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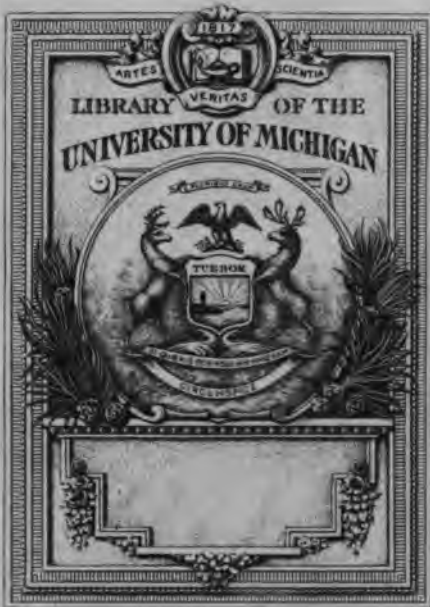
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THE
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VOL. V.

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THE SOUTHERN REVIEW.

No. IX.

JANUARY, 1869.

ART. I.—*The Old Regime and Revolution.* By Alexis De Tocqueville, of the Académie Française, Author of *Democracy in America.* Translated by John Bonner. New York: 1856.

We believe in the value of criticism ; otherwise this REVIEW had never seen the light of day. But if criticism be good for others, it is also good for ourselves ; and we neither expect, nor desire, to escape its sharp inquisitorial processes. But we do ask, that those who favor us with their critical judgments would, in some small degree at least, imitate the conscientious care which we bestow on the formation of our own views and opinions. For hasty, crude, inconsiderate judgments — such as the world swarms with — are of no value to any one, and least of all to the critic himself.

One learned critic assures us, that the article on *The Education of the World*, which appeared in the first number of our REVIEW, was 'not complete.' 'It is well written', says he, 'but the subject is not exhausted.' What ! who could hope to exhibit a complete view of The Education of the World, or The Philosophy of History, in one short article ? It was not intended to be complete. No one was, indeed, more profoundly sensible than ourselves, that the subject was not exhausted by the paper in question. The object of that first article of THE SOUTHERN REVIEW was, as we supposed every reader would perceive,

merely to preface our Journal with a brief outline of the religious, political, and philosophical views of its editors. A dozen volumes at least, if not more, would be necessary to the complete, or adequate, discussion of the great themes, or topics, broached in that prefatory article, or introduction to THE SOUTHERN REVIEW.

That article, indeed, contains merely the germs of great thoughts respecting the conditions and the laws of human progress. Each and every one of those germs must be developed and illuminated, by the discussions of philosophy, by the illustrations of history, and by the divine lights of religion, ere any thing bearing even a remote approximation to a complete view of the Education of the World, can result from our labors. It is our design, in the present paper, to develop and illuminate, by the means above mentioned, one of the germs of the article in question.

But why discuss, or consider, The Great Error of the Eighteenth Century? Is that error any thing to us? It is, indeed, by that error that the South now lies crushed and bleeding at every pore, and that the North is smitten with blindness as to the things which make for her peace, her prosperity, her greatness, and her glory. That error, then, concerns us more — infinitely more — than our shops, or trades, or professions, concern us. No plague, indeed, comes more directly home to our 'business and bosoms', than does the error in question. Already has it visited us in the terrible shapes of war, pestilence, and famine; and in like forms of desolation and death will it visit us again and again, unless it be exorcised from the mind of America, and cast from us.

Let us, then, examine this error, and see how it desolates the world. It is thus stated, in the paper on *The Education of the World*: 'In the second volume of his work, [Guizot's History of Civilization], he refers to what he calls "the dominant idea of the last century", namely, "that governments and institutions make the people." That notion was, indeed, one of the great errors of France [as well as of America] during the last century.' (p. 11.) The men of 1789 had, as M. De Tocqueville says, 'a robust faith in man's *perfectibility and power*; they were

eager for his glory, *and trustful in his virtue.*' (p. 13.) So great, indeed, was their faith in man's *perfectibility*, and *power*, and *virtue*, and *intelligence*, if only emancipated from the shackles of false legislation, that 'they had no doubt,' as De Tocqueville says, that '*they were appointed to transform society and regenerate the human race*'. (p. 13.) Such was *The Great Error of the Eighteenth Century*. It was the hope of that age; it is the scourge of this. It filled the two great nations then, America and France, with intoxicating, maddening schemes of reform; it has since covered them with scenes of desolation and despair. Let us, then, proceed to dissect, anatomize, and examine this monstrous, world-devouring error, in the combined lights of history, philosophy, and religion.

We call this the Error of the last Century, not because it was peculiar to that age or era, but because it then reached its maximum, and revealed its malignity. 'It may be reasonably doubted', says Bishop Thirlwell, in his *History of Greece*, 'whether the history of the world furnishes any instance of a political creation such as that ascribed to Minos or Lycurgus.' A belief in the reality of such creations, he says, has arisen from 'the false notion of *the omnipotence of legislators*, which has been always prevalent among philosophers, but has never been confirmed by experience.' Though always prevalent among men, this false notion had never reached the highest pitch of insanity, till it was embraced by the ardent and enthusiastic philosophers of the eighteenth century. They believed, indeed, that the world might easily be regenerated, and restored to perfect order and beauty, by the omnipotence of legislation alone. Legislation was, in the estimation of those illuminati, the universal specific for social ills, the panacea in politics, the one and all-sufficient remedy for the intellectual and moral diseases incident to the nature of man. Alas! how little they knew respecting the nature, the source, or the inveteracy of such disorders!

'Without rhetorical exaggeration,' says Hegel, 'a simply truthful combination of the miseries that have overwhelmed the noblest of nations and polities, and the finest examples of private virtue, forms a picture of the most fearful aspect, and excites emotions of the profoundest and most hopeless sadness, counter-

balanced by no consolatory result. We endure in beholding it a mental torture, and at last draw back from the intolerable disgust with which these sorrowful reflections threaten us, into the more agreeable environment of our individual life; the present formed by our private aims and interest. In short, we retreat into the selfishness that stands on the quiet shore, and thence enjoy in safety the distant spectacle of "wrecks confusedly hurled."¹ 'Regarding history as the slaughter-bench at which the happiness of peoples, the wisdom of States, and the virtue of individuals, have been victimized'; they turn from the insufferable horrors of the hopeless spectacle, and meanly seek their own private ends and ease. No such emotions, however, afflicted the legislators of 1789; who, in spite of the world's awful history, insanely believed that they were 'appointed to regenerate the human race,' and to glorify the hitherto debased and sad estate of man. Why should they mourn, indeed, who had short and easy methods to render the future as bright and beautiful, as the past had been dark and dreadful? On the contrary, why should they not rejoice, as they did, with an exceeding great joy, at the contemplation of the glorious work before them?

We shun, and we despise, both extremes. Both the course of those cowardly, selfish souls, who forsake the vessel of humanity in despair, in quest of their own private, personal enjoyment; and of those exalted heroes of reform, who expect to regenerate the world, and restore it to its pristine glory and perfection. Having learned to say, even amid the deepest darkness of the world, 'The Lord God omnipotent reigneth, let the whole world rejoice'; we neither desert His banner, nor erect a hostile one of our own.

If, however, we would not sail under false colors, or bear down on the rocks that have wrecked former polities and states, it behooves us to see to our course and bearing. It behooves us to consider the dangers by which we are surrounded, as well as the real grounds of our hope. It behooves us, above all things, to be honest with ourselves, and humble before the Most High; shunning all those manifold delusions and lies which, however pleasant and flattering to human pride, only conduct individuals and states into the whirlpools of destruction.

¹ History of Philosophy, p. 22.

The first question, then, relates to the cause of danger, or the source of the great Error of the Eighteenth Century. The physician is guided, not so much by the nature, as by the cause of the disease he aims to cure. In vain will he combat the disease, whatever may be its nature, if its cause be left in active operation. The very greatest blunder he can make, indeed, is to mistake the cause, or the source, of the disease he seeks to remedy. Nor is it otherwise with the disorders of the body politic. Especially is it all-important to grasp and comprehend, first of all, the real cause of social disorders and calamities, if we would cure them. It is, then, the first duty of the statesman and the legislator to ascertain the real cause and source of the disorders by which society is so often convulsed, and the brightest hopes of mankind overcast with clouds and darkness. Yet has this first duty, perhaps, been more sadly neglected than any other, by the so-called rulers of the world. Hence it is, that their remedies are so frequently misconceived; that the conditions of human progress are ignored; and that political quackery, in all its forms, does such infinite mischief, even when it designs to do most good.

The cause in question is not far from any one of us. The word is on our lips, and the *thing* is in our hearts. But the human heart, so prone to look on itself with complacency, ascribes the disorders of the world to any thing, or to any cause, rather than to itself. Hence, if we would be truly wise, we must shun this inexhaustible fountain of self-delusion; nay, if we would not be incurably blind, we must reverse the usual style of thought, and sternly bar the inner sanctuary of the soul against the flood of self-flattering lies by which it is generally defiled and laid waste. We must, in short, ascribe the evils and disorders of society, not to external causes or conditions merely, but to the nature of man himself. That is, to the nature of man, not as he came from God, but as he now exists in the world around us. For in all the universe of God, as it sprang fresh from the plastic hand of his power, there was not the least impress or overshadowing of evil. All was perfection and beauty and joy. Peace reigned within, and Paradise bloomed without. But the Father of Lies, having turned philanthropist, cheated

our kind with a scheme of equality, and brought down its primeval glory to the dust.

'Forth-reaching to the fruit, she plucked, she ate.
'Earth felt the wound, and Nature, from her seat,
'Sighing through all her works, gave signs of woe,
'That all was lost.'

Woe betide the nation, whether guided by philosophers or fools, that proceeds as if this were a dream of the poet, or a fable of the heathen mythology! It is, indeed, the saddest and real-est fact in all man's history. But if it be a fact, as most assuredly it is, then it can not but be fraught with the most tremendous consequences to society and the world. Hence to speculate, as so many do, and especially as did the legislators of the last century, about 'the regeneration of the human race', without the recognition of this great fundamental fact, is to dream merely, and to reform madly. It is, in truth, to ignore the great Cause of causes, by which the whole history of man has been so deeply colored, and his destiny so fearfully deranged and debased. It is, in one word, to overlook the great disturbing force, which has sported with the schemes and falsified the predictions of the sanguine projectors of all ages. If philosophers, and philanthropists, and reformers, and statesmen, and legislators, had not disregarded this great disturbing force, this great *Causa causans* of social disorders; then had the world been delivered from an infinite legion of wild and visionary schemes for 'the regeneration of the human race,' which have only terminated in the ruin of states. History, with all her unuttered and unutterable woes, rises up in solemn and everlasting protest against the madness of all such infidel delusions.

Precisely such, as we shall now proceed to show, was the root of the great error of the philosophers and legislators of the eighteenth century. The two great schools or sects, namely, the economists and philosophers of France, by whom the Revolution of 1789 was introduced, unanimously denied the fall of man, and poured scorn and contempt on the divine method for his restoration. Yet each of these sects, (not to say each individual of it,) had a scheme of its own 'to transform society and regenerate the human race'. Starting from the common error, that

man is inherently pure, is such as God made him, and only requires to be delivered from bad laws and bad organizations of society; they developed a swarm of Utopias the most wonderful the world has ever seen. That is to say, the most wonderful, considering the vast erudition and the great intellectual power of the men by whom they were created, and recommended to the world. It almost seems, indeed, as if the Almighty had permitted the experiment to be made, in order to show how blinder than ignorance and folly themselves, even in great minds, may become this conceit of the inborn goodness of the human race. It is certain, that if we fail to study their works, or to comprehend their great error in its source, as well as in its results, we shall lose some of the most instructive lessons of history ever written for the warning and instruction of mankind.

Believing, as they did, that man is good in himself, they ascribed all the disorders and evils of society to external causes, or to bad institutions, and not to the tendencies of his nature. Hence, in order to remove all such evils, and renew the face of society, nothing was needed, as they fondly imagined, but to remodel the State, and bring mankind under the influence of better external causes. Nothing seemed more easy to their minds. Hence, to begin with the economists, they could only wonder at the blindness and folly of all former legislation and laws. 'Their contempt for the past', says De Tocqueville, 'was unbounded'. 'The nation', cried Letronne, 'is governed on wrong principles; every thing seems to have been left to chance.' Starting from this idea, from this boundless contempt of the past, 'they set to work', as De Tocqueville says, 'to demand the demolition of every institution, however old and time-honored, which seemed inconsistent with the symmetry of their plans. Forty years before the Constituent Assembly divided France into departments, one of the economists suggested the alteration of all existing territorial divisions, and of the names of all the provinces.'

If any thing could be more wonderful than their gloomy views respecting the folly of the past, it was their glowing hopes and expectations in regard to the future. The entire face of society was about to be suddenly transformed and illuminated by them;

and, at last, after the weary revolution of so many dark, groaning ages, the people were to be delivered from all their vices and their woes, from all their ignorance, degradation, and misery. All this was to be achieved, too, not by the power of the Almighty, but by the omnipotence of their own beneficent schemes.

Even Turgot, 'the god-like Turgot', as he is called by Austin in his *Province of Jurisprudence*, had this unbounded confidence in the efficacy of his method for the regeneration of France. 'I will venture to answer', said he to the king, whose illustrious minister he was, 'that in ten years the nation will be so thoroughly altered that you shall not know it, and that, in point of enlightenment, morality, loyalty, and patriotism, it will surpass every other nation in the world. Children now ten years old will then be men, trained in ideas of love for their country, submissive to authority from conviction, not from fear, charitable to their fellow countrymen, habituated to obey and respect the voice of justice.' The people of France, however, refused to be so suddenly transformed into angels; and, in little more than ten years, they were devouring each other in right good earnest.

Quesnay, the founder of the sect, had as great confidence as Turgot himself, or as the other economists, in the transforming power of knowledge. Believing, with Plato, that no one is ever knowingly in the wrong, these reformers deemed knowledge an all-sufficient remedy for the evils of society. Political guarantees, or checks and counter-checks on power, such as all sensible men, from Aristotle down to Austin, have deemed essential to freedom in such a world as ours, they rejected as 'fatal features in government.' As the State had done all the mischief in times past, so the State, with the sublime instrument of public instruction, must do all the good in the future. 'The State', says one of the great lights of this school, 'moulds men into whatever shape it pleases'. In all former ages, it had, unfortunately, moulded them into bad shapes: it must now mould them into good shapes. Having created all the inequalities among men, either by its sins of omission or commission, the State must now redress such frightful wrongs, and restore all men to a perfect and more than angelic equality. A task so great, and so glorious,

and, at the same time, so easy, must be performed by the State without delay.

With these wonderful illuminati, free institutions were 'chimerical speculations.' Aristotle himself, if he had found a place among them, would have been deemed a dotard and a dreamer. Equality was their one political idea, and the hatred of inequality their one political passion. All power in the hands of one man, with knowledge alone as the safeguard against the injustice of the monarch or the masses, was their ideal of a government for equal citizens. 'I do not exaggerate,' says De Tocqueville, 'when I affirm that every one of them wrote in some place or other an emphatic eulogium on China. One is sure to find at least *that* in their books; [a statement which we have taken the pains to verify for ourselves.] . . . They wanted all the nations of the world to set up exact copies of that barbarous and imbecile government, which a handful of Europeans master whenever they please. . . . They were transported with emotions of delight at the contemplation of a government wielded by an absolute but unprejudiced sovereign, who honored the useful arts by ploughing once a year with his own hands; of a nation whose only religion was philosophy, whose only aristocracy were men of letters, whose public offices were awarded to the victors at literary tournaments.'

Such were the economists. Though it numbered many learned men in its ranks, Turgot was unquestionably the chief pillar and glory of the sect. Profoundly versed in all human lore,—in sciences, in languages, in literature, in history, and in philosophy—he was, nevertheless, a mere child and dreamer in regard to man's social condition and destiny; just because he ignored the real source of this world's manifold disorders. Blind amid the very blaze of noon, he hoped to convert France into a Paradise in ten years, and he only helped to convert it into a Pandæmonium. The high position he occupied, as the ruling minister of France, had long been the object of his lofty ambition; and when, at last, the great troubles began 'to cast their shadows before', all eyes turned to him for guidance and instruction. 'No man', says his great admirer, Voltaire, 'ever came into the ministry better announced by the public voice.' Infinite

expectations were founded on his wisdom as a statesman. He was, in one word, the Madison of France. Malesherbes, his illustrious co-minister and friend, did not hesitate to express the opinion, that he united 'the heart of a L'Hopital with the head of a Bacon'. But Malesherbes lived to correct this mistake. 'M. Turgot and myself', said he, 'were very honest men, very well informed, and passionate for the public good. Who would have thought that they could have done better than to choose us? However we knew men only from books; and, wanting skill in affairs, we administered badly. Without wishing it, without knowing it, we have contributed to the Revolution.'

Thus, with all his learning, so profound was Turgot's ignorance of *men as they are*, that he imagined that all abuses, and all obstacles, would readily yield to the magic of his methods. Hence, with the force of a Hercules, he threw himself against France. But France had notions, and prejudices, and passions, and customs, and habits, and rights, of her own, which proved too much for M. Turgot. The past was a mere circumstance with Turgot; it was a great fact with France. Hence, finding the reaction equal to the action, and France being the greater of the two, the giant was hurled from the seat of power, and perished, with all his fine schemes, in the dark abyss of disappointed ambition. Turgot, no doubt, intended great good; he certainly accomplished great evil. He sincerely wished to transform France into a Paradise. He only caused a contemporary to say, that '*of all the abuses of a great nation, the greatest is when, without a mission, men come to reform abuses.*'

Turgot, like all the French statesmen of his time, was too impatient to be wise. Having neither sounded the depths, nor measured the extent, nor comprehended the rooted obstinacy, of the evils around him; he imagined that they were merely the transient effects of bad social laws, which might be easily removed by good social laws. Hence, in hot haste, he set to work with his remedies. He could not, like a truly wise statesman, consent to work in one age, and contemplate the fruits of his labor in another age. He must, at the very farthest, do all in ten years. Reproached by one of his friends with having proceeded with too great precipitation, he replied: 'How can you offer

that reproach? You know the need of the people, and that in my family we die of the gout at fifty.' Thus, he feared that he should soon die, and then it would all be over with the poor people. That is to say, he must make haste to regenerate the people, lest the gout should overtake him, and his great work remain unfinished. A patriotic reflection truly, no doubt, and a wise one, too, provided the Almighty had resigned the government of the universe in favor of M. Turgot. Such were the economists and their great chief.

The other school of reformers, or 'the philosophers', as they are called, next claim our attention. A certain class of historians — such as Macaulay, Schlosser, and others — are accustomed to represent these men as having embarked in the 'ardent struggle for freedom'. Not one of them, in fact, had the most distant idea or conception of freedom, except Rousseau toward the close of his life. Voltaire, the intellectual chief of the sect, as well as of the nation, may be fairly taken to represent the whole school or sect. He insists that all crimes and disorders proceed, not from any tendency to evil in man's nature, but, to use his own words, 'from education, example, and the government in which he finds himself cast.' Hence, his method for the regeneration of the human race is short and easy. It is merely to have a better education, a better example, and a better government. But his views of education and government were, if possible, as wretched as his example. The first step in his system of education is to banish Christianity from the face of the earth; and the next is to elevate, enlighten, and purify the masses, by means of 'divine philosophy'! This done, no difficulty about government remains. For no political guarantees, no constitutions, and no checks on power, such as depraved Christian States find necessary, will be needed by a nation of philosophers! Hence, in all sober earnestness, and in a work which has been most absurdly styled a 'philosophy of history', he holds up the Chinese empire as the most perfect model of a nation the world has ever seen. 'The disciples of Confucius', says he, 'were a people of brothers. The most happy and the most respectable time ever seen upon earth, was that in which they followed his laws.' Especially is the philosopher ravished and transported

with their 'religion of letters.' 'We have calumniated the Chinese', says he, 'merely because their metaphysic is not ours. We should have admired in them two merits, which condemn the superstitions of the Pagans, and the morals of the Christians. Never was their religion of letters dishonored by fables, nor stained by quarrels and civil wars.' No writer on the philosophy of history has, so far as we know, even attempted to illustrate, from the annals of China, the great lessons they seem so well adapted to impress on the human mind. But it is certainly better to remain silent with Vico, and Hegel, and other writers, than to utter the sheer nonsense of Voltaire. We thank him for his nonsense, however, since it serves to illustrate and enforce the great truth, that no man, however great his learning or his genius, who ignores the real internal causes which debase and desolate the world, can either comprehend the conditions of human progress, or the circumstances on which civil liberty depends. Voltaire, it is certain, knew nothing of such liberty, either in itself, or in its causes and conditions. He merely sought *equality*; and he sought it, too, in the bosom of a despicable Chinese despotism. No matter though all be slaves, provided that all, except one, are equal.

Voltaire, in reality, hated *liberty* as much as he admired *equality*. Hence when, in 1771, the king swept away the Parliament, Voltaire applauded. 'The king is right,' said he, 'if one must serve, I hold it better to serve a well-bred lion, who is naturally stronger than I am, than two hundred rats of my own breed'. We should, indeed, have most profoundly sympathized with Voltaire in the above sentiment, if the rats, which he so intensely abhorred, had only been radicals. But they were not radicals; and besides, Louis XV., that vile epitome of meanness, was Voltaire's lion! Even his will may be the law, provided all are equal under the shadow of his despotic meanness. This arch-advocate of civil despotism has, no doubt, been regarded as the ardent friend of liberty, by superficial thinkers, only because he hated *inequality*.

In this respect, Voltaire represented the French people of his time; and this explains the apparent anomaly, that after a crusade against inequality, supposed to be a crusade in favor of

liberty, the nation so quietly settled down under the absolute despotism of one man, and rejoiced in their equality. There is, indeed, but one step between the hatred of inequality and the love of despotism. It was, then, no very wonderful change, when the French people took that step.

It is the great fundamental doctrine of Rousseau, that man is naturally and positively good, and that, in all former ages, he has been 'depraved by society and civilization.' Little faith had he in the efficacy of knowledge. Indeed, from all he had seen of the Voltaires, the Diderots, the Grimms, the D'Albachs, the Raynals, and the other philosophers, he concluded that philosophy and letters corrupt the human heart. He should have only concluded, that something more than philosophy and letters, is necessary to keep it from becoming corrupt. Hence his method, for the regeneration of the world, is different from that of the other philosophers. A disciple of Plato, in the eighteenth century, he found the great source of social evils in the institution of property; and, accordingly, he preached a crusade against the accursed words *mine* and *thine*. 'The savage', said he, 'when he has dined, is at peace with all nature, and the friend of all his kind.' See to it, then, that all the savages of earth, and especially all the civilized savages, are well fed, if you would have a glorious and a perpetual peace. See to it, moreover, that they are fed from the public crib, and that no man be allowed to call any thing his own; since, 'according to the axiom of the sage Locke, *there will be no injury when there is no property.*'²

The celebrated *Code of Nature*,³ which played so terrible a part in the French Revolution, is built on this platform of Rousseau. 'This Code, like the Republic of Plato, inculcates, in the eighteenth century, the doctrine of a *community of goods*, or an *equality of riches*, substituted for *the grand scourge of property.*' 'Nothing', says the first article of that Code, 'belongs wholly to any one. Property is detestable, and any one who attempts to re-establish it shall be imprisoned for life, as a dangerous madman, and an enemy to the human race.' There has

² There is no such axiom in Locke. Rousseau derived it from his master, Plato.

³ Laharpe, in *Cours de Littérature*, vol. xviii., gives an elaborate criticism on this Code, under the false impression that it was the work of Diderot. It was, in fact, written by Morelly.

been, says its author, one first error of all legislators, namely, 'that which maintains that the vices and passions of human nature render the social state impossible without co-ercive laws.' He would abolish all such laws; and never more seek 'to protect the right against usurpation', or 'property against violence'. The world should be governed on far better, on far more humane, principles. 'Men', says he, 'exempt from the fears of indigence, would have only a sole object of their hopes, a sole motive of their actions, *the common good.*' Only banish property, and substitute 'an equality of riches' for that 'grand scourge' of the human race, and all selfishness, all vice, all crime, and all evil, will disappear from the world, and the universe put on a new face!

We might fill a volume with such short and easy methods for the regeneration of mankind. But we must forbear. When we consider the learning, the ability, and the genius, of the men, by whom such schemes are set before us, we are lost in wonder and amazement. If they were produced, like the Republic of Plato, merely as abstract 'visions of justice', we should still wonder at such aberrations of the human mind. But they are actually and earnestly recommended, by their authors, as schemes for the practical adoption of mankind. What, then, shall we think of them? Shall we not suspect, indeed, that our own reason labors under some strange hallucination, rather than that such men are as insane as they appear to us? This would, perhaps, be the proper inference, if these philosophers, as they are called, had not arraigned all past ages on the charge of downright stupidity and folly. The age, which despises the past, has no claim to the respect of the future.

We have not, as yet, contemplated the dark abyss of the great Error of the Eighteenth Century. We have merely caught a glimpse of its philosophy, and a few of its wonderful Utopias. The practical workings of its *philanthropy* remains to be considered. The bitter invectives, which those lovers of despotism, launched at every species and variety of inequality, as well as other appeals to the malignant passions of mankind, we have, thus far, passed over in silence. Of all the passions of the Revolution of 1789, 'the deepest and the most solidly rooted', says

De Tocqueville, 'was a violent and unquenchable hatred of inequality.' Hence it was that Raynal, the prophet of this new religion of hate, exclaimed: 'When will the angel of Extermination come to beat down all that elevates itself, and reduce all to one level.' The prayer of Raynal, or rather his diabolical imprecation, which was that of France herself, was soon answered. The angel of Extermination appeared in the year 1789. That Revolution was, perhaps, the most magnificent illusion by which the world has ever been deceived. The friends of freedom, as they are called, hailed that tremendous explosion of hate as the sublime outburst of philanthropy and good will to man. With acclamations of joy and delight, wild and enthusiastic, they hailed the angel of Extermination as the angel of deliverance, and mercy, and life. For they beheld, as they imagined, a great nation rising in its might, with the resistless determination to shake off the accumulated wrongs and abuses of the past, and establish, in their stead, the everlasting principles of right. The glory of the cause, or rather the glory of the illusion, cast a deceptive lustre over the spirit of the age and nation. France desired *equality*; she knew nothing of *liberty*. She had, indeed, neither learned the first lesson, nor inhaled the first breath, of a rational freedom. She had sworn eternal hostility to tyrants, not eternal fidelity to man. Her prophets, her teachers, her guides, were inspired by hate, and not by love. It was the heat from below, and not the light from above, which had set them in motion, and wrapped them in flames. Their ruling passion was, indeed, a wild, dark, fierce, maddened spirit of resentment, directed against 'all that elevates itself', or rises above the common level; and was neither enlightened by wisdom, nor controlled by goodness. Hence it was as impotent to construct as it was mighty to destroy. The very work of death itself was their grim delight and chiefest joy. The Christian prayer, which invokes the angel of Mercy to elevate all that debases itself, was then unknown to France.

The infidel philosopher was at the helm. As he had introduced, so he undertook to conduct, the Revolution. Believing, as he did, in the 'inherent purity and the indefinite perfectibility of man,' he imagined that all the evils around him were exclu-

sively due to the institutions of society. Hence, to demolish these, and substitute others in their place, would be, as he fondly imagined, to restore the people to their 'inherent rectitude,' and set them forward in a glorious career of 'indefinite perfectibility.' Accordingly, the heads of his rulers are taken off; the new *regime* is introduced; and he looks for the great day of emancipation to dawn. But instead of this, the reign of terror sets in, with night, and death, and hell, and the guillotine, in its train.

We shall not attempt to describe the scenes which followed. If we had the genius of a Dante, we might produce a counterpart to the *Inferno*, in which guilty men, transformed to demons, are the torturers of guilty men. Or, if we had the grand pictorial imagination of a Chaucer, we might build some great house of death close by the gates of hell, and fill it with images of horror from the infernal regions of the French Revolution. A mob of women, frantic with despair and wild with vengeance, crying for bread; and mothers, with uplifted knives, releasing their children from the world as regenerated by the philosophers, should be sculptured on its walls, or emblazoned on its tablatures. And a philanthropist, plying the guillotine, with eyes gleaming and gloating over the work, while his tongue, ever and anon, laps the blood flowing at his feet, should likewise be conspicuous among its imagery. Nay, if we had the taste and talent for such things, every niche, every nook, every panel, and every corner, of the building, should have its memento of that great carnival of death and depravity. But as it is, we shall simply let the curtain drop, and hide from view that *Inferno* of philosophers and reformers; leaving all their victims behind the scenes to lift up their eyes, as it were, in hell, being in torments, and cursing the very day and hour when first they dreamed of the 'inherent purity of man'.

That dream of madness, so fatal then, was not confined to France alone. It was also dreamed in America. We have said that M. Turgot was the Madison of France. On the other hand, Madison, 'the father of the Constitution,' was the Turgot of America. Hence, 'without wishing it, without knowing it,' he 'contributed to the Revolution' of 1861. As Turgot, by his doctrines and his measures, was the forerunner of the angel of Extermination,

which visited France in 1789 ; so Madison, the great legislator of 1787, prepared the way for the angel of Extermination, which, in 1861, visited the South. But the demonstration of this truth must be reserved for some future number of THE SOUTHERN REVIEW.⁴

More than once, in the course of the preceding reflections, have the eloquent words of a great writer occurred to our minds ; covering the whole ground we have so feebly occupied, and far more. The words in question being, in fact, as pertinent to the present discussion as they are eloquent, we shall here introduce them. 'All the speculations and schemes of the sanguine projectors of all ages', says John Foster, 'have left the world still a prey to infinite legions of vices and miseries ; an immortal band, which has trampled in scorn on the monuments and dust of self-idolizing men who dreamed, each in his day, that they were born to chase these evils out of the earth. If these vain demi-gods of an hour, who trusted to change the world, and who perhaps wished to change it only to make it a temple to their fame, could be awakened from the unmarked graves into which they sunk, to look a little around the world for some traces of the success of their projects, would they not be eager to retire again into the chamber of death, to hide the shame of their remembered presumption ? Hitherto the fatal cause of these evils, the corruption of the human heart, has sported with the weakness, or seduced the strength, of all human contrivances to subdue them. Nor do I perceive any signs, as yet, that we are commencing a better era, in which the means that have failed before, or the expedients of some new and happy invention, shall become irresistible, like the sword of Michael, in our hands. The nature of man, "Still cast ominous conjecture on the whole success." While that is corrupt, it will pervert the very schemes and operations by which the world should be improved, though their first principles be as pure as heaven ; and revolutions, great discoveries, augmented science, and new forms of polity, will become in *effect* what may be called the sublime mechanics of depravity.'

⁴ The intelligent reader will, of course, bear it in mind, that Turgot and Madison are selected as the subjects of our remarks, because they were 'representative men', and because they were among the most influential of those by whom the great Error of the Eighteenth Century was embraced and reduced to practice, or embodied in institutions.

There is, it must be admitted, one difference between the French Revolution of 1789 and the American Revolution of 1861. The one was instigated by infidel philosophers; the other, by professedly religious preachers. This difference is, however, more nominal than real. For the preachers, having adopted the political maxims of the philosophers, were animated by the same spirit of revolt against the eternal laws of heaven and earth. In open defiance of their own creeds, as well as in proud contempt of the principles of the Bible, with respect to the nature of man, they embraced the anarchic maxims of the infidel philosophers of the eighteenth century, and proceeded to set the New World on fire. Hence both Revolutions had their roots in the same great error, were nourished by the same fell spirit, and brought forth the same fruits of desolation and death. It was precisely the same virus which convulsed and devoured France in 1789 and America in 1861. It was not as Christian divines, but as infidel dreamers and reformers, that the Beechers, the Tyngs, the Cheevers, and the McIlvaines, of the North, trod in the fatal footsteps of the Voltaires, the Rousseaus, and the Raynals, of France. Heaven have mercy on their poor deluded souls! But we shall not spare their errors. On the contrary, we shall, in some future number of this REVIEW, expose the radical opposition to their political maxims to the principles and the spirit of the religion which they profess, and upon which they have, by their worse than infidel practice, brought such infinite and ineffacable disgrace.

ART. II.—1. *Répertoire d'Optique Moderne.* Par l'Abbé Moigno. Paris: A. Franck. 1847.

2. *Œuvres de François Arago.* Publiées d'après son ordre sous la direction de M. J. A. Barral. Paris: Gide, éditeur. 1858.

3. *Familiar Lectures on Scientific Subjects.* By Sir John F. W. Herschel, Bart., K. H., M. A., etc. London: Alexander Strahan. 1867.
4. *Faraday as a Discoverer.* By John Tyndall. New York: D. Appleton & Co. 1868.

A fool can ask more questions than a wise man can answer. However far we may analyse any fundamental subject, we are compelled to pause at those outer limits which may be called the corner-posts of nature. The unsatisfactory results of many philosophical systems may doubtless be traced to the effort made to define those primitive elements of all definitions which can not, in the nature of things, be subject to limitations. Seneca well contrasts some of the dismal conclusions thus reached. 'If', says he, 'I believe Protagoras, there is nothing in nature but doubt; if Nausiphanes, this thing only is certain, that nothing is certain; if Parmenides, every thing is but one thing; if Zeno, every thing is nothing.' Nothing approaches, in august origin and abstruse nature, more nearly to the elemental mystery of life itself, than light, the 'first-born of Heaven', — offspring, indeed, of the earliest recorded utterance of the creative Power. 'What is light?' is a question to which we may frankly reply, as to a thousand similar ones touching the primitive mysteries of the universe, that we do not know. Yet there is a great deal about light which we do know, — many most wonderful facts, out of which and for the explanation of which the mind strives to build up a reasonable theory of the nature of light. To define it as an agency subject to certain laws and producing such and such results, by no means satisfies the inquiring understanding. As yet, however, we can scarcely do more.

Three fundamental laws of light are as follows:

- 1°. Itself invisible, it renders all material objects within its sphere of action visible.
- 2°. For any given medium it acts in right lines, in all directions from the luminous body.
- 3°. This action proceeds at an enormous velocity.

The invisibility of light may strike one, at first, as a thesis out of Anaxagoras, who, according to Cicero, proved to the satisfaction of his own senses that snow is black. Nevertheless, it

is true. Take a box the inner walls of which are, like the chamber of a camera, thoroughly blackened. In one face puncture a pin-hole and admit a ray of light. If, through a blackened tube inserted in the upper side immediately over the line of the ray, we gaze down into the chamber, all is darkness. The light is there, however; for, on lowering by a thread through the tube a silvered bead into the line of the ray, its star-like reflection will instantly spring into view. 'A sunbeam, indeed,' says Sir John Herschel, 'is said to be seen when it traverses a dark room through a hole in the shutter, or when in a partially clouded sky luminous bands or rays are observed as if darted through openings in the clouds, diverging from the (unseen) place of the sun as the vanishing point of their parallel lines seen in perspective. But the *thing seen* in such cases is not *the light*, but the innumerable particles of floating dust or smoky vapor, which catch and reflect a small portion of it, as when in a thick fog the bull's-eye of a lanthorn seems to throw out a broad, diverging luminous cone, consisting in reality of the whole illuminated portion of the fog.' (pp. 223-4.)

The rectilinear transmission of light is also proved by the phenomena here mentioned by Sir John, as well as by observations too familiar to need recital. We ascertain the rapidity of its transmission from more abstruse considerations. Ordinary terrestrial phenomena indicate that the communication of light is instantaneous, and for what we name 'practical purposes' this is so. As a fact, however, it requires time and is subject to a definite velocity.

Around the planet Jupiter, four satellites revolve in different orbits, nearly circular. The periodical times of their revolutions, as well as the dimensions and positions of both the satellites and their orbits, have been carefully and accurately determined. The three nearest to the planet move in orbits lying nearly in the plane of the path of the latter round the sun. Consequently, they suffer eclipse by the interposition of the body of the planet at every revolution. The observation of these eclipses being useful in the determination of longitudes of places on the earth's surface, the periods of their occurrence are now regularly calculated beforehand. But the times thus predicted,

upon data so thoroughly ascertained, were found to vary from the observed times,—being some times earlier, some times later, by a regular gradation of differences. In 1676, Roemer, a Danish astronomer, traced these discrepancies to their true cause. The eclipses took place *too soon* at the periods when the earth in its annual course came nearest to Jupiter, *too late* when it receded farthest. The total variation, amounting to sixteen minutes and twenty-six seconds, or not quite one thousand seconds, indicated, therefore, the time consumed by the light from the satellites in crossing the diameter of the earth's orbit. This diameter, heretofore taken at one hundred and ninety millions of miles, is now considered (from late observations upon the distance between the orbits of Mars and the earth) as more probably being about one hundred and eighty-four millions of miles in length. From these data the velocity of light appears to be about one hundred and eighty-six thousand, five hundred miles per second.

The discovery of the *aberration* of light by Dr. Bradley, in 1727, afforded a means of confirming this almost incredible result. Though we can not here enter upon a full explanation of this phenomenon, a conception of it may be had by considering the case of two men moving with rapidity in opposite directions during a shower of rain falling perpendicularly. The rain-drops will fall upon the faces of the two men as if proceeding in inclined lines from points in front of their respective zeniths. The rain-drops represent the rays of light in the astronomical phenomenon, and the opposing motions of the observer are those of the earth at the opposite sides of its orbit. The inclination of the rays is the result of the motion of light combined with the earth's orbital movement. The latter is known and the angle of inclination can be measured, and these data furnish, by an extremely simple calculation, an estimate of the velocity of light.

But the velocity of light has also been measured by means of mechanism, the principle of whose action may be said to be the subdivision of a second of time into very minute parts,—in a word, the *atomizing* of time. M. Fizeau, of the French Academy of Sciences, effected this by means of a toothed wheel, in which the teeth were precisely of the same size as the intervals between them. The light of a lamp was directed through an

aperture in a screen so as to cross one of these intervals and fall upon a reflector placed at a known and considerable distance from the wheel. The reflector was so arranged as to throw back the beam through the notch in the wheel exactly opposite to that through which it first passed. Through this notch could be perceived the reflected ray, which had traversed a distance double that of the reflector from the wheel. When, now, the wheel was revolved with increasing velocity, the reflection at first seen continuously, gradually became feebler and presently entirely disappeared. This occurred when the velocity of the wheel was such that the light transmitted through the notch on one side was intercepted by the tooth adjacent to the opposite aperture on its return; that is, when the velocity of rotation carried a tooth over its own breadth whilst the ray was going and returning. This velocity is readily measured; indeed, it may be registered by the mechanism used to drive the wheel. If the wheel, as was actually the case, makes twelve and six-tenths revolutions in a second and has fourteen hundred and forty divisions (teeth and notches), the time of the passage of a tooth across its own breadth is found by taking the reciprocal of the product of these numbers. In this fraction of a second the ray has traversed twice the distance between the mirror and the wheel,— which amounted in M. Fizeau's experiments to eighteen thousand, eighteen hundred and eighty yards. But this total distance measured or divided by the time, will give the distance gone over in a second, or, in other words, the velocity of the ray. The mean results of the experiments established a velocity of one hundred and ninety six thousand miles.

The far more refined and delicate method of M. Foucault has shown, however, that this result is too great. This method is essentially that first used by Arago, in an experiment determining the relative velocities of light in air and water. A horizontal ray of light is admitted into a darkened chamber, and falls upon a mirror arranged to revolve on a vertical axis lying in its own plane. As the mirror turns, the reflected ray will move, of course, in a horizontal plane passing through the point of incidence and the aperture of admission, and by an easy geometrical consideration its angular velocity is known to be double that

of the mirror. In this horizontal plane, a second mirror is placed perpendicular to a line itself drawn perpendicular from the centre of the last to the axis of the first;—placed, in other words, so as to return a ray to the first mirror upon the same path in which it is first reflected from it. If, now, the revolving mirror be supposed at rest and be so arranged as to reflect the ray (received through the aperture) upon the second mirror, the ray will manifestly be returned by the latter upon the same path, and will be again reflected by the first directly towards the aperture. But if, whilst the ray has been passing between the mirrors, the first has revolved through a small angle, the ray in passing back towards the aperture will deviate from its original path by an angle double that described by the mirror. This angle is readily measured; and the fraction of a second required by the light to traverse the distance between the mirrors, to and fro, multiplied by the angle described by the mirror in any small fraction of a second taken as a unit, will give a product equal to one-half this measured angle. But the number of rotations in a second being registered, the unit angle may be readily deduced from the unit of time. The product and one factor of it being thus known, we derive the other factor, or the time of the ray; this, with the space passed over—the double distance between the mirrors—affords one factor of another known product; so that finally dividing the space by the time we obtain the velocity.

We may here mention, in passing, that by the interposition of a column of water between the mirrors, through which the ray is passed, we have the means of ascertaining the velocity of the propagation of light through water, and that this is found to be less than its velocity in air.

The result of M. Foucault's experiments was a velocity of 185,172 miles; so that taking all the methods into consideration,—neglecting only M. Fizeau's as subject to important errors from mechanical imperfections,—we may conclude that the velocity of light in interplanetary and cosmical space is about *one hundred and eighty-six thousand miles in a second!*

This enormous velocity takes hold upon the infinite, and is beyond any adequate comprehension. The greatest speed we

can generate in a body moving through the air or over the surface of the earth, is a mere bagatelle to a velocity which will belt the globe in the eighth part of a second. Yet it is some consolation to know that we can always halt one immensity, however overbearing, with the *qui va là* of another. Space, in fact, is infinite, and we can, by bringing it face to face with this vast velocity, not only reduce the scale of numbers upon which the latter plumes itself, but even turn the tables upon it and obtain tremendous results in the opposite direction, so as to leave the impression that, after all, light is really slow! To achieve this desirable result, we count off space in units of this velocity. We thus find that light will reach us from the moon in about one second and a quarter; from the sun, in eight minutes and thirteen seconds; from the fixed star, Alpha Centauri, in about three years; from 61 Cygni, in nine years; from Alpha Lyrae, in twelve years; whilst from the remotest nebulae, as surmised by Sir Wm. Herschel, it will require not less than two million years! These facts develop a singular field of contemplation. When we view, in an unclouded night, the starry dome, we are really looking upon a historical chart reaching back into the far-distant ages of the past. The rays that reach our eyes started upon their journey, some an hour, some a day, some years, some centuries, ago from the stellar bodies in our field of vision. This light may be partially that reflected by these bodies from rays which left the earth just twice those periods past. So that the whole history of our earth may now be illustrated on the vault of heaven.

The two leading theories of light are known as the corpuscular, emission, or Newtonian, and the wave or undulatory theory. The first seems to be attributed to Newton on insufficient grounds. He, indeed, advanced it as a means of comprehending certain phenomena of light, but he explicitly says: 'Tis true that from my theory I argue the corporeity of light; but I do it without any absolute positiveness as the word "perhaps" intimates; and make it at most but a very plausible consequence of the doctrine, and not a fundamental supposition, nor so much as any part of it.'¹ Newton, indeed, whilst urging objections against

¹ Phil. Trans. Vol. x. p. 5086: quoted by Prof. Baden Powell.

the undulatory theory, still held a particular hypothesis of undulations, consentaneous with corpuscular emission, as possible. In fact, however, he adopted positively no hypothesis. 'Were I', says he, 'to assume an hypothesis, it should be this, if propounded more generally, so as not to determine what light is, further than that it is something or other capable of exciting vibrations in the ether; for thus it will become so general and comprehensive of other hypotheses as to leave little room for new ones to be invented.'²

The corpuscular theory assumes that a luminous body projects or emits, in all directions, extremely minute particles, which falling upon the retina of the eye produce the sensation of light, just as minute particles of any perfume excite sensation in the organs of smell. A leading objection to this view arises from the extreme velocity under which these particles must move. 'If each luminous molecule', says l'Abbè Moigno, 'should weigh a grain, its momentum, endowed as it is with so excessive a velocity, would equal that of a ball of seventy-five kilogrammes (165 pounds avoirdupois) traversing more than one thousand feet a second. The weight of the luminous molecule must be, in reality, some millions of times less than we have supposed it; but as, on the other hand, we can make efficient at the same moment several millions of these molecules collected in the focus of a lens, the mechanical effect produced by the sum of their momenta ought to be rendered sensible,—which result it has been impossible to obtain under the most favorable circumstances.' (Vol. i: p. 71.) This negative evidence is, however, not conclusive. It is a part of this theory,—in its explanation of the passage of light from air into water or glass,—that the luminous molecules which escape reflection from the surface of the second medium, advancing still more closely to the particles of water or glass, reach the sphere of their attraction, and then enter the substance. This entrance is made with the original velocity *increased* by the powerful attraction of the particles of water or glass. The undulatory theory, on the contrary, in its explanation of the same phenomenon, holds that light traverses the new medium, if denser than that from which it is received,

² Phil. Trans. x. 5089.

under a *diminished* velocity. Here is then, as between these theories, the crucial test. First applied by Arago, the result has already been mentioned as obtained by Foucault's apparatus. A *diminished* velocity in the denser medium is established by experiment; and the corpuscular theory, without essential modification, must be abandoned.

The wave theory of light assumes the existence of a fluid of great tenuity pervading cosmical space, which is called *the ether*. The luminous body is supposed to put the ether into vibration, as a sonorous body excites vibrations in the air. The luminiferous waves travel forward, as waves raised upon a surface of water, with the velocity we have already established. There is no transmission of the ethereal particles; each, after suffering the vibratory motions necessary to carry it through all the phases of the wave, subsides to its former position. Light is, therefore, upon this theory, a *property*, a mere vibration of an assumed highly elastic fluid having a fixed relation to our organs of sight, just as sound is a vibration of sensible matter communicated to the auditory organs.

The vibration of the air caused by a sonorous body proceeds by alternate compression and expansion along the lines of communication; in other words, it is *longitudinal*, like that propagated by expansion and contraction along the length of an elastic cord. Waves excited upon the surface of water are, on the other hand, *transversal*, the vibration of each particle of water being perpendicular to the rectilinear advance of any face of the wave. Now, certain phenomena of light plainly show that the vibrations of the ethereal molecules must be regarded as of the latter class, with, however, this remarkable difference, that there must be simultaneous vibration of particles of the luminiferous ether in all directions at right angles to the lines of progression; that is, alternate expansion and contraction transverse to the line of the ray. Each particle may be considered as vibrating under two forces acting in lines perpendicular to each other. If, then, the force along one line is separated in its action by an interval from that along the other, curvilinear motion will result; circular, if the interval be just one-fourth of a vibration; elliptical, if it be any other amount. These results, theoretically

anticipated as possible, are established as probable by the explanation they afford to certain actual phenomena of light.

The explanation of the aberration of light, as well as of other phenomena, upon the undulatory hypothesis, seems to require the particles of ether to be regarded as fixed, except for their vibratory movements, and not subject to any participation in the motion of the earth. Consequently, Sir John Herschel advances a third theory of light as one worthy of consideration. 'Still retaining the idea of an ethereal medium,' he says, 'its constitution may be conceived as an indefinite number of regularly arranged equidistant points *absolutely fixed and immovable* in space, upon which, as on central pivots, the molecules of the ether, supposed *polar* in their constitution, like little magnets (but each with three pairs of poles, at the extremities of three axes at right angles to each other), should be capable of oscillating freely, as a compass-needle on its centre, but *in all directions*. Any one who will be at the trouble of arranging half a dozen small magnetic bars on pivots in a linear arrangement, will at once perceive how any vibratory movement given to one, will run on, wave-fashion, both ways through its whole length. And he will not fail to notice that the bodily movement of each vibrating element will be transverse to the direction of the propagated wave. As this hypothesis, however, has hitherto received no discussion, and is here suggested only as one not unworthy of consideration, however strange its postulates, we shall not dwell on it; remarking only that every phenomenon of light points strongly to the conception of a solid rather than a fluid constitution of the luminiferous ether, in this sense—that *none of its elementary molecules are to be supposed capable of interchanging places*, or of bodily transfer to any measurable distance from their own special and assigned localities in the universe. * * * This would go to realize (in however unexpected a form) the ancient idea of a crystalline orb.' (pp. 284-5.)

A ray falling upon a transparent body, as a plate of glass, does not pass on in the same line, but is bent or refracted. The wave is retarded in its progress among the particles of the denser medium, and its front is changed in direction. A ray passing from air into glass is bent towards the perpendicular drawn to the surface

at the point of incidence; and there is a fixed ratio for each substance,— called its *refractive index*,— between the sines of the angles of incidence and of refraction; the angles, namely, under which, as measured to the perpendicular, the ray first strikes and then enters the medium. If, now, a piece of glass having two plane surfaces inclined to each other at an acute angle,— the simplest form being that of a triangular prism,— be so arranged that a circular pencil of light may fall upon one of these surfaces, it enters the glass with the usual change of course, strikes the adjacent side, and passes out from the denser into the rarer medium of the air with its line of progression still further bent in the same direction. If a screen of white paper is held in the transmitted pencil, a surprising change in its character will be observed. It is found projected on the paper in an elongated form and to be no longer white, but colored in transverse bands with all the familiar colors of the rainbow. Commencing at the end of the image, or *spectrum*, least removed from the original course of the rays, we find a band of red, then orange, next yellow, green, blue, indigo, and lastly violet. Under favorable circumstances it is possible to detect beyond the violet a faint shade of color best described as lavender. To the young student the names of these colors of the Newtonian spectrum in their due order, occasionally prove such a burden to the memory, that some ingenious teacher, moved to pity, has combined their initials into a name, which always sounds to us like the name of some youth of great promise suddenly and mysteriously cut off,— the name of Roy G. Biv.

The spectrum affords us an *analysis of light*, by which it is shown that undulations of white light are compounded of waves of colored lights. But not all these colors are considered to be primitive. It is supposed that the primary colors are but three in number, that the union of these will make white light, and that by their varying dispersion over the area of the spectrum and admixture in different proportions, the other colors are produced. The three primitives were long taken as red, yellow, and blue; it being held, in accordance with the experience of artists in the mixing of their colors, that a union of the prismatic yellow and blue would afford green. But M. Helm-

holz's and Sir John Herschel's experiments have shown that the 'direct mixture of the prismatic yellow and blue, in whatever proportions, can no-how be made to produce green; while that of the prismatic green and red *does* produce yellow.' Therefore red, green, and blue,—the initials of which are exactly the initials of the three names of the above-mentioned Mr. Biv, affording a coincidence largely to the credit of the inventor of Mr. B.,—are now held as the three primitive colors, the remainder being compound.

If the colored rays of the spectrum be collected, by contrary refraction, into a single pencil again, it will prove to be white-light. If a portion of the colored rays be collected into one compound color, and the remainder of the spectrum into another, the tints so produced are said to be *complementary* to each other. They bear a striking relation to each other, causing either to contrast with the other with softness and power, and to the greatest advantage.

Color is, however, not produced solely by refraction. It is caused also by the 'interferences' of light from which arise many of the colors of the clouds, and the scintillations of the stars. Two equal waves on the surface of water meeting in the same phase of undulation, crest upon crest, combine into a wave of double their own amplitude. If, however, their phases are precisely opposed, if the crest of one be exactly superposed upon the trough of the other, the result will be total interference and mutual destruction. If they meet in any discordance of phases, lying between these extremes, the results will be waves of different intensities, less than that of the original waves. These interferences are exemplified in the case of the *spring* and *neap* tides; the wave in the former case being the sum, in the latter the difference, of the waves due to the action of the sun and the moon. In the port of Batsha, at particular seasons when the morning and evening tides are equal, there is no tide at all, in consequence of the interference of the tidal waves which approach through two channels of unequal length, whereby one is kept behind the other just six hours. Thus the low water of the morning tide approaching through the longer channel, meets the high water of the evening tide coming in through the shorter, and com-

pletely neutralizes it. A similar interference of tidal waves takes place at a point in the North Sea, midway between Lowestoft and the coast of Holland.

These interferences of waves of water find their counterpart in the case of light-waves. Two lights will sometimes produce darkness; or, as the first observer of the phenomenon, Father Grimaldi of Bologna, expresses it, 'an illuminated body may be made darker by the addition of light.' By the junction of interfering waves of light in opposite phases, the vibration of the ethereal molecules is arrested. This phenomenon and that of partial discordance resulting in waves of colored light, are displayed in the *colors of thin plates*, first investigated by Boyle and Hooke. They are shown whenever transparent bodies are reduced to films of excessive tenuity; as, for instance, in the familiar film of the soap-bubble. If we take up from the usual soapy liquid, a film upon the mouth of a wine-glass, and hold it in a vertical position, it will appear uniformly white at first; but growing thinner at the top by the descent of the fluid particles, colors will soon be exhibited there. These colors will arrange themselves in horizontal rings and constantly move downwards to give place to others of increased brilliancy, as the film grows more and more thin. Presently the uppermost ring becomes *black*; shortly after which the bubble bursts from its extreme tenuity at the black point. The colors vary with the thickness, and are due to the interference of the waves of light reflected from the upper and the under surface of the film. They are also produced when, as in Newton's experiment, a convex lens of considerable radius is pressed upon a flat surface of glass. The distances of the various points in the convex surface from the plane below being readily calculated, a means is had for measuring the length of the light-waves of various colors. These lengths being ascertained and the velocity of light known, we obtain at once the number of vibrations made by a ray of any color in a second. For the extreme red of the spectrum, the wave-length is found to be a little more than one thirty-four-thousandth of an inch and the wave-period about one four-hundred-trillionth of a second; for the extreme violet, the wave-length is one seventy-thousandth of an inch and the number of

vibrations in a second more than eight hundred million of millions.

A most remarkable circumstance connected with the spectrum remains to be mentioned. The whole length of it is traversed by dark lines. Wollaston observed six; Fraunhofer, nearly six hundred; and Sir David Brewster enlarged the number to two thousand. Singularly enough, spectra formed by the light of the fixed stars are crossed by dark lines in different arrangement—showing some difference in the rays. Again, when the light from white flames is used, the spectrum is found to be crossed with bright lines; and minerals thrown into these flames develop, each its own system of bright lines. The *spectroscope*, as the instrument is named with which these effects are best observed, is no doubt destined to important uses in chemical analysis and to further triumphs. Already, after having measured and weighed the sun, through this means we know something of his mineral constitution.

‘What is *polarized light*?’ is one of the questions with which the populace vex the souls of philosophers. And the inquiring populace are generally dissatisfied with the explanation tendered them. They feel a void, a vagueness, a desire further to interrogate because no categorical *definition* (to use the word very loosely),—as when we say ‘Lead? why, lead is a metal,’—can be furnished them. If they could be told that polarized light is *blue light*, they would go away satisfied because everybody feels quite strong in his knowledge of the meaning of color; but tell them that it is *flat* or *plane* light, and they retire reasonably discontented.

The briefest explanation of polarized light is negative in character, and derived from what it does and not from what it is. Thus: polarized light is not capable of reflection at oblique angles of incidence in every position of the reflector, like common light, but in certain positions only; it penetrates a plate of *tourmaline*, cut parallel to the axis of the crystal, in some positions, but in others, unlike common light, is intercepted; and in certain positions, it does not suffer double refraction by Iceland spar.

The term *double refraction* indicates the nature of the phe-

nomenon it names. An object seen through a doubly refracting body in proper directions appears double. The ray from it is split into two, one of which takes nearly the ordinary course, and is hence called the ordinary ray, whilst the extraordinary ray diverges considerably. If, for instance, through a rhombohedral crystal of Iceland spar, we look at any illuminated point, the image will be duplicated, in all positions of the crystal save one,—namely, when the ray is transmitted along the optic axis of the crystal. This axis is called, strangely enough but by authority of usage, the *axis of double refraction*. It is really the axis of *no* double refraction.

If, now, the two images be viewed through a tourmaline plate an extraordinary result is displayed. The two will appear with different amounts of distinctness, and, as the plate of tourmaline is turned round, one will gradually fade whilst the other grows stronger. The revolution of the plate being continued, presently the fading image wholly disappears, and the other attains a maximum of illumination. Revolve the plate still further, and the order of these changes is reversed; the lost image reappears and grows more and more conspicuous, as the other diminishes in brightness until it, in turn, goes out. It is plain, therefore, that each ray traversing the spar has become endowed with certain properties, which we express by the term *polarized*. All doubly refracting bodies polarize light; and polarization may also be effected by reflection at certain angles. Theoretically, it is presumed that the molecular arrangement of the spar is such as to separate the series of undulations constituting the ray of common light, into two, in one of which all the transverse vibrations have ceased except those in one plane,—or, we should prefer to say, all the vibrations parallel to some one plane have ceased, while in the other, all have ceased which were perpendicular to the same plane. The tourmaline has such a structure that the plane-polarized ray can penetrate as it were through slits in its substance parallel to its long axis; if the ordinary ray hold this position, the extraordinary vibrating at right angles to the former will be intercepted.

Tourmaline is itself a polarizer. If a second plate of the same substance (in this connection called the *analysing* plate) be

placed with its long axis perpendicular to that of the former (called the *polarizing* plate), it will completely intercept a ray passing through the first.

Polarization is also effected, as we have said, by reflection under certain angles. The polarizing angle was found by Sir David Brewster to be connected with the refractive index of the reflecting body through a simple and invariable law,—the latter being the *tangent* of the former,—or, what is easily shown to be the same thing, the polarized ray is perpendicular to the refracted ray. The angle of polarization for water is $53^{\circ} 11'$; for glass, $56^{\circ} 45'$. But these should be called the angles of maximum polarization; for light falling at other angles upon these media, is more or less partially polarized. There is a great deal of polarized light in the blue light of the sky, and in the glare from the surface of water. If in the latter case the polarized light be intercepted by a plate of tourmaline, the glare will be so diminished that the eye can detect the bottom of a clear stream, or rocks below the surface of the sea, otherwise wholly invisible from the point of observation.

A plate of any crystalline structure, except the tessular, introduced between the polarizing and analysing plates, produces colors, from the interference of the polarized waves; and there are many substances which produce chromatic illumination passing, on the rotation of the body, through all the colors of the spectrum in regular order. On the rotation of the substance under examination from right to left, the changes proceed from red to blue, which is called *right-handed*, or from blue to red, which is called *left-handed*, circular or elliptical polarization. There is thus afforded, through one of the most delicate and immaterial of natural agents, a means of prying into the obscure molecular arrangement of transparent bodies. Already useful results have been obtained. Starch, dextrine, and grape-sugar, all possess the property of circular polarization; but the two former polarize to the right (whence the name *dextrine*), the latter towards the left. Thus we can judge through a polarizing apparatus of the changes in an infusion of malt undergoing fermentation. Again, cane-sugar polarizes to the right, and it alone of the sugars has value as an article of commerce; yet it

degenerates rapidly, under certain circumstances, into grape-sugar, which will not crystallize. A polarizing apparatus enables us to detect this change, of which neither taste, color, nor specific gravity, would give us warning.

The recondite relations between the mysterious agencies of nature, were never so finely illustrated as by one of Faraday's surprising developments. He experimented with magnetism upon light. The plane-polarized ray from a lamp was shut off by the analysing plate. In this position he subjected it to the force developed by a current through the coils of an electro-magnet, when instantly the ray was partially transmitted through the analyzer and the lamp-flame became visible. He had *magnetised the light!* 'His magnet', says Prof. Tyndall, 'turned the plane of polarization through a certain angle, and thus enabled it to get through the analyser; so that "the magnetisation of light and the illumination of the magnetic lines of force" becomes, when expressed in the language of modern theory, the *rotation of the plane of polarization.*'

It is a favorite figure of speech with some writers and speakers, who have a weakness for bathos, to inform their readers or hearers what emotion is suitable to certain emergencies in their discourse. When we are told that 'the heart which has no tears to shed at the recital of this moving story, must be hard indeed,' we make it a point of honor not to weep. When we are assured that 'it is the best evidence of an indurated bosom and a seared conscience, not to be ready to go into flagrant indignation at the outrage,' we endeavor to be unusually calm; and when it is emphatically announced to us that 'no man with the least sense of beauty or sentiment of character could fail to love her,' we confess to such a revolt at the superb impudence which dares to gauge our emotions by its own, that we enter at once upon a hearty hatred of her. Notwithstanding our feeling upon this subject, we venture to affirm that every mind must approach the study of the stupendous forces of nature revealed to us by the phenomena of light, with something of awe. For we tread consciously near the outer boundaries of the material and close upon the invisible threshold of the spiritual.

Knowing the velocity of sound, and that of light, we can readily calculate the increased elastic force with which it would be necessary to endow the air, in order to make the velocity of the former equal to that of the latter. This enables us, in the next place, to deduce the *bursting power* of the ether when so much of it is enclosed in a cube of an inch in the side, as is equal in quantity of matter to that existing in a cubic inch of air. It will be found to be more than *twelve trillion pounds on each face of the cube*. In dealing with the phenomena of light, 'we cannot escape', says Sir John Herschel, 'from the conception of enormous force in perpetual exertion at every point through all the immensity of space.' If we trace the vibrations of the ethereal molecules to their source, it is scarcely possible to suppose that the material particle, which gives rise by combustion or otherwise to these vibrations, does not itself undergo the same phases of undulation. Now, if the force necessary to drive this particle through its total excursion from its point of repose, within the brief period of (one-fourth of) an undulation, be calculated,—by assigning as the smallest length of such an excursion under which the retina may still be sensible to the vibration, only one quintillionth of an inch,—it is found to exceed the force of gravity more than *thirty-five thousand millions to one!* Thus, light, in the length of its waves and the rapidity of their transmission, in the excursions of the ethereal particles necessary to propagate it and in the force requisite to generate these excursions, in the minuteness of its penetration and the vastness of its dispersion,—stretches almost across the finite, and links the infinitely little with the infinitely great. Bacon complains that 'the manner in which Light and its causes are handled in Physics, is somewhat superstitious, as if it were a thing half-way between things divine and things natural;' and the manner probably remains to this day. But Bacon himself confesses that light, 'hath a relation and correspondence in nature and corporal things, to knowledge in spirits and incorporeal things.'

ART. III.—1. *History of the Life of Arthur, Duke of Wellington.* From the French of M. Brialmont, Captain of the Staff of the Belgian Army; with Emendations and Additions by the Rev. G. R. Gleig, M. A., Captain-General to the Forces and Prebendary of St. Paul's. In Four Volumes. London: Longman, Green, Longman, and Brothers. 1860.

The work of General Brialmont has hardly received, from the press of this country, the degree of attention to which it is fairly entitled as the most authentic account of a man who occupied so large a space, for so long a time, in the eyes of Europe, as the Duke of Wellington. It was published at a time not at all favorable to a large American circulation. It was on the eve of the war, when the public mind was too deeply absorbed in contemplation of the approaching crisis, to be diverted into other channels of less immediate interest. Apart, moreover, from the fact that the exploits of Wellington had been performed in support of a cause which is peculiarly distasteful to Americans of all classes, and every shade of political opinion, the most striking portion of them had already, many years since, been narrated by a military writer of surpassing ability, whose fascinating pages find no rival in the work of de Brialmont. We allude, of course, to Colonel Napier, and his great history of the Peninsular War. Though doubtless possessed of great talents, and many of those high qualities which are always found associated with brilliant achievement, there seems to have been nothing in the character or conduct of Wellington calculated to excite the admiration or enthusiasm of a people supposed to be peculiarly attached to a republican form of government. He was the most haughty noble of an age in which haughtiness and nobility were far more closely allied than they are at present, and he seems to have had quite as great a contempt for the vulgar herd as Coriolanus, or any other Roman of them all. The earlier years of his military service had been devoted to the overthrow of ancient thrones, and the extinction of ancient dynasties, in India, where he had already become a highly useful

agent in extending the most tremendous system of conquest of which the world has afforded an example since the destruction of the Roman Empire, when he was recalled to assist in restoring effete dynasties, propping ancient thrones, reviving abuses grown hoary with age, and resisting a system of conquest, which although right enough in India, was thought not to be exactly the thing in Europe. There may appear to be some incongruity between the nature of his employment in India, and the nature of his employment in Europe. But there is one reconciling feature which stands out conspicuously in both. In each instance he acted in utter disregard of the wishes of the conquered people; in each he forced upon them a government they utterly abhorred. Few men can be found at this day, bold enough to maintain that the French people entertained a very great affection for the Bourbons, and since the events of 1857, the world has learned pretty well what to think of that deep attachment to the British Government which English writers used to tell us the Hindoos universally felt. These remarks are merely designed to explain the reason why, in our opinion, the work of Brialmont has received so little notice from the press, and not as the commencement of an extended commentary. Having noticed, in the author's account of the campaign of Waterloo, several incidents which place the conduct of Wellington on that occasion in a different light from any in which we had hitherto seen it, we use the title of his book merely as an introduction to our main subject, which is the campaign in question.

The Duke of Wellington is never spoken of, by English writers of any class, but in terms of the most extravagant eulogy. That he did great things is true, but we can conceive of nothing which a mere mortal could do, sufficiently great to justify the hyperboles of which he has constantly been the subject. Upon comparing the catalogue of his exploits with those of other generals, such as Turenne, Eugene, Marlborough, and the great Frederic, we fail to see the enormous superiority which we are told is so very apparent. Before the campaign of Waterloo, most assuredly, his achievements bore no comparison whatever to those of Napoleon. As compared with those of General Lee, they seem, including even Waterloo, absolutely insignificant.

General Lee, with a force not so large as the Anglo-Portuguese regular army which Wellington had under him when he encountered Massena in 1809 — not half so large as his whole force if the Portuguese militia be taken into the account — in the space of twenty-eight days, in three battles, killed and wounded more men than Wellington ever killed and wounded during his whole career, from Assaye to Waterloo, both inclusive. In one of these battles Lee killed and wounded more men by 9000, than the French army lost, including prisoners, in the whole campaign of Waterloo, and the pursuit to the gates of Paris. In the same battle he killed and wounded more men than Wellington, Blucher, and Napoleon, all three together, lost in killed and wounded in the *battle* of Waterloo, by 5000 men. In the second of these battles he killed and wounded the same number that both the opposing armies lost in the battle of Waterloo; and in the third he killed and wounded more by 7000 than the French alone lost in the battle of Waterloo. In the three battles together, Lee killed and wounded more men, by at least 30,000, than the Allies and French lost in the whole campaign, including prisoners. The force with which Lee operated never amounted, at one time, to 50,000 men; the force with which Wellington and Blucher acted was, even according to English estimates, 190,000 strong. The force to which Lee was opposed was, from first to last, 240,000 strong; the force to which Wellington and Blucher were opposed was but 122,000 strong. When Massena invaded Portugal in 1810, Wellington had 30,000 British troops, and 25,000 Portuguese regulars, who, in the battle of Busaco, according to Wellington's own account, 'proved themselves worthy to fight side by side with the British veterans,' besides 40,000 admirable Portuguese militia. He had Lisbon for his base, with a British war fleet riding at anchor, and innumerable vessels of other descriptions plying between the port and England, and bringing the most abundant supplies of arms, provisions, and munitions of war. He had surrounded the port with the most tremendous system of fortifications known in modern times, and his task was to defend the strongest country in Europe. In Lee's case, his enemy had possession of the sea, and could and did land a powerful army to attack the very basis

of his operations, while he was fighting another of still greater strength in front. It is probably not altogether just to Wellington to institute this comparison. If his deeds look but commonplace beside the achievements of this campaign, so do all others. The history of the world cannot exhibit such a campaign as that of Lee in 1864.

Wellington's deeds will always be a subject of pride and exultation at home; but abroad, the only title to popular remembrance his name will enjoy, will be derived from its association with that of Napoleon, in the last act of his military life. His deeds in the Peninsula and in India, have already begun to be remembered with that faint sort of recollection which is bestowed upon the deeds of Marlborough and Turenne; but the name of Napoleon keeps the memory of Waterloo fresh in the minds of the whole race of mankind. There are few of our readers who do not recollect the noble apostrophe of Byron to the fallen monarch in the third canto of *Childe Harold*.

'Conqueror and captive of the earth art thou,
She trembles at thee still, and thy wild name
Was ne'er more bruited in men's minds than now,
That thou art nothing but the jest of Fame,' &c.

These lines, written during the first year of Napoleon's short but painful captivity in St. Helena, are singularly expressive of the contemporary sentiment with regard to him. He had burst upon the world amidst the throes of a revolution, which had had no parallel in the records of the past, as a volcano is thrown to the surface of the ocean by the convulsions of an earthquake. Like that grandest and most appalling of material phenomena, as long as he continued in full activity, he had attracted the undivided gaze of all who were within the range of vision, comprehending in his case the inhabitants of the whole civilized world. When his career had closed forever, and he remained a helpless captive in the hands of his implacable foes, as if to complete the parallel, in the middle of the Atlantic Ocean they had selected for his prison the summit of an extinguished volcano, the aptest type of his own wretched and ruined fortunes. Though escape was next to impossible, it was natural that the nations, to whom his name had been so long a terror, should

‘hold their breath for a time,’ and that he should become more constantly the subject of their thoughts and conversation, than he had been in the day of his most prosperous fortunes. Long before his death, the change in European sentiment with regard to him, had already become so great as to attract the attention of statesmen. Chateaubriand, alluding to it, said, that his grey coat and cocked hat, hung up in any quarter of Europe, would produce a revolution. Surely no human being, of whom we have any account, ever so profoundly affected the imagination of mankind. This was the fact while he was among the living, and is still more emphatically the fact now that he is dead. It was proved, while he was living, by the desire, amounting in many cases almost to madness, to catch a glimpse of his person ; by the frantic haste with which travellers from all parts of the continent rushed to Paris, at the imminent risk, as they supposed, of being detained in captivity, as soon as they learned that he had returned from Elba ; by the crowds from the most remote parts of England, Scotland, Wales, and Ireland, that swarmed into Portsmouth, when it became known that he was a prisoner there on board the *Bellerophon* ; by the appearance presented in the harbor, literally paved with boats to such an extent that the space between the shore and the ship, which lay a mile off, could be passed over dry-shod ; by the pertinacity with which strangers who landed at St. Helena, and the sailors looting to the men-of-war which cruised around the island, not only endeavored, in spite of the severe penalties annexed, to break through the regulations that they might catch a glimpse of him through the gun walls, when he was taking his evening walk. His death, by the unbounded circulation of cheap prints of him among the lower classes throughout Europe, to a great extent in America ; by the eagerness with which every man who ever saw him, or heard the tones of his voice, to be by all descriptions of persons when he speaks ; by the devotion with which the slightest memorial is treasured up by those who are so happy as to possess it ; by the prodigious number of books which have been written about him, and the readiness with which they are purchased by chasers for them all. We have seen the

number of these books estimated as high as ten thousand, and although this is a manifest exaggeration, it at least in some degree proves to what a prodigious extent he is the hero of the popular imagination. The merit of these works is as various as the character and occupations of their authors. They are written for every conceivable purpose, and under the inspiration of every possible motive. And yet they all seem to be received with the same degree of favor by the public. The mere name of Napoleon in the title page is enough to sell the worst book, and temporarily to rescue from oblivion the most transcendent blockhead of an author.

It is entirely, we are disposed to think, from its association with the last act of Napoleon's amazing career, that Waterloo is at this moment, to the majority of mankind, the most interesting spot upon the face of the earth. The plain of Marathon, the dome of St. Peter's, the Pyramids of Egypt, the city of Jerusalem, the very site upon which it is supposed that once stood the Temple of Solomon and its successor, far less deeply affect the imagination or move the interest of the general traveller. It is not merely because it was the scene of a great battle, where thousands were slaughtered; for were that all, there are within a circuit of fifty miles, taking this as a centre, quite as many fields as full of interest as Waterloo. Flanders, indeed, is covered with fields of battle; it has been for centuries the 'cockpit of Europe.' 'No matter where they quarrel,' say the Belgians, 'they always come here to fight it out.' If the skeletons of those who fell in battle, and are buried beneath the soil of Belgium, from the time when it was invaded by the 'first bald Cæsar,' to its last invasion by Napoleon — could be dug up, a solid pavement for the whole country might be made of the bones; could their skulls be arranged in the form of a pyramid, the pile would overtop the loftiest spire of the loftiest church in Brussels or Antwerp. Could the blood that has been shed in that terrible neighborhood be collected into a lake, it would float the proudest navy of modern times. Within a few hours' journey of Waterloo, lie Senef, and Ramilies, and Oudenarde, and Malplaquet, and Genappe, and Fleurus. But the traveller cares for none of these things. The world knows little and cares less for the

great Condè and Dutch William. It has grown 'dull to the great Marlborough's skill in giving knocks.' Eugene and Villars are remembered by it very faintly indeed. It has already forgotten Jourdan and Clairsait, and is hastening, as fast as it can, to forget Dumouriez and Louis Philippe. But Waterloo, and the man who fell there, can never be forgotten. Its memory is still as green as were its fields the next summer, when their extraordinary verdure led the contemplative Childe Harold to exclaim,

'How this red rain has made the harvest grow!'

Every traveller makes a pilgrimage to the spot, as the devotee of old made a pilgrimage to the shrine of his patron saint. It is worthy of remark, that the same enthusiasm is not felt with regard to any other of his numerous fields of battle. Few travellers from Genoa to Milan, leave the main track to visit Marengo. A railway track runs through the field of Austerlitz, and hundreds pass along it every day without dreaming of the celebrity of the spots lying to the right hand and to the left. Of the thousands who annually pass through Vienna, how many take the trouble to cross the bridge, that they may tread upon ground so celebrated as that of Essling and Wagram? Of the thousands of students educated at Jena, how many know that the town gave name to a battle which once levelled the Prussian monarchy in the dust? Of the thousands of travellers who annually visit the fair of Leipsic, how many are aware that they are treading upon ground made memorable by the mightiest conflict that occurred in Europe during the long interval that separated the era of Actius and Attila from the era of Swartzenburg and Napoleon. Waterloo alone, where the sun set forever on the fortunes of Napoleon, is still remembered and still visited with a reverence approaching superstition. The tomb of the martyr becomes the shrine of the saint. The field of his labor is passed by with indifference.

And yet, notwithstanding the celebrity which it enjoys, we are constrained to believe, that few campaigns recorded in history exhibit stronger evidences of the entire absence of all military skill in the conduct, and more certain marks of the superiority of good fortune to all human arrangements, than may

be found in that of Waterloo. It appears to us to have been a tissue of blunders from one end to the other; on the part of Napoleon, we see, after the first rush across the Danube, nothing but languor, hesitation, delay, and a total disregard of the opportunities which fortune repeatedly threw in his way; on the part of Wellington, an utter incapacity to penetrate the object of his adversary, and an obstinate adherence to a preconceived opinion, which led to the most fearful mistakes, and but for the inconceivable weakness of that adversary, must have resulted in his entire destruction. These are unusual opinions, boldly but honestly expressed, and as they are somewhat calculated to startle our readers, it is proper that we should point out our reasons for entertaining them. In order to do so, it will be necessary to ask attention to a concise narrative of the campaign, wherein we shall endeavor to show that the battle of Waterloo never ought to have been fought, and that had Napoleon been the man he *had* been a few years before, it never would have been fought.

Let us premise that the allies (Blucher and Wellington) had a vast superiority of force when the campaign commenced; that by keeping that force united, success to Napoleon was so utterly impossible, that he has told us himself he would not, in that case, have ventured to attack them; that his only hope lay in separating them, and attacking them in detail. The problem for them to solve was concentration; the problem for him to solve was the attack in detail. Did *they* pursue the best policy to ensure concentration? Did *he* pursue the most certain plan to produce a separation? We will endeavor to decide these questions, with the lights before us.

We pass over the spring of 1815, and come to the month of June, when Napoleon had assembled an army of 122,400 men for the invasion of Flanders, defended at that time by the combined English and Prussian armies, under the command, respectively, of Wellington and Blucher. What the real amount of that force was, we cannot learn with any degree of accuracy. Plotho, upon whose authority Alison relies, tells us that Blucher had 141,000 men, divided into four corps, averaging, of course, about 35,000 each. But Alison does not admit that more than

112,000 Prussians fought in this campaign, and does not tell us where the remaining 29,000 were while active operations were in progress. In order not to be above the mark we are content to adopt his figures, though Siborne, who is in general much more accurate, says Blucher's force was 117,000, and Napoleon calls it, in round numbers, 120,000. Wellington's army is set down by Alison at 106,000, of which, however, 4000 from Hamburg and 12,000 Danes had not arrived. His whole force, then, in Flanders, was 90,000, of which 85,000 were actively engaged; that is to say, 73,000 fought at Waterloo, and 7000 were detached at Halle. To this add 5,700 killed and wounded at Quatre-Bras. In all then, 197,000 men belonging to the commands of Wellington and Blucher were actually engaged in this campaign, according to English statements.

Upon consulting on a plan for the campaign which was soon to ensue, the allied generals agreeing in the opinion that it was of the last importance to preserve Brussels from the hands of the enemy, fell upon a scheme which we conceive to have constituted their first great blunder, and which bore within itself the germ of all the others which they committed during the operations. Three great roads led across the frontier from the French fortresses, directly to the city in question; the first from Saumur by Ath, Mons, and Tournay, directly upon the Duke of Wellington's communications. The second by Charleroi where it crossed the Sambre, and thence due north to Brussels, which is thirty-three miles from Charleroi; the route across the Meuse, which was so low down as to be considered out of the question. The attention of the Allies, therefore, was divided between the other two, Wellington undertaking to guard the Tournay route, and Blucher that by Charleroi. In order to effect his purpose, Wellington extended his line from the Scheldt to Quatre-Bras, a distance of fifty miles. His head-quarters were at Brussels, where also was his reserve; the large majority of his English troops were in the neighborhood of Ath, Tournay, Mons, &c., on the extreme right of his line, and considerably in advance. On his extreme left, at Quatre-Bras, twelve miles from Charleroi, and twenty-one from Brussels, he left but two thousand Dutch-Belgian troops to keep open the communica-

tion with the Prussians. There were, however, five thousand more at Nivelles, which is seven miles off, at the intersection of the road leading from Nivelles to Brussels, and that leading through Nivelles to Namur. Between Quatre-Bras and Brussels, so far as we have been able to discover, there was not so much as a regiment of any description whatever. Blucher undertook to guard the Charleroi route; his head-quarters were at Namur, his extreme right, under Zieten, at Fleurus, holding Charleroi by a detachment, and extending its piquets beyond the Sambre, his second corps at Binche, his third at Namur, and his fourth beyond Liege. The first three corps covered thirty miles; it is fifteen miles from Fleurus to Binche, and fifteen from Binche to Namur, and thirty from Namur to Liege. Blucher's line was thus 60 miles long, and as Wellington's was 50, the *allied* line was 110 miles long, from the Scheldt to Liege. It formed two sides of a right-angled triangle, the right angle being at Fleurus. It would be impossible, we submit, to make a more dangerous disposition of troops, in the expectation of an attack from and almost in the presence of, such an enemy as Napoleon, with his whole force concentrated and prepared for immediate action. It combined all the defects which had so often led to the destruction of large armies of his enemies in detail; which, in his first campaign, had caused the overthrow of Beaulieu, with forces double his own; which subsequently brought on the ruin successively of Wurmser and Alvinzi, before the walls of Mantua; which handed over Zurack and his whole army to capture at Ulm; which proved fatal to the Arch-Duke Charles, in the campaign of 1809, before Ratisbon. Every writer upon military subjects, impresses upon the reader the extreme danger of double bases of operation. As if on purpose to set at defiance all the rules of war, no matter how long sanctioned by the experience of the greatest masters, or how often the violation of them had proved fatal; the Allies established two different and opposite bases of operation, the distance between which was at least one hundred miles. Wellington received his supplies from Ostend and Antwerp, Blucher from Cologne and the Rhine. With their armies thus scattered, the allied generals lay motionless in their cantonments, until the morning of the 15th June, although Welling-

ton knew as early as the 6th that an immense number of troops was already collected in Maubeuge, and had received intelligence, (falsely as it proved,) that Napoleon was among them on the 10th. The English writers, finding it impossible to pass over this unheard-of apathy on the part of Wellington, endeavor to explain it by saying that he was waiting intelligence from Fouché, who had promised to furnish him with an exact plan of the campaign, before he concentrated his forces. We shall see presently that there was no truth in this suggestion. The fact is, the whole scheme for the defence of Brussels was a blunder, and a gross and palpable one. The enemy could break in at any point, and, getting within the line, prevent the scattered detachments from rallying, and uniting for a general battle.

Napoleon, in the ninth volume of his memoirs, criticises this plan with great severity. He said the allied generals ought to have concentrated their forces in rear of Brussels, before the 10th of June, and that had they done so, with his inferior forces, he either never would have ventured to attack them, or, if he had, must have been destroyed. The plan pointed out by Napoleon involving the abandonment of Brussels, and the retention of that capital being a great point in the defence made for Wellington by his admirers, why then did not he and Blucher concentrate their armies *in front* of Brussels, and await the attack of Napoleon, or become the assailants and march against him in one body? Alison treats with scorn the suggestion that the armies thus concentrated could not have been subsisted. 'Men', he says, 'do not eat more when brought together, than when scattered over a hundred miles.' Moreover, he tells us that, after the campaign actually commenced, 190,000 men were brought together, and very comfortably subsisted for days. As for the country not being able to afford supplies, he calls attention to the fact that Marlborough and Eugene had subsisted for weeks together 100,000 men one hundred years before, in the same country, which it was now said could not support 200,000 men for a few days, although it was more than double as productive in 1814 as it was in 1709.

Napoleon having determined to pursue the route by Charleroi, took measures to deceive his enemies with regard to his

intention to the last moment. By marching national guards into the fortresses, he relieved the regular troops; and tripling the line of sentinels along the frontier, and forbidding any one to pass the boundary on pain of death, he was enabled to concentrate his troops, without giving alarm to the enemy, close to the Sambre. It is now said that the Prussian officers beyond the river had a dim vision of these movements, and reported not only the march of troops, but the direction in which they were moving. Be that as it may, their reports did not in the least disturb the profound security in which both Wellington and Blucher were indulging, or produce the slightest change in any of their dispositions. At night, on the 14th of June, 1815, they were distributed just as they had been for a month before, while a few miles from their centre lay the whole French army, with the Emperor in the midst of them, who issued one of those stirring proclamations which have become so celebrated, reminding them that it was the anniversary of Marengo, and calling on them to emulate the glory of that immortal day, in the conflict that was approaching. At daybreak they began to move in three columns, driving the Prussian cavalry piquets before them, and crossed the Sambre, the right at Chatelet, the centre at Charleroi, and the left at Marchiennes. By ten o'clock the whole army was over the river, the Prussians under Zieten having fallen back, fighting along the paved road to Fleurus, where was their rallying ground, and having lost 1500 men out of 27,000 in the operation. Napoleon now gave the command of the left wing, 42,000 strong, to Marshal Ney, to whom was assigned the task of attacking Les Matre Bras, twelve miles distant, at the intersection of the roads from Nivelles to Namur, and from Charleroi to Brussels, a point of the utmost importance, since upon it depended the communication between the head-quarters of Wellington at Brussels, and those of Blucher at Namur. It was at that time held by a Dutch-Belgian force only 2,000 strong; Ney was twelve miles from it with 42,000; and its nearest succor was the 5,000 troops in Nivelles. (In order that the reader may understand what follows with accuracy, we ask him to ascertain the places mentioned, the roads, &c., on the small sketch of the country around Charleroi, which he will find

annexed.) It was the intention of Napoleon to attack, in person, the Prussian rallying point at Fleurus, at the same time that Ney attacked the English position at Quatre-Bras, with an overwhelming force, and thus effectually destroying the communication, to deal with them separately with his whole force, being superior to either taken in detail.

Napoleon was now in a position quite as favorable as he could have desired. By a march of only three miles that morning, he had come into the very midst of his enemies; he had surprised them so completely, that had he fallen among them from the skies their confusion and consternation could hardly have been greater; he had it in his power to carry out the object of his previous combinations, which was to separate the two armies, to prevent their reunion, and to attack them in detail. In order to accomplish this, and to secure the success which must inevitably have followed such accomplishment, it was necessary to use the utmost vigor, promptitude, and despatch. But it is evident to any one who reads the details of this campaign, that although he could still plan a campaign as ably as ever, his power of execution was already gone, never to return. None of his campaigns was planned with higher wisdom, in none did he succeed more completely in concealing his initiatory movements from his enemy, and in none did he so completely fail to carry out the designs he had conceived. The Napoleon of 1809, or of 1814, would never have halted an instant at Charleroi. He would have pushed directly after Zieten to Fleurus; he would have ordered his right to march from Chatelet, and thrown itself 30,000 strong between his corps and that of Kleitz, which was at Binche, fifteen miles off; with his centre 50,000 strong, he would have attacked the front and left flank of Zieten, while his right assailed his left; and by three o'clock on the 15th, that corps, after its losses of the morning still 25,000 strong, would have been killed, captured, or dispersed. He was, at Charleroi, only eight miles from Fleurus, while it is fifteen miles to Binche, where was the corps of Kleitz. That corps hastened to Fleurus as soon as it received the intelligence that the French had crossed. It was but 28,000 strong, and it could only have arrived in time to share in the destruction of Zieten.

If it had fallen back on Thielman's corps, with which Blucher was, still Napoleon would have been superior to the two combined, by 25 or 26,000 men. If it had arrived after the destruction of Zieten's corps, it must itself have been destroyed that day, or if it had fallen back upon Blucher instead of coming directly forward *that* day, the two must have been destroyed. Bulow's corps, being sixty miles from Fleurus, did not join until the evening of the 17th. Wellington would have been unable to avert this catastrophe, for none of his troops as it turned out, arrived to reinforce the detachment at Quatre-Bras until noon the next day, although that position was left perfectly quiet the whole day before, and there was nothing to stop him. But if Napoleon had been the man he was in 1809 or '14, there would have been a very serious impediment in his way. For he would have ordered Ney to march instantly on Quatre-Bras, and take possession of it,—it could have offered no resistance,—and to occupy the defiles of Genappe, with his 42,000 men, until he himself had finished with Blucher. Wellington, with the force which he brought up on the 16th could not have forced that defile, for he had no artillery, and by the time the rest of his troops assembled, Napoleon, having destroyed Blucher, would have been on his flank (see the map) with his whole army. Or, Ney taking possession of Quatre-Bras, might have continued his march along the Charleroi road in the direction of Brussels. On the way, the next morning, he would have met the troops of Wellington repairing to Quatre Bras, in scattered detachments, without artillery or cavalry, marching without any sort of order, by brigades, regiments, and companies. What effect the appearance of 42,000 men, with five thousand cavalry and 100 pieces artillery, all concentrated, in the midst of troops thus scattered, might have produced, we leave it to tacticians to say. To our simple apprehension, it seems that they must have been picked up by regiments as they came on. If the Duke of Wellington, however, hearing that Quatre-Bras was captured, and Blucher overwhelmed, had declined to march to Quatre-Bras, he would have fallen back from Brussels, and concentrating beyond that city, the final battle would never have been fought at Waterloo.

That such might have been the issue, had Napoleon made such

use of the 15th June as he was wont in his better days to make of his time and opportunity, is not our opinion alone. We derive it from a work well known to the world; the most minute and accurate that has been published of this campaign, written by an English officer, (Capt. Siborne), and published more than thirty years ago. But the exertion he had already made, seemed to have exhausted the energy of Napoleon. He remained the whole day at Charleroi, while Blucher was making the most gigantic exertions to concentrate his army upon Fleurus; succeeding at last in bringing together three of his corps, only so late as twelve o'clock on the 16th, more than twenty-four hours after the French had crossed the Sambre; an incontestable proof that Napoleon, by the exercise of even ordinary energy, might have either crushed all three in detail, or dispersed them so completely that they could never have re-united. The Prussians, he it observed, showed a remarkable alacrity in disbanding throughout this campaign. Bulow, who commanded the 4th corps, was sixty miles off, and could not be expected to take part in the approaching battle; in fact, he did not join until the evening of the 17th, so that Blucher could depend on only three corps, forming in the aggregate a little more than 80,000 men, while Napoleon himself remained at Charleroi the whole day on the 15th; his troops lay in loose array, occupying the space between that town and the position of Ligny, which the Prussians had occupied, and where every moment of the afternoon and night, and until noon the next day, they were receiving reinforcements, never attempting further than, by a little light skirmishing, to interrupt their proceedings. In the same manner the left wing under Ney, was scattered all the way from the river to within two miles of Quatre-Bras, where there were only 2000 troops, without once attempting to take possession of that vital point, apparently waiting until the Duke of Wellington should reinforce it so strongly that it could not be carried but at an immense expense of life. Wellington, in the meantime, appeared to be quite as anxious that Ney should take it without loss, for he gave him twenty-four hours to do it in, not a man arriving to support the garrison until twelve o'clock on the 16th. Ney slept that night at Gosselies, and Wellington danced that night at Brussels, at the Duchess of Richmond's ball. Ney's conduct

was excusable, for he had received no orders, but English ingenuity has been exerted to the utmost to apologise for the apathy of Wellington.

Information had been despatched to Wellington of the French advance in great force, as soon as they crossed the river; but from some strange neglect in the intermediate stages between Charleroi and Brussels, it did not reach him until three o'clock. He made very little of it, (taking the affair for a mere feint); so little, indeed, that he actually sent orders to the officer commanding at Quatre-Bras to evacuate that post, and fall back on Nivelles, where he proposed to concentrate the army. Fortunately for him, the officer in command disobeyed the order, and afterwards received the approbation of his chief, the Prince of Orange, for doing so. The most fatal consequences must have ensued from obedience, as the reader will see by casting his eye over our little map. From Fleurus, where Blucher's extreme right lay, to Quatre-Bras, where lay Wellington's extreme left, the distance is seven miles, and from Quatre-Bras to Nivelles, it is seven miles more. The execution of this movement, therefore, would have made a gap of fourteen miles between the English army and the Prussian, and Ney was in presence, ready to throw himself into it, sure to be followed by Napoleon and his whole force. Or Ney having no enemy before him, would have marched his whole force on the rear of Blucher, who, attacked at the same time in front, by a force equal to his own, must inevitably have lost his whole army before Wellington could have relieved him. It seems never to have occurred to Wellington to mount his horse and take an evening ride of twenty-one miles, over a splendid paved road, and through the most fertile country in Europe, waving with rich corn-fields, and teeming with all the promise of a glorious harvest, to Quatre-Bras, there to see, with his own eyes, how large was the scale upon which the irruption was conducted. Possibly he thought of the coming ball, and the pleasure he should miss by leaving town at such an inconvenient season; for it seems he was all his life passionately fond of fashionable society, and spent his last days amid its incense, almost to the entire exclusion of such company as his old military friends could afford.

Be that as it may, after issuing orders for the troops to hold themselves in readiness for an early march on the morrow, he rested quiet until half-past seven; when, while he was at dinner in the midst of his officers, another courier arrived, bearing intelligence that the French had captured Charleroi, and beaten back the Prussians, and were at that moment threatening both Quatre-Bras and Fleurus, with an enormous force, estimated at not less than 150,000 men. This was surely enough to move an ordinary man; but the Prince Regent, and the Parliament, had voted the Duke no ordinary man, and the latter had voted him no ordinary sum of money. Besides, the ball was no ordinary ball; kings and princes, and ambassadors, were to be the company. The Duke could not miss the opportunity of showing his orders, come what might. Accordingly he went; and receiving, about ten, a still more urgent dispatch, he answered it by reiterating his order to evacuate Quatre-Bras and fall back on Nivelles, which was again disobeyed.

We have read many histories, both English and French, of the campaign under consideration; but we do not recollect that we ever saw this extraordinary order even so much as alluded to, before we met with it in Brialmont's book. Yet that it was given, and exists to this day, is certain. No doubt it is to be found recorded in Gierwood's publication, but if so, it has been strangely overlooked; we say strangely, because it is impossible to over-estimate the importance of the consequences it would have carried with it had it been regularly obeyed, as the Duke, of course, had every reason to suppose it would be. We should have supposed that the omission arose from the anxiety of his friends to protect his military reputation, so deeply affected by this order, had we not reflected that his enemies, also, have had the telling of the story. One part of the Duke's military conduct was, however, so notorious to the whole world, that it was impossible, even for the most enthusiastic of his admirers, to pass it over in silence; that is to say, his having neglected, from three o'clock on the 15th, when he first heard that the French had opened the campaign in great force, to day-break on the 16th, to order succors to the all-important outpost of Quatre-Bras. They have attempted to apologise for that neglect, and for the

extraordinary torpor of the allied generals, when Napoleon was manœuvring within a few miles of them for days, and they knew the fact, by insisting that they were all the time regulating their movements by reports from Fouché, who was playing the double spy at Paris. But, on the authority of Lord Ellsmere, Brialmont puts an extinguisher upon that apology, if apology it could be called. The Duke of Wellington, long before the campaign actually commenced, had come to the conclusion that Napoleon would open it by advancing along the Tournay and Mons route, and endeavoring to cut off his communications. It was always his belief that such was the route he *ought* to have taken, and he stated it to be such in certain remarks written upon the works of a foreign officer many years ago. In *Raikes' Journal*, or *Roger's Table-Talk*, or perhaps in both, he is introduced as expressing himself to the same effect; and we are now told that he persisted in maintaining that opinion to the day of his death. He was influenced in forming it by his own judgment alone, and not by any report received from Paris, or any extraneous intelligence whatever. When, therefore, he heard that the post at Quatre-Bras was threatened, he refused to regard the invasion by the Charleroi route as any thing more than a feint, and an affair of outposts, having already made up his mind to expect the real tug of war from a different and opposite quarter. The Duke of Wellington assigned no reason for the opinion in which he so obstinately persisted, and we are unable to see what reason it would have been possible to assign. In order to advance upon his rear, and intercept his communications, Napoleon would have been compelled to capture Mons, Tournay and Ath, three strongly-fortified and well-garrisoned towns, which lay directly in his line of march; or to mask them, by leaving before them a considerable body of men. He was in no condition to do either of these things, for he was already inferior to the allied armies by nearly 80,000 men. Supposing these obstacles successfully removed, by attacking the Duke of Wellington's rear, he compelled a junction with Blucher, the very thing it was most important for him to prevent, and the very thing which actually occasioned his defeat at Waterloo. Wellington standing fast, and Blucher wheeling upon his left, they would have thrown

197,000 men upon Napoleon, cut him off from France, thrown him back on the sea, and killed or captured himself and his whole army. On the contrary, the route by Charleroi offered no obstacle to an advance in the shape of a fortified town; it opened directly on the centre of the allies, very badly supported; it offered an opportunity, if despatch were used, to separate the armies with ease and certainty. In a word, Wellington not only utterly failed to penetrate the real design of his adversary, but ascribed to him a design which he never for a single moment entertained.

The admirers of Wellington, with very bad judgment, as we should think, have converted even his gravest mistakes into subjects of adulation. To a disinterested man it would seem that they should pass over the presence of the Duke at the ball, on the night of the 15th, as lightly as possible. To tell the world that the Duke appeared calm and serene in the midst of the festivities, while twenty-one miles off his communications with his ally were threatened every moment by 40,000 men, necessarily provokes the question, 'Why was he not at his outpost, instead of being here at this ball?' Those who defend him by saying that the example he gave was necessary to keep the population of Brussels calm, ought first to ascertain whether it was more important to keep the population quiet, than to keep up his communication with the Prussians. The point lay not in Wellington's attending the ball, (since he had determined to remain at Brussels, he might as well have been in the ball-room as any where else in the city,) but that he should not have been at Quatre-Bras, with reinforcements to defend his communications. To attempt to defend this part of the Duke's conduct is ridiculous, for it admits of no defence. To attempt to convert it into something laudable is to set common sense at defiance. The only real excuse for him is, that he was perfectly ignorant, because he would not see. Had he known the true state of the case, he would have been guilty of an exceeding grave military offence.

We have sought in vain for the occasion of that cannonade which Byron tells us was heard in the ball-room, and upon which he constructs some of the most magnificent poetry ever

published in the English tongue. There was no firing at that hour of the night, so far at least as we can discover, either before Ligny or Quatre-Bras.

On the morning of the 16th, by day-break, the British troops, in pursuance of orders issued the night before, began their tardy march to Quatre-Bras, which ought already to have been in the possession of Ney twelve hours before; and Wellington preceded them along the Charleroi road. Arrived at Quatre-Bras, he saw before him only the head of Ney's long and loose column, and concluding there was no danger of an immediate attack, he took a cross road and rode over to Blucher's head-quarters, in front of Ligny, where he found him already in battle array, confronting Napoleon, who was also in order of battle. So little, even then, did Wellington understand the situation, that he offered to lead the troops which were following him from Brussels, along the road by which he had come from Quatre-Bras, to attack the left wing of Napoleon when he should advance against Blucher, although Ney was in front of his position with 40,000 men. In fact, he had scarcely arrived at Quatre-Bras on his return, when it was attacked by Ney. Napoleon had directed that this position should be carried early in the morning of the 16th, which might even then have been done, for it had not been reinforced. Believing Ney to be in possession of the place, he sent him an order to send D'Erlon's corps to attack Blucher in the rear, and waiting to hear D'Erlon's cannon in the rear, he consumed the whole day until four o'clock, before he attacked Blucher in front. In the meantime, Ney having sent the corps, about twelve o'clock commenced a feeble assault upon Quatre-Bras, a most fortunate circumstance for Wellington, since his reinforcements had not begun to arrive. At last, however, the Dutch-Belgian Division from Nivelles, five thousand strong, arrived, and a number of English divisions soon after the latter, without either cavalry or artillery, and by detachments in such a manner that, had Ney even that morning taken Quatre-Bras, by merely marching along the road towards Brussels, he must have killed or dispersed the greater part of them. At last, by two o'clock, 31,000 men were assembled, and Ney, whose whole force after D'Erlon's corps had left him, was not more than 20,-

000, had a furious battle instead of a mere skirmish. The English force finally amounting to 36,000 men, but with no cannon except that already at Quatre-Bras and that brought from Nivelles, slept on the field of battle. Ney fell back one mile to Frasne, where, after the battle was over, he was rejoined by D'Erlon. In the meantime, Napoleon, hearing a furious cannonade on his left, concluded that Ney was seriously engaged, and that it was too late to expect assistance from him. He attacked Blucher about four, and shortly after D'Erlon came up on this left, and attacked the right of Blucher. Had he continued this attack, he would have decided the fate of Blucher; but in the height of the engagement he received peremptory orders from Ney, who was himself hard pressed, to return. He did so, and thus had the satisfaction to know that he had rendered no service to either party, while his aid to either would have been decisive. In the meantime, Napoleon defeated Blucher on the right, and would, in all probability, have killed, captured or dispersed his whole army, but for the intervention of night. This is evident, from the fact acknowledged by the English, that Blucher lost on the occasion 15,000 men, killed, wounded, and prisoners, and 10,000 disbanded. The rout was so complete that it deceived Napoleon as to the condition of Blucher, whom he supposed to be much worse beaten than he was. Had it occurred early in the day, that General would have been pursued until his army had been annihilated.

Scornfully as Napoleon had rejected the advances of Fortune since the opening of this campaign, she seemed reluctant to abandon him forever. The last offer she made him was, indeed, the most splendid of all. The larger part of Wellington's army had joined him in the night, and he was now at Quatre-Bras with about 60,000 men. In his front was Ney with an army still 40,000 strong, baffled, but neither conquered, nor even disheartened. Seven miles on his left lay Napoleon with a victorious army of 74,000 men, which could reach his flank by a paved road, the same over which he had himself passed to Blucher's head-quarters the day before. In his rear, lay the defile of Genappe, consisting of long and narrow streets, and a single bridge, likewise long and narrow, over a broad and deep stream. If

Napoleon had seized the bridge, and attacked Wellington in flank and rear, while Ney assailed him in front, he must have been lost. A force of 60,000 men, of whom not one-half were British, assailed by 112,000 French veterans, with Napoleon at their head, in a field where they had no advantage of position, as they had afterwards at Waterloo, must inevitably have been destroyed; for Blücher was too far off, and too much bruised and battered by the mishap of the day before, when two squadrons of cavalry rode over him in coming to his relief. But Napoleon had again subsided into listlessness and apathy. He saw the chance, but had not energy enough left to take advantage of it, and fortune abandoned him forever. All writers have taken notice of this strange omission, but none have explained the cause of it. In the meantime, Napoleon, having wasted the morning in reviewing troops, distributing crosses, and talking with his officers about the news from Paris, sent Grouchy about 3 o'clock, in pursuit of Blücher, who had already gained eight or ten hours the start, and he himself, with the rest of the army, fell in with Ney, who was pursuing Wellington to Waterloo. He left at Ligny Girard's corps, 8,000 strong, to 'guard the field of battle,' as Gourmand says; but, as we suspect, this corps was simply overlooked, its commander having been killed the day before. This blunder was quite as stupid as that of Wellington, who, after the armies were actually drawn out for battle at Waterloo, sent General Hill, with seven thousand of his best troops, to Halle, to protect his communications, although they had never been threatened; and to reach them it would have been necessary to make a flank march in front of the whole army of Wellington, drawn up in order of battle, and about to engage. No doubt, when he was praying for the arrival of either 'night or Blücher,' he must have terribly felt the want of these veteran battalions.

We had intended, when we commenced this article, not to make any remarks upon the battle of Waterloo; except to show, as we think we have succeeded in doing, that if Napoleon had not thrown away a succession of great opportunities in a manner so apathetic and so wonderful, that that battle would never have been fought. He had, by his own want of energy, failed to

solve the great problem of the campaign, the separation of the allies, and the keeping of them separate. Yet he believed that he had done so, and that the detachment of 34,000 men sent in pursuit of them under Grouchy, was sufficient to keep the Prussians from joining the English. That he greatly overrated the magnitude of his victory over Blucher we think certain; otherwise he would not have divided his army. Had he kept Grouchy with him, and attacked Wellington early in the morning, we think there is no doubt that he would have swept him from the field,—if not before Bulow made his appearance, which was at twelve, at least before he commenced his attack, which was not until four, and certainly long before Blucher came up, which was not until half-past seven. Grouchy's movements do not appear to have delayed the movements of Bulow, for that General started from Wavre by day-break, his troops being fresh; nor those of Blucher, whose troops were greatly fatigued from the battle and the retreat, and consequently did not leave Wavre until much later. Both these corps evidently got to Waterloo as early as they would have done, had Grouchy remained with Napoleon; nobody but a Briton will doubt that his force of 34,000, added to the force which actually attacked Wellington, would have decided the day, before they could have reached the field of battle. Napoleon, as we have said, thought Blucher much worse beaten than he actually was, and believed he was falling back upon Bulow, in the direction of Liege; whereas, on the evening of the 17th, Bulow joined Blucher, whose whole army united at day-break at Wavre, on the right flank of Napoleon, and only twelve miles off, was 87,000 strong. It was evidently too strong to be kept back by Grouchy's 34,000 men. In fact, the corps of Thielman alone kept Grouchy busy, while the other three marched upon Waterloo.

It has long been, and still continues to be, a subject of dispute between French and English writers, what effect upon the result the arrival of Grouchy at Waterloo would have produced. That depends, we suspect, entirely upon the time at which he might have happened to arrive. If, at sunrise on the 18th, finding he had lost all traces of Blucher, whom he had been ordered to follow, and concluding that he was making the best of his way to

Wellington, he had determined to seek for him in that direction, and had made the best of his way to Napoleon, he would have arrived there by eight o'clock at the farthest,—that is, three hours and a half before the attack upon the Chateau Hougoumont, which was the commencement of the battle. His presence would certainly have ensured the victory over Wellington before the arrival of Bulow, or at least before his attack, and Blucher did not arrive until three hours and a half after Bulow had opened his fire. It is true, Grouchy would have disobeyed his orders by making this march, but it would have been a disobedience for which he would have been readily pardoned, since it would have saved the army. The orders were given in ignorance of the circumstances; and surely every general, in such case, is, or ought to be, allowed a considerable discretion.

We have seen that the Dutch General who commanded at Quatre-Bras on the night of the 15th, disobeyed two *positive orders* from Wellington, to evacuate that post, and fall back on Nivelles; that he thereby saved both the allied armies from destruction, and that he was applauded for his disobedience by his superior, the Prince of Orange. That man was a man of sense, and knew the difference between an order given with a full knowledge of all the circumstances, and one issued without the possession of such knowledge. Grouchy, a good soldier, seems to have been a mere man of routine, obeying orders strictly, even where they lead to destruction. A Dessaix or a Kleber, would have marched at once to Waterloo, and not only reinforced Napoleon, but enabled him to attack four hours sooner; for the delay until half past eleven was occasioned by the desire to hear from Grouchy before commencing the attack. Especially when the tremendous firing, in the attack upon Hougoumont, induced Excelmans to implore Grouchy to march 'in the direction of that fire.' Dessaix or Kleber would not have hesitated. The way was clear to Grouchy; he had not become entangled with the Prussians; his manoeuvres were perfectly at his own command; he could have passed over his whole army without disturbance from Blucher; and Gembloux being, by the paved road he would have taken, only nine miles from the field of battle, he would have arrived on Bulow's flank by three o'clock;

that is, at least one hour before he opened fire upon Lobau, who fronted him with 13,000 men. Re-uniting himself with Lobau, and attacking Bulow in front and flank, he would have routed him in two hours, and the whole 47,000 sweeping on and falling upon the flank of Wellington, who was evidently keeping his ground with great difficulty, would have destroyed his army before Blucher could possibly have arrived; for as it was, he did not get up until 7½ o'clock, and the utter rout of Bulow would assuredly have retarded his march very seriously, if it had not stopped it.

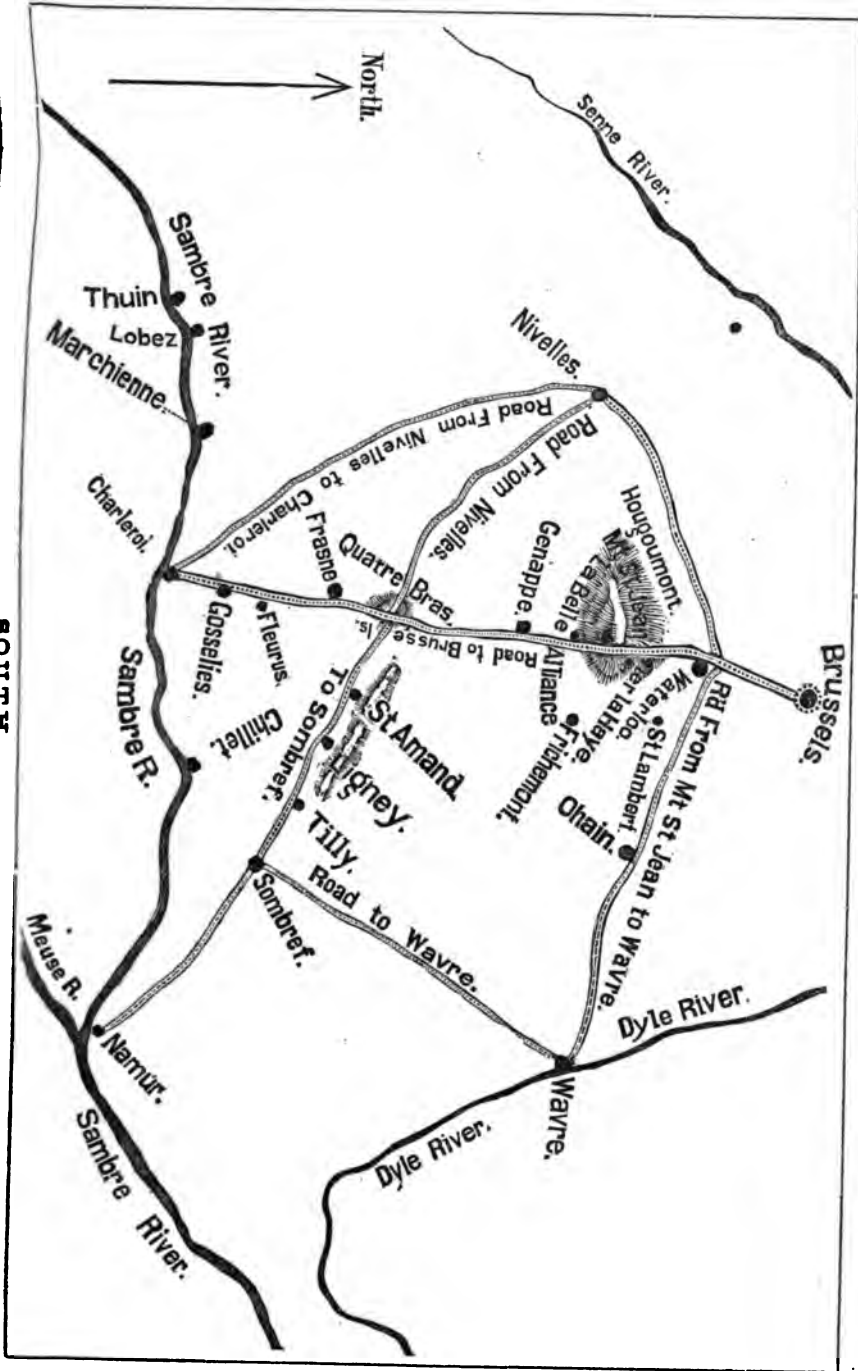
English writers insist that Grouchy's arrival would not have altered the result, because Thielman would have arrived along with him, &c. That would have been so, if Grouchy had not arrived until late in the evening, after he had become engaged with the Prussians. But all the morning the way was open to him. The problem to be solved was to get to Waterloo, and rout Wellington before Blucher could come up. *That* he could easily have done, since so late as twelve he did not even know where Blucher was, as is evident from the language used by General Excelmans in expostulating with Grouchy: 'Your order', says Excelmans, 'required you to be *yesterday* at Gembloux, and not to-day.' And again, 'Blucher was yesterday at Gembloux, but who knows where he is now? If he is on the field of battle, your orders will have been literally obeyed. If not, our arrival will decide the battle, and then, what can Blucher do, who has already been beaten?'

But let us return from speculations to facts, and dismiss the subject in as few words as possible. English writers all represent Wellington's army as opposing overwhelming numbers with superhuman valor. That they fought very bravely, nobody has ever denied; but it is not true, that they fought against overwhelming numbers. Had such been the fact, it would have been a lasting stigma upon the military reputation of Wellington; that is, if it be true, (as undoubtedly it is), that he is the best general who, with the smallest number of men, on the whole, can bring the largest number to bear upon a given point; for he and Blucher certainly had, on the whole, an enormous superiority of force. The best point in Wellington's campaign, as every

military man admits, is his having led Napoleon into a situation in which he could throw an overwhelming force upon him. Wellington, the English writers say, had 72,780 men, (in round numbers 73,000). Napoleon had, as he says himself, only 68,650, (in round numbers 69,000). English writers say he had 80,000; as we have not room to dispute the ground of this assertion, so let it go. Wellington had the strongest position in Flanders, but they say only 60,000 of his troops were reliable. The *unreliable* troops lost nearly as many men in proportion as their reliable neighbors. Let that, too, pass. Here, then, were 80,000 French troops drawn out to attack 60,000 reliable and 13,000 unreliable allies, holding the strongest ground in all Flanders. Before the battle had begun, except at Hougoumont, the heads of Bulow's columns made their appearance on Napoleon's right, and he sent first 3000 light cavalry, under Dumont and Suberire, and immediately after Lobau's division, 10,000 strong, to oppose them; so that only 67,000 French were left to oppose 60,000 reliable and 13,000 unreliable allies. During the battle, Morand and Friant, with 4000 men each, and Duhesme, with 2000, were sent to reinforce Lobau, leaving 57,000 French to fight 60,000 reliable and 13,000 unreliable allies. Again, Napoleon had 242 pieces of cannon. English writers say Wellington had only 186. This is manifestly false, as is proved by the following fact. In one of the tables at the end of Alison's 4th volume, Napoleon is credited with the 242 guns, and with 4,680 cannoneers, or about twenty men to a gun. In the British artillery, and that of the King's German Legion, in the next page, it is said there were 124 guns and 5,536 cannoneers; that is nearly 45 men to a gun, although the English and Germans are larger and stronger men in general than the French. This is altogether incredible. Napoleon says Wellington had 250 guns, and that, we suspect, is very near the truth. However, be that as it may, Lobau carried off thirty guns to meet Bulow, and Morand, Friant, and Duhesme, 30 more; so that the guns playing on Wellington were not more numerous than his own. Bulow had 96 guns; so that allowing the English statement to be true, the allies had 282 guns against 242.

Accounts differ as to the moment when the rout of the French took place. The English say the Imperial Guard was repulsed before Blucher came up; Wellington says it was at the same moment with the attack of Blucher; Gneisenau, who wrote Blucher's dispatches for him, says he attacked the right flank of the French, broke their line in several places, and that *then* the whole army gave way in a panic. Napoleon says that the flight was occasioned by this attack, and that the Guard, ordered forward to arrest it, advanced, but was unable to deploy, because 2,000 Scotch cavalry had penetrated between them and General Reille on their left, and because they were inundated by fugitives on their right. Being thus attacked, and being unable to deploy, they gave way. The French and the Prussian statements correspond pretty accurately with each other.

Such was the battle of Waterloo—undoubtedly one of the 'great decisive battles of the world,' or great turning points in the stream of human history. The English, we are sure, have boasted more of this battle than the Romans ever boasted of all their military successes, from Romulus to Julius Cæsar. Yet, after all, it amounts to this only:—One hundred and twenty thousand men were, after a desperate and doubtful struggle, foiled, in an invasion, by two hundred thousand men. Really, it does appear to us, that this was no very superhuman feat after all. Indeed, if all the circumstances of the case be calmly and dispassionately considered, we can hardly discover sufficient grounds or reasons for those outbursts of self-gratulation which have so often shaken the British Isles. But when we consider the magnitude of the stakes at issue, and the force of the feelings enlisted in the contest, we can at least fully comprehend, if we cannot wholly approve, such tremendous explosions of British pride and passion. How differently had been the result, if Napoleon, the greatest warrior that ever lived, had not *let down* in the race of glory! How different, especially, had been the fate of England and the fame of Wellington!



ART IV.—‘*Christopher North*’; *A Memoir of John Wilson*, late Professor of Moral Philosophy in the University of Edinburgh, compiled from family papers and other sources. By his daughter, Mrs. Gordon. Complete in one volume. New York: W. I. Widdleton. 1863.

The celebrated saying of Buffon, ‘the style is the man’, has seldom, if ever, been more strikingly illustrated, than in the case of John Wilson. His fulness of life, his exuberance of animal spirits, his wild, rollicking joyousness of disposition, exulting alike in sunshine and in storm, are all as perfectly reflected in his writings as in his personal existence. Indeed, he is so personally present in his writings, that he was a familiar acquaintance of ours even before we read his *Life* by Lady Gordon. No hypocrisies concealed, and no conventionalities disguised, either the beauties and sublimities of his noble character, or its deformities. ‘The style is the man’, and the man is the style. And a more pleasing study than the man John Wilson, or the writer Christopher North, it would be difficult to find among the biographies of modern men of genius.

‘The many-sided character of the man’, says Lady Gordon, ‘I have not attempted to unfold; nor have I presumed to give a critical estimate of his works,—they must [and they will] speak for themselves. Now and then, in the course of the narrative, when letters are introduced referring to literary subjects, I have made a few observations on his writings; but in no other way, with the exception of those chapters devoted to *Blackwood’s Magazine* and the Moral Philosophy chair, have I departed from my original intention of giving a simple domestic memoir. If I have in any way done justice to my father’s memory in this respect, I am rewarded.’ This, as the reader will no doubt say, was well and wisely done; for who that has seen John Wilson in his writings, would desire ‘a critical estimate of his works’ from the pen of his daughter. All, however, will thank her for the admirable ‘domestic memoir,’ in which all may see the man as he was in himself, as well as in his relation to others.

John Wilson was, in fact, one of a group of very remarkable men; 'a bright particular star' of a magnificent constellation of writers. 'The glimpses of his contemporaries', says Mackenzie, 'afforded by Mrs. Gordon, show us Lockhart and De Quincey, Jeffrey and Scott, Hartley Coleridge and "Delta," and, above all, that singular "wild boar of the forest," James Hogg, the Et-trick Shepherd, the redoubtable hero of the "Noctes," and William Blackwood, the astute publisher.' These, no doubt, give additional fascination to the pages of Lady Gordon's memoir of her father; but there are other glimpses of men of genius in the same volume, which, in our estimation, very greatly enhance its value and its interest. Her Memoir is, indeed, all ablaze with glimpses of such men as Alison and Macaulay, Aytoun and Brown, Mackintosh and Bentham, Brewster and Brougham, Byron and Moore, Wordsworth and Southey, Samuel Taylor Coleridge and Carlyle, Hallam and Sir William Hamilton, not to mention a hundred other names of less note in the world of letters. Such reading is good for the young. It suggests many valuable lessons. Especially this: that great men become great, and bright men become bright, only by prolonged study and patient meditation. 'From the wild mirth,' says Mr. Mackenzie, 'which he delighted to throw into the immortal "Noctes," the world, [the unthinking world], fancied that Wilson was as reckless, humorsome, and jovial, as he represented their heroes to be. Mrs. Gordon's plain record shows that these very remarkable dialogues were written with *prolonged toil*, and upon no stronger inspiration than a chicken for dinner, and tea or cold water as a beverage to follow!' Not so with poor Maginn, however, whose name we miss in Lady Gordon's mention of Wilson's contemporaries. Though equal to Wilson in genius, and more than equal to him, or to Lockhart, or to Hogg, or to any other contributor to Blackwood, in early promise, his 'sun went down while it was yet day', and it went down amid clouds and darkness and disgrace. If he, too, had drawn his inspiration from 'tea or cold water,' he would, in all probability, have shone forever, as a star of the first magnitude, in the grand constellation of Wilson's contemporaries. As it is, however, we miss him from that bright array of immortal lu-

minaries, and mourn him as we do 'the lost Pliad'. How sweet, how bright, how beautiful, how glorious the opening of Maginn's life! How dark, how troubled, and how inglorious its close!

It was otherwise—far otherwise—with John Wilson. We can not infer, however, from his writings alone, that he was always happy, or jubilant, at heart. It is a well-known and often-quoted fact, that the very men who convulse the world with laughter, are themselves the victims of a terrible melancholy. This is the case, however, only when there is something morbid in their nature. In Wilson there was nothing morbid. His moments of exaltation and gladness, were, it is true, sometimes followed by hours of depression and gloom. But melancholy, in the true sense of the word, never preyed upon his mind. At one time, indeed, under the stress of bitter trial and great temptation, he showed what looked a good deal like melancholy. But his great, strong, healthy nature, soon threw off the incubus, and righted itself. Many writers open only the ante-chambers of their real being to the world, while all that is deepest and truest lies hidden within; but the man, who does not write truly from his own heart, can never lay hold of the hearts of his readers. This was the secret of Wilson's success, that he projected his heart, his whole heart, and nothing but his heart, into his writings. Frank, free, genial, and open as the day in his disposition, he neither concealed his capacity for strong tender love, nor his propensity to vehement dislike. But always honorable and magnanimous in his enmities, he was ever ready for any battle, however stern, in the cause of truth, or justice, or mercy, without one particle of that sensitive, timid shrinking from contact with the world, which is supposed to characterize the poet.

Much of all this was, no doubt, due to his fine *physique*. No man was ever more perfectly formed. Marvellous stories are, indeed, told with respect to his dexterity, skill, and muscular force, in all manner of gymnastic sports, into which he usually threw himself with ardor. As a wrestler, as a boxer, as a leaper, and, above all, as a pedestrian, his feats were prodigious. One morning, for example, he walks, we are told, fifty miles to a

Burns' dinner; and yet, once there, he is the freshest, the blith-est, and the most jubilant spirit at the feast. Others, feeling their wine, may be inclined to sleep, or to doze away their dullness. He springs upon the massive table, dances a *pas seul* among tumblers, wine-glasses, and decanters, and then leaps upon the floor again, to the astonishment and delight of all present. His leap, too, is like the leap of the wild panther, or the cat o'mountain; clearing no less than twenty-three feet on a dead level! the longest leap of any biped of his day in all England. (p. 48.) Surely, a mind lodged in such a body, has a great advantage over other minds, and is far more easily educated. For, as an ingenious writer says, *mens sana in corpore sano*, is the grand aim and object of all education.

The circumstances, too, attending his childhood and youth, were most favorable to the formation of his character. His home, always so bright and cheerful, surrounded him with an atmosphere of love and tenderness and freedom. Every thing, indeed, from his earliest infancy, conspired to produce a healthful activity, a genuine growth, in the bright and beautiful boy. We can hardly find, in all biographical literature, another instance of circumstances so favorable to the development of genius. Accordingly, in becoming, as he did, not a miserable sham, or perverted specimen of humanity, but a glorious reality; he owed no less to his good fortune, than to his noble and 'high endeavor.'

Among the many circumstances, which so powerfully contributed to the formation of his genius, there was one of such transcendent importance as to demand a special notice. We allude to the choice of his teachers. This was singularly judicious and happy. There were, in those days, as well as in our own, a class of teachers who labored under the conviction that small boys were made for the Latin grammar, and that the whole art of teaching consisted in forcing into their small pericraniums as large an amount of that very useful commodity as they could be made to accommodate. The men to whom the instruction of young Wilson was entrusted, possessed not only the capacity to teach and to train their pupils, but also the far more uncommon gift of knowing when to desist from teaching

and training and boring their minds. Hence they never educated their young and tender pupils into a disgust with their studies; but, allowing them to mingle out-of-door sports with the brain-work of the closet, they made both an equal delight to them, and each a support and encouragement to the other. By this means, their bodies were developed and improved as well as their minds, and, consequently, they became men as well as scholars, and not merely walking, coughing, attenuated, dreaming encyclopædias of useless lore. 'A pleasant idea', says Lady Gordon, 'of the relation in which the kind minister of the Mearns stood to his pupils, is given in a note from Sir John Maxwell Pollok, who was a school-fellow of my father: "He was above me in the ranks of the school, in stature, and in mental acquirements. I may mention, as an illustration of the energy, activity, and vivacity of his character, that one morning, I having been permitted to go and fish in the burn near the kirk, and having caught a fine trout, was so pleased, that I repaired to the minister's study to exhibit my prize to Dr. M'Latchie, who was then reading Greek with him. He, seeing my trout, started up; and, addressing his reverend teacher, said, "I *must* go now to fish."'" Now, what did the good minister do? Did he drive the little Sir John from his presence, or knock the young rebel, Wilson, on the head, with angry directions to mind his Greek? Did he repress the fine enthusiasm of the boy, declaring, in the presence of 'his revered teacher,' 'I *must* go now to fish'? Not a bit of it. 'Leave was granted,' says Sir John, 'and I willingly resigned to him my rod and line; and before dinner he reappeared with a large dish of fish, on which he and his companions feasted, not without that admiration of his achievement which youth delights to express and always feels.' By pursuing the method of some teachers, and, strange to say, of some parents too, the boy John Wilson, 'as beautiful and animated a creature as ever played in the sunshine', might have been developed into as ugly and perverse a character as ever cursed a happy land.

'The kindness and partiality', says his biographer, 'with which he loved to speak of his friends in Paisley, may be seen in the words he made use of in reference to his old friend, (*i. e.* his former teacher, Mr. Peddie,) as he was taking leave of duties

he had followed for upwards of half a century. They are, (especially after so long an interval,) honorable alike to master and pupil: "It was his method rather to persuade than enforce, and they all saw, even amidst the thoughtlessness of boyhood, that their teacher was a good man; and therefore it was their delight and pride to please him. Sometimes a cloud would overshadow his brow, but it was succeeded by a smile of pleasure as gracious and benign as the summer sky. In his seminary, children of all ranks sat on the same form. In that school there was no distinction, except what was created by superior merit and industry, by the love of truth, and by ability. The son of the poor man was there on the same form with the sons of the rich, and nothing could ever drive him from his rightful status but misconduct or disobedience. No person would deny that the office of a teacher of youth was one of the most important in this world's affairs. A surly or ignorant master might scathe those blossoms, which a man of sense and reflection by his fostering care, would rear up till they became bright consummate flowers of knowledge and virtue."'

In relation to these two teachers of young Wilson, Peddie and M'Latchie, Lady Gordon has beautifully said: 'It is impossible to overrate the influence of such a training as young Wilson had, during these happy years, in forming that singular character, in virtue of which he stands out as unique and inimitable among British men of genius, as Jean Paul, *Der Einzige*, among his countrymen. In no other writings do we find so inexhaustible and vivid a reminiscence of the feelings of boyhood. There was in that heart of his, a perpetual well-spring of youthful emotion. In contact with him, we are made to feel as if this man were in himself the type, never to grow old, of all the glorious bright-eyed youths that we have known in the world; capable of entering with perfect luxury of abandonment, into their wildest frolics, but also of transfiguring their pastimes into mirrors of things more sublime—of rising without strain or artifice, from the level of common and material objects into the supreme heights of poetic, philosophic, and religious contemplation.'

Beautiful, also, exceedingly beautiful, is the tribute which

Wilson, in after years, paid to two other of his teachers. Lady Gordon says: 'Of the various professors under whom he studied, there were two who won his special love and life-long veneration: these were Jardine and Young.

'When the relationship between pupil and teacher has been cemented by feelings of respect and affection, the influence obtained over the young mind is one that does not die with the breaking of the ties that formally bound them. Of this Wilson's experience as a professor afforded him many a delightful illustration. To Jardine, in the first place, as not only his teacher, but his private monitor and friend, he owed, as he himself said, a deep debt of gratitude. He is represented as having been "a person who, by the singular felicity of his *tact* in watching youthful minds, had done more good to a whole host of individuals, and gifted individuals too, than their utmost gratitude could ever adequately repay. They spoke of him as a kind of intellectual father, to whom they were proud of acknowledging the eternal obligations of their intellectual being. He has created for himself a mighty family among whom his memory will long survive; by whom, all that he said and did — his words of kind praise and kind censure — his gravity and his graciousness, will no doubt be dwelt upon with warm and tender words and looks, long after his earthly labors shall have been brought to a close.'

He thus speaks of the other: 'I own I was quite thunder-struck to find him passing from a transport of sheer verbal ecstasy about the particle *ἀρα*, into an ecstasy quite as vehement, and a thousand times more noble, about the deep pathetic beauty of one of Homer's conceptions in the expression of which that particle happens to occur. Such was the burst of his enthusiasm, and the enriched mellow swell of his expanding voice, when he began to touch upon this more majestic key, that I dropped for a moment all my notions of the sharp philologist, and gazed on him with a higher delight, as a genuine lover of the soul and spirit which has been clothed in the words of antiquity.

'At the close of one of his fine excursions into this brighter field, the feelings of the man seemed to be rapt up to a pitch I

never before beheld exemplified in any orator of the Chair. The tears gushed from his eyes amidst their fervid sparklings, and I was more than delighted when I looked round and found that the fire of the Professor had kindled answering flames in the eyes of not a few of his disciples.'

'We have sat,' he says, 'at the knees of Professor Young, looking up to his kindling or shaded countenance, while that old man eloquent gave life to every line, till Hector and Andromache seemed to our imagination standing side by side beneath a radiant rainbow glorious on a showery heaven; such, during his inspiration, was the creative power of the majesty and the beauty of their smiles and tears.'

Lady Gordon adds, from another source, the following account of Professor Young: 'It may be seen', says she, 'from these sketches what manner of men had the moulding of that young taste in its perceptions of the good and the beautiful. Nor could his mind fail to have been ennobled by such training.' True. It is mind that wakes up mind, and reveals its powers to itself. The kindling enthusiasm of a Jardine, or a Young, rapt with visions of the true, the beautiful, and the good, and burning with a desire to impart their views to others, could hardly fail to wake up minds, not incurably dull, to a consciousness of their powers and to a new 'intellectual being'; which could find its rest only in—

'The high endeavor and the glad success.'

How different from the poor, perfunctory teacher, who, having no enthusiasm and no delight in his work, can kindle none in his pupils, or rather in his victims! His intellectual offspring, if he happens to have any, are, like himself, poor weaklings, half asleep when they are awake, and half awake when they are asleep, not knowing when, nor where, nor how, they were born into the world of mind, nor to whom they owe so very doubtful an honor, much less 'acknowledging the eternal obligations of their intellectual being' to any one. It is a Jardine or a Young, and not the false or the feeble teacher, who 'creates for himself a mighty family among whom his memory will long survive', and gladden the decay of life with all its precious recollections of the past.

There is something beautiful in the free growth of any thing, but, above all, in the free growth of so wonderful a thing as the human mind. To help forward this growth,—both in depth and breadth, in strength of grasp and in delicacy of discrimination,—is the high office of the teacher. The mere transference of facts from book to brain, is not the thing he aims at. To cram the mind, and to crush or cripple its faculties with a mass of undigested knowledge and half notions of things, is not to educate a rational and accountable being. Education is, on the contrary, the harmonious and perfect development of his whole nature — physical, intellectual, moral, social, religious, and practical. To watch over this development and growth ; to see that it is not too great in one direction, nor too small in another ; to determine how far the student should be helped in his labors, and how far he should be made to rely on his own exertions ; to guard his mind against the approaches of a dark self-distrust, so deadening to all his faculties, and inspire him with self-reliance, or, on the other hand, to ward off the equally fatal effects of an irreverent and presumptuous spirit ; to study the mind and character of each pupil, so as to be able to select the proper remedies for his individual defects, or to apply the proper stimulants to his individual talents ; to consider the capacity of each, allowing no one to go beyond his strength, or to lag behind the healthy exertion of his powers ; — these are a few, and but a few, of the delicate and difficult problems with which the teacher has to grapple. They require, it is evident, the very highest order of talent and education, as well as experience, for their successful solution. How many, nevertheless, who are not half taught themselves, rush into the vocation of the teacher ; seeming to conclude that it is the work for which nature intended them, because they have been found unfit for any other ! Thus it is, that the most important, as well as the most difficult, of all labors, is so frequently performed by miserably incompetent hands. The truth is, that the dignity of the office of the teacher is so imperfectly understood by the world in general, and the value of his services is so poorly appreciated and paid for, that the highest order of talent and education usually seek other spheres of activity and usefulness. Some teachers, it is true, have realized fortunes, and

thereby won the respect of the world; but then it will be found, perhaps, that in the most of such cases, they have been paid not so much for their teaching as for other things.

We offer no apology for this digression on the all-important subject of education. It was naturally suggested by the life of Wilson, who was not only well and wisely educated himself, but was also a wise and good educator of the young. His powers, and his attainments, were equal to the high and holy work of his vocation as a teacher. We can not but think, however, that his power lay in the intense vitality of his nature, in the harmonious union of a sound mind with a body full of animal life and vigor, rather than in any remarkable pre-eminence of genius. An activity which is barred in many directions, and forced into some one channel, may be deep and strong; it is rarely healthful. In Wilson, the channels were all free and open, and the flow of life apparently inexhaustible. There was no outward impediment, and no inward paucity. It is, however, the weakness of all human things, that they continually tend to excess. Wilson's keen enjoyment of sports, and his enthusiastic devotion to them, carried him sometimes, perhaps, beyond the line of propriety. His passionate devotion to 'cock-fighting', for example, seems to us more than questionable, at least for a civilized and Christian gentleman. The best apology for him is, that cock-fighting was one of the amusements of his age, and formed a part of his education. This vice, however, is as venial, if not beautiful, when set by the side of some lean Cassius, pale and cadaverous with passion, who would hold up hands of holy horror at the cruelty of cock-fighting, and yet joyfully crush a whole people for an honest difference of opinion.

Wrestling and boxing he considered noble sports. Fishing was a passion with him from infancy. At only three years of age, he went, armed with line and pin, to a 'wee burnie', a good mile from home, with what splendid success we find thus recorded in *Fytte First of Christopher in his Sporting Jacket*:—'A tug! a tug! With face ten times flushed and pale by turns, ere you could count ten, he at last has strength, in the agitation of his fear and joy, to pull away at the monster, and there he lies in his beauty among the gowans and the greensward, for he had

whapped him right over his head and far away. A fish a quarter of an ounce in weight, and at the very least two inches long! Off he flies on the wings of the wind to his father, and mother, and sisters, holding his fish aloft in both hands, fearful of its escape. He carries, up-stairs and down-stairs, his prey upon a plate; he will not wash his hands, for he exults in the silver scales adhering to the thumb-nail that scooped the pin out of the "baggy's maw".' Young Wilson, even at the age of three years, was, it is evident, among the very liveliest of live boys; and 'the child was father of the man'. His intense vitality, we repeat, was the secret of his strength, as well as the source of his defects. If it occasionally betrayed him, as it did, into serious indiscretions of conduct; this was because his sense of justice had been outraged. An amusing instance of this, is thus candidly recorded by Lady Gordon:

'About a year after he had entered upon his new duties, the Professor was rambling during vacation-time in the south of Scotland, having for a while exchanged the gown for the old "Sporting Jacket." On his return to Edinburgh, he was obliged to pass through Hawick, where, on his arrival, finding it to be fair-day, he readily availed himself of the opportunity to witness the amusements going on. These happened to include a "little mill" between two members of the local "fancy." His interest in pugilism attracted him to the spot, where he soon discovered something very wrong, and a degree of injustice being perpetrated which he could not stand. It was the work of a moment to espouse the weaker side, a proceeding which naturally drew down upon him the hostility of the opposite party. This result was to him, however, of little consequence. There was nothing for it but to beat or be beaten. He was soon "in position;" and, before his unknown adversary well knew what was coming, the skilled fist of the Professor had planted such a "facer" as did not require repetition. Another "round" was not called for; and leaving the discomfited champion to recover at his leisure, the Professor walked coolly away to his seat in the stage-coach, about to start for Edinburgh. He just reached it in time to secure a place inside, where he found two young men already seated. As a matter of course he entered

into conversation with them, and before the journey was half over, they had become the best friends in the world. He asked all sorts of questions about their plans and prospects, and was informed they were going to attend College during the winter session. Among the classes mentioned were Leslie's, Jameson's, Wilson's, and some others. "Oh! Wilson; he is a queer fellow, I am told; rather touched here" (pointing significantly to his head); "odd, decidedly odd." The lads, somewhat cautiously, after the manner of their country, said they had heard strange stories reported of Professor Wilson, but it was not right to believe every thing; and that they would judge for themselves when they saw him. "Quite right, lads; quite right; but I assure you I know something of the fellow myself, and I think he is a queer devil; only this very forenoon at Hawick he got into a row with a great lubberly fellow for some unknown cause of offence, and gave him such a taste of his fist as won't soon be forgotten; the whole place was ringing with the story; I wonder you did not hear of it." "Well," rejoined the lads, "we did hear something of the sort, but it seemed so incredible that a Professor of Moral Philosophy should mix himself up with disreputable quarrels at a fair, we did not believe it." Wilson looked very grave, agreed that it was certainly a most unbecoming position for a Professor; yet he was sorry to say that having heard the whole story from an eye-witness, it was but too true. Dexterously turning the subject, he very soon banished all further discussion about the "Professor," and held the delighted lads enchained in the interest of his conversation until they reached the end of the journey. On getting out of the coach, they politely asked him, as he seemed to know Edinburgh well, if he would direct them to a hotel. "With pleasure, my young friends; we shall all go to a hotel together; no doubt you are hungry and ready for dinner, and you shall dine with me." A coach was called; Wilson ordered the luggage to be placed outside, and gave directions to the driver, who in a short time pulled up at a very nice-looking house, with a small garden in front. The situation was rural, and there was so little of the aspect of a hotel about the place, that on alighting, the lads asked once or twice, if they had come to the right place? "All

right, gentlemen ; walk in ; leave your trunks in the lobby. I have settled with the driver and now I shall order dinner." No time was lost, and very soon the two youths were conversing freely with their unknown friend, and enjoying themselves extremely in the satisfactory position of having thus accidentally fallen into such good company and good quarters. The deception, however, could not be kept up much longer ; and in the course of the evening, Wilson let them know where they were, telling them that they could now judge for themselves what sort of a fellow "the Professor" was.

But in spite of all such irregularities, not to say eccentricities, of character and conduct, no one can read the memoir before us, without a kindling admiration for the man. John Bull had, we fear, set John Wilson a bad example, in his too passionate love of sports. The *Times* has sarcastically said, that the English people seem to be in earnest only in their sports, and to amuse themselves with the serious business of legislation. It should be borne in mind, however, that the wisdom of English legislation is, in part at least, due to the healthfulness of body and mind engendered by English sports. It cannot be denied, on the other hand, that the passion for sports has become excessive in England. It is no reproach to her, perhaps, that she has a *Derby* ; but it is, it seems to us, a shame that the *Derby* is the greatest of all the days in her calendar. A great revolution, said the *Times* in 1865, has been going on in America, and the conflict of mighty armies has attracted the attention, and excited the passions, of mankind ; but still this year belongs forever to ———, the horse that had just won at the *Derby*. We must beg the reader's pardon for having forgotten the name of the Horse to whose supreme Highness the year 1865 forever belongs. If that year had belonged to some saint, or martyr, or hero, not to a horse, we should probably have remembered the name of its owner. But we shall never forget the *Derby* of 1865 itself. For, on that ever-memorable day, the universe seemed to be turning out, and rushing, in wild torrents of immortal bipeds, to a horse race. Hundreds of thousands were there. Princes and pickpockets, ladies and loafers and lords, royalty and ragamuffins, parsons and politicians and petticoats ; all these, and

all other sorts, sizes, and descriptions, of people, were there in wild confusion, and upon terms of the most perfect democratic equality. Betting, gambling, racing, whooping, shouting, drinking, stealing, fighting, swearing, and killing, were a few of the incidents which gave interest, as well as an infinite motley variety, to that great day of days with the populace of London. We were not present ourselves; still we can never forget the *Derby* of 1865, partly because the roarings of its din disturbed our quiet lodgings in Bedford Square, and partly because we read one or two of the descriptions of that wonderful day which, next morning, appeared in the countless newspapers and journals of London. We can well imagine, that John Wilson, if alive and well, would have delighted in the *Derby* of 1865; for he was a pugilist as well as a philosopher.

But whatever his faults or foibles, (and he was certainly far from perfect) there was in the deep, strong nature of Wilson, an inexhaustible fountain of pure, warm, tender affection. Hence, in all the relations of domestic life, his character showed its brightest and most beautiful sides. In his wife and children, above all earthly objects, his hopes, and joys, and desires, all centred. His letters to them are, at once, natural, playful, and brim-full of affection. As he grew older, his family ties grew stronger and stronger. He was, at the loss of his wife, overwhelmed with a grief, which none but deep natures like his are ever called upon to experience. This great sorrow is thus described by one of his former pupils: 'I attended his class in the session in 1837-8. It was the session immediately succeeding the loss of his wife, the thought of which was ever and again re-awakened by allusions in lectures, however remote; and again and again it shook his great soul with an agony of uncontrollable grief, the sight of which was sufficient to subdue us into sympathy with him. On such occasions, he would pause for a moment or two in his lecture, (struggling in vain to sustain the burden of his mighty grief,) then fling himself forward on his desk, bury his face in his hands, and, while his frame heaved with visible emotion, he would weep and sob like a very child.' 'Weak old man'! exclaims the cold, phlegmatic reader. But, no! he wept aloud and sobbed, just because he was still, in spite of the frosts

of more than fifty winters, a strong young man in all the most glorious attributes of manhood. Though the glories of learning, and literature, and fame, encircled the brow of Wilson, it was, nevertheless, the very chiefest of all his glories, that he never ceased to be a child at heart.

It is scarcely necessary to add, that his friendships were strong and lasting. His two most especial friends, Alexander Blair and Robert Findlay, he had known and loved from his boyhood. One of the last things he ever wrote, was a letter to Findlay, which breathes the same deep affection for him that he had cherished for more than fifty years. The feeble hand which traced the lines was almost powerless with disease, but the love which inspired them burned as strongly and as clearly as ever.

An incident, which occurred a few years after his marriage, illustrates the magnanimity of his nature. His career opened with the most brilliant prospects. A beautiful home on Lake Windermere, and an income amply sufficient for all the wants of his family, rendered him perfectly independent. But an uncle to whom he was much attached, and in whom he placed unlimited confidence, betrayed the trust committed to him, and lost all of Wilson's property. As 'in ruining others', however, 'he also ruined himself', Wilson seemed more affected by his uncle's loss than by his own. For he not only bore his own loss with a quiet, manly, uncomplaining courage, but also liberally contributed to the support of his uncle.

One of the last acts of his life, and one very characteristic of the man, was his going, with great effort, to Edinburgh, to vote for Macaulay, who had been a rather bitter political antagonist; an act of magnanimous generosity, and gentle courtesy, which Macaulay most heartily acknowledged.

The two great relations of Wilson's literary life were, first: his connection with *Blackwood's Magazine*; and, secondly, his occupancy of the Chair of Moral Philosophy in the University of Edinburgh. In the first, he made known his abilities as a writer; in the last, his capacity as a teacher. The briefest sketch of his life and labors would, without some notice of him as an editor and as a professor, be disgracefully deficient. We shall, therefore, devote a few moments to his career as the editor of *Blackwood* and as professor of moral philosophy.

There is nothing in the account of Wilson's boyhood, which unmistakably indicated his future eminence as a writer. His intellectual nature, in fact, was so often dragged at the wheels of his physical nature during boyhood, that no one could predict his future career. And besides, with one exception, his life was free from the bitter disappointments, the unsatisfied longings, the homelessness, the friendlessness, and the poverty, which, at one time or another, usually prepare men, as with a baptism of fire, to become famous writers. It was not till his examination for the bachelor's degree at Oxford, that he first distinguished himself, and gave unmistakable signs of his subsequent career. In the words of his friend Blair, that examination was 'the most illustrious within the memory of man.' Sotheby, who was present, declared that 'it was worth coming from London to hear him translate a Greek chorus.' Another of his examiners says: 'it produced such an impression on his examiners as to call forth (a distinction very rarely conferred) the public expression of our approbation and thanks.'

His first publication, '*The Isle of Palms, and other Poems,*' appeared in 1812, and was very favorably received by the public. But he never fully made his mark in the literary world, until *Blackwood's Magazine* made its appearance in October, 1817. It is impossible to read his contributions to that magazine, without perceiving that, like his great friend, Sir Walter Scott, his best poetry is to be found in his prose writings; and especially in his immortal *Noctes Ambrosianæ*.

He was, by many persons, supposed to be an editor, if not the sole editor, of *Blackwood*, and was, consequently, made to bear the brunt of all the scathing criticisms and invectives which, with no sparing hand, were laid on by his political opponents. But Wilson — thanks to his superb physique as well as to his brave spirit! — only laughed such castigations to scorn, or returned them with tenfold severity. In the first feeble struggle for existence, which this periodical had made under the editorship of Cleghorn and Pringle, and under the name of *The Edinburgh Monthly Magazine*, Wilson had anonymously contributed some poems. But when, as his biographer says, 'he was relieved from the editorial incubus, and the embarrassment of

a divided responsibility, the genius of Wilson found free scope. Like a strong athlete who never before had room or occasion to display his powers, he was revelling in their exercise in an arena where the competitors were abundant, and the onlookers eagerly interested. Month after month, he poured forth the current of his ideas on politics, poetry, philosophy, religion, art, books, men, and nature, with a freshness and force which seemed incapable of exhaustion, and regardless of obstacles.'

We should err, however, if we should infer from this passage, that he was the real editor of *Blackwood*; for, at most, he was only a subordinate editor. 'The public', says Lady Gordon, 'whether pleased or angry, inquired with wonder where all this sudden talent had lain hid that now threatened to set the Forth on fire. Suspicions were rife; but Mr. Blackwood could keep a secret, and knew the power of mystery. Who his contributors were, who his editor, were matters on which neither he nor they chose to give more information than was necessary. It might suffice for the public to know, from the allegorical descriptions of the Chaldee MS., that there was a host of mighty creatures in the service of the "man in plain apparel," conspicuous among which were the "beautiful Leopard from the valley of the Palm trees," and "the Scorpion which delighteth to sting the faces of men." As for their leader, he was judiciously represented as a veiled personage, whose name it was in vain to ask, and whose personality was itself a mystery. On that point the public, which cannot rest satisfied without attributing specific powers to specific persons, refused after a time to acknowledge the mystery, and insisted on recognizing in John Wilson the real impersonation of Blackwood's "veiled editor." The error has been often emphatically corrected: let it once again be repeated, on the best authority, that the only real editor *Blackwood's Magazine* ever had was Blackwood himself. Of this fact I have abundant proofs. Suffice it that contributions from Wilson's own pen have been altered, cut down, and kept back, in compliance with the strong will of the man whose name on the title-page of the Magazine truly indicated with whom lay the sole responsibility of the management.'

John Wilson, *alias* the 'Leopard', (and a strong, wild, beau-

tiful Leopard he certainly was,) and Lockhart, the Scorpion — terrible creature! — ‘which delighteth to sting the faces of men’, were the two principal contributors to *Blackwood’s Magazine*. In *Peter’s Letters* by Mr. Lockhart, the appearance of Wilson is thus described: ‘In complexion he is the best specimen I have ever seen of the ideal *Goth*. His hair is of the true Sicambrian yellow; his eyes are of the brightest, and at the same time of the clearest, blue, and the blood glows in his cheek with as firm a fervor as it did, according to the description of Jornandes, in those of the “*Bello gaudentes, prælio ridentes Teutones*’ of Attila.”’ Yet even this brave Goth, if we may believe the words which he himself, in one of his ‘*Noctes*’, puts into the mouth of James Hogg, was ‘a wee feared’ of the terrible Scorpion. In regard to him, Lady Gordon says: ‘The black-haired, Spanish-looking Oxonian, with that uncanny laugh of his, was a very dangerous person to encounter in the field of letters. “I’ve sometimes thocht, Mr. North,” says the Shepherd, “that ye were a wee feared for him yoursel’, and used rather, without kennin’t, to draw in your horns.” Systematic, cool, and circumspect, when he armed himself for conflict it was with a fell and deadly determination. The other one (*i. e.* Wilson) rushed into the combat rejoicingly, like the Teutons; but even in his fiercest mood, he was alive to pity, tenderness, and humor. When he impaled a victim, he did it, as Walton recommends, not vindictively, but as if he loved him. Lockhart, on the other hand, though susceptible of deep emotions, and gifted with a most playful wit, had no scruple in wounding to the very quick, and no thrill of compassion ever held back his hand when he had made up his mind to strike. He was certainly no coward, but he liked to fight under cover, and keep himself unseen, while Wilson, even under the shield of anonymity, was rather prone to exhibit his own unmistakable personality. Such were the two principal contributors to *Blackwood* when it broke upon the startled gaze of Edinburgh Whigdom, like a fiery comet “that with fear of change perplexes monarchs.”’

John Wilson and John Lockhart, the Leopard and the Scorpion, seemed utterly indifferent as to consequences. Wilson, in the full flush of youthful ardor, enjoyed attacks on men and

things usually considered unassailable; while Lockhart found free scope for his sardonic wit and biting satire. He spared no one. Friends no less than foes, allies and co-contributors to *Blackwood* no less than enemies and hostile critics, were the victims of his wicked wit. But Hogg, *alias* 'The wild Boar of the forest', or the 'Ettrick Shepherd', was, perhaps, the person who suffered most from the Scorpion's love of mischief. Speaking of Lockhart, he says: 'I dreaded his eye terribly, and it was not without reason, for he was very fond of playing tricks on me, but always in such a way that it was impossible to lose temper with him. I never parted company with him that my judgment was not entirely jumbled with regard to characters, books, and literary articles of every description.' He (the Shepherd) was anxious to find out who wrote the articles which, from month to month, created so great a sensation. Being unable to extract any information from Wilson, he would repair to Lockhart, who, with the most immovable gravity, would father the articles upon some innocent or imaginary personage. 'Then', says the simple Shepherd, 'away I flew with the wonderful news to my associates, and if any remained incredulous, I swore the facts down through them, so that before I left Edinburgh I was accounted the greatest liar in it except one.' The Shepherd, finding that the conspirators had made up their minds to act on O'Doherty's principle — never to disclaim any thing they had *not* written, and never to acknowledge any thing they *had* written — and, thinking to secure himself against misrepresentation, determined to sign his name to every piece from his pen. 'But', says he, 'as soon as the rascals perceived this, they signed my name as fast as I did. They then continued the incomparable "Noctes Ambrosianæ" for the sole purpose of putting all the sentiments into the Shepherd's mouth, which they durst not avowedly say themselves, and these, too, often applying to my best friends.' Hogg was, however, secretly delighted with 'the fame thus thrust upon him in addition to his own deserts.' (p. 180.) But Dr. Scott, or the 'Odontist', as he dubbed himself, was absolutely carried away and almost crazed by the fame thrust upon him by Lockhart's powers of mystification and mischief. The amusing story is thus related by Lady Gordon: 'The doc-

tor was a dentist, who practised both in Edinburgh and Glasgow, but resided chiefly in the latter city,—a fat, bald, queer-looking, and jolly little man, fond of jokes and conviviality, but with no more pretensions to literary or poetic skill than a *street porter*. To his own and his friends' astonishment he was introduced in *Blackwood's Magazine* as one of its most valued contributors, and as the author of a variety of clever verses. There was no mistake about it, "Dr. James Scott, 7 Miller street, Glasgow," was a name and address as well known as that of Mr. Blackwood himself. The ingenious author had contrived to introduce so many of the Doctor's peculiar phrases, and references to his Saltmarket acquaintances, that the Doctor himself gradually began to believe that the verses were really his own, and when called on to sing one of his songs in company, he assumed the airs of authorship with perfect complacency. The "Odontist" became recognized as one of Blackwood's leading characters, and so far was the joke carried, that a volume of his compositions was gravely advertised in a list of new works, prefixed to the Magazine, as "in the press." Even the acute publisher, John Ballantyne, Hogg relates, was so convinced of the Odontist's genius, that he expressed a great desire to be introduced to so remarkable a man, and wished to have the honor of being his publisher. The Doctor's fame went far beyond Edinburgh. Happening to pay a visit to Liverpool, he was immediately welcomed by the literary society of the town as the "glorious Odontist" of *Blackwood's Magazine*, and received a complimentary dinner, which he accepted in entire good faith, replying to the toast of the evening with all the formality that became the occasion.'

We adorn our pages with Lady Gordon's account of the contributors to *Blackwood*, chiefly for the sake of the admirable description of Lockhart, with which it concludes: 'The staff of contributors whom Mr. Blackwood had contrived to rally round his standard contained many distinguished men. "The Great Unknown," and the venerable "Man of Feeling," were enlisted on his side, and gave some occasional help. Dr. M'Crie, the biographer of Knox, and Dr. Andrew Thomson, were solemnly and at much length reproved by an ortho-

dox pamphleteer, styling himself *Calvinus*, for their supposed association with the wicked authors of the Chaldee Manuscript. Sir David Brewster contributed scientific articles, as did also Robert Jameson and James Wilson. Among the other contributors, actual or presumed, were De Quincey, Hogg, Gillies, Fraser, Tytler, Kirkpatrick, Sharpe, Sir William Hamilton, and his brother,¹ the author of *Cyril Thornton*. But though all these and more figured in the list of Blackwood's supporters, there were but two on whom he placed his main reliance, the most prolific and versatile of all the band, who between them were capable at any time of providing the whole contents of a Number. These were John Wilson and John Gibson Lockhart. Those whose only knowledge of that pair of briefless young advocates was derived from seeing them pacing the Parliament House, or lounging carelessly into Blackwood's saloon to read the newspapers,² and pass their jokes on everybody, including themselves, could have little idea of their power of work, or of the formidable manner in which it was being exercised. That blue-eyed and ruddy-cheeked poet, whose time seemed to hang lightly enough upon his hands, did not quite realize one's idea of the redoubtable critic whose "crutch" was to become so formidable a weapon. Nor did his jaunty-looking companion, whose leisure seemed to be wholly occupied in drawing caricatures,³ appear a likely person, when he sauntered home from

¹ Thomas Hamilton wrote several works besides *Cyril Thornton*; among others, *Annals of the Peninsular Campaign*, and *Men and Manners in America*. He died in 1842, at the age of fifty-three.

² That saloon and its proprietor are thus described by Dr. Peter Morris:—"Then you have an elegant oval saloon lighted from the roof, where various groups of loungers and literary *dilettanti* are engaged in looking at, or criticising among themselves, the publications just arrived by that day's coach from town. In such critical colloquies, the voice of the bookseller may ever and anon be heard mingling the broad and unadulterated notes of its Auld Reekie music; for unless occupied in the recesses of the premises with some other business, it is here that he has his usual station. He is a nimble, active-looking man of middle age, and moves about from one corner to another with great alacrity, and apparently under the influence of high animal spirits. His complexion is very sanguineous, but nothing can be more intelligent, keen, and sagacious than the expression of his whole physiognomy; above all, the gray eyes and eyebrows, as full of locomotion as those of Catalani."—*Peter's Letters*, vol. ii, pp. 187, 188.

³ It is said, with what truth I know not, that clever as Mr. Lockhart was with both pen and pencil, he lacked curiously one gift without which no man can be a successful barrister; he could not, like many other able writers, make a speech. His portfolios show that, instead of taking notes during a trial, his pen must have been busily employed in photographing all the parties engaged—judge, counsel, and prisoner.

Princes street, to sit down to a translation from the German, or to dash off at a sitting "copy" enough to fill a sheet of *Blackwood's Magazine*. The striking contrast in the outward aspect of the two men corresponded truly to their difference of character and temperament — a difference, however, which proved no obstacle to their close intimacy. There was a picturesque contrast between them, which might be simply defined by light and shade; but there was a more striking dissimilarity than that which is merely the result of coloring. Mr. Lockhart's pale olive complexion had something of a Spanish character in it, that accorded well with the sombre or rather melancholy expression of his countenance; his thin lips, compressed beneath a smile of habitual sarcasm, promised no genial response to the warmer emotions of the heart. His compact, finely-formed head indicated an acute and refined intellect. Cold, haughty, supercilious in manner, he seldom won love, and not unfrequently caused his friends to distrust it in him, for they sometimes found the warmth of their own feelings thrown back upon them in presence of this cold indifference. Circumstances afterwards conferred on him a brilliant position, and he gave way to the weakness which seeks prestige from the reflected glory found in rank. The gay coteries of London society injured his interest in the old friends who had worked hand in hand with him when in Edinburgh. He was well depicted by his friend through the mouth of the Shepherd, as "the Oxford collegian, wi a pale face and a black toozy head, but an e'e like an eagle's; and a sort o' lauch about the screwed-up mouth o' him that fules ca'ed no canny, for they couldna' thole the meaning o't." I am fortunate enough to be able to give the capital likeness on page 185, drawn by his own hand, in which the satirist who spared no one, has most assuredly not been flattering to himself.

An outrageous attack upon Professor Playfair, one of the most highly respected men in Edinburgh, caused a breach in the friendly relations of Wilson and Jeffrey, the editor of the *Edinburgh Review*. In honorable and manly terms, Jeffrey refused to ask or accept any favor from one who allowed himself to be identified with the authors of what he considered false and malignant accusations. Lady Gordon apologizes for her father

on the ground, that he was not the author of such attacks ; and that Mr. Blackwood, not Mr. Wilson, was the real editor of the magazine. Wilson, it is true, had no alternative but to withdraw from all connection with the magazine, or to bear his share of the odium justly attaching to its course. In permitting himself to stand before the world as *the* editor of *Blackwood*, Wilson undoubtedly occupied a false position, and a false position is always unmanly. It is one in which a man is neither true to himself nor to his friends. The true course for him was to resign all connection with the magazine, at whatever pecuniary sacrifice, rather than permit himself to be identified with writers who, with the utmost virulence, attacked the men and things which he approved, while, at the same time, he occupied a position in which he could express no disapprobation of the course pursued by them ; nor even disclaim being the perpetrator of the gross injustice. We can imagine, however, that his position might, in the eyes of a young man, appear heroic rather than otherwise. It seems so like what is truly heroic — the quiet persistence in a course of duty, unmoved by misapprehension and obloquy. Yet the distinction is clear. A man has no right to be misunderstood — to appear to condemn what he really approves. If his course is true, if his eye is single to what is right, if he really pleads the just cause, instead of remaining silent when it is assailed, or appearing as its enemy, and then, in spite of himself, the world attributes false motives to him, the world, and not himself, is in fault. But such was not the position of Wilson. Both by his position as reputed editor of *Blackwood*, and by his silence, he appeared before the public as the perpetrator, or at least the approver, of the most flagitious acts of injustice.

An article upon Leigh Hunt, for example, appeared in *Blackwood*, not only criticising his writings unfairly, but aspersing his character most unjustly. Nor was this all ; for Sir John Dalrymple, a man who, as a Whig, held *Blackwood* in utter detestation, was represented as the author of that unscrupulous and outrageous article. Sir John, still smarting under the merciless ridicule of the famous *Chaldee Manuscript*, a previous contribution to *Blackwood*, sued the publishers for the liberty taken with his name, and recovered exemplary damages. This suit, and

some others, restrained the license, without impairing the liberty, of Mr. Blackwood's press. Nay, by curbing the ferocity, it decidedly improved the freedom, of his celebrated magazine.

In reading the *Blackwood* of that day, we are surprised, at first, that it should have produced so tremendous a sensation in the world of letters. This fact can not be accounted for by the merits of the magazine alone. Several other causes, even more powerful than its intrinsic merits, contributed to the impression it made on the public mind. In the first place, it was something new under the sun; displaying a power more startling by its apparent lawlessness, than by its inherent magnitude. It broke, as Lady Gordon says, on the astonished gaze of the world like a comet, which with 'fear of change perplexes monarchs,' as well as fills the minds of common people with fear for their personal safety. In the second place, the violent animosities which influenced the political parties of that day, gave a wonderful zest, on the one hand, and a profound abhorrence, on the other, to the raging and the rancorous personalities of the magazine in question. The violent animosity of parties, in fact, then divided society to its foundations, and convulsed it with passions almost equal to those of a great revolution. It is no wonder, then, that a periodical such as *Blackwood's*,—bold, daring, unscrupulous, and vindictive,—should have acted more like an ignited magazine for powder, than one for letters and philosophy. Without these elements of success, or sources of sensation, the intrinsic merits of the magazine, even if they had been twice as great, would not have produced half the effect. Its merits were, no doubt, as great as they were motley; and seem to be well described in one of its own most remarkable articles, from the pen of that prodigy of learning and genius, poor Maginn, *alias* Ensign O'Doherty. 'People have learnt,' says he, 'the great lesson, that Reviews, merely *quâ* such, are nothing. They take in his book (*Wilson's Magazine*) not as a Review, to pick up opinions of new books from it, nor as a periodical, to read themselves asleep upon, but as a classical work which happens to be continued from month to month,—a real magazine of mirth, misanthropy, wit, wisdom, folly, fiction, fun, festivity, theology, bruising, and thingumbob. He unites all the best

materials of the *Edinburgh*, the *Quarterly*, and the *Sporting Magazine*—the literature and good writing of the first, the information and orthodoxy of the second, and the flash and trap of the third.’⁴

The Chair of Moral Philosophy in the University of Edinburgh becoming vacant on the death of Dr. Thomas Brown, both Wilson and Sir William Hamilton announced themselves as candidates within a month. They were personal friends at the outset of the contest, and so they remained to its end. Neither of them was responsible for the bitter personalities in which their respective friends so freely indulged. The whole battle was fought upon political, and not upon personal, grounds; the very personalities introduced proceeding from political motives. Wilson was abhorred, by the Whigs, as the editor of *Blackwood*; and his private character was meanly and basely aspersed by his political opponents. Sir William Hamilton, though a whig, had never taken an active part in politics; and the odium of *Blackwood* did not interfere with his prospects. No one doubted his pre-eminent qualifications for the Chair in question; for he had, with great labor and success, devoted his life to the study of philosophy. The grave philosopher, it is true, did contribute one verse to the famous *Chaldee Manuscript*, and was so highly amused at his own wit, that he rolled from his chair upon the floor in a fit of laughter. His comparatively slight connection with *Blackwood*, however, was either not known, or it was not deemed an unpardonable offence, by his political friends. Both candidates were brilliant Oxonians. But Hamilton, as Wilson himself must have known, possessed claims to the Chair in question superior to his own. By his intellectual habits and tastes, by his profound and protracted studies, by his vast erudition and powerful mind, Sir William Hamilton had, indeed, placed himself in advance of the very front rank of the philosophers of his age and country. Yet John Wilson, the brilliant *litterateur*,—thanks to his political connections and to his party services!—carried off the palm of victory from the philosopher; who, absolutely free from envy, continued to enjoy his friendship for his successful rival, as well as his passion for the study of philosophy.

⁴ *Noctes Ambrosianæ*, No. IV.; an imaginary dialogue at Pisa between Maginn and Byron; upon reading which his Lordship exclaimed, ‘Confound the fellow! he understands me better than I do myself.’

Political influence had, as we have seen, raised Wilson to the Chair of Moral Philosophy, but it could not enable him to fill that Chair with honor to himself or to the University. This could be done only by the attributes and the attainments of the man himself. It is evident from Wilson's letters to his friend Blair, and the anxiety they manifest, that he had serious misgivings as to his own fitness for the Chair in question. His adversaries more than doubted, they denied and poured contempt on, his qualifications for such a professorship; and entered into a formidable conspiracy to bring him into irretrievable disgrace. If he triumphed over his enemies, as he did most effectually, this was due to his manhood, not to his moral science. The conspiracy, and its fate, is thus described by an eye witness: 'There was a furious bitterness of feeling against him among the classes of which probably most of his pupils would consist, and although I had no prospect of being among them, I went to his first lecture prepared to join in a cabal, which I understood was formed to put him down. The lecture room was crowded to the ceiling. Such a collection of hard-browed, scowling Scotchmen, muttering over their knobsticks, I never saw.' Poor chance, surely, has the new Professor for a hearing from that audience of knobsticks, hard-brows, and scowling Scotchmen, whose mutterings of hate, scorn, and all manner of uncharitableness, are ready and eager to burst into a furious storm of disapprobation! But, nothing daunted, the Professor 'enters with a bold step amid profound silence. Every one expects some deprecatory or propitiary introduction of himself and his subject, upon which the mass (*i. e.* the mob) is to decide against him, reason or no reason,' and overwhelm him with a storm of knobsticks and hissing Scotchmen. But he disappoints their expectations. He 'thunders right into the matter of his lecture, and keeps up unflinchingly and unhesitatingly, without a pause, a flow of rhetoric such as Dugald Stewart or Thomas Brown, his predecessors, never delivered in the same place. Not a word, not a murmur, his captivated, his conquered audience; and at the end they give him a right-down burst of unanimous applause. Those who came to scoff remain to praise.' Knobsticks said that word, and even hard-browed, 'scowling Scotchmen', —

such and so great was the presence of the man and the power of his speech. Beautiful, too, exceedingly beautiful, is the incident, that Sir William Hamilton, the defeated candidate, listened entranced to the first lecture of the new Professor, and, at the grand final burst of the peroration, out-clapped the most enthusiastic of his pupils.

Yet, after all, we can not find that John Wilson was a moral philosopher. Neither from the *Memoir* before us, nor from any other source, can we learn that he ever really devoted his mind, in right good earnest, to the study of the science. And in none of his numerous writings, is there a discussion of any of the great principles of moral science, or even a distinct statement of them. In his multifarious contributions to *Blackwood*, extending over a long period of literary labor, we find almost every thing considered, except the elements of moral science. It seems truly wonderful indeed, that he should have devoted so large a portion of his life to the teaching of the science, and yet leave no traces of his studies of it in his writings. He did elaborate, as we are assured in his *Memoir*, a certain theory respecting the origin of the moral sense, or the conscience; but that was a theory which he had found in the *Progress of Ethical Philosophy* by Sir James Mackintosh, and which he ought to have permitted to slumber there forever. It is certainly the most questionable portion of Mackintosh's history of moral philosophy; and might, if this were the place for its examination, be very easily refuted. This theory resting, as it does, on vague and doubtful analogies for its support, opened a fine field for the excursions of Wilson's imagination and eloquence. But it did not open the door to moral philosophy. His teachings were, no doubt, highly beneficial to his pupils, in rousing their minds to activity, and inspiring them with noble sentiments and glorious resolves; but then they were not, properly speaking, instructions in the *science* of morals. They seem to have been any thing but this. The fragments of his lectures, or rather allusions to his lectures, which are given in the *Memoir*, are simply flights of imagination used to illustrate some moral sentiment or emotion, and not a principle or law of moral science. They only profess, indeed, to be the reproduction of impressions

made upon some listener or other. But whatever may have been his deficiencies as a moral philosopher, they were concealed from his admiring audience, by the halo which his eloquence and wonderful personal presence threw around his metaphysical prelections. The man who, like Wilson, has only impressed his hearers deeply, but has never propounded a new truth, nor arranged, systematised, and organised truths already known, who, in short, leaves the world without having added one thing, either in substance or in form, to the science to which he has devoted his life, can hardly deserve the high encomiums bestowed upon him by his biographer.

From his first lecture, Wilson learned that he could, even under the most trying circumstances, rely on his manhood, his learning, and his eloquence, without much aid from his knowledge of moral science; and this lesson he seems to have carried with him to his grave. One of his pupils, for example, gives the following beautiful and spirited description of Wilson, as he appeared in his lecture-room in the last year of his professional life: 'And then to the bewilderment of those who had never heard him before, he looked long and earnestly out of the north window toward the spire of the old Tron Kirk, until having at last got his idea, he faced round and uttered it with eye and hand and voice and soul and spirit, and bore the class along with him. As he spoke, the bright blue eye looked with a strange gaze into vacancy, sometimes sparkling with a coming joke, sometimes darkening before a rush of indignant eloquence, the tremulous upper lip curving with every wave of thought or burst of passion, and the golden gray hair floating on the old man's mighty shoulders, if indeed that could be called age which seemed but the immortality of a more majestic youth. And occasionally, in the finer frenzy of his more imaginative passages, as when he spoke of Alexander, clay-cold at Babylon, with the world lying conquered around his tomb, or of the Highland hills that pour the rage of cataracts adown their riven cliffs, or even of the human mind with its primeval granitic truths, the grand old face flushed with the proud thought, and the eyes grew dim with tears, and the magnificent frame quivered with the universal emotion.'

These two impressions made upon two different minds, at the beginning and end of his professional career, give a better idea than anything we could say, however elaborate, of the man and the professor. The utterance of such moral emotions, however eloquent, is not moral science. It is merely the lightning of the mind, playing among the branches of the science, which leaves its roots, its organic structure, and its vital principle, precisely where it found them.

We now take a reluctant leave of Lady Gordon's *Memoir* of her father. It is well-written, — uncommonly well-written for a first effort. Yet, in all the earlier portions of the work, there is a certain stiffness and conventionality of style, which is not pleasing. We do not feel that the eulogium of the American editor is fully deserved. We do not think it can be classed with 'the master-biographies of English literature.' There is no feeling, especially in the earlier parts of the book, of any thorough mastery of the subject. The facts are presented in too bald a manner; and the arrangement is somewhat faulty. The same matter, better arranged and systematized, might have been easily compressed within two-thirds of the space, and, at the same time, have been presented in a form more easily retained in the memory. Besides occasional letters, which could not have been spared, the greater part of which are to his wife and daughters, and throw much light upon his domestic life and character, there are about 126 pages devoted exclusively to correspondence. Many of these letters are of an utterly trivial character, throwing no light upon characters or the times; others of much literary interest, are from his distinguished contemporaries, but perfectly irrelevant. After these comes the only genuine biography of the book. The delineation of his early life is full, accurate, and honest, but the breath of life has never been breathed into it. But when we come to the picture of the old man, with his majestic frame shattered and brought low, while his mind was yet bright and clear, even the old zest for boyish sports in full vigor, the old scorn of all that was unmanly and mean strong as in his youth, then we see the man, and we believe in him. Before he was only a myth. It is natural that his daughter, in these latter years of his life, when she was old

enough to know and appreciate him, should, into her picture of him, throw a life and a power which she could not give to her ideal of his youth and early manhood.

Mrs. Gordon is evidently a truthful writer. We have seldom seen such honesty of purpose in a biographer, and yet in spite of her steady resolve to tell only the truth, her filial love has made her take a view of her father, which is not perhaps the truest one. It is almost impossible for the human mind entirely to dispossess itself of the idea that the object around which its dearest affections, most genuine admiration, and almost worship, cluster, is not, in some sense, the centre of the universe. That, of course, is a strong form of expression, and yet it symbolizes a truth. She can not see clearly that in some cases he was wrong. We believe she never excuses him for any thing she sees to be so, but not seeing things as they are, is a subtle form of untruthfulness; though, in this case, far from discreditable to her goodness of heart. We believe John Wilson was too noble a man to desire that his errors should be smoothed over, or apologised for. The truth, after all, is the best thing,—not only truth in speaking, but also truth in seeing. Biography ceases to be the most intolerable reading in the world only when the truth, from any cause, is spoken. Boswell, who, in his sheer opacity and conceit, has written a biography which has yet to be displaced from its seat of high honor in that class of literature, and Irving, who, with his artistic eye and profound study of the subject, forgot to be a partizan, are marked instances. Who has not had that unutterable horror forced upon him, a religious biography from which all that was not considered the right thing has been carefully expunged, and, with it, all the life of the man? Surely the life of a good man should be more interesting than that of a bad one; and it would be so, we believe, if the whole truth were only told. There is no pleasure in following the mystery of crime like the glow of delight, and the exaltation of the moral sense, which a grand sentiment, or a noble, pure, disinterested action, can inspire. There is something wonderfully self-asserting in truth, as well as a something wonderfully beautiful in the character which is, at all times, rendered perfectly transparent by its fearless presence. If our instincts

were only pure and uncallous, we should never hesitate, we believe, between the true and the false; the very atmosphere surrounding each being, in such case, amply sufficient to reveal its real nature. Hence the sublime beatitude, 'Blessed are the pure in heart; for they shall see God'; having their eyes opened by the natural affinities, by the mutual sweet attractions, between truth and goodness. It was indeed the presence of truth,—not of perfect and full-orbed but only of fragmentary and refracted truth,—which gave so wonderful a charm to the manhood of John Wilson.

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- ART. V.—1. *Lexicon Comparativum Linguarum Indogermanicarum.* Von L. Diefenbach. Frankfurt. 1846–51.
2. *Garnett's Linguistic Essays. The Philological Essays of the late Rev. Richard Garnett.* Edited, with a Memoir, by his Son. London: 1859.
3. *Charakteristik der Hauptsächlichsten Typen des Sprachbaues.* Von H. Steinthal. Berlin: 1860.
4. *Hebräisches und Chaldäisches Handwörterbuch über das alte Testament.* Von J. Fürst. Leipzig: 1852–60.
5. *Deutsche Grammatik.* Von J. Grimm. Göttingen: 1822–40.

Of the works, whose titles we have placed at the head of this article, and which have been several years before the public, we do not purpose now to undertake any criticism; we wish rather to offer to our readers certain reflections on the study of the Sanskrit language, which have been naturally suggested by their examination. Though it has now been eighty-four years since the foundation of the Asiatic Society at Calcutta, the Sanskrit has forced itself to a very small extent into the curricula of the universi-

ties and colleges of the world. In England, where it was first made the subject of scientific investigation, the interest in it has always been largely commercial. The East India Company has established professorships in the colleges in which its cadets are trained for service abroad, and where they are expected to prepare themselves to hold communication with the natives, learned and unlearned, but where it is not regarded as of special importance that they should make themselves acquainted with the literature as such, or enter into the general questions of grammar which the Sanskrit suggests. Besides these, there is the Boden professorship at Oxford, where Mr. Monier Williams has labored faithfully, and has published a grammar. Professor Max Müller, a German by birth, and a scholar of acknowledged merit, has given to the world, besides a grammar, editions of the *Hitopadesa* and the *Rig-Veda*, but his lectures have for the most part had reference to the science of language, which supposes, but does not give, a knowledge of Sanskrit. In India, Messrs. Hall, Cowell, and others, have trodden worthily in the footsteps of their predecessors, Colebrooke, Carey, Wilkins, Forster, and Wilson.

In Germany, provision is made in nearly all the universities for the study of Sanskrit; but the number of students is small, averaging in one prominent institution, per Semester, about twenty-five out of three thousand; and Doctorates, which include Sanskrit, are rare. At Paris, M. Oppert has earned a good reputation by his labors; but we are unable to say what opportunity he has had of giving instruction. So at St. Petersburg, where Boehtlingk has received hearty support from the Imperial Government, especially in bringing out the great dictionary which he has undertaken in conjunction with Roth and others. In America, there is one chair, (at Yale, filled ably by Mr. Whitney), and the attendance is small. In the entire South, there is not an institution that offers any opportunity for the acquisition of Sanskrit.

It is not difficult to discover the reason of this neglect. In any country and age old enough to have an intellectual history, two tendencies or systems of education will be found, the traditional and the practical; the one received from the past, the

other called forth by the needs of the present. And these two are one as to their origin, for the traditional of one period is the practical of the preceding. So with us. The study of the classics is an heirloom, made sacred by the lapse of time, certainly of the highest value, but retained and defended by many persons whose real ground for its maintenance is, that it comes to them from the fathers. Originally, it was purely practical. In the Middle Ages, Latin was a necessity, as being the repository of religious and secular learning. The fifteenth century introduced to Europe, with Greek, the finest poetry and best history and philosophy of the world. The prime consideration was, not that these languages afforded mental gymnasia, but that they furnished the only intellectual nourishment of the times. Men studied and read Greek and Latin as we read English and German; they were the vernacular of the learned world. It was a practical need which was felt, and not a scientific, philological, or educational enthusiasm. The study of the classics thus became necessarily the A B C of the schools, and firmly fixed in the routine of instruction. After the pressing need for material had passed away, it being supplied by modern writers, it was discovered that the study of the dead languages offered the best means for the development of the mind, and it was accordingly constituted the mental gymnasium. And very naturally, the study thus established, with all the machinery of the university system, there sprang up a race of scholars and professors in whom the simply scientific spirit showed itself. This, then, is the present status of classical study; a traditional reverence, and a simple, scientific interest, both coming directly from an original striving after a practical benefit.

In our own time, the same practicalness leads to somewhat different results. The public, which teachers are expected to reach, is of a different character. Petrarch and Boccaccio disinterred the monuments of Roman Literature for a select few; and it was as a rule to the limited number who intended to devote themselves to learning, that Leontius Pilatus and Johannes Argyropulus, and the colleagues, delivered their lectures; though some, like Manuel Chrysoloras, may have gathered round them disciples of every rank and age. This was the case also with

Reuchlin and Cheke. Their hearers were the young men who aspired to erudition, or at least to a place among the cultivated people of the time.

Now it is precisely this class which determines the *differentiæ* of the educational system of a period; and to its greater extent in modern times, we must refer in great measure the difference between the new and old views on the subject. The training of the lowest class has not varied greatly in different ages of the world. It has usually been limited to the acquisition of the alphabet of learning, with such slight differences as difference of religion and social habits produced. Reading, writing, and arithmetic, have always been the basis of popular education. This Moses commanded, and this was the *grammata* of Athens in its simplest signification; beyond this, it is probable, the majority of children did not go. If music were added, as at Athens, (and now in Prussia), it was of an elementary character. Of course, we mean here by 'education' the cultivation of the mind, and have nothing to do with the bodily exercise of the gymnasium, or with that more general training which fits the man for what Dr. Arnold calls his second business, that is, the discharge of his social duties as man. We observe only that it is the practical which determines here also the extent of education, the supply being directly in proportion to the demand.

The same consideration governs in the provision made for higher education, and the demand will be determined by the spirit of the age. In modern times, the circle of cultivation has greatly enlarged itself; while at the same time, commerce and industry in general have taken hold of society, (the Aristocracy of England does not disdain to share the profits of Joint Stock Companies); and the 'practical' is understood to mean that which increases the physical or industrial capacity of the world, which gives man power over natural agencies, or as it actually presents itself to the mass, which puts money into the pocket. By many people, science and philosophy are understood to mean simply the natural sciences, and everything else is for them empty theory. The education of even the better class must fit them to comprehend and use the immediate minute facts of life, and of life as it presents itself in the restricted circle of the in-

dividual. Schools are established to prepare young men independently for commerce, for agriculture, for any avocation. It has come to be believed that a knowledge of the classics, a mere acquaintance with the modes of communication of a dead race, the acquisition of ideas foreign to our own, is not worth the trouble required to gain it, since it does not actually guide a man in building a house or in making a bargain. The modern languages are pitted against the ancient, and their claims to superiority based on commercial relations; mensuration is held to be more valuable than the calculus, and the study of metaphysics useless and deservedly replaced by hygiene. In a word, mental training and love of truth are subordinated to a mechanical utility. The noble enthusiasm of learning, the devout desire to know the secrets of the universe, is ignored in favor of a blind regard to material prosperity.

We are not surprised, then, that a language, destitute both of the traditional and of the practical claim, unknown to the founders of the schools, nowhere a medium of communication, having only an antiquarian and scientific interest, should meet with little favor. Unfortunately, the trade in East India cotton can be carried on, and the government of the Province tolerably administered, without Sanskrit. One class of men may regard this extinct tongue as having a secondary practical value,—missionaries to India. But they find their every day evangelical work in the modern dialects, and have little more inducement to learn the sacred language, than a Buddhist missionary to England would have to study Anglo-Saxon. It must be confessed that the study of Sanskrit does not seem to offer any immediate advantage, (that it will be ultimately beneficial might easily be proved), to the commercial and manufacturing world, or to the professions of law, medicine, and theology. Therefore, and because it has no support from tradition, the greater obligation rests on the centres of learning to sustain it, especially now that a university of this country has avowed its preference for the bread-and-butter sciences. It is to the universities that we must look to introduce studies that do not commend themselves to the public apprehension, and we believe that there are solid reasons for now calling on the prominent institutions of the South to make provision for the teaching of Sanskrit.

It is proper to state another fact which is not without influence on this study in scientific circles — we mean the misunderstanding and rivalry which has sprung up between Sanskritists and Classicists, or, as it is perhaps more correct to say, the jealousy felt by the latter toward the former. It seems to a devoted student of the Greek, of the old school, intolerable that that ancient and polished tongue should be explained by means of a newly discovered barbarous dialect. It may be that the Sanskritists have sometimes ungracefully advanced the real claims of their language, as well as made pretensions to what it did not possess. But this is only the exaggeration of a new impulse, and they have usually conceded to the classic languages their excellencies and advantages. Professor Curtius, in a tract of commendable fairness, has endeavored to mediate between the two parties, to show that, though the Sanskrit must be regarded as the foundation of etymology, the Greek must be held to be superior not only in its literary monuments and its syntactical construction, especially its connectives, but even in some cases in distinctness of form, and in the vowel-declensions, where it carefully distinguishes the feminine (a) forms from the masculine (o), while the Sanskrit has only one vowel (a) for both. There is in truth no ground for rivalry, and we may hope speedily to see perfect harmony reigning in the scientific world on this point. It is not pleasant to see so eminent a critic as Haupt, of Berlin, heaping indiscriminate, (and we must be pardoned for adding, ignorant,) ridicule on the attempts to throw light on the Homeric forms and mythology from the language of the Vedas, as if it were derogatory to the poet to assert that the forms of his mythological names are secondary, and to attempt to trace the splendors of his representations to the simple nature-worship of the primitive race. A similar spirit of opposition repels the claims to superior antiquity set forth by scholars in favor of Latin over Greek. It is all unscientific, unphilosophical, prejudicial to truth, and, we may be sure, cannot stand before the progress of inquiry.

In the Southern States, then, no effort has as yet been made to recognize and further Sanskrit studies. At the University of Virginia, connected with the School of Modern Languages, there

is a Department of Comparative Philology, (and a work designed to give an outline of the science has been published by the present incumbent of the chair), but Sanskrit has not entered into the course, as indeed it would be impossible to find time for it. In endeavoring to present its claims here, we call on those who have pursued it to aid us in bringing it before our universities and colleges, and especially, while striving to form a public opinion which shall demand its introduction, to induce governing bodies, faculties, and boards, to give it due consideration.

We do not propose here to give a description of Sanskrit literature, though the subject is an inviting one. Each of the three divisions, (the Vedic, the Epic, and the Classic), has its peculiar charms. The Vedas spread over a large space of time, and exhibit in their different parts different characters, showing the progress of the religious or mythological spirit, and the growth of the national consciousness. But it is impossible not to observe with pleasure the freshness and simplicity of the earliest hymns, (in the Rig-Veda chiefly), which are redolent of the influences of the sunshine and the breeze, and the starry heavens. In the later Vedas we have a cooler spirit of philosophical inquiry, and in the great epics grand heroic narratives with numerous episodes, some of which, (as the romantic story of Nala and Damayanti, the theological poem called Bhagavad-Gita, and Arjuns's Journey to Indra's Heaven), have been translated into the western languages. In the classic period are found descriptive poems and dramas, and these, as well as the epics, have all the qualities necessary to excite interest—involved plots, difficult situations, deep and tender feeling, cunning and magnanimity, reverses of fortune, wickedness in its temporary triumphs, and goodness in its final reward. The immense field of literature is by no means yet explored. In the explication of the Vedas, more remains to be done than has yet been accomplished; in all departments, hitherto unknown regions are showing themselves; and lately the investigation of the Buddhist literature has been entered on. There is great need of laborers, and abundant opportunity to earn honorable distinction. We desire, however, rather to call attention to the necessity for a

chair of Sanskrit in every university, from the connection between this language and the science of comparative grammar, or, more exactly, comparative etymology, in the Indo-European family. This family, extending from India westward, and including almost the whole of Europe, contains all the languages, with the exception of the Semitic, which have played an important part in the civilization of the world. But the close connection between its different members was not suspected till the beginning of this century, when the result of the English study of Sanskrit was appropriated and carried on by Germans. Some general resemblances had been perceived, and it was the opinion of many that Latin was a daughter of one of the Greek dialects. But it amounted to a revelation when it was shown that not only Latin and Greek, and German and English, but also Danish and Icelandic, Russian and Polish, Irish, Scotch, and Welsh, stood in such relation to one another as made it impossible to consider them otherwise than as sisters, daughters of a common mother. This is proved by a large induction of facts, comparisons of declensions, conjugations, pronouns, prepositions, and verbal roots. It is accordingly supposed that at a remote period the primitive race dwelt in Asia, probably on the tablelands, near the northwest corner of India, and spoke the mother-language, the grammar of which a German scholar, Schleicher, has attempted to give. From this point colonies went forth, some into India and Persia, some westward to Europe, and different dates have been fixed for these migrations, and therefore different degrees of antiquity for the various languages. The relative ages must be determined from the greater or less fulness and the more or less distinct significance of the roots, and inflectional endings; and on such grounds the highest antiquity must be assigned to the Sanskrit, the language originally spoken by the Indo-European colony that went into India. When this migration occurred, we do not know; but we may affirm that the immigrants found a people already inhabiting the country, and speaking a rude uninflected language, and that they conquered them only after years of sharp conflict. The new race brought with them an inflected language, and a civilization which, identical with their religion, first expressed itself in the Veda, (which was originally

liturgical), afterwards in the Epic, and later in the Drama, and in works of History and Philosophy. In this language, first made known to the learned of Europe by Sir William Jones, Colebrooke, and Carey, the structure of words is so apparent, the inflectional fusion has so generally respected original forms, that the study of the origin of terminations and the form of roots forced itself on scholars. *The laws of the growth of words* became for the first time the subject of scientific inquiry. Moreover, the striking similarity between certain Sanskrit and Greek words had already been perceived, and the next step was to determine whether the Greek inflectional endings, or the Sanskrit, came nearest to the original form. The settlement of this question required of course the fixing of some standard for the original form, and this led to comparisons of consonants and vowels, and inquiries as to which in each class were more stable, and which were likely to come from others. Finally, the question of precedence was decided in favor of the Sanskrit, which seemed to have the fuller forms. The way was now opened for an etymological analysis of the Greek vocabulary, and of course of the Latin. Soon the same researches were extended to the Germanic Tongues, then to the Romance, (which are lineal descendants of the Latin), and to the Slavonic and Celtic; and Bopp has given in his *Comparative Grammar* a view of the forms of all these groups of languages in their mutual relations, with an attempt to discover their origin and primitive dimensions. Other researches have been made in fields of greater or less extent, and have elicited many interesting facts concerning the original condition of the various languages, and the steps by which they reached their final forms. In these comparisons it is not always the case that the Sanskrit presents the oldest forms; sometimes it must yield to Zend, sometimes to Latin or Old Prussian, (which is a Slavonic tongue). But in the main its structure is the clearest. While it has reached definiteness and symmetry of form, (in which the Zend, for example, is deficient), it has suffered less than the western languages from attrition. This was exhibited very satisfactorily by Bopp as early as 1816, (in his work on the conjugation-system of Sanskrit and Greek), in regard to personal and modal endings and augment. And

more lately Curtius in Germany, and after him Hadley in this country, have transferred to Greek Grammar the treatment of the verbal root which the native grammarians in India have been familiar with for a thousand years.

Much has been done therefore towards laying bare the structure of nouns, verbs, and particles, in this widely diffused Indo-European family. To a certain extent, the primitive form and the origin of case-signs, of the signs of degrees of comparison, of verbal terminations, and the elements of adverbs, prepositions, conjunctions, and substantives, have been determined. In regard to these there is not always unanimity among scholars, nor does the Sanskrit always afford the means of coming directly to a conclusion. But in many cases it does; and, what is more important, it suggests the principles which lead to satisfactory conclusions. By the peculiarities of its structure it has given occasion to the researches from which has sprung a science; so that, where it fails to supply material facts, it points out to the investigator the path in which he is to advance. An English student would get no light from Sanskrit, or from Latin or Greek, in regard to the origin of the English gerund-sign *ing*, but a little experience leads him naturally to the simple analysis, either into an original *n* with added *g*, or an original *g* with insertion of the nasal, and it is probable that further comparison will incline him to the latter supposition. The English dative (and now also accusative) sign *m*, which is found only in the pronouns, seems to present a similar difficulty, for the grammars do not give such a termination in Latin, Greek, or Sanskrit, and it helps us nothing to know that the German has the same sign. But Bopp suggests a very ingenious explanation. In certain Sanskrit pronouns, the syllable *sma* is interposed between the root and the termination, being itself composed of well-known pronominal elements, and we have retained the *m* of this insertion and dropped all the rest, so that instead of *hisme* we write *him*. This method has been carried out in various directions, and notwithstanding obscurities and uncertainties, has produced valuable results.

The number and value of these results, and the positiveness of the rules of procedure, entitle the method to the rank of a sci-

ence. One becomes conscious of the satisfactoriness of having a safe foundation whereon to build, and safe principles for guidance, when he reads the opinions of men of learning and intellect in the pre-Sanskritic times; such, for example, as Coleridge's criticism on the *Diversions of Purley*, (Table-talk, May 7, 1830,) or his assertion that the inflections of the tenses of a verb are formed by adjuncts from the verb-substantive, (March 18, 1827.) There are not a few persons now who adopt Voltaire's definition of etymology—a science in which the consonants are of very little account and the vowels of none at all. They could hardly object to the relation between *alms* and *eleemosynary* under Mr. Trench's guidance, but they hold a stretch of credulity necessary in order to believe in the identity of *goose* and *anser*. It is true, the time has been when there was a great deal of dabbling in etymologies, but that time has passed. Fanciful guesses at connections between words and languages are now suppressed. He who ventures into the arena must have some acquaintance with the science of comparative etymology, with the general laws of interchange of vowels and consonants, and the special laws of particular languages, so that he may temper boldness with prudence; and any deviation from a rule which is advocated, must be supported by as sound reasons as are required of the physicist who professes to have discovered a new principle in phenomena heretofore unknown. A Sanskrit word being given, we know straightway within certain limits the form which it will assume in Greek, Latin, German, or English; and to this we hold till sound proof of deviation is adduced. In every science, the necessity of allowing a certain latitude follows from the imperfection of research. A discrepancy between astronomical calculations and observed phenomena, led to the discovery of the planet Neptune; and so new relations between words lead to the discovery of new laws of interchange. But there is already definiteness enough in the principles of etymology, to point out clearly the path of investigation.

Thus, a Sanskrit initial *j* answers to English initial *k*, as we may see by comparing *jan*, 'to bring forth,' 'to be born,' and *kin*, or *jna* and *know*, (*kna*). When then we find *janaka*, 'a father', on looking for the corresponding English word in *k*, we

have little difficulty in adducing *king* (*kanig*) as identical, the Saxon adjective termination *ig* being really the same as the Sanskrit *ak*. With equal ease we connect the feminine form *jâna*, 'wife,' with English *quean* or *queen*, though here the insertion of *w* (originally *v*), will strike the attention and call for investigation. And this is not an isolated case, for we find the same *v* when we compare Sanskrit *jîv* 'to live' and English *quick* (*kvik*), with the added difficulty of final English *k* for Sanskrit *v*, which meets us also in Latin *viv* (in *vivere*) and *vic* in *vizi*, (*viksi*). Here then the English *qu* (*ku*) will require examination, and the question will present itself whether Sanskrit has dropped the *v* of this initial combination, (the original form being *kvikv*), or whether a guttural has interchanged with a labial, which some regard as impossible. If now we wish to discover the Sanskrit form of the English *come*, we look in vain for a root *jam*, which we would expect from the statement made above; but find instead *gam*, which means the same thing, and which naturally (especially in its shorter form *ga*), suggests English *go*; so that here Sanskrit *g* seems to correspond with English *k* (*c*), and also with English *g*. The apparent confusion is increased when we find that on the one hand the Sanskrit *gâ* 'to sing' seems to explain *gale* ('singer') in *nightingale*, and on the other that Sanskrit *go* 'ox' and English *cow* (Anglo-Saxon *ku*) seem to be identical. That is, English *k* and *g* answer to Sanskrit *j* and also to *g*. Part of the difficulty vanishes when we observe that the palatal *j* is a secondary letter, coming frequently by a softened pronunciation from *g*, and that some roots retain the harder, while others sink to the softer. We shall get rid of the rest of the difficulty if we regard English *go* and *come* as different forms of the same radical, and so accept the fact of interchange of *k* and *g* in English, of which there are other examples. The discussion of the initial *kv* or *qu* would occupy too much time, and we only remark that there is reason for regarding it as a widely spread combination, issuing however from the simple guttural. A similar interest attaches to the English initial *wh* (originally *hv*), an examination of which will show how ungrounded is Webster's statement (*Unabridged Dictionary*, 1852), that *who*, (Latin *qui*), is a compound form. And a very little carefulness

would have saved this author from the incomprehensible blunder of comparing English *preach* (which is from Latin *prædicare*, radical *dic*), with Hebrew *barak*, or English *sir*, (which is French *sieur*, *seigneur*, Latin *senior*), with Hebrew *shur*, 'to sing' or 'to behold'. There must be scientific method in such inquiries.

An interesting result of this careful analysis of language which has come from the study of Sanskrit, is the attempt which has been made to classify the languages of the world. The modes and details of classification are various, and we do not propose here to discuss the two principal methods, the genealogical, which makes the division turn on the descent and kinship, and the morphological, which is based on the form or the mode of combining roots. We merely point out the desirableness of scientific precision in such classifications, and the fact that this is gained by the accurate analysis of the matter and form of each individual language, such as Steinthal has given of one of the negro dialects of Africa. Great blunders have been made on this point by writers who failed to determine accurately, first, what constitutes in general the *differentia* of a tongue, and, secondly, what the character of this determining element in any individual case is. An example is afforded by Webster's reference of the Basque to the Celtic class, it being really *sui generis*, not Indo-European, and not Semitic, agreeing in general with the Tataric idioms, (such as the Turkish), and placed by one writer on a level with Greek in fulness and exactness. And it is evidently in the treatment of such languages as do not belong to the great well-known families that method is required, in that extensive debatable ground where our ordinary experience does not guide us, and where we must look to established law. Before the beginning of this century, there was no such law. Collections of words were made by Leibnitz, by the Russian Empress Catharine, and by Adelung; but these, though valuable as material, were without scientific arrangement, because based on no scientific principle. The principles and laws were derived from, or suggested by, the study of Sanskrit.

Though we have here referred chiefly to the benefit accruing to Indo-European grammar, the benefit of the general impulse

has not been confined to this family, but has been felt also by the Semitic. We have as yet no comparative Semitic grammar like Bopp's Indo-European, or like Schleicher's; but the corresponding constructions of the various dialects have been to some extent determined, their grammatical and lexicographical relations investigated, and each made to contribute to the elucidation of the others. Thus, to give a simple illustration, the comparison of the Hebrew definite article *ha* and the Arabic *al*, suggests *hal* as the original form, and explains the doubling of the initial consonant of the Hebrew noun after the article. Attempts have also been made to discover the etymological relations of the Semitic and Indo-European families, but sometimes with so little caution as to bring discredit on the whole question. At this moment only two parties are prominent in the discussion; one affirming the complete identity of the two families, the other denying the relationship absolutely. The second party is largely in the majority, the first finding almost its sole representatives in Fürst and Delitzsch. Even Ernest Rénan, the able author of the *Histoire générale des Langues Sémitiques*, while citing various examples of the identity of roots, ranges himself practically with the second, and Fürst is usually denounced by Semitists as crazy. The two parties represent two extremes. Professor Fürst has been incautious in the proofs of identity which he has adduced, and in the extent of his generalizations; but the assertion of his opponents that the difference in organic structure of the two families makes an etymological comparison impossible, seems to us as scientifically unsound as a denial of the ethnological relationship of the Tatars and the modern Hungarians, (who are descendants of the old Huns), based on the present differences in national character and civilization.

From these facts, to which many more might be added, we may judge of the dimensions of the science which has grown out of the study of Sanskrit; and a word may now be said of its bearing on the languages of most interest to us, and of greatest prominence in our collegiate courses.

Greek and Latin etymology has within a few years undergone a complete transformation. We can not go into the history of

the movement, which is an interesting one, but does not differ materially from that of other sciences. It is marked by an initial indigenous empirical stage, which was followed by the foreign empirical, to which succeeded finally the scientific. This first stage is represented in Greek by the *Cratylus* of Plato, and in Latin by Varro, and did not in general go out of the bounds of the language itself for explanations. The *Cratylus* may be cited whether Plato were in earnest or only ridiculing the current systems of Parmenides and Heraclitus, since he gives examples of the reigning style of derivation of his time. Perhaps the best way to exhibit the progress of etymology will be to give a few specimens from the *Cratylus*. In some cases he could hardly go wrong, as where he makes *Astyanax* 'the guardian of the city', and *Hektor* 'a ruler', or compares *Ares* 'Mars' with *arren* 'male,' and *selene* 'the moon' with *selas* 'light'. Elsewhere the explanations are very absurd; *dikaïos* 'just' is said to be *diaïon* 'going through', because there is a something pervading the universe and determining the laws of right. The *k*, he remarks, is inserted for euphony, and he not inaptly supports the insertion by the example of the word *dioptron* 'mirror', which is evidently from the root *opt* 'to see', and where the *r* is euphonic. The maxim of Heraclitus, that all things in the universe are in motion, is made the basis of numerous etymologies: *helios* 'the sun' from *heilein* 'to revolve', because he goes round the earth, (in regard to which, be it observed, the astronomical error is not a bar to etymological correctness); *aer* 'the air' is *aei rei* 'it is ever flowing'; *phronesis* 'prudence' is perhaps *phoras onesis* 'utility of movement'. And when we find such a shocking derivation as *gnome* 'thought' from *noman* 'to agitate', we are prepared for similar dispositions of other intellectual attributes, as *sophia* 'wisdom' from *soo* 'to rush' and *aphe* 'contact'. In the same way he treats the virtues and vices; *kakia* 'vice' is *kakōs ion* 'moving badly', *arete* 'virtue' *aei reite* 'eternal flowing' (of the soul), and *aletheia* 'truth' is, (from a theological stand-point admirably, but from an etymological, unhappily), decomposed into *theia ale*, 'divine wandering'. Finally, not to accumulate examples, the fundamental conception *ousia* 'being' is declared to be merely *iousia* 'going'. It is, however,

interesting to observe that Socrates proposes to elude certain difficult etymologies by referring them to the barbarians, (the Phrygians), and from the fact that *kunes* 'dogs' was one of the words so referred, we may perhaps conclude that this Phrygian dialect belonged to the Indo-European family.

In the *Noctes Atticae*, we find traces of an advance to a somewhat more rational method. Gellius endorses Varro's criticism on L. Aelius' attempt to derive Latin *lepus* 'a hare' from *levipes* 'light-footed', on the ground that it was really the Greek *lagōos*; and criticises Varro's derivation of *fur* 'a thief' from *furvus* 'dark' (because thieves steal best at night), citing Greek *phor* 'a thief' as identical with Latin *fur*. This is the beginning of comparison. Gellius also justly refers *licitor* to *ligo* 'bind', because it was the duty of this officer to bind persons whom the magistrates had ordered to be punished. This opinion he quotes from Valgius Rufus in opposition to Cicero's freedman, Tiro Tullius, who derived the name from *licium* ('limum'), the 'girdle' which the licitor wore; and he defends the interchange of the consonants *g* and *c* by citing *lector* from *lego*, *victor* from *vivendo*, and other examples. This is good reasoning; but elsewhere he errs lamentably, as in *Jovem*, which he derives from *juvare* 'to help'; and so *veiovis*, which he makes the negation of *juvare*. *Inducias* 'truce', he explains as = *inde uti jam*; that is, 'quiet shall reign till a certain day, after which war shall proceed as now'. Not unlike these are the explanations given in the *Etymologicum Magnum*, which may be taken as exemplifying the science of the Byzantine school, and in general of the grammarians.

This system, which consisted so largely of mechanical division and wild guessing, with a plentiful lack of acquaintance with the powers and relations of letters, may be said to have lasted till the revival of the study of the classics in Europe. The generation of scholars that now grew up (the foreign empirical school), differed from the ancients chiefly in the caution and judgment which they brought to bear; and though Latin was explained from Greek, (and occasionally Greek from Latin), there could be no comprehensiveness in the treatment of the subject. There remained a large class of words on which Greek

threw no light; and, generally, the aid which might have been gotten from Latin, was lost by ignorance of the laws of interchange of consonants and vowels. Plato seems to regard *Zeus* as made up of *Zeu* and *Dis*, and it was a long time before it was discovered that *Jupiter* is *Zeu-pater*. But further it was impossible to go. There is nothing in the Greek language to explain the meaning of *Zeus*; and it does not seem to have occurred to the old scholars to compare *dis* and *dies*, though they had referred to *divus* and Greek *dios*. Buttman and Döderlein, and their school, could make valuable contributions to etymology, when, by patient research, by accurate knowledge of words, and by sound judgment, they could discover cognate words in the language itself. But for two reasons, they necessarily failed to give satisfactory accounts of Greek and Latin words. The first is, that many of these words come from roots no longer existing in these languages, and therefore only to be conjectured; and the second, that the stage of development in which we find the classic tongues, does not usually give the primary significations of roots. Now the Sanskrit, by supplying these radicals with their primitive meanings, furnished precisely the material which was lacking, and gave a scientific sureness to these investigations, which was before impossible. It gives a satisfactory explanation of *arete* 'virtue', as well as *Ares* 'Mars', by making us acquainted with a root *ar* 'to be strong'; it connects *helios* 'the sun' with *su* (*hu*) 'to generate'; and shows that *Zeus*, *Jupiter*, *Juno*, *dies*, are all related, and all signify 'shining'. If we suppose a migration of tribes from a central stem, it is probable that those which make the greatest geographical departures, which enter into the most active and varied life, will to the greatest extent modify the original meanings of words, build up, and, as it were, recreate radicals, and so lose sight of primitive forms. And this is actually the case with Greek and Latin as compared with Sanskrit, which thus offers a starting-point from which we can trace the progress of the sister tongues. The study of these changes is etymology; it is the recognition of unity in variety. The student is made familiar with the outward and inward modifications of words, ever variable, yet always to be referred to laws; and as his researches extend themselves, he is called on to wonder at

the diversity of form and color which the living radical assumes. In some cases, the relation between root and derivative was probably always apparent; as in the Greek *phero* and *phoros*, *lego* and *logos*; and, (as it seems to us Plato ought to have known,) *gignosko* and *gnome*. But in others, where the signification has been considerably modified, the connection is not obvious. The relationship between Greek *teino* and Latin *tendo* 'to stretch', and *tener* 'tender', was not perceived till the Sanskrit *tan* 'to stretch', and *tanu* 'thin', suggested it; and *hominem* was not referred to the root *min* in *memini*, till the Sanskrit *manu* 'man' was plainly seen to come from *man* 'to think'. Hundreds of these beautiful connections exist, and would perhaps have lain concealed forever, but for the method of investigation suggested by the Sanskrit, by the accuracy with which it has preserved the naked radicals in their early signification,—we say early, not original, because all our study goes to show that even in this primitive tongue, there is a past history of changes in the form and in the meaning of words; and the principles which are derived from the investigation of the modifications of Greek and Latin radicals may be applied to these remoter modifications which stand, it may be, at the very beginning of language.

This is the transformation which has been made in classical etymology; and it is a revolution. And the grammars, as well as the dictionaries, have been affected. Where the student formerly found only unpretending paradigms, faced, it is true, with numerous exceptions, he is now liable to encounter schemes of cases bristling with uncouth additions, represented as essential to the understanding of the declensions, but to him for the most part in themselves unintelligible. He meets with discussions based on what are called original case-endings, as in the treatment of certain conjunctions and adverbs, *dum*, *palam*, *furtim*, and Greek *palin*, *autōs*, and others. He will find divisions of the verbs, and etymological and lexical views of moods and tenses, which can hardly convey much meaning to him if he be ignorant of the language whence they come, and where their force is evident. It should never be attempted to force Sanskrit terminology on Latin and Greek grammars; but it is impossible to understand the inflections of these languages without referring

to their oldest sister. Even, as has been intimated, where Latin has inflections not found in Sanskrit, the *method* which the latter carries with it, leads to satisfactory results.

We may here briefly state the fact, that English lexicology has been brought within the circle of Sanskrit influence. We have very few inflections, and the only rational accounts of them have come from comparison with this language of India. Our genitive ending *s*, our dative and accusative *m*, plural *s* and *en*, signs of comparison *er*, *est*, *m* (as in *former*), many verbal inflections and formative syllables in adjectives and substantives, have been more or less fully explained. But the field offered by our dictionaries is much larger. Our lexicology has been greatly improved within a few years. The last edition of Webster is satisfactory in its etymologies so far as concerns the reference of English words to words of other languages, or comparison with cognates; the Provençal and old French especially have been diligently searched and made to do good service. But there is a further step to take, particularly in the case of isolated English words or radicals,—that is, to trace their primitive form and meaning. This has been done in a few cases of common words, such as *brother*, *sister*, *father*, and *mother*; but only in a few cases, and this must be noted as a defect. A very interesting field is opened here, to which we hope to be able to call further attention. Suppose we are dissatisfied with the reference of English *ban* to French *ban* ‘curse’, as not explaining for example the word *arrièreban*, we get no light from western languages; but from Sanskrit we learn that the root signifies properly ‘to say’, thence ‘to proclaim’; and we may observe that the general signification is limited in process of time, and given a special direction. A little analysis will sometimes throw a flood of light on a common word. We will hardly find in our dictionaries any account of the word *wing*; but if we drop the nasal, (as we have a right to do from a well-known law of root-formation), we get *wig*, which is evidently the base of *wiggle*, and identical with *wag* ‘to move’ (as in *wagon*), and therefore with Sanskrit *vah*, Latin *vehere* ‘to carry’. We see that the notions ‘moving’ and ‘carrying’ are closely connected, and *wing* is probably the ‘carrier’. Laws of formation have

thus been developed in the English itself, as must be the case in every language. Special etymology has always been the child of general or comparative etymology.

And this leads to the remark that this latter—the investigation of universal radicals—is itself the product of Sanskrit studies, historically and logically. This attempt to discover the radicals of the primitive Indo-European family, has not as yet been carried very far; but it is a step in the right direction. It is by no means intended merely to satisfy curiosity in regard to primitive root-forms and root-meanings, but helps to solve interesting questions with which it connects itself concerning the processes of the human mind in building up roots, and the origin of language. Inquirers have not been satisfied with researches in Indo-European radicals, but have tried to extend their comparisons so as to embrace not only the Semitic, but also the Polynesian, Dravidian, and other groups. This is a very fascinating pursuit, and we would be glad to see a universal identity of roots established; but it must be confessed that the effort thus far has not been successful. It is possible that minuter study of the various families of languages may disclose more numerous resemblances, but we must as yet withhold our judgment in respect to their identity.

The demonstration of the unity of the human race on linguistic grounds is, therefore, yet unattained; we do not say that it is unattainable. But there are questions connected with the social, political, and religious history of the race, which do to a certain extent admit of solution on such grounds. Dr. Kuhn has determined by an extensive comparison of words, the social condition of the primitive Indo-European race. He has shown, for example, that they must have known certain animals, vegetables, trees, and implements, and proves that they were not a nomadic, but an agricultural-hunting people. Our word *earth* itself means 'ploughed land', if it be correctly connected with the verb *ear*, which Shakespere and the common version of the Scriptures use for 'cultivate', 'till'. An agreeable picture of this early life is preserved in the words *brother* and *daughter*. The former, from the verb *bear*, indicates the person sustaining this relation as to some extent the support of the family, and so

represents the household as organized ; and the latter, which signifies 'the milker', (compare the English *dug*), recalls the patriarchal and Homeric times : the daughter went forth in the morning to milk the herds, as Rebecca went to the well for water, or as Ulysses encounters the Princess Nausicaa and her damsels on the banks of the river, whither they have come ostensibly to wash their clothes.

The researches in mythology are extensive and important. The systems of India, Greece, and Rome, have been found to coincide in many particulars, and to throw light each on the others. These comparisons show the existence of a simple nature-worship, in which the air occupies a prominent place under the name of *Dyaus* or *Zeus* ; and they further furnish materials for tracing the progress of mythological development through the stages of the naively simple impersonation of the elements and natural agencies, the construction of an organized Pantheon, and the resolution of the deities into abstract notions and generalizations. This was the order in India, and probably in Greece and Rome ; and we have here a basis for more general investigations.

We have thus given a very brief outline of the results of the study of Sanskrit : that is, investigations which have arisen from, and now to a considerable extent depend on, this study ; and these can not be ignored by institutions claiming to give a thorough scientific culture. For a science has emerged, which has to do with the most interesting questions that can engage our attention ; which has points of contact with psychology, with ethnology, and with theology. The field is extensive, and the laborers comparatively few. It ought to be opened to the young men of the South. If the opportunity be placed before them, and so the necessity for a distant journey be obviated, there will be many to lay hold of it. Besides the enthusiasm that it would excite, this science of comparative grammar has the great advantage that its materials are always at hand. It requires no costly machinery. In the common English words which we speak and read every day, in the ordinary expressions which we find in Cæsar and Xenophon, in Plautus and Homer, we have the subject matter. The acquisition of Sanskrit itself will re-

quire a thorough study of the grammar, and a patient devotion to the literature. Then, after having laid a good foundation, we will find opportunity everywhere,—in the school-room, in our ordinary reading, in our walks, to study language; and we may emulate the example of Mozart, who is said to have not infrequently paused in a game of billiards to draw out his notebook, and jot down a melody which had popped into his head. But along with this amusement, there will be demand enough for serious thought and patient labor. The science has its romantic side, leading us into the shadowy regions of the beginning of speech, accompanying our first father in his unaccustomed labor of inventing radicals and bestowing names, and tracing the progress from the primitive tongue to its descendants. But even here, it is not merely conjecture and fanciful theorizing which it invites, (though imagination has played no unimportant part in science, witness Kepler and Goethe), but profound consideration of the capacities of the primitive mind. If it be true that the mistiness and mystery sometimes seduce us into the fantastical and the dogmatic, it is also true that they may call forth something better,—a patient scientific analysis of facts which, from their commonness, their ultimateness, are peculiarly difficult to analyze.

The science of Linguistic, (and therefore Sanskrit, on which it is based), has a special claim on Southern men. We have left the investigation of the indigenous tongues of this continent almost entirely to foreigners. It belongs, however, in great part, naturally to us, and we have better opportunities than others of pursuing it. In truth, comparatively little has been done in this direction, and the means of arriving at scientific definiteness are every day becoming fewer. A little while, and the aboriginal races will have passed away. How much can now be recovered of the languages of the great civilized peoples who inhabited the southern part of the continent, or of the races who preceded the present tribes, it is hard to say. But it is of great importance to lay hold of what remains. These languages belong to a very interesting family; the Turanian or agglutinating, in which modifications of the idea of the radical are expressed by a mechanical addition of suffixes, and they are with-

out the symmetry and smoothness of inflecting tongues. But they may represent a transition period. As the germ of the human being passes through a state in which it is apparently identical with that of the brute, (differing only in internal capacity of development), so may the polished tongues of the Greeks and East Indians have had a form in which they were not distinguishable from the less cultivated. The separating, developing power lay hidden in the national mind and character. But the inflecting languages have passed this stage, and present themselves to us with the prefixes and affixes so fused with the root as to be often unrecognizable. If we can seize the crystallized intermediate form, we may learn the laws of formation, as the human embryo may be studied from the lower animal existences. This intermediate form is furnished by the Turanian family. And in the American dialects there is variety enough, and similarity enough, to invite research, and opportunity to do good service in the cause of science. To accomplish this, there must be preparatory training. Something has already been done by sound scholars, but the great body of observers only accumulate facts whose significance they do not know, and from which, therefore, they are not capable of drawing valuable conclusions. We need men who can go to work systematically; who can give definite shape to the mass of facts which are clearly known, accumulate new matter, and breathe life into the dead body. William von Humboldt's great work on the Kavi-language is a philosophical investigation of a dialect which belongs to this same Turanian group, and he has made it the occasion of the most useful general discussions. The accomplished English philologist, Richard Garnett, has drawn largely on this family, for proof and illustration of his positions in respect to various inflectional signs; and it is certain that the fund of illustration is not yet exhausted. The science which determines the principles on which such investigations must proceed is a necessity, and will commend itself to all who are interested in the study of our aboriginal languages; and the duty of supplying the means for pursuing the science, devolves on our universities and colleges.

No doubt, to many of our readers who admit the necessity of

instruction in Sanskrit and Linguistics, a question will present itself as to the practicability of its present introduction into Southern institutions; and we may here advert briefly to the subject. We do not forget the untowardness of the political and financial condition of the country. Unsettled and excited as we are, there may be difficulty in arousing the popular mind to a due consideration of the importance of so abstract a thing as a science which has to do chiefly with words, or so remote a thing as the dead language of an Oriental people. And even if sufficient interest were excited, there might be difficulty in finding the money to give it practical expression.

While this is true, its importance seems to us to be greatly diminished by the following considerations: In the first place, the cultivation of science depends on the few, rather than on the many. Even in the most flourishing Art-periods, as at Athens and Florence, it was the power of a few men that gave encouragement and direction to Art. And, universally, the first impulse must come, not from the mass, but from individuals; since it is not to be expected that the body of men will have time, or capacity, to make themselves acquainted with the good results which flow from a mental energy so different from their own. In the present case, then, if there be only a few to lay hold, though we may wish it otherwise, we are not to regard it as necessarily a ground of discouragement, and certainly not as a reason for holding back. In the next place, in spite of financial and other difficulties, much has been done lately for the support of education, and the encouragement of literature. The war left us crippled,—our lands devastated, our capital lost, our buildings destroyed, our commerce ruined,—a completer picture of prostration could hardly be found. And yet within three years, the majority of the colleges of the South have resumed operation, some of them with encouraging success, and literary periodicals have fared as well, certainly, as before the war. This shows the existence of a real interest in the matter, and proves that we may rely on the cultivated consciousness of our people, with whom now education is not an accomplishment, but a necessity. And if so much has been done, then certainly more may be done. But the establishment of a new chair in a uni-

versity or college would not necessarily demand any expenditure of its funds. Such chair may be self-supporting. In this particular case, the proceeds from tuition-fees might not at first be large. But they would yield a support, and the income would gradually increase. It is the general experience, that the extension of the course of instruction is pecuniarily beneficial to a college; and naturally, since it offers greater inducements to students, and heightens the enthusiasm for study, it extends and intensifies the literary atmosphere. It is deficiency in this subject, which has been a source of weakness in our educational institutions. A new chair acts beneficially on the others, and is in its turn benefited by them. In the present case, it is probable that the subject would need only to be introduced to meet with support. And, in the last place, we must recognize it as a duty to foster science, even if it cost labor and self-denial. Generally, we are not called on to exercise the latter largely. A little hearty interest, a few well-directed efforts, will work wonders. Whatever men regard as a necessity, they usually accomplish. According to the scheme of the divine providence in the world, science is a necessity. For this particular direction of scientific effort, we have the ability and the opportunity. Undoubtedly, it will be followed in time; but the sooner we begin, the better. The purer our devotion to truth, the more splendid the gifts it confers.

ART. VI.—1. *An Historical View of the Government of Maryland from its Colonization to the Present Day.* By John V. L. McMahon. Baltimore: F. Lucas, Jr. & Co. 1831.

2. *The History of Maryland, from its first Settlement in 1633 to the Restoration in 1660.* By John Leeds Bozman. Baltimore: Lucas & Deaver. 1837.

3. *The Landholder's Assistant.* By John Kilty, Register of the Land Office, &c. Baltimore: S. Dobbin & Murphy. 1808.
4. *A History of Maryland,* from its Settlement in the year 1634 to the year 1848. By James McSherry. Baltimore: Jno. Murphy & Co. 1850.
5. *The Day-Star of American Freedom, or the Birth and Early Growth of Toleration in the Province of Maryland.* By George Lynn-Lachlan Davis. New York: Scribner. Baltimore: Murphy. 1855.
6. *Terra Mariæ, or Threads of Maryland Colonial History.* By Edward D. Neill. Philadelphia: J. B. Lippincott & Co. 1867.

It is, and it ought to be, a genuine refreshment to the wayfarer over the rugged road of life, to find among our fellow men, whether living or dead, examples of the combination in one person of the two rare qualities of greatness and goodness. There are, indeed, ingenuous thinkers who deem these qualities, to a certain extent, inseparable; or, at least, who imagine there is no true greatness without that aggregation of virtues recognized as goodness; but this is a mistake which may be disproved by nearly every page of general history. We have seen it somewhere asserted, by an over-zealous champion of Christianity, that there was no true eloquence but that inspired by Christianity, in utter ignorance or oblivion of the fact that Demosthenes and Cicero have now, and have ever had, more admirers than Paul and Chrysostom; and those champions of goodness, who deem it necessary to greatness, must likewise ignore or forget that Alexander, Cæsar, Cromwell, and Napoleon, are conspicuous among the great men of the earth. We fear that, in point of fact, greatness and goodness are as little akin as Petruchio's stirrups; and yet they are, happily, sometimes combined. To say nothing of the great and good of the Christian ministry, living lights, or shining through all Christian ages and nations, we may offer as familiar examples or representative men, an Alfred the Great, a Sir Thomas More, a Christopher Columbus, and last, not least, the great American — no, let us give him his local habitation,—the great VIRGINIAN, whose name towers above all others, sprung from this new and vigorous western world of ours.

The seventeenth century abounded in men of mark, in every line of human distinction; and prominent among them were the founders of the various American colonies, which were the sources or fountain heads of states already great and powerful; but which are, as yet, but slightly developed in comparison with their future destinies. All of these founders are more or less objects of the world's admiration; all were cast more or less in the same heroic mould; all were brave, resolute, and self-reliant; men of bold enterprise, who won, without exception, the 'bubble reputation', while seeking, for the most part, much more substantial rewards.

For ourselves, we believe that among the colonial founders there are none more worthy of love, of praise, of admiration, or, in like circumstances, of imitation, than George Calvert. In the seventeenth century, knowledge was making immense strides; and men's minds were expanding with what may be considered the world's expansion. And yet, in some respects, and those the most interesting as well as the most important to the happiness of the human race, the darkest shadows were lowering over the face of Christendom; and that faith which in intelligent minds must needs be free to be real, was subject, in the mother country especially, to civil or military power, or to the caprice of any reigning tyrant.

Under the reign of James I., religious persecution was very active, and Catholics and Protestants had to bear penalties that were sometimes almost beyond human endurance, for adhering to the faith of their fathers, on the one hand, or, on the other, for diverging from the tenets approved by the British Solomon. This king himself, born of a Catholic mother, and bred a Presbyterian, 'half Pope and half Puritan', gave to both Catholics and Calvinists a foretaste in this world of what he supposed they were to endure in the world to come. Without dwelling upon these matters, we may say briefly, that numbers of the sufferers were driven to seek homes beyond the seas. The virgin soil of America offered the highest inducements to the persecuted, of whatever denomination. The Puritan emigrants made a lodgment, first in Holland, where they were free from persecution, but where they found no prospect of material

advancement; and then they wisely determined that their promised land was in the new world, whither many of them directed their steps, to build up a new nation in the wilderness.

The Catholics, sorely beset in their native land, knew not where nor how to find a place of peace and safety. Fortunately for them, in the last year of the reign of King James, a courtier, a gentleman, a scholar, a man of unquestioned ability in wielding either the sword or the pen, publicly announced his attachment to the Catholic faith. This was in 1624. It has been a matter of keen controversy as to whether this conversion, or perversion, as it was respectively considered, took place in 1624, or at an earlier date. From the data furnished by the various disputants, as well as by the most trustworthy authorities, we infer that the gentleman in question adopted the Catholic faith positively in the year 1624, although his inclination had been tending that way for some years. Be this as it may, the able, accomplished, and favorite courtier, Sir George Calvert, made his public profession in the year above mentioned; and, with this public profession, he resigned the offices with which the King had honored him. He held the office at that time, *inter alia*, of Chief Secretary of State. 'This place he discharged', says Fuller, in his *Worthies of England*, 'above five years; until he willingly resigned the same, 1624, on this occasion. He freely confessed himself to the king that he was then become a Roman Catholic, so that he must either be wanting in his trust, or violate his conscience, in discharging his office. This, his ingenuity, so highly affected King James, that he continued him privy councillor all his reign, (as appeareth in the council book), and soon after created him Lord Baltimore, of Baltimore, in Ireland.'

The courtier knew full well that his religious principles would be of no worldly advantage to him; but, being stout of heart and strong in faith, he declared them frankly, and prepared to abide the consequences. In the words of Bancroft, 'preferring the avowal of his opinions to the emoluments of office, he resigned his place and openly professed his conversion.' Being a personal favorite of the king, whom he had served with fidelity and zeal, he retained position at court in spite of the clamor of a rising party in the State, whose influence became much more potent in subsequent years.

The privy councillor was not a man to rely exclusively and devotedly upon royal favor. He was too sagacious to place all his trust in princes. And even if the king should be always friendly, there were other parties willing and ready to mar the peace of his life. He was not exempt, notwithstanding the king's favor, as McMahan remarks, from those difficulties and mortifications which always attend the profession and exercise of a proscribed religion. 'It was natural', says this author, 'that thus situated, he should desire to establish himself in some more happy land, where, in every event, he might be free from the persecutions of the Established Church. Men are not content with the enjoyment, by mere sufferance, of either political or religious liberty. The insecurity of the tenure robs them of half their enjoyment.' He went to Avalon,¹ in Newfoundland, to find a peaceful home, but left it on account of the rigor of the climate; ² he went thence to Virginia, but was repelled from that province by the local government on account of his religious tenets. 'Then it was', continues McMahan, 'that his eyes were cast upon the territory along the Chesapeake Bay, as yet unsettled; and by the amenity of its situation, and the fertility of its resources, inviting him to its retreat. Here, if he could but obtain a grant of it from the crown, he might dwell in his own territory and under his own government; and build up in the wilderness a home for religious freedom. These were the leading views which seem to have operated upon him, in applying for the charter of Maryland; and but for his untimely death, at the moment of accomplishing his wishes, it is probable he would have removed to the province, and would have here permanently established his family. Hence it may be truly said, from the consideration of the views of its founder, and of the character and objects of its first colonists, that the State of Maryland, as well as the New England States, originated in the search for civil and religious freedom; and the character of the former is still further consecrated by the fact, that her government, for a

¹ He called his first province *Avalon*, from the place where it is said Christianity was first planted in England.

² A French author complacently observes that he (Calvert) was '*obligé de l'abandonner à cause des excursions des Français*;' but in point of fact, in his engagements with the French, he bore off the laurels, and they the cypress.

long period after the colonisation, was true to the principles which laid the foundations of his colony. Her colonists, in escaping from the proscriptions and persecutions of the mother country, unlike those of some of the Puritan settlements of the North, did not catch the contagion of the spirit which had driven them from their homes.'³

The buffetings which Calvert received on account of his religion, probably opened his eyes to the enormity of persecuting men for their religious tenets. He had felt the wrong in his own person, and he had witnessed the sufferings of others, both of his own faith and of divers dissenting creeds, for their religious opinions. It seemed to be sent to him, a just and a wise man, like an inspiration, that this great evil, this perennial scourge of Christendom, could and should be redressed at once and forever. Returning to England from Virginia, he made a successful application to King Charles I. for a grant of land within certain limits bordering upon the Chesapeake Bay. He drew up the charter with his own hand, and he took care to keep out of it anything which might trench upon liberty of conscience. His own plans were already made. Except a couple of phrases, one merely conventional, which declared that nothing should be done in the colony to the detriment of God's holy religion, and another that all ecclesiastical benefices were to be within the gift of the proprietary, there was nothing in the charter bearing upon the subject of religion. It is to be presumed that the king did not mean that the members of his own church should be in any way molested on account of their creed; but, at the same time, there was a careful avoidance of making the Established Church of England the established church of the new colony. King Charles meant to act gracefully and gratefully by his father's old and trusted friend. He probably wished that Calvert and his followers should have, in the wilderness beyond the seas, as happy and as peaceful a home as possible. If the Catholics could find an asylum far away from England, where the king was often obliged to persecute, *bongré malgré*, his majesty who, though selfish, was not cruel, by nature, would rather favor than hinder the enterprise. Accordingly, he allow-

³ McMahon's History of Maryland.

ed Lord Baltimore to shape the charter to suit himself, reserving only a nominal tribute, besides an interest in the precious metals to be discovered in the province. So far, the provincial possessions had been the source of about as much trouble as profit to the crown; and the king set very little store by the then nameless territory asked by the petitioner. He gave it a name, however, and happily hit upon the beautiful name of *Mary*, or *Maria*, the second name of the queen, *Henrietta Maria*. And thenceforth the brightest gem in the American cluster of provinces or states was known as *Terra Mariæ*, or *Maryland*, otherwise called with reason, the *Land of the Sanctuary*.

At this stage of the proceedings, the great and good George Calvert was gathered to his fathers; but his works have survived him. He had projected a scheme for the happiness of his fellow men, which was carried into execution by his son and successor, Cecilius, with results with which the world is familiar. 'Sir George Calvert died,' says Bancroft, 'leaving a name against which the breath of calumny has hardly dared whisper a reproach.'

We should like to dwell upon his fame and memory if our space permitted; for calumny has dared to touch his name—only to recoil, and to plague the inventors. Detraction has been busy, and, since the facts are all in favor of Calvert, his motives have been assailed; but empty assertion, and conjectures, or surmises, have fortunately exerted very little influence over the minds of men capable of thinking and judging for themselves.

We pass on rapidly to the actual settlement of Maryland. George Calvert dying, the charter was made out in favor of the second Lord Baltimore, Cecilius Calvert. In the words of the instrument, the son and heir, 'treading in the steps of his father, and being animated with a laudable and pious zeal for extending the *Christian religion*, and also the territories of our empire, hath humbly besought leave of Us, that he may transport by his own industry and expense, a numerous colony of the English nation to a certain region, hereinafter described, in a country hitherto uncultivated, in the parts of *America*, and partly occupied by savages, having no knowledge of the Divine

Being, and that all that region, &c., may by our royal highness be given, granted, and confirmed unto him and his heirs.

‘Know ye therefore, that WE, encouraging with our royal favor the pious and noble purpose of the aforesaid barons of Baltimore, of our special grace, certain knowledge, and mere motion, have GIVEN, GRANTED, and CONFIRMED, and by this our present CHARTER, for US, our heirs and successors, do give, grant, and confirm unto the aforesaid Cecilius, now baron of Baltimore, his heirs and assigns, all that part of the Peninsula or Chersonese, lying in the parts of America between the ocean on the East, and the bay of Chesapeake on the West,’⁴ &c., &c.

‘Treading in the steps of his father’, in the words of the king, is not, in this instance, the language of empty compliment. The great soul of George Calvert designed to establish a government wherein liberty of conscience should be the crowning glory of a just, liberal, and generous rule. But George Calvert did not establish his government. This work was left for his son and successor, and it often happens that the son and heir has widely different views from those of his progenitor. In this case, however, the son was fully imbued with the sentiments of the father, and it devolved upon him to reduce theory to practice. It was a grand experiment at that day, but a successful one, for a time at least, as we shall see; and though interrupted for a time, it was, we may hope, the harbinger of better and brighter days for all Christendom, to the end.

In the month of November, 1633, two vessels of significant and memorable names—the *Ark* and the *Dove*—sailed from England with the first pilgrims destined for Maryland. These pilgrims were, for the most part, gentlemen of means and condition, who, with their families,—wives, children, and servants,—were in search of the most desirable of earthly blessings—peaceful and happy homes. After various adventures and perils, the pilgrims landed on the banks of the Potomac in March, 1634. They were met by large bodies of armed natives, who swarmed upon the shores, who sent messengers inland, and who, by night, illumined earth and sky with their alarm fires, to invite the neighboring savages from far and near to repel the invaders.

⁴ See Charter in Bozman’s History of Maryland.

The hostility of these simple children of nature was soon disarmed by the conciliatory policy of the immigrants. At the head of these was Leonard Calvert, brother to the proprietary, and now governor of the new commonwealth, another worthy son of a worthy sire. The governor immediately entered into friendly relations with the Indians, and 'Maryland', as McSherry remarks, 'was almost the only State whose early settlement was not stained with the blood of the unfortunate natives.' This is another crown of glory for the lovely princess of the Chesapeake.

On the 25th of March, the colonists 'took solemn possession of Maryland, and their priests performed divine service for the first time within its borders. After mass was ended, the pilgrims formed in procession, led by the governor, Leonard Calvert, the secretary and other officers, carrying on their shoulders a huge cross, hewn from a tree, and erected it upon the island, as the emblem of Christianity and civilization, which they were about to plant upon those shores. Under these auspices was begun the founding of Maryland.'⁵

The cross was not, in those days, considered by all American colonists, as a Christian emblem. A curious illustration of hostility to this ancient and venerable symbol, may be found in the life of Sir Henry Vane, when governor of Massachusetts. The Bostonians and some English captains had certain compromises to make to get on satisfactorily, and *inter alia*, the captains desired that the royal ensign should be displayed on the fort in the harbor. 'Fair and reasonable as this request seems,' says Mr. Upham, Vane's biographer, 'it would have been impossible for the captains to contrive a more effectual dilemma for the poor Puritans.' They did not want to appear disloyal to the crown from which they held their charter, but to hoist the ensign was to hoist the cross also in the chosen centre of Puritanism. With the ingenuity, which was already a New England trait, they avoided both horns of the dilemma for a time, by declaring there was no royal ensign in the colony. The captains offered to lend or give colors for the occasion. 'All chance of escape being thus shut out, the magistrates met the question

⁵ McSherry's History of Maryland.

fairly, and returned this reasonable answer to the request of the ship-masters, that, although they were fully persuaded that the cross in the colors was idolatrous, yet as the fort belonged to the king, they were willing that his own flag should fly there.'

The clergy took the matter in hand the same evening, and caused the magistrates to reconsider, and finally to refuse the request of the captains. The governor remained firm, however, and displayed the flag without the authority of the clergy and magistrates; after which act his official relations with the colonial government became more and more discordant, until the opposition finally brought his administration to a close.⁶

Our colonists soon set to work manfully as tillers of the soil; and by dint of industry and good management, they enjoyed a modest prosperity from the first days of their occupation. They soon learned the virtues of Indian corn, among other good things, and improved upon the *hominny* and *pone* of the natives; though no culinary art has made the *roasting ear*, from that day to this, any better than it was when the colonists first received it from the hands of their rude but hospitable entertainers.

The colony thrived by its own exertions, and also in consequence of the foresight of its founder. 'It was supplied', says McMahon, 'for its establishment by the kind providence of the proprietary, not only with the necessaries, but even with many of the conveniences adapted to an infant settlement. Although many of the first emigrants were gentlemen of fortune, he did not therefore throw the colony on its resources, and leave it dependent for its subsistence upon the casual supplies of an unreclaimed country, and a savage people. At the embarkation of the colony, it was provided at his expense with stores of provisions and clothing, implements of husbandry, and the means of erecting habitations; and for the first two or three years after its establishment, he spared no expense which was necessary to promote its interests. It appears, not only from the petition preferred in 1715, to the English Parliament, by Charles Lord Baltimore; but also from the concurring testimony of all the historians who treat of the settlement of this colony, that, during the first two or three years of its establishment, Cecilius, the

⁶ Sparks's American Biography.

proprietary, expended upon it upwards of £40,000. Nor did his care stop there. He governed it with a policy more efficacious than his means would justify, in giving strength and confidence to the colony, and happiness to the settlers. The lands of the province were held up as a premium to emigrants. The freemen were convened in Assembly, and thus made to feel that they were dwelling under their own government. Religious liberty was subject only to the restraints of conscience; courts of justice were established; and the laws of the mother country, securative of the rights of person and property, were introduced in their full operation. The laws of justice and humanity were observed towards the natives. The results of so sagacious a policy were soon perceived. During the first seven years of the colony, its prosperity was wholly uninterrupted; and when the interruption came, it proceeded from causes which no policy could have averted.'

While the colonists were attending to their material interests, planting, trading with the Indians, &c., their missionary priests were exerting themselves to bring the pagan natives into the Christian fold. Mr. Neill, in his *Terra Mariæ*, assures us that the Quakers were the first people to arouse religious sentiment in Maryland. 'The fair-minded historian', he says, 'can not disguise the fact, that under the influence of these despised people, the first great religious awakening in Maryland occurred.' George Fox, 'one day in 1672', appeared upon the banks of the Patuxent to diffuse Christian truth. Before George Fox commenced his work in America, however, historians, fair-minded or otherwise, agree that Fathers White and Altham, of the Society of Jesus, first, and subsequently others of their faith and order, had not only attended to the spiritual wants of the English settlers, but had made numerous conversions among native princes and people. At a very early day, 'the two priests obtained, by the consent of its owner, one of the Indian huts or wigwams, for their own use; and having fitted it up in the most becoming manner their circumstances allowed, they called it the "*first chapel in Maryland.*" Here they immediately applied themselves to the study of the Indian language, in which they found the difficulties much increased by the number of dialects

used among the different tribes.' The colonies were often spoken of as plantations, and Father Roger Rigbie, catching the word, writes to his superior in 1640, to allow him to go to work in that 'new spiritual plantation', with others, 'farr better deserving', already in the field. In various quarters, conversions were made of entire towns or tribes. At the Indian town of *Potopaco*, for example, nearly all the native inhabitants embraced Christianity, to the number of 130, including the young queen, and the wife and two children of the former principal chief. We believe that there is at this day a Christian population at *Potopaco*, now Port Tobacco, not less in numbers than at the day of the conversion of the young queen and her adherents.

The missions, considering the paucity of the missionaries, were quite extensive. 'We have seen that up to 1642, the Gospel had been preached to the Indians with success,' continues Campbell, 'not only at the capital of the province, but at Kent Island in the Chesapeake Bay, at Piscataway and Port Tobacco, on the Maryland side of the Potomac; and at Patowmech town on the Virginia side of that river; at Mattapany and Pawtuxent town, on the Patuxent river; besides in many other places which were visited by the missionaries in their aquatic excursions.'

The just and generous treatment of the Indians in Maryland forms a striking contrast with their treatment in Massachusetts; where, as Bancroft testifies, 'the first planters assumed to themselves a right to treat the Indians on the footing of Canaanites and Amalekites.' The children of the first planters placed them in a still worse condition; for, according to Mr. Upham, they were held to be the devil's own children and agents, whom the saints were in duty bound to exterminate, and send back to the powers of darkness whence they came. (*Salem Witchcraft*, &c., by Charles W. Upham.)

In these primitive days of the colony, most of the colonists were of the faith of the proprietary, but there were also among them some Protestants. The relations between Catholics and Protestants were, for the most part, unusually harmonious; and it seemed to be a prime wish of the proprietary that all should

¹ Early Missions in Maryland. Read before the Maryland Historical Society by B. U. Campbell, Esq.

live together, notwithstanding differences in faith or opinion, as one happy family. He exacted an oath of the governor, which bound that official, and the privy councillors also, not to trouble, molest, or discountenance any person whatever, directly or indirectly, professing to believe in Jesus Christ. Every form of Christian faith was perfectly free. At this time, in the words of Bancroft, 'every other country in the world had persecuting laws.' And, pursues this author: 'Under the mild institutions and munificence of Baltimore, the dreary wilderness soon bloomed with the swarming life and activity of prosperous settlements; the Roman Catholics, oppressed by the laws of England, were sure to find a peaceful asylum in the quiet harbors of the Chesapeake, and there, too, Protestants were sheltered from Protestant intolerance.'

It is to be regretted that Lord Baltimore had not taken one step further, and admitted Jews and all other honest worshippers of God to equal rights in his province. It does not appear, however, that even Jews were molested unless they became aggressive. 'A Jew, without peril to his life,' says Mr. Davis, 'could not call the Saviour of the world a "magician", or a "necromancer."' In a foot-note, this author goes on to say: 'In the text I have referred to Dr. Lumbrozo, the well-known Jew, (for he seems to have observed no secrecy,) who lived some time in Maryland, in the usual exercise of his calling, and of the right to institute actions in the civil court. We can not doubt he was also allowed the *quiet* enjoyment of his religion. But he was accused of blaspheming', &c. He said the Saviour was a 'man' who performed his miracles 'by y^e art magic.' He was ordered to remain in 'y^e Sheriff's custody to make answer at y^e next Provincial court',⁸ but in consequence of remote political events, he fortunately escaped a trial.

It was an object with the authorities to tolerate difference of religious opinion, and to promote social harmony. Religious toleration was maintained by the proprietary and the governor from the beginning. Says Mr. Davis, speaking of the first governor: 'His policy included the humblest, as well as the most exalted; and his maxim was, PEACE TO ALL — PROSCRIPTION

⁸ Davis' Day-Star of American Freedom.

OF NONE. Religious liberty was a vital part of the earliest common law of the province.' It was deemed advisable to make toleration more than a mere matter of personal benevolence. It may be that the colonists were quickened in their action, as Bancroft and others allege, by the state of affairs in England; but whether so or not, the fact remains as he says, 'in April, 1649, the Roman Catholics of Maryland, with the earnest concurrence of the governor and of the proprietary, determined to place upon their statute-book an act for the religious freedom which has ever been sacred on their soil. "And, whereas the enforcing of conscience in matters of religion"—such was the sublime tenor of a part of the statute—"hath frequently fallen out to be of dangerous consequence in those commonwealths where it has been practiced, and for the more quiet and peaceable government of this province, and the better to preserve mutual love and amity among the inhabitants, no person within this province, professing to believe in Jesus Christ, shall be in any ways troubled, molested, or discountenanced, for his or her religion, or in the free exercise thereof." Thus did the early star of religious freedom appear as the harbinger of day. But the design of the law of Maryland was undoubtedly to protect freedom of conscience; and the apologist of Lord Baltimore could assert that his government, in conformity with his strict and repeated injunctions, had never given disturbance to any person in Maryland for matter of religion; that the colonists enjoyed freedom of conscience, not less than freedom of person and estate, as amply as ever any people in any place in the world. The disfranchised friends of prelacy from Massachusetts, and the Puritans from Virginia, were welcomed to equal liberty of conscience and political rights in the Roman Catholic province of Maryland.'⁹

The Calverts were at all times so anxious to keep the peace between members of the different religious denominations, that they decreed penalties long before the famous act of 1649, for offensive disputations. Mr. Neill narrates the instance of Wm. Lewis, as a case in point, but he seems to have taken a very limited view of the facts. He tells us that 'Thomas Cornwallis,

⁹ Bancroft's History U. S.

a councillor of the province, had a number of white servants under the care of an overseer, named William Lewis. One day, in the year 1638, these servants were listening to the reading of sermons written by the eloquent Puritan divine, known in England as the "silver-tongued Smith," when the overseer, in a rage, said that the book came from the devil, as all lies did, and that he that wrote it was an instrument of the devil, and that they should not keep nor read such books. Christopher Carroll, and others of the aggrieved, complained of this abuse to the civil authorities, and to the credit of the governor and council, Lewis was found guilty of an offensive and indiscreet speech, and was fined 500 pounds of tobacco.' ¹⁰

The sermons of the *silver-tongued* divine were scarcely such as were suitable for reading aloud in a Catholic dwelling, and in the ears of the proprietor, intended as he believed for his hearing, when such passages as—'that the Pope was anti-Christ, and the Jesuits anti-Christian ministers', &c., were specimens of the pious reading. Lewis ordered the servants to stop; and certainly he was not choice in his phrases, nor would a Calvinist probably be, if Calvin were held up to scorn in his hearing under his own roof; so that mutual charges were the result, yet it seems that he alone was punished. He asserted that the servants were getting up a petition, to call in the intervention in their behalf of the authorities of Virginia. 'If the charge was true,' says Bozman, 'that they intended to prefer their petition to the governor of Virginia, it is certain that such conduct wore very much the aspect of the *political* crime called sedition.' ¹¹

Notwithstanding all the obvious facts in favor of the early proprietary government, and especially in the matter of that kind of liberty which is most important to the happiness of mankind,—liberty of conscience,—there are parties who give most grudgingly and reluctantly any meed of praise to the founders of Maryland, and its civil and religious liberty; while they make most extraordinary claims for the liberty-loving and liberty-diffusing sentiment of the eastern colonies. This is illustrated in a paper read before the Maryland Historical Society, in May, 1852, entitled, *Maryland Two Hundred Years Ago*, by a resi-

¹⁰ Terra Mariæ.

¹¹ Bozman, v. 2, p. 85.

dent of Baltimore, then recently from New England. The author appears to make it his aim to give Lord Baltimore and his colonists the least credit possible, without denying the plainest facts of colonial history. Lord Baltimore's representative, Gov. Calvert, issued a proclamation substantially against religious quarrels, rather than arguments; leaving every man at the same time to the enjoyment of his own opinions, provided he did not interfere with those of others.

'If the enforcement of Governor Calvert's proclamation proves toleration, it will be easy to show that the Massachusetts authorities were tolerant in the same way, and on the same principle. Hubbard, an old writer, says, "It was on that account [the disturbance of the civil peace] that men suffered, [in New England] under authority and not for their opinions; for if men that have drunk in any erroneous principles, would also make use of so much prudence as not to publish them in a tumultuous manner, and to the reproach of the worship established in the place where they live, they would not have occasion to complain of the severity of the civil laws.'" (Note p. 39.)

The force of this insinuating defence will scarcely convince the reader that the authorities of Massachusetts were as generous as the authorities of Maryland. The former actually passed a law to prevent any but approved members of their own sect from coming into their colony; no colonist could harbor one of dubious theological opinions, nor let to such a one a lot or habitation, 'and a large fine was also to be levied upon any town which should, without such permission, allow a stranger a residence.' (Upham.) 'It has often been remarked', says Mr. Upham, 'that our fathers were guilty of great inconsistency in persecuting the followers of Mrs. Hutchinson, the Quakers, and others, inasmuch as they settled the country in order to secure themselves from persecution. They are often reproached as having contended manfully for the rights of conscience when they were themselves sufferers, and as then turning against others, and violating their rights of conscience, so soon as they had the power and the opportunity to do it. But the remark and the reproach are equally founded in error. It was for religious liberty, *in a peculiar sense*, that our fathers contended,

and they were faithful to the cause, *as they understood it*. The true principle of religious liberty, in its wide and full comprehension, had never dawned upon their minds, and was never maintained by them.¹² This, be it remembered, is from an admirer and apologist of the Puritan pilgrims.

Was Roger Williams,—‘godly, zealous, and having precious gifts’,—a tumultuous disturber of the civil peace? To us, he appears to have had an *opinion*, for which he was duly or unduly punished. He maintained that the civil magistrate should restrain crime, but should not control opinion; should punish guilt, but should not violate the freedom of the soul. Massachusetts toleration found such heretical doctrine intolerable. ‘No one’, said Williams, ‘should be bound to worship, or to maintain a worship, against his own consent.’ ‘What,’ exclaimed his antagonists, ‘is not the laborer worthy of his hire?’ ‘Yes,’ replied he, ‘from them that hire him.’ It was, in his view, a ‘yoke of soul-oppression’, that magistrates should exercise spiritual powers over the people. ‘The evils inseparable on a religious establishment’, says Bancroft, ‘soon began to be displayed. The ministers got together, and declared any one worthy of banishment who should obstinately assert that the civil magistrate might not intermeddle, even to stop a church from apostasy and heresy.’

Mr. Williams was accordingly driven forth, living sometimes among the Indians, sometimes in midwinter without any shelter but a *hollow tree*, until he got beyond the reach of his persecutors, settling at Rhode Island, A. D., 1636, and getting an Indian deed for a tract there in 1638, whence his colony grew into life and prosperity under his liberal guidance.

The author of *Maryland Two Hundred Years Ago*, endeavors to give Williams precedence over Lord Baltimore, in making Rhode Island the *first* dwelling-place of religious liberty in America. Maryland, he informs us, was the second, but was very near being only the third; as the Plymouth Company *would have been the first*, but for the timidity of the governor, who acted in opposition to the wishes of the people; so that the bill for religious liberty in the Plymouth settlement, instead of being passed, was, unfortunately, never acted upon!

¹² Sparks's American Biography.

Meantime, what was going on in Maryland? Gov. Calvert, in 1637, wrote a letter to Boston, inviting colonists who were persecuted for conscience' sake, to come to Maryland, assuring to them not only religious freedom, but perfect equality with his own colonists in all civil rights.¹³ The harassed Puritans in Virginia were also invited to find refuge, asylum, and *freedom*, in Maryland. 'Mankind then', says a distinguished authority, 'beheld a scene new, and uncommon, exhibited on colonial theatres; they saw in Massachusetts the Independents persecuting every different sect; the Church retaliating on them in Virginia; the Roman Catholics of Maryland alone, actuated by the generous spirit of Christianity, tolerating and protecting all.'¹⁴

When Gov. Stone, succeeding Calvert, invited persecuted Puritans from Virginia to come to Maryland, making them very liberal offers, they objected to the quantity of lands offered as insufficient. Lord Baltimore being appealed to, he changed the grant 'to three thousand acres for every thirty persons; but requiring from each settler, as before, the oath of fidelity, as a condition precedent to taking possession of his land.'

They gratefully and promptly accepted this offer. 'Here they sat down, and joyfully and cheerfully followed their vocations; so that it might be appositely said of them and the proprietary, in the words of Cowper:

"Ample was the boon
He gave them; in its distribution, fair
And equal; and he bade them dwell in peace.
Peace was awhile their care; they ploughed, and sowed,
And reaped their plenty without grudge or strife."¹⁵

The quotation is not entirely apposite; for, as the same authority tells us: 'The Puritans brought the old hatred of Popery, and looked with distrust upon the oath, because it required them to obey a government that was bound to respect the religious convictions of the Roman Catholics in the province. This, in the eyes of the more zealous, was no better than upholding anti-Christ; and although they at first submitted, yet as they gained strength, and their friends in England consolidated their power, they more openly manifested their repugnance, and finally refused to take the oath as it had been prescribed.'¹⁶

¹³ Winthrop's Journal.

¹⁴ Chalmers' Political Annals.

¹⁵ Maryland Two Hundred Years Ago.

¹⁶ Ibid.

They took the ample boon readily enough, but ungraciously enough ; showing their teeth, as it were, and yet not by way of smile, to the proprietary government, as they accepted its bounty. They soon, indeed, reaped their plenty in peace, but they did not desire that their generous hosts should long enjoy the same blessings.

The author of *Maryland Two Hundred Years Ago* wrongfully claims that the Assembly, which passed the famous Toleration Act of 1649, was composed principally of Protestants ; a mistake most amply corrected by various writers, and especially by Mr. Davis, in the *Day-Star of American Freedom*. The author shows his *animus* still further, by asserting that Lord Baltimore had procured the charter of *Avalon* in almost the same terms as that of Maryland, when he was a Protestant ; so that there is no reason in making any claims for Catholic toleration in the foundation of Maryland. In reply to this, it may be said that when Lord Baltimore obtained his charter for Avalon, he was already a Catholic, or on the eve of becoming one. He was then casting about for, or projecting, a home to be consecrated to religion in the New World, as the very name of his province indicates.

It appears to us, that in the tone of *Maryland Two Hundred Years Ago*, may be detected a modicum, or more, of that 'old hatred of Popery', which the author speaks of as characterizing a class of persons who evidently enjoyed his sympathies. If Lord Baltimore had been of the New England orthodoxy, there would have been no limits to his praise. He would have been the greatest and best man of his age, if not of all ages. But as a Catholic, he and his works may only be commended with 'faint praise', or, at most, within the limits of a very prudent reserve. Now, the simple fact is, that Lord Baltimore, a Catholic, 'animated', we may say, as Columbus said of himself, 'as by a heavenly fire', decreed toleration in matters of religion, in advance of all the lawgivers of his day. We may readily believe that the same man, with his innate magnanimity, would have done the same thing had he remained a Protestant. Some men are constitutionally bigots, be their religious profession what it may ; while others, cast in a nobler mould, are incapable of bigotry. Lord Baltimore was one of the latter class. Per-

haps Roger Williams was another. We should certainly class him with such as Baltimore, but for the fact that the first Assembly in his province passed an act discriminating against Catholics. It tolerated them in some sense; that is, it allowed them to dwell in Providence, but it forbade their holding office, or voting at elections. Thus, Mr. Williams's settlement, at least, was not on a footing, in liberality, with Lord Baltimore's.

The early peace of Maryland was much troubled by William Clayborne, commonly called the *evil genius* of the colony. Clayborne had licenses from the king and from the governor of Virginia, to trade with the Indians on the Chesapeake; and under these licenses he established a trading-post on Kent Island, which came within the limits of Lord Baltimore's charter. He took a decided stand against the Marylanders from the first; indeed, he was prominent in driving Lord Baltimore from Virginia, when that nobleman was desirous of establishing himself in that colony. 'Governor John Pott, Samuel Mathews, Roger Smyth, and William Clayborne, remonstrated with the privy council in behalf of the colony of Virginia, relative to Baltimore's visit. In a communication of November 13, they state: "That about the beginning of October last, Lord Baltimore arrived in Virginia, from his plantation in Newfoundland, with intention, as they are informed, to plant to the southward, but has since seemed willing with his family to reside at this place. He, and some of his followers, being of the Romish religion, utterly refused to take the oaths of supremacy and allegiance, tendered to them according to instructions received from King James. As they have been made happy in the freedom of their religion, they implore that, as heretofore, no Papists may be suffered to settle among them.'" (*Terra Marice* p. 47). In these few lines, Mr. Clayborne shows a capacity for both malice and falsehood.

When Lord Baltimore's people took possession of Maryland, Clayborne was what would now be called a *squatter* on Kent Island. He was promptly notified, that if he remained, he would be deemed a subject of the colony. He as promptly refused to submit, and he made an appeal to his friends in Virginia to sustain him, which they were disposed to do; they urged him

to resist the Maryland authorities. He needed no urging, but immediately prepared for action. His first scheme was one very likely to bring destruction upon the colony. He began to poison the minds of the Indians against the colonists, telling them that the Maryland settlers were Spaniards, and his and their secret enemies. The natives at first took his counsels, and began to manifest hostility to the settlers. These last were obliged to suspend the works of peace, and to give their energies to finishing a fortification for protection in case of necessity. Meantime, however, they treated the Indians with the uniform justice and kindness which had marked their course from the beginning, until at length it became clear to these children of the forest that Clayborne was using them for his own ends, and not at all for their good or welfare. As soon as this was clear to them, they resumed and perpetuated their friendly relations with the colonists. (McSherry.)

It is needless for us to follow any arguments about Clayborne's 'rights' or his 'wrongs', though these arguments abound in the various authorities. The main force of his claim was, that he established himself in Kent Island as a part of *Virginia*, and that therefore he was not subject to Lord Baltimore; as he had established himself there before the Maryland charter was issued. Some writers justify this claim, but they set aside the most prominent fact against it, to wit: that the charters granted to *Virginia* had been annulled, and the rights conferred by them re-vested in the crown. 'From that period, (1623), *Virginia* became what was termed "a royal government", and as such there was an inherent right in the crown to alter and contract its boundaries, or to carve new and distinct territories or governments out of it at its pleasure; yet, incontestible as this right was, it will be seen that the exercise of it in granting the province of *Maryland*, was the source of much dissatisfaction among the colonists of *Virginia*; and that at one period, attempts were made to assert and maintain the existence of the charter government, notwithstanding the judgment on the *quo warranto*, for the sole purpose of reclaiming the territory of *Maryland* as lying within the old charter limits.' (McMahon).

Clayborne spared neither force nor fraud to obtain the ascen-

dancy, and he intrigued with divers disaffected parties, (Ingle among others), to override the proprietary government; in which he had successes and reverses, alternately, until, after about a quarter of a century of turbulence, he was finally and effectively defeated.

During the ascendancy of the Parliament¹⁷ in England, Clayborne was in active co-operation with the Puritans, who were always ready to repay the benefits received from the proprietary government in a way peculiar to themselves. They were ready to do battle in any form for its overthrow, but were reluctant to enter the lists for its preservation, even against the Indians, where themselves were not exposed. Thus, when the Nanticoke Indians assailed the settlers upon the Eastern Shore, burning, ravaging, and slaughtering, and people were filled with terror, an earnest effort was made by the governor to raise a force to protect the frontiers. Every seventh man capable of bearing arms, was ordered to muster into service; boats were prepared, &c. But the Puritans of Anne Arundel refused to make their levies; selfishly alleging as the reason, the hardships of the season, December and January, and the danger to their health from exposure on the bay and rivers in open boats. (Bozman.)

In 1654, by virtue of the condition of affairs in the mother country, the Puritans were the ruling powers in Maryland. Their guiding spirits were 'Commissioners' Clayborne and Bennett. An assembly was called, which excluded Catholics explicitly. *This body passed a law excluding Catholics and the members of the Church of England from the protection of the government.* The same assembly also passed an act to prevent the taking of the oath of fidelity to the Lord Proprietary. They were willing to take nothing of or from the proprietary but his lands, and these they hoped to get and keep without grants or rents.¹⁸ His lordship, upon receiving tidings of these pro-

¹⁷ 'The Puritans artfully connected political grievances which were real and numerous, with religious principles and ceremonies; and having the main body of the people with them, as to the former, while these were, in consequence of the endless change of creeds, become indifferent as to the latter, they soon became, under the name of "*The Parliament*", the sole rulers of the country; they abolished the Church and the House of Lords, and finally brought, in 1649, during the progress of their "thorough godly reformation", the unfortunate king himself to trial and to the block.'—Wm. Cobbet.

¹⁸ See Proclamations, &c., in Kilty's Landholder's Assistant.

ceedings, rebuked Gov. Stone for want of vigor, and directed him to regain his lost rights. Stone made the effort, and at first was successful. He then went with 130 men to reduce the refractory parties at Providence, (now Annapolis), but these having superior numbers, and the aid of an armed ship, the *Golden Lyon*, in the harbor, turned the tables upon him, and nearly annihilated his little force. The governor, wounded and a prisoner, and several of his council, were condemned to be shot, although they had surrendered themselves upon the pledge of quarter; several actually were shot in cold blood while prisoners. 'After the skirmish', says Doctor Barber, 'the governor, upon quarter being given him and all his company in the field, yielded to be taken prisoners; but two or three days after, the victors condemned ten to death, and executed foure, and had executed all, had not the incessant petitioning and begging of some good women saved some, and the souldiers others; the governor himselfe being condemned by them, and since beg'd by the souldiers; some being saved, just as they were leading out to execution.' (Bozman.)

We have now seen the origin of religious toleration and of religious intolerance in Maryland. After six years of struggle the proprietary regained his rights, (1658), and appointed Fendall his governor, who soon in turn proved rebellious. He was displaced in favor of Philip Calvert, the proprietary's brother, and to him succeeded Charles Calvert, a son of the proprietary; both wise and just men, under whom the colony thrrove apace, both in numbers and in resources.

Things went on peacefully enough until 1689, just after William and Mary were enthroned in England. An opportunity was now offered for neglected politicians to rise in the province, which they did not neglect to use. Mr. John Coode, a prototype 'know-nothing' Christian, got up '*An Association in arms for the defence of the Protestant religion, and for asserting the rights of King William and Queen Mary to the Province of Maryland, and to all the English dominions.*' Coode was a man of thoroughly bad habits and character; though calling himself a clergyman, he was presented by the grand jury, under the government which he was foremost in establishing, for atheism and

blasphemy. He expressed his determination to overthrow the government in Maryland. He was tried and convicted, but pardoned in consideration of services rendered during the revolution of '89. (McMahon.) Mr. Coode's association called a convention, which denounced Lord Baltimore to the king, laying accusations against him, and requesting the King to take the province in his own hands, which he did. It availed nothing that people of high character, Catholic and Protestant, made counter representations to the King. Upon this point the testimony from the Protestant county of Kent, is equally interesting and valuable. The reader will pardon our reproducing a portion of it:

'ADDRESS OF PROTESTANTS OF KENT COUNTY, *November, 1689.*

'To the King's most Excellent Majesty:

'We, your Majesty's most loyall and dutyfull subjects, the ancient Protestant Inhabitants of Kent county, in y^r Majesty's Province of Maryland, who have here enjoyed many halcyon dayes under the immediate government of Charles Lord Baron Baltmore, and his honourable father,' assure his Majesty that they have always enjoyed, to the fullest extent, all rights and privileges, civil and religious, under the proprietary government, and, 'Doe, in prostrate and humble manner testify to your Majesty that we abhor and detest y^e falsehood and unfaithfulness of John Coode, and others his associates and agents, who first by dispersing untrue reports of prodigious armies of Indians and French Papists invading us, did stirr up unjust jealousies and dismall apprehensions in y^e less cautious sort of people in this Province, and then having thereby created unnecessary feares, and disposed y^e people to mutiny and tumult, made further insurrection, and extorted the lawfull government from the Lord Proprietary, who was always as ready to redress our grievances as wee to complaine.' Coode's 'Delegates' had given the command of the militia to 'unworthy and infamous persons', and 'many of them have procured themselves to be putt in judicial places to the terror of your Majesty's more peaceable subjects.' Wherefore the petitioners requested that the government be again restored to Lord Baltimore, 'which will make him and

us happy, and give us new occasion to bless God, and to pray for your Majestie's life and happy reign.'

'(Signed,) WM. FRISBY,	HENRY COURSEY,
GRIFFITH JONES,	JOSH. WICKES,
ROBERT BURMAN,	JNO. HYNSON,
PHILEMON HEMSLEY,	GEORGE STURTON,
SIMON WILMER,	LAMBERT WILMER,
WILLIAM PECKETT,	GERRARDUS WESSELS,
JOSIAS LANHAM,	RICHARD JONES,
THOMAS RINGGOLD,	PHILIP CONNER.
THO. SMYTH,	

'*Indorsed.*

'Kent County in the Province of Maryland.

'Address to His Majesty.'

But the '*halcyon days*' of the colony had fled forever. The king appointed a royal governor, Sir Lionel Copley; who called a General Assembly in May, 1692. The first act of this body was the recognition of William and Mary; the next, the abolition of religious equality. The Church of England became the established church of Maryland. The proprietary was reduced to the condition of a mere landlord, entitled to his rents only, which indeed were often collected with difficulty. Catholics, and dissenters of all kinds, were made the subjects of oppressive laws, which endured for the most part until the greater Revolution of 1776. At the expiration of twenty-five years, Benedict Leonard Calvert having become a Protestant, was restored to his proprietary rights, and the colony again prospered more than under the royal government. The legislature passed beneficial laws, but ungenerously enough, 'introduced into Maryland all the test oaths and disabilities which were enforced against conscience in England.' (McSherry.)

The affairs of Maryland henceforth are not very interesting, until we approach the days of that revolution which separated this and the other provinces from the mother country. The trivial Indian wars, the French wars, the boundary disputes with the neighboring provinces, Virginia, Pennsylvania, and

¹⁹ Day-Star of Freedom, p. 95.

Delaware, are parts of Maryland history of more or less importance, but of no great interest to the general reader. The cities of Baltimore and Annapolis have respectively their special annals. Baltimore was laid out in 1729 on the lands of Charles Carroll, in sixty lots, by commissioners appointed by the legislature; and in 1732 it was increased by the addition of ten acres, east of Jones' Falls, on the lands of Edward Fell, whose name is transmitted in that part of the city known as *Fell's Point*. Elkridge Landing was for a time a spirited rival of Baltimore, but Elkridge yielded gracefully at length, and may yet one day become a suburb of the successful rival.

In 1771, Frederick, the last of the Lords Baltimore, died without legitimate descendants. The rôle of this house was accomplished. He transmitted his estates to an illegitimate son, Henry Harford, Esq., whose name is preserved in Harford county. Frederick was not an honorable scion of a noble house. In the words of Mr. Neill, 'As George was the first, wisest, and best, so Frederick was the last, weakest, and worst of the Barons of Baltimore.'

We are now approaching the great event of American history, the Revolution of 1776. The colony of Maryland had thriven apace; and, indeed, it had all natural advantages independently of those conferred by kings, lords, or laws. In one respect it had retrograded, and that is, in religious liberty. After the establishment of the Church of England, Catholics and all dissenters were under the ban of proscription. In 1702, the provisions of the English toleration Act were extended to Protestant dissenters, but laws equally cruel and unjust were passed and enforced against the Catholics until the dawn of the new era in '76. 'And thus,' says McMahon, 'in a colony which was established by Catholics, and grew up to power and happiness under the government of a Catholic, the Catholic inhabitant was the only victim of religious intolerance.'

The English government was beginning to bear very heavily upon the American colonies, and the colonists proved refractory. They thought their own burdens enough for their own shoulders, without carrying besides those of the mother country. They resented the introduction of stamped paper, and the tax upon tea,

as infringements upon their rights, and the initiation of further wrongs. The people of Maryland acted boldly and without disguise. They drove the stamp agent from the colony in terror and disgrace. And when various articles, as tea, glass, paper, &c., were only allowed to enter the colonies when taxed for the benefit of Great Britain, the people formed 'non-importation societies', and astonished the London merchants by refusing to receive their goods, and sending back vessel and cargo as they came. The taxes were then repealed, except upon tea. This *placebo* was not sufficient for the now aroused colonists. The people destroyed, or caused to be destroyed, 'the detestable weed', wherever it was found. In one case they obliged Mr. Steward, the owner of a brig laden with tea, which came to Annapolis, (October, 1774,) to burn his brig with her cargo, which he did with his own hand. Of course, things were coming to a crisis. War between the colonists and the mother country became inevitable. Maryland, with the other colonies, began to make preparations.

Conventions were held, and acts and resolutions were passed, plainly indicating the popular will. At a meeting of the convention at Annapolis, we find, *inter alia*, the following resolutions. (December 8, 1774.) '*Resolved unanimously*, That if the late acts of Parliament, relative to the Massachusetts Bay, shall be attempted to be carried into execution by force in that colony, or if the assumed power of Parliament to tax the colonies shall be attempted to be carried into execution by force, in that or any other colony, that in such case this province will support such colony to the utmost of their power.

'*Resolved unanimously*, That a well regulated militia, composed of the gentlemen, freeholders, and other freemen, is the natural strength and only stable support of a free government, and that such militia *will relieve our mother country from any expense in our protection and defence*; ²⁰ will obviate the pretense of a necessity for taxing us on that account; and render it unnecessary to keep any standing army (ever dangerous to liberty) in this province; and therefore it is recommended, that

²⁰ Italics ours: This filial regard for the expenses of the mother country must not be overlooked.

such of the said inhabitants as are from sixteen to fifty years of age, should form military companies, &c.

Resolved unanimously, That contributions from the several counties of this province, for supplying the necessities and alleviating the distress of our brethren at Boston, (whose distressed inhabitants were "cruelly deprived of the means of procuring subsistence for themselves and families, by the operation of the act for blocking up their harbor," as stated in a previous resolution,) ought to be continued in such manner and so long as their occasions may require, &c.

Resolved unanimously, That it is recommended to the several colonies and provinces to enter into such or the like resolutions for mutual defence and protection, as are entered into by this province.

'As our opposition to the settled plan of the British administration to enslave America, will be strengthened by an union of all ranks of men in this province, we do most earnestly recommend that *all former differences about religion or politics*, [italics ours] and all private animosities and quarrels of every kind, from henceforth cease and be buried forever in oblivion; and we entreat, we conjure every man, by his duty to God, his country, and his posterity, cordially to unite in defence of our common rights and liberties.'²¹ The general reader is apt to go upon the presumption, that resolutions of conventions in times past are naturally dry and uninteresting; these we have cited present several points of decided interest, however, on which the reader will make his own comments and reflections.

The history of Maryland from the initiation of the State governments until a very recent period, presents nothing of general, though much of special, interest. Mr. McSherry brings his history down to 1848; the other State historians stop at much earlier periods. We will not undertake now to describe the glorious part taken by this State, either in the council, or in the field, during the revolutionary war; though we may say that no troops earned more well merited distinction, in those days of trial, than the famous old Maryland line. The names of Smallwood,

²¹ Proceedings of the Conventions of the Province of Maryland, held at the City of Annapolis, in 1774, 1775, and 1776.

Howard, Williams, and many others, will recur to the reader as among the most distinguished of the sons of Maryland on the field of battle; while the names of Samuel Chase and Charles Carroll, of Carrollton, will be held in perpetual honor for their vigorous championship of American freedom in the field of politics. As a signer of the Declaration of Independence, Mr. Carroll brought the heaviest oblation of all his compeers to offer upon the altar of their country.

Civil and religious liberty, prosperity and peace, were the fruits, in Maryland, of the war of Independence. In other words, the resplendent light of the 'halcyon days' of the early proprietary government beamed forth again with an effulgence that spread, not over one little colony alone, but over a large portion of a new continent. The post-revolutionary liberties of America had been no where so fully foreshadowed, as in Lord Baltimore's colony. The Revolution restored lost liberties to the people of Maryland. All former differences about religion and politics were thenceforth honestly buried in oblivion; and in no part of the world, perhaps, have people of different religious views lived among each other in greater harmony, or with more mutual kindness and good will; some trivial outbursts of a contrary character notwithstanding. Until 1824, the Jews labored under some political disabilities, which were then happily and wisely removed forever.

The act for their relief is the only step in advance of Lord Baltimore's toleration. We do not for a moment believe that his noble soul would have stooped to the persecution of the Jews; and history shows that, practically, his government only required of them not to agitate the differences between themselves and the Christians with whom they were dwelling.

The word *toleration*, by the way, scarcely expresses Lord Baltimore's design in its fulness. Toleration implies inequality; thus Catholics were *tolerated* in Rhode Island, but they were not upon an equal footing with Protestants. In Maryland, all Christians, so far as religion is concerned, were absolutely free and equal. Lord Baltimore had abundant means of making unfavorable discriminations if he had been so disposed, but he was not. The whole evidence goes to show that he was deter-

mined to give religious equality a fair trial; or, in short, to initiate it upon a new field, where alone its success in those days could be possible. He might have excluded dissenters with the full approbation of the king who gave the charter; and as to members of the Church of England, if he could not have passed acts against them, he could have kept them (as urged in a letter published on this subject, by Mr. W. M. Addison, of Baltimore,) out of his colony, by refusing to sell them land, 'every inch of which was vested in the proprietary.'

The unquestionable facts of history show that he cordially invited all Christians oppressed for conscience' sake, to come to Maryland as a home, where they should enjoy all the rights and privileges, civil and religious, that his charter and laws enabled him to offer to those of his own faith, and his immediate friends and followers. He invited these strangers into his political household, and never, in any instance, did he violate his pledges or promises. Neither party spirit, nor *odium theologicum*, can change established facts.

A writer who is enlisted in the ranks of Lord Baltimore's detractors, says in a late number of the London *Athenæum*, with the most empty self-complacency, that 'the good people of Baltimore pique themselves on being planted by a lord, while the neighboring States were planted by commoners like Walter Raleigh or William Penn.' To take down the inflation of the Baltimoreans, this writer informs them that Baltimore's title was derived from a mere honorary Irish barony, which gave him no place in the British House of Lords. Upon this an eminent jurist²² of this city justly observes: 'We presume that no man or woman in Maryland ever thought for an instant of any difference between Lord Baltimore and plain George Calvert. . . . Whether Calvert was lord or commoner, or commoner made lord, is to us a matter of profound indifference. We are proud of his name, and of him, only because we are proud of the immortal principles on which his colony was founded, and which place the landing of the pilgrims from the *Dove* and the *Ark*, among the grandest incidents of human history. We are proud of his great charter, as one of the noblest of the works that

²² S. T. Wallis.

human hands have ever reared,—the most glorious proclamation ever made of the liberty of thought and worship. Had he been an Irish peasant instead of an Irish baron, we should reverence him perhaps the more, and certainly feel none the less honor of descending from the good, brave men, who made the precepts he bequeathed them a practical and living truth.'

In the last decade of years, Maryland has had, as in the beginning, a peculiar history, which has not yet, however, been subjected to the methodical treatment of the historian. As it is equally curious and interesting, we hope to see it fairly and fully presented, at an early day, by some one competent, both by sentiment and ability, to do justice to the subject.

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- ART. VII.—1. *History of the Inductive Sciences,* from the Earliest to the Present Time. By William Whewell, D. D., Master of Trinity College, Cambridge. In three volumes, octavo. London: J. W. Parker. 1847.
2. *Histoire de l'Astronomie Ancienne.* By Jean Baptiste Joseph Delambre. In two volumes, quarto. Paris. 1817.
3. *Histoire de l'Astronomie au Moyen Age.* By J. B. J. Delambre. In one volume, quarto. Paris. 1819.
4. *Histoire de l'Astronomie Moderne.* By J. B. J. Delambre. In two volumes, quarto. Paris. 1821.
5. *Histoire de l'Astronomie au dix-huitième Siecle.* By J. B. J. Delambre. In one volume, quarto. Paris. 1827.
6. *Histoire de l'Astronomie Ancienne, depuis son origin jusqu'à l'estaballissement de l'ecole d'Alexandrie.* By Jean Sylv. Bailly. In one volume, quarto. Paris. 1781.
7. *Histoire de l'Astronomie Moderne, depuis la foundation de l'ecole d'Alexandrie jusqu'a l'epoque 1782.* By Jean-Sylv. Bailly. In three volumes, quarto. Paris. 1785.

8. *An Historical Survey of the Astronomy of the Ancients.* By Sir George Cornwall Lewis. London. 1862.
9. *The Recent Progress of Astronomy; especially in the United States.* By Elias Loomis, LL. D. New York. 1856.

We have read, with an absorbing interest, the fascinating little work of Professor Loomis, on *The Recent Progress of Astronomy*. We shall not, however, in the present article at least, reach the period to which it relates. The volume of Sir G. C. Lewis is remarkable, first, as the work of her Majesty's late Secretary of War, and, secondly, as displaying the diligent research and care observable in all the productions of his pen. It adds nothing new, however, to the great histories of Bailly and Delambre. Indeed, in the *History of the Inductive Sciences* by the erudite Dr. Whewell, there is little, if anything, pertaining to the rise and progress of Astronomy, which may not be found in the great works just mentioned. We owe him, nevertheless, a debt of gratitude for the delightful manner in which he has served up the History of Astronomy for the general reader. If any one would, however, master the history of Astronomy in its details, as well as in its magnificent results, he must give his nights and days to the quartos of Bailly and Delambre.

It is no part of our design, however, to make the above works, or any of them, the subject of the present article. In placing their titles at the head of this paper, we merely wish to notify our readers of the sources from which we have, for the most part, derived our information respecting the Progress of Astronomy, and from which a vast deal more of information may be easily gathered. It is our purpose, at present, merely to glance at a few of the great epochs, or eras of light, in the History of Astronomy.

Nothing would seem, at first view, more remote from human apprehension than Astronomy, or *the science of the stars*. One would suppose that if the great Geometer of the universe had arranged the stars, they would have been disposed in hexagons, or octagons, or in some other regular and beautiful figures. But instead of this, they lie scattered over the heavens as if, by chance, they had been 'shaken from the fingers of the Almighty.'

Hence it was, perhaps, that Socrates concluded that the gods had purposely concealed from human view, the wonderful art wherewith they had constructed the heavens, and would, therefore, be displeased should mortals presume to pry into the mystery of the material universe. But notwithstanding the apparent impossibility of such knowledge, and the pious admonition of Socrates, it is precisely the mechanism of the heavens into which the mind of man has presumed to pry with the most inextinguishable curiosity; and it is precisely in this magnificent field of investigation, that its most splendid triumphs have been achieved.

Nor should we so much wonder at this, when we consider the visible glory of the heavens. There is, indeed, a mysterious charm in this majestic fabric of the world around us and above us, which, in all ages and in all climes, has attracted the gaze, and fired the imagination, of every devout admirer of nature's glorious forms. Even those who, like Lucretius, believed that sun, moon, and stars, are no larger than they seem to be, were still smitten with the indescribable magnificence and beauty of the scene which the nocturnal heavens present. Regarded merely as appendages and ornaments of the earth, there is still a fascination in the shining orbs above us, which enchains the reason, and exalts the fancy, wherever these are found alive to the beautiful and the sublime. The ancient poet might well have exclaimed with the modern :

Beautiful !
How beautiful is all this visible world !
How glorious in its action and itself !

High though his feelings may have risen, the ancient poet could have contemplated only the outside or surface glory of the world. His views with respect to the appalling magnitude, and the deep internal beauty, of the material universe, were necessarily low and defective. One of the Roman poets, for example, represents their army, while in Portugal, as having heard the sun hiss as he went down in the bosom of the ocean.

' Audiit hurculeo tridentem gurgite solem.'

There were travellers, too, in those ancient times, who talked

of a vast cavity in the East, whence the sun is heard to issue every morning with an insufferable noise. Puerile as such notions now seem to us, they were naturally entertained before the human mind had been enlightened by the science of astronomy, or its conceptions enlarged by even one glimpse of the inconceivable grandeur of the creation.

If, in the time of Lucan, the Roman poet just referred to, the science of astronomy existed in the germ merely, it now appears in the expanded blossom. Or if it was then the smallest of all seeds, it has now become the greatest of all trees, which has struck its roots to the centre of the earth, and spread its branches abroad in the heavens. Or again, if we may change the figure, the science of astronomy, having become the most perfect of all the systems of physical truth, now forms, by far, the proudest monument of human genius the world has ever seen, or is ever likely to see. By the concurrent labors of a long succession of illustrious men, extending through different ages and nations, this sublime monument has gradually risen from its broad basis, until its lofty pinnacle is now seen glittering among the stars. A brief sketch — an exceedingly brief sketch — of the principal stages in the progress of this stupendous work, and of the gigantic intellects by which it has been reared, is all that can be anticipated in the course of the ensuing reflections.

Not to fatigue the reader's attention with the comparatively dry details of the Chaldean, the Egyptian, the Chinese, and the Indian astronomies, we shall proceed at once to that of the ancient Greeks, from whom the science has descended to modern times. The astronomy of Greece begins with Thales, and the philosophers of the Ionian school, which was founded by him six hundred years before the Christian era. Thales is the first who is known to have propagated a scientific knowledge of astronomy among the Greeks. He taught them the movements of the sun and moon; he explained the inequality of the days and nights; and he showed the Greek sailor, who had only observed the great bear, that the pole-star is a far surer guide over the wide waste of waters. But that which rendered him more celebrated than any thing else, was the prediction of a solar eclipse. For easy as it is to calculate an eclipse at the present

day, the astronomer who could, at that early age of the world, merely predict such an event, was regarded more as a god than as a man. Hence it is that Pliny, having mentioned the name of Thales in connection with that of Hipparchus, bursts into one of his fine strains of enthusiastic praise. 'Great men!' says he, 'elevated above the common standard of human nature, by discovering the laws which celestial occurrences obey, and by freeing the wretched mind of man from the fear which eclipses inspired. Hail to you and to your genius, interpreters of heaven, worthy recipients of the laws of the universe, authors of principles which connect gods and men!' Hence also the admiration of Josephus, who calls astronomers '*the sons of God.*'

Next to Thales, Pythagoras, who founded the school of Crotona, about five hundred years before Christ, was the grand luminary of astronomical science in ancient Greece. Whether he reflected the science of the East, or shone by an inherent and original splendor of his own, we are amazed at the extent and the sublimity of his views. His name is forever associated with the true system of the universe. For he is the first, at least among the Greeks, who maintained that the sun is the centre of the planetary orbits, around which the solar system revolves. In one word, he is the first Greek astronomer who is known to have taught the system which now immortalizes the name of Copernicus. It was Pythagoras, too, who conceived the sublime idea that the planets are inhabited, and that each star which twinkles in the immensity of space is a sun like our own, and the centre of a splendid retinue of planetary worlds.

It has always seemed wonderful to us, that after the true system of the universe had been broached, and embraced by a large school of philosophers, it should have passed away, and sunk into almost total oblivion. Various causes may be assigned for this strange fatality of the Pythagorean scheme; but the chief cause, no doubt, is to be found in the domination of the Aristotelian philosophy. It is to the authority of Aristotle's mighty name, no less than to the force of his deceptive arguments, that we should ascribe the temporary downfall and oblivion of the true system of the world.

If the opinion of Sir William Hamilton be just, that '*Aris-*

totle stands the Copernicus and Kepler and Newton of the intellectual world', his most enthusiastic admirers should be satisfied with such exalted praise. He is certainly neither the Copernicus, nor the Kepler, nor the Newton, of the material world. Hence, if he were all of these to the philosophy of mind, then may the metaphysician crown him with glory and honor; he certainly deserves little at the hands of the astronomer. For in this department of knowledge, he not only extinguished the lights which his predecessors had kindled, but he laid down laws and maxims which would have made the universe a profound enigma for all time to come, and the science of astronomy an eternal puzzle. His philosophic dream, that it becomes such divine objects as the heavenly bodies are, to move always with a uniform velocity, and that therefore they never move slower or faster, is a fair specimen of the spirit and manner in which he determined the most important questions pertaining to the order of the universe. The scholastic jargon, too, by which he affected to demonstrate that the planets must revolve in perfect circles, is one of the most remarkable instances on record of a great intellect striving to appear profoundly learned on a subject, in regard to which it knew—just exactly nothing. The truth is, that Aristotle did not address himself in right good earnest to study the world which God had made; but he came with his *matter*, and his *privations*, and his *forms*, to show how it must have been made. Hence darkness was the result, and his errors were *legion*.

Yet with all his errors, Aristotle had one true astronomical idea. He maintained the spherical form of the earth. Though this doctrine had been taught before his time; yet is it so distinctly conceived by him, and so strongly argued, that he almost deserves the credit of an original discoverer. From the shadow of the earth, as seen projected on the moon during a lunar eclipse, and from the gradual elevation of the stars toward the north or south as we approach them; he inferred the spherical form of the earth. Better arguments have not since been invented; and better it is not easy to conceive.

We can not even allude to all the names which adorn the annals of astronomy. We shall, however, in passing, mention

that of Aristarchus, because of his attempt to determine the distance of the sun from the earth. Though his method was ingenious in theory, it proved false in practice. For he concludes that the sun is eighteen times the moon's distance from the earth; we know that it is four hundred times that distance. Indeed, the greatest astronomers of antiquity could not determine the distances, nor the magnitudes, of any of the bodies of our system; but such have been the improvements in the methods of the science, that the mathematician can now calculate them with exactness and ease.

Among all the astronomers of antiquity, Hipparchus stands pre-eminent. Endowed with one of those vast intellects which, by its compactness, its vigor, its comprehensiveness, its acuteness, its originality, and its depth, was destined to make an impression on all succeeding ages, he has ever been the admiration of astronomers, to whose favorite pursuit his immortal powers were almost exclusively devoted. Even Delambre, though usually so severe in his judgments, relaxes into praise as he approaches the name of Hipparchus; pronouncing him 'one of the most extraordinary men of antiquity, *the very greatest* in the sciences which require a combination of observation and geometry.' And M. Auguste Comte, by grouping Hipparchus and Kepler and Newton together, as the three great lights of astronomy, has, if possible, still more impressively expressed the estimation in which he held 'the father of astronomy.' You will naturally ask, then, what constitutes his title to so proud a distinction, to so high a niche in the temple of fame, to so imperishable a chaplet of glory as that which encircles his lofty brow?

We answer, the theories of the sun and moon, as propounded by him, were far more perfect than those of his predecessors. In the second place, he reformed the calendar and introduced greater accuracy into the computations of time. Thirdly, he founded the science of trigonometry, a branch of the mathematics without which the very alphabet of physical astronomy could not have been constructed; for it is by the application of trigonometry, that the distances and the magnitudes of the various bodies of our system are determined. Thus, the *real facts*

of astronomy, which are so amazingly different from the apparent ones, are due to the method first invented by Hipparchus. Fourthly, his grand discovery of the precession of the equinoxes, which was made one hundred and twenty-eight years before Christ, was indispensable to the future progress of astronomy. Fifthly, the astronomical observations which were made by him alone, and transmitted to posterity, exceeded in number and value all the observations he had received from all his predecessors. And, lastly, his sixth great labor, which in that early age, Pliny regarded as pertaining to the Deity rather than to man, consisted in a construction of a catalogue of the fixed stars. By this labor alone, he created an era of light in the history of the science; and if the labor was immense, its results have been of incalculable benefit to all succeeding astronomers.

But, if we mistake not, he deserves as much credit for what he did not attempt, as for what he actually accomplished. Having proceeded as far as the light of nature seemed to guide him, he there resolutely halted, and refused to advance or bury himself among the obscurities of nature. 'The art of talking unintelligibly on matters of which we are ignorant', is one of the fine accomplishments which he does not seem to have learned from Aristotle, or from any of his predecessors. In one word, his object seems to have been, not so much the illustration of his own name, as the discovery and propagation of truth. Hence, the miserable weakness of pretending to know all things, and to explain all things, formed no part of the intellectual character of Hipparchus. In this respect, he presents a glorious contrast to many of the most renowned philosophers of Greece; and, as the bright and morning star of astronomical science, he will ever be, even as he now is, most reverently admired. The astronomical dreams of a Plato and an Aristotle have passed away; the discoveries of Hipparchus will live forever.

From the time of Hipparchus, who flourished one hundred and twenty years before Christ, down to that of Ptolemy, a period of about two centuries and a half, no real astronomer appeared. The works of Hipparchus have been lost; not so with those of Ptolemy. It is to these works, says Mr. Whewell, that we owe ninety-nine-hundredths of all our knowledge of the Greek astronomy.

Ptolemy possessed, not only a great, but also a versatile mind; yet it is as an astronomer, that he has ever been held in the highest estimation among men; for it was to this noble science, then languishing in the schools, that he gave a new and lofty impulse. He brought together and united the scattered materials existing in the works of Hipparchus and others; which, combined with his own discoveries, formed a complete system of astronomy as the science was then understood. The publication of his *Μαθηματικὴ συγγραφή* forms a great epoch in the history of the science. This work, which fortunately escaped the barbarism of the middle ages, formed the basis of all the astronomy of the Arabians, and, for a considerable time, that of modern Europe. If our design would permit, we should be glad to give an outline of the contents of this great work; but we must hasten on to the more important and more interesting eras of the science.

But in passing down from Ptolemy, how shall we speak of the dark ages? We see 'the angelical doctors' there; but we see them engaged in no very angelical pursuits. The same 'wilderness of suns', which looked down on Pythagoras, is shining on them too; but yet it seems that the great angelicals refuse to dabble in such gross material things as stars or stones. Instead of studying the great world which God has built, they are constructing little worlds of their own, here upon this atom earth of ours, out of the entities and quidities, and privations and forms, of Aristotle. The categories and predicables are their sun and moon; and the topics are their stars. To these they look for light; in these they search for the glory of God. How the heavenly bodies move, or by what laws they are governed, is a question which they put aside for the sublime speculations, 'whether a disembodied spirit can go from one place to another without passing over the intermediate points?' They seek to know, not how many myriads of shining orbs adorn the halls of space, but how many myriads of spirits may dance, all at once, upon a cambric needle's point! And why, indeed, should they care to know how many mansions there are in this our Father's house of the universe; since for aught they know, all created spirits might creep at once into a single needle's eye, and there conceal themselves!

Yet one friendly glance, at least, is due from us to these great 'angelicals'; for they are near of kin to us. Then hail to you, ye logicizing, metaphysicizing, mighty dreamers of the misty past; we greet you with a kindly feeling from the heart! For had we been born and lived with you, we too, perchance, had been a brother of your craft, and dwelt amid the cobwebs of the brain. But as it is, thank God, born in a better age, we may despise ourselves in you; and quit both you and self to dwell with greater minds, whose glorious thoughts have raised us from these little souls of ours.

During the dark ages, the science of astronomy took its flight from the Christian world. If any one, like Gerbert, for example, happened to feel a passion for the study, he had to seek an instructor either among the Arabs, or in the Moorish universities of Spain. He could find no teacher in Christian countries. For more than a thousand years, the science of astronomy suffered this dark eclipse. But then a more propitious era began to dawn, and continued to brighten with a steadily progressive lustre; until about the middle of the sixteenth century, it burst on the Christian world in full-orbed splendor, never more to decline, or to become obscured. Nicholas Copernik, an ecclesiastic and recluse philosopher, was the author of this wonderful revolution. No man ever lived, indeed, who was more worthy to follow philosophy than he; for '*he was a freeman in mind.*' His was not the freedom of those, however, who 'think much of themselves, and know but little'; for he knew how to reverence the mighty past, as well as *to think for the everlasting future.* His freedom was inspired, not by the intoxicating fumes of a vain-glorious disposition, but by a profound love of truth, and consisted in the greatness and the glory of his discoveries.

An intellect like his could not but strive, and strive with energy, after that unity and harmony of principle, that symmetry and beauty of view, which alone can fully satisfy the rational nature of man. Hence the complexity and confusion which reigned in the Ptolemaic system of the world, proved offensive to his mind. As this was the system then universally received, and no better was dreamed of, so had Copernicus thought more highly of himself, he might have boasted with Alphonso X., 'Had the Deity

consulted me at the creation of the universe, I could have given him some good advice.' Good advice he could have given, far better indeed than King Alphonso, provided the real model of the universe had been such as it was then distorted and misrepresented in the schools. But shunning the error of the proud Castilian monarch, Copernicus more wisely concluded, that the manifold imperfections which had shocked his reason and clouded his imagination, existed not in the divine scheme of the universe itself, but only in the human interpretations of that scheme. Dissatisfied with the labors of the past, and weary of the uncertainty of the 'mathematical traditions', he resolved to try anew, and for himself, the stupendous problem of the world. He felt the necessity of the task, as well as the glory of the attempt.

'Then, I, too, began to meditate', says he, and for forty long years he continued to meditate. With Pythagoras, and Philolaus, and Anaximander, and Aristarchus, he placed the sun in the centre of the world; and gave to the earth a motion around that great luminary, as well as around its own axis. Over this sublime scheme, his mind continually brooded. He rose above the illusion of the senses; and saw more clearly than mortal eye had ever seen before, that the motion of the heavens is *apparent* only, while that of the earth is *real*. Having taken a firm hold of this theory, by means of his clear geometrical conceptions, he made it explain the phenomena of the heavens, far better than they had, until then, been explained; and, by immense mathematical calculations, he verified his explanations. Thus did he find, in some good measure at least, that order and harmony, that simplicity and beauty, for which his rational nature had so passionately longed.

As we have already seen, it was not the merit of Copernicus, that he was the first to conceive the true system of the universe. But if he was not the author, he was certainly the founder, of that system. The arguments and views which had imposed on the mighty intellects of Plato, and Aristotle, and Hipparchus, and Ptolemy, and which had led the whole world astray, disappeared before the blaze of his intense mind, like mists before the sun. Beneath his *thinking* also; those vague considerations which had controlled the opinions of Pythagoras and his fol-

lowers, assumed a form and a substance, and a radiance, which the winds of controversy could neither blow away, nor extinguish. We have said, that Pythagoras taught the system which now immortalizes the name of Copernicus; we may with equal justice say, that the genius of Copernicus has immortalized the system which Pythagoras taught. Indeed, if the maxim that 'he who proves is the discoverer', be just, then is Copernicus the real author of that view of the universe which bears his name. For he it was, whose mind first brooded over this sublime system of the world, until he could speak, not as one moved by vague and shadowy conceptions of the distant only, but as one actually inspired by the present possession of a great and glorious truth. 'All which things,' says he, in reference to his views, 'though they be difficult and almost incredible, and against the opinion of the majority, yet in the sequel, by God's favor, *we will make clearer than the sun*, at least to those who are not ignorant of mathematics.'

But while the great work of Copernicus revealed much of the divine order and beauty of the world, it still left much unrevealed. It is easy to see, that those who referred the motions of the planets to a false centre instead of to the true, to the earth instead of to the sun; and who, moreover, conceived this false centre to be fixed, instead of being, as it is, in perpetual motion; must have entertained the most erroneous and distorted views of their real revolutions. Much of the artificial and highly complicated machinery, which had been invented to explain the apparent irregularities in their motion, was swept away by the Copernican reform; and the heavens put on a new face. Kepler enumerates eleven motions of the Ptolemaic system, which were exterminated by the new system. But although Copernicus thus wiped out these disfigurements, and partially restored the beauty of the world; he yet left much for his successors to accomplish. In reality, he merely laid the foundation of the true system of the universe; on which the magnificent superstructure has since been reared by those sublime architects of science,—a Galileo, a Kepler, a Newton, and a Laplace.

From even this brief review, one thing may be learned; and should forever remain impressed upon the tablets of our memory.

It is, namely, the arrogance and vile conceit, the mad precipitance and haste, with which the untrained mind presumes to sit in judgment on the works and ways of God. Behold Lucretius, for example, that brilliant Epicurean poetizer of the atomic cosmogony,—how he vaunts himself! how in spirit he exclaims, If this universe be, indeed, what some pretend, the work of God; then had he consulted me when it was made, *I* could have given him some good advice! Poor, puny mortal, blinder than the atoms which thou singest! not even knowing that sun, moon, and stars, are larger than they seem: how canst thou criticise the book of God, ere thou hast learned the very alphabet in which he writes His laws and fixed decrees?

We may be sure, that if any imperfection shows itself in the world of God; this only proves the imperfection of our minds, and not of His design or work. For all the huge defects, however numerous or great they be, which seem to cloud the universe, and hide its beauty from our eyes, exist, not in the glorious world of God without, but only in the little, dark, and crooked world within; where sin, and pride, and ignorance, and all this cursed vile conceit of little minds, have warped and twisted every thing amiss.

Having glanced at the progress of astronomy from the time of Thales down to that of Copernicus, the history of the science begins to assume a ten-fold interest. Hitherto we have seen, as if struggling through the obscurity which surrounds us, some beautiful gleams of the great outer glory of the universe; that glory is now steadily dawning, and the heavens are in a glow. And from the splendid epoch of Copernicus, the inconceivable grandeur and glory of God's creation will continue to open on all sides around us, until we shall be made to feel that the utmost effort of our intellect to grasp it can only betray our weakness, and that the utmost flight of the imagination can only overwhelm us with a sense of our insignificance. In attempting to point out the progressive developments of this glory, or the sources whence it has dawned on an astonished world, the first great object which claims our attention is, 'The starry Galileo and his woes.'

It was owing to the good fortune, no less than to the genius

of Galileo, that he was the first to direct the telescope to the heavens ; but we may safely say, that a good fortune so splendid, could not possibly have fallen to the lot of a more worthy recipient. The year 1609 is forever memorable in the annals of astronomy, as that in which the first telescope was constructed by Galileo, and pointed to the heavens. In true moral heroism, this was no ordinary deed ; for, in his time, it required all the enthusiasm, as well as all the courage of genius, to dare to see anything, either in heaven or in earth, which had not been seen by Aristotle, or allowed by him to exist. But still Galileo ventured to look, and to announce the discoveries which he made. ‘Plagiarist! liar! heretic! impostor!’ are some of the gentle epithets which were hurled at him, because he presumed to look at the heavens through the telescope, rather than through the logic of Aristotle. But to all this abuse, the philosopher calmly replied, either by good natured retorts, or by a renewed zeal in his looking and his seeing. And when he discovered the four magnificent moons of Jupiter, all calmly and beautifully rolling around that majestic orb of light, the indignation of his enemies knew no bounds. Lost in amazement at the audacity of a man who had pretended to see four great worlds about which Aristotle had not said one little word, they gave him up as a son of darkness, and fit only for perdition. But while they were thus denouncing and dogmatizing about the system of the world, and while they were thus ready to close their eyes, and gnash upon him with their teeth, Galileo thus writes: ‘Oh, my dear Kepler, how I wish that we could have one hearty laugh together. Here, at Padua, is the principal professor of philosophy, whom I have repeatedly and urgently requested to look at the moon and planets through my glass, which he pertinaciously refuses to do. Why are you not here? What shouts of laughter we should have at this glorious folly! And, too, the professor of philosophy at Pisa, laboring before the grand duke with logical arguments, as if with magical incantations, to charm the new planets out of the sky.’

From all quarters of the earth, indeed, as well as from Pisa and Padua, the peripatetics were shooting off these ‘paper pellets of the brain’ at the moons of Jupiter. Yet, so far as his-

tory informs us, not a single satellite could they bring down; but each and every one still shines and sings in his eternal course, in proud defiance of the petty schools below. In this fierce war of theirs, no hero signalized himself more than poor Horky did; who valiantly declares, 'I will never concede his four new planets to that Italian from Padua, *though I die for it.*' And thereupon he wrote a book to prove that they neither did, nor could exist.

He first asserts that with Galileo's glass he had looked for himself, and that no such thing as satellite or moon belongs to Jupiter. He secondly asseverates that he not more surely knows that he has a soul in his body, than that reflected rays are the sole cause of Galileo's erroneous view. He thirdly maintains that these planets are like flies to an elephant; and finally concludes their only use is to 'gratify Galileo's thirst of gold,' and furnish him with a subject for dispute.

Having thus put an extinguisher upon Galileo's fame, and snuffed out the four moons of Jupiter, the hero hastened back to Kepler, expecting to receive his praise. But instead of praise, the noble-minded Kepler overwhelmed him with a storm of indignation and reproof. The poor hero begged and pleaded, and prostrated himself so humbly that Kepler consented to receive him into favor again, but on the express condition *that Kepler was to show him the four moons of Jupiter; that he was to see them, and to own that they existed.* To all which the hero agreed; and so ended his campaign against the moons of Jupiter.

Francisco Sizzi, a Florentine astronomer, thus demolished the satellites of Jupiter. There are seven windows given to the head, says he, to enlighten, to warm, and to nourish this tabernacle of the body,—namely, two nostrils, two ears, two eyes, and one mouth. So, in the heavens, he argues, there are two favorable stars, two unfavorable, two luminaries, and one undecided. From which, and from many other similar sevens, such as the seven metals, &c., &c., it is evident that the number of the planets is necessarily seven; and can neither be more nor less. And besides, the satellites are invisible to the naked eye therefore they exercise no influence upon the earth; therefore they are useless; therefore they do not exist. Moreover, not

only the Jews and other ancient nations, but also all modern Europe, have divided the week into seven days, and named them after the seven planets; and if we increase the number of these, this whole system will fall to the ground. But Galileo simply replied, that however admirable such arguments might be to prove beforehand that not more than seven planets would ever be discovered, they hardly possess sufficient force to overthrow or extinguish those which are actually seen in the heavens.

But the revelations of the telescope were not thus universally received. For when the windows of heaven were thrown open, and the curtains withdrawn, the prospect which on all sides rose to view in the infinite depths of space, was far too grand and imposing not to attract the attention, and to excite the wonder, of here and there a few. Those who were *below*, as well as those who were *above*, the prejudices of the schools, were anxious to know whether these things were so; and, in some places, the curiosity of the multitude rose almost to a phrenzy. Those only who were already wise in their own conceit obstinately refused to look and see; and while they stood aloof, either railing at or ridiculing the satellites of Jupiter, the multitude were often eager to use their eyes. Hence Sirturi, for example, had to secrete himself in order to enjoy his telescope in peace. He hid himself in the tower of St. Mark's, at Venice, but the place of his concealment was soon discovered: a crowd rushed upon him, took possession of his instrument, and spent hours in satiating their curiosity. Having heard them eagerly inquire at what inn he lodged, and, fearing the arrival of another swarm more hungry than the first, he thought it advisable to quit Venice early the next morning, and seek some less inquisitive neighborhood for the place of his observations.

The great thinkers of that period, too, those who knew something of the littleness of man, and the greatness of God, were inclined to receive, in the profound humiliation of the soul, the wonderful revelations of the telescope. For nearly all of these were Copernicans; and there, in that great world, with his four magnificent moons all revolving around him, the system they had embraced was seen on a diminished scale — a system within a

system. This was an argument addressed to the eye, and spoke volumes at once in favor of the true system of the universe.

But why, it had been asked, if the Copernican system be true, are not the planets seen with phases like the moon? Why is there not a new and a full Venus for example, as well as a new and a full moon? Copernicus had been pressed with this difficulty, and failed to return a satisfactory reply. The telescope of Galileo furnished the true solution, and, in the beautiful moon-like phases of Venus, presented another strong proof and confirmation of the heliocentric theory of the world. Milton, whose poem is replete with allusions to Galileo and his astronomy, has not permitted the phases of Venus to escape his notice. After describing the creation of the sun, he thus beautifully adds:

‘Hither, as to their fountain, other stars
Repairing, in their golden urns draw light,
And here the morning planet gilds her horns.’

In addition to these discoveries, it was the proud privilege of Galileo to be the first among men to resolve the flaky light of the milky way into an innumerable host of fixed stars or suns. Too much glory this for any mortal man to possess in peace; and hence, as every one knows, the fame as well as the zeal of Galileo, drew upon him the wrath of the persecuting bigots of the age in which he lived. Disease grew upon Galileo, and, in the midst of his discoveries, he became totally blind. This calamity overwhelmed Galileo and his friends: ‘Alas!’ says he, to one of his correspondents, ‘your dear friend and servant has become totally and irreparably blind. These heavens, this earth, this universe, which by wonderful observations I had enlarged a thousand times beyond the belief of former ages, are henceforth shrunk into the narrow space which I myself occupy.’ And Father Castelli, whose enthusiastic and devoted attachment to the persecuted Galileo is more beautiful than the concentrated glory of all the sciences, likewise laments, in the same tone of pathetic sublimity, the irreparable loss of his friend. ‘The noblest eye’, says he, ‘which Nature ever made, is darkened; an eye so privileged, and gifted with such rare powers, that it may be truly said to have seen more than the

eyes of all that are gone, and to have opened the eyes of all that are to come.' Thus dark, 'irrecoverably dark amid the blaze of noon', Galileo passed from earth in 1642, and in the seventy-eighth year of his age.

The island of Huen is memorable in the annals of astronomy. Six miles from the coast of Zealand, three from that of Sweden, and fourteen from Copenhagen, this beautiful island rises from the bosom of the ocean. Rising in the form of a mountain, whose base is six miles in circumference, it terminates in a plain, just exactly as if nature had intended it for an observatory. Here, in the centre of this lofty plain, Tycho Brahe erected the most splendid observatory which Europe had ever seen, and called it 'Uraniburg', or '*the city of the heavens*.' This magnificent structure, together with the improvements, the furniture, and the decorations therewith connected, cost the King of Denmark no less than one hundred thousand dollars, and the princely Tycho himself an equal sum.

This magnanimous astronomer always had around him a band of chosen pupils, whom he boarded, and delighted to instruct in the art of astronomical observation. Though almost wholly devoted to this science, he nevertheless kept open house, and, with unbounded hospitality, received the crowds of philosophers, and nobles, and princes, who came to be introduced to the astronomer, and to admire the splendid temple which, in that sequestered spot, he had erected and consecrated to science.

During the twenty-one years which Tycho spent in this glorious retreat, he made vast additions to the science of astronomy. But '*the city of the heavens*', though so magnificent and so lovely to look upon, was not long free from the malignant influences of earth. For after the death of Frederick II., by whose royal bounty it had been founded, the Danish nobility, jealous of Tycho's fame, conspired to work his ruin. Surrounded by such conspirators, those only can comprehend the anguish of Tycho's noble soul, who are aware of the profound solicitude he felt, that the glory of the peaceful conquests of science which he made, and which belonged to all nations, should in an especial manner fall to the lot of his beloved Denmark, his native land and his home. The glory of Tycho was

indeed the glory of the State. But these ignoble noblemen had neither eye, heart, nor soul, to comprehend the glory of the man whose fame was that of Denmark. They could not see, forsooth, why this mere idle gazer at the stars should draw more eyes to Denmark than all their ribbons drew. Hence, with vindictive malice, this nobleman of nature was pursued by Denmark's pack of little noblemen.

But though compelled to quit Uraniburg, the paradise on which he had laid out his all, and even to quit his native land, the soul of Tycho was unsubdued and equal to the times. More glorious in adversity, indeed, than he had ever been in brighter days, the philosopher consoled himself with the sublime reflection that every soil and every clime is the country of the great man; and that wherever he might go, the same blue sky would spread itself above his head, and *the same gracious God would smile.*

But as in the case of Galileo, so in that of Tycho Brahe; the persecution of the astronomer proved advantageous to the progress of astronomy. For, driven from his native land by the guardians of its glory, he was invited to Prague by the Emperor Rudolph, who gave him a salary of 3000 crowns, and the castle of Benach for an observatory. Here he formed an acquaintance with Kepler,—a circumstance to which astronomy is indebted for some of the most sublime discoveries that have ever rewarded the labors of genius.

This happy union of Tycho and Kepler was indeed indispensable to the progress of astronomy. For as the one was the eye, and the other the intellect, of the science; so neither could have dispensed with the other. The one, by his observations, furnished the materials; the other by his constructive genius, reared the edifice. Without the one, the materials had been wanting to the architect; without the other, the architect had been wanting to the materials. But by the combined labors of both, the magnificent structure of 'Formal Astronomy' arose; and only awaited the god-like genius of a Newton to crown the whole with the inconceivably grand dome of 'Physical Astronomy'; blazing with the radiance of more than ten thousand times ten thousand suns.

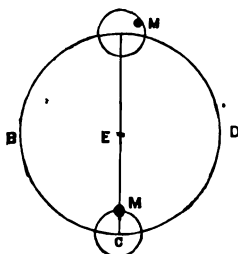
If we would do justice to the discoveries of Kepler, we must, for a moment at least, revert to the astronomy of the past. The great problem of astronomy, as propounded by Plato, is this: *to explain the motions of the heavenly bodies, on the supposition that they move with uniform velocities and in perfect circles.* To the solution of this problem, the labors of Hipparchus, and Ptolemy, and Copernicus, as well as of all other astronomers, had been directed. It does not seem to have been doubted, for a moment, that the assumption of Plato, which makes all the heavenly bodies revolve in exact circles, is perfectly true. The only question was, to reconcile the phenomena of the heavens with this assumption, with this foregone conclusion, with this unquestioned and unquestionable hypothesis.

This was no easy task. The facts seemed to contradict the theory. Mars, for example, neither seemed always at the same distance from the earth, nor to move with a uniform velocity. On the contrary, he appeared sometimes to move faster and sometimes slower; and his apparent diameter varied from 4'' to 18'', which showed that his distance from the earth is far greater at some times than it is at others. It was impossible, then, that he could revolve around the centre of the earth in a perfect circle and with a uniform velocity. For if so, his motion would seem uniform, and his apparent diameter would remain always the same.

Hence, still clinging to the hypothesis of Plato, Hipparchus supposed that the earth is not placed in the centre of the orbit of Mars, (for that is our example), but on one side of its centre; so that, although he really moves in a perfect circle, his distance from the earth varies; and he seems to move slower or faster as that distance is greater or less. Hence arose the famous theory of *eccentrics*; as the orbits of the planets were called, because their centres did not coincide with the centre of the earth.

Ptolemy and others adopted a different method to remove the difficulty in question. He supposed that the earth is placed in the centre of the orbit of Mars; and that Mars nevertheless appears at various distances from the earth, because he does not move in the circumference of his orbit, but is carried around by

a smaller wheel or circle, whose centre moves along that circumference. This may be more clearly exhibited by means of a dia-



gram. Let c , B , D , then, represent the orbit of Mars, or rather the 'deferent' of his orbit, with the earth at its centre. Now if we suppose the planet M to be carried around by the small circle c , M , while the centre of this small circle is moving along the circumference c , B , D , we shall have an idea of the device by

which Ptolemy sought to reconcile the phenomena of the planets with the theory of Plato. He supposed, that while the centre of the small circle, or epicycle, as it was called, is making one entire revolution around the great circle, it causes the planet to make one entire revolution around its own centre; so that the greatest and least distances of the planet are exactly opposite to each other.

But neither the eccentrics of Hipparchus, nor the epicycles of Ptolemy, would exactly reconcile the motions of the heavenly bodies with the idea that they revolve in circles, and with a uniform velocity. With all the ingenuity and labor of these astronomers, which were immense, they could not make their machinery fit the heavens. It was this vast departure from the appearance of a circle in the orbit of Mars, whose apparent diameter, as we have said, varied from $4''$ to $18''$, that first led Copernicus to believe that he does not revolve around the earth at all, but around the sun. But in transferring the centre of the planetary motions from the earth to the sun, Copernicus did not dream of calling in question the dictum of Plato and Aristotle with respect to the circular orbits of the planets; on the contrary, it was his adherence to this dogma which induced him to suppose that the earth could not be, and that the sun is, the true centre of the planetary movements. Hence, he carried along with him the *eccentrics* and the *epicycles* of the old astronomy. If he erred at all, and err he certainly did, it was on the side of a too great reverence for antiquity; but yet, with all his veneration for the past, he ventured to think for himself, and, in opposition to the opinion of the scientific world, he adopted the helio-

centric theory of the solar system. His independence and his boldness, however, did not enable him to shake off the cumbrous machinery of eccentrics and epicycles; this was reserved for the still more free and bold genius of Kepler. Though by means of the heliocentric theory, he made this unwieldy machinery fit better; yet not with that mathematical precision which affords such exquisite delight to the scientific mind. And the more accurate the observations became, the more conspicuous and glaring became this discrepancy between the phenomena and the theory of Plato.

Neither an eccentric nor an epicycle could explain, even with tolerable accuracy, the apparent irregularities of the moon's motion, which are so numerous and so complicated. Hence the eccentric and the epicycle were combined by Ptolemy, in order to perfect the theory of the moon. But even this would not do, for twist the machinery as he would, he could not make it fit the phenomena of the moon. Hence hypocycles and concentric epicycles were invented, until the heavens were scribbled all over with the fictions which astronomers had introduced into nature. The love of simplicity to which the hypothesis of Plato owed its existence, at length became shocked and offended by the interminable complexity and confusion, which a pertinacious adherence to that hypothesis had introduced into the universe. The heavens became a puzzle, and the scheme of the universe an enigma, as profound and dark as the riddle of the Sphinx.

With centric and eccentric scribbled o'er,
Cycle and epicycle, orb in orb.

The beautiful heavens racked the brain of man, and continually solicited his exertions to bring order out of the apparent chaos which reigned therein.

Impressed by this solicitation, the truth-loving mind of Kepler, attuned by nature to the glorious harmonies of the universe, lent its unconquerable and immortal energies to decipher and to read, beneath all this unseemly scribbling, the real poetry of the stars. Thus, it was the attempt, not to overthrow the fictions of the old astronomy, but to reform its errors, and make them reflect the beauty of the universe, which led Kepler to perceive that this never could be done; and that astronomers

had failed because the problem which they had sought to solve was not solvable. Hence, instead of a reform of the old astronomy, a creation of the new is due to Kepler. He just wiped out all the fictions and all the scribblings of the past, that God's own writing, in the beautiful book of the heavens, might be seen and read. Then let us with humble step and at reverential distance, pursue this glorious son of God, as he tracks out for us, and *before* us, the radiant footprints of the Deity upon the realms of space.

It was in the attempt, as we have said, to reconcile the phenomena of Mars with the theory of eccentrics and epicycles, that Kepler was led to perceive the errors of that theory and to discover the true one. For adjust the eccentrics and epicycles as he would, or combine them as he might, he still found it impossible to make them represent the phenomena of the heavens. No revolutions could he give to them, and no librations could he assign to them, to reconcile them with the facts observed. Having, in accordance with this theory, calculated the longitude of Mars, he found that it differed 8' from the position which the observations of Tycho had assigned to it. This would have satisfied most minds; any mind, indeed, which was more in love with theory than truth. But it did not satisfy the mind of Kepler.

Having great faith in others, as well as in himself, no conceit about the accuracy of his calculations led him to discredit the accuracy of Tycho's observations. 'Since', says he, 'the divine goodness has given us in Tycho an observer so exact that this error of eight minutes is impossible; we must be thankful to God for this, and turn it to good account. *And these eight minutes, which we must not neglect, will, of themselves, enable us to reconstruct the whole of astronomy.*' It was, indeed, while poring over these eight minutes, and the calculations which led to this discrepancy between theory and fact, that the first idea of an elliptic orbit occurred to the mind of Kepler, which, says he, '*raised me as from a sleep, and gave me a new light.*' That new light it was, which has so magnificently illuminated the entire universe of God.

The theory of eccentrics and epicycles fled before it like weird

shapes of the night before the sun. A revolution more original, or more complete, or more beautiful, has never been effected by the genius of any one man. The history of the repeated struggles by which Kepler effected this revolution, occupies thirty-nine chapters of his book on Mars. 'My first error was,' says he, 'that the path of a planet is a perfect circle; an opinion which was a more mischievous thief of my time, in proportion as it was supported by the authority of all philosophers, and apparently agreeable to metaphysics.' But having found good reason to suspect the error of all philosophers, and having caught a glimpse of the light which raised him as from a sleep, he prosecuted the investigation until, after repeated trials, he found the precise ellipse which would truly represent all the phenomena of Mars: the inequalities in his velocity, as well as the variations of his distance from the sun. If the first conception of this grand idea raised him as from a sleep, his triumphant demonstration of its truth seems to have exalted him to the third heavens. If Kepler had never made any other discovery but this, he would have deserved the proud title of 'The Legislator of the Skies', which has been awarded to him. But two other magnificent laws were discovered by him. The one is, that if a line be drawn from the centre of the sun to that of a planet, this line, or radius vector, as it is called, will describe equal areas in equal times. The other is, that the squares of the periodic times of any two planets are always to each other as the cubes of their mean distances from the sun.

We have said that Kepler's mind was, by nature, attuned to the harmonies of the universe. Hence it was that, from the very commencement of his career as an astronomer, he was impressed with the conviction that some clear, fixed, mathematical relation exists between the periodic times and the distances of the planets from the sun. This conviction cost him an immense outlay of time and labor; extending through a period of no less than seventeen years. But when the law or the relation for which he had so long and so eagerly sought, was actually found, he was more than rewarded for all the toil which the mighty search had cost him. This sublime discovery was first made known in 1619, in his *Harmonies of the World*. In this work,

he says: 'What I prophesied two-and-twenty years ago; what I firmly believed before I had seen the *Harmonies* of Ptolemy; what I promised my friends in the title to this book, (the *Harmony of the Celestial Motions*); what sixteen years ago I regarded as a thing to be sought; that for which I joined Tycho-Brahe, for which I settled at Prague, for which I devoted the best portion of my life to astronomical contemplations; *at length I have brought to light, and have recognized its truth beyond my most sanguine expectations.*' Thus, in *The Harmonies of the World*, was the discovery of his third great law announced. His exultation knew no bounds. 'Nothing holds me,' said he, 'I will indulge my sacred fury; I will triumph over mankind, in the honest confession that I have stolen the golden vase of the Egyptians, to build up a tabernacle for my God far away from the confines of Egypt. The die is cast; the book is written, to be read either now, or by posterity, I care not which. I can afford to wait a century for a reader, since God Himself has waited six thousand years for an observer.'

The discoveries of Kepler constitute, by far, the most magnificent era in the history of Astronomy, except the one forever identified with the name of Newton,—a name without a peer or parallel in the annals of science. Next to the name of Newton, however, that of Kepler, 'the legislator of the skies', stands highest and brightest on the rolls of fame. Is it not sad to reflect, then, inexpressibly sad, that even Kepler was made to endure the wants and woes of poverty? One of his biographers, alluding to his monument, says: 'If his fellow-men refused him bread while living, they gave him a stone after he was dead.'

The astronomer must have food and raiment as well as other men, not even excepting poor reviewers. He can no more feed on the stars, nor clothe himself with the blue firmament, than we can blow away our griefs with 'paper pellets of the brain.' For though 'a son of God' he is, he must eat, and drink, and sleep, like other men. Shame is it, then, we say, an everlasting shame, that Kepler should have lacked for bread. So thought Kepler's neighbors too, no doubt, in regard to Pythagoras, who had long since passed from earth, leaving only his glorious name

behind. What pity! they too cried, that a Pythagoras should have lacked for bread in his old age. But little did they dream, that a greater than Pythagoras was there, living in their very midst, and feeling all the wants he felt.

‘Fame bears no fruit till the vain planter dies’; and then it bears a stone! Even Tycho Brahe is pursued by this earth’s noblemen, and Kepler is despised, till the avenger Time, that Nemesis of God, comes round to all, and to all deals out their due. We may repeat the follies of the past,—the very follies we condemn,—but Wisdom is, nevertheless, justified of her children, and all the children of the light are hers. They do not live by bread alone, nor seek it as they seek the truth; and bread, therefore, they sometimes need. But then their souls are clad in light. For as they love the light, their thoughts are, even as the thoughts of God, imperishably grand and beautiful. Then take — ye proud despising worldlings! — take the glories that you covet most! Take all the riches of the world — the insect glories of the aspiring worm — and count them all your own; for yours they are, and perishable as the painted dust they decorate!

There is a tribe of critics, respectable enough, it is true, in point of intellect, but yet of the low-thinking and cold-feeling kind, who consider it a pity, that one whose method was so unphilosophical as that of Kepler, should have been rewarded with such splendid discoveries. For our part, we know of no man, in the whole range of history, whose labors deserved so glorious a reward, more richly than those of Kepler. His genius, it is true, appears as wild and irregular at times, as it is sublime and beautiful at others. But one reason of this is, that, for the benefit of mankind, he has taken as much pains to lay open and expose the aberrations of his own mind, as other men out of regard for their fame, have been to conceal theirs from the world. Such noble, generous, self-sacrificing heroism, in the cause of truth, none of his very respectable critics will ever possess the enthusiasm to imitate.

It must be conceded, that Kepler’s method of philosophizing was very different from the calm and cautious method, which Bacon has so eloquently recommended in the *Novum Organum*.

But if Kepler did not follow the letter of the inductive method, he was animated by its spirit in as great a degree as any man that ever lived. We do not mean the spirit which cries, '*Hypotheses non fingo*'; but the spirit which, as the voice of one crying in the wilderness, with agonizing heart and tearful eyes, looks up to God for light. We are not surprised, therefore, that light should have blest his eyes; or that, in God's mercy, he was the chosen forerunner of the great Shiloh of modern science. Though now, since the advent of Newton, the very least in this bright kingdom of the outer universe may be greater than he; yet, until then, no greater than Kepler had been of woman born.

Though often misled by hypotheses, his love of truth proved victorious in the end. The most beautiful theory that ever dawned on the imagination of man, though it had been the offspring of his own brain, and cost him incredible labor to bring it to perfection; he was ever ready, at the call of Truth, to sacrifice it upon her altar. He deserves, therefore, to be called the father of the faithful in the sciences; and pointed to, as the type and model for all future time, for those who would fain learn their mysteries, and behold the face of God in his works.

The labors of Kepler having been completed, the time was ready for the sublimest flight which astronomy had ever taken, or will ever take, perhaps, in view of the little globe we occupy. For two thousand years and more, the science had gathered up her energies, and successfully essayed the loftiest peaks of knowledge in her view. But now she plumes her wings for a still bolder flight. She spreads them for the pinnacle of the world itself, whence its transcendent glory, even as the shadow of its God, may be more truly seen and more devoutly felt. In short, the time is ready for a Newton now, and now a Newton is vouchsafed to earth.

'The name of Sir Isaac Newton', says Brewster, 'has by general consent been placed at the head of those great men, who have been the ornaments of their species. However imposing be the attributes with which time has invested the sages and the heroes of antiquity, the brightness of their fame has been eclipsed by the splendor of his reputation; and neither the partiality of rival nations, nor the vanity of a presumptuous age,

has ventured to dispute the ascendancy of his genius. The philosopher,¹ indeed, to whom posterity will probably assign the place next to Newton, has characterized the *Principia* as pre-eminent above all the productions of the human intellect, and has thus divested of extravagance the contemporary encomium upon its author,

‘Nec fas est proprios mortali attingere Divos.’

This wonderful man was born on Christmas day, 1642; the very year in which Galileo died. It is exceedingly difficult, we know, to keep from exploding with admiration at the bare mention of Newton’s name; and this has, indeed, become so common among literary and scientific men, that every scribbler thinks he must follow the fashion, and go off like a percussion cap, or a bag of explodable gas. Such bags there have been, and will be, of all sizes and dimensions, from the two-penny bladder of a W——n to the great balloon of an Alexander Pope; which, as every body knows, has gone off in the following tremendous manner:

‘Nature, and Nature’s laws, lay hid in night;
God said, Let Newton be, and all was light.’

There is not one step from the sublime to the ridiculous here; for here they both lie so lovingly together, that it is difficult to determine whether one ought to admire or to laugh. Such semi-sublime and semi-ridiculous encomiums have, no doubt, provoked some men to wonder, and some, with no greater knowledge of Newton or his discoveries than Pope himself possessed, to underrate the fame which he exaggerates. That sublime genius, for example, Samuel Taylor Coleridge—but erratic as sublime—essays his wit, at times, and critical authority, against the fame of Newton. So much the worse for him; for the most devout admirers of the ‘half seer and half charlatan’, can not approve that wild delirium of his, in which, like Sam-aurez, Forman, and others, he assails the solid adamantine pillars of a Newton’s fame, with the jejune fancies of a poet’s brain.

Indeed, if we may trust his reveries, then was Newton but

¹ Laplace.

'the patient and calculating plodder', while Kepler was 'the grand constructive genius' of astronomy. Newton was patient, it is true,—like Hipparchus and Copernicus,—like all who yet have sprung 'the mines of everlasting thought', his patience was truly great and wonderful. It was his love of truth that made him so. With a protracted vigil, here in the darkness of the world, he looked for truth with that enduring love, which weaker minds can neither feel nor bear. And it was the habit of his mind, that until the light appeared to dawn,—until it opened into day,—he would not speak at all. If genius deals in dreams, or speaks in dark enigmas, or talks of what it does not understand, then Newton had it not; for all his theories, yea, all the mighty schemes he reared, are like the sun, which is not only light itself, but which enlightens all beside.

But, forsooth, he was a 'calculating plodder'! He lacked that genius, we admit, whose eye is always 'in a fine frenzy rolling', and is never fixed on the deep things of the universe. He may have lacked that genius, too, whose fine ecstatic pulses beat to the more ethereal harmonies around us, and feel the music which is lost on coarser minds, or minds absorbed in greater things. He was not born, indeed, to gaze upon the painted fleeting cloud; or bend, like Chaucer, over the evanescent glory of the grass; or, like him, listen to the sweet song of the perishing bird. His mission, if not more beautiful, was more sublime, than this; and doomed him to calculate as well as soar. Nay, to calculate, in order that he might soar. In regard to geometry, the bliss of ignorance could not be his; for his it was to comprehend the great Geometer, who planned and built the mighty fabric of the universe.

Shall he be lessened, then, who taught mankind the science of the stars, because he did not sing their poetry? For aught we know or care, it may be true, as Coleridge has said, that it would 'take many Newtons to make one Milton.' But then, it is likewise true, that it would take just as many Miltons to make one Newton. The truth is, that neither could be made out of the other at all, without a great waste of material; and we shall therefore just leave each as the Almighty made him,—the one for science, and for song the other. Though

each is mightiest in his glorious kind ; yet are the kinds as different as light and sound.

In passing from Newton himself to his *Principia*, we can only glance at some of the most important discoveries which that wonderful production contains. The principle or law of universal gravitation, is *the* sublime disclosure which it makes. This principle or law may be thus stated : Every particle of matter in the universe, gravitates toward every other particle, with a force which is inversely proportioned to their distances from each other. This grand law was not reached at once, or *per saltum*, but by a succession of steps, or partial approximations. Setting out from the third law of Kepler, as a postulate, Newton deduced the inference, that the attractive force of the sun, as exerted upon the planets, varies inversely as the squares of their distances from the sun. This is the first step which the sublime 'plodder' took, in his walk among the stars ; and if, in taking it, he did not leave the poet behind, he at least kept pace with his soaring fancy, and demonstrated its conjecture.

The object of the next steps of the Newtonian discovery was to show, that the force by which the sun holds each planet in its path varies, for every point of its course, according to the same law, or inversely as the square of its distance from the sun. This extension of the law of gravity had, no doubt, been made by many, at least conjecturally ; and continued to haunt the imagination, ere its truth could be realized by the reason, It is certain that Hooke, in 1679, had asserted, that supposing such to be the law of the great central force, the orbit of the earth would be an ellipse. But it is one thing to imagine or conjecture, and quite another to demonstrate. Newton was the first who, by strict mathematical reasoning, deduced from the law of Kepler that 'the orbit of a planet is an ellipse', the beautiful conclusion, that the force which draws it to the sun in one of the foci of the ellipse, is always inversely proportional to the square of its distance from the centre of attraction.

But the third step in the Newtonian discovery, if we consider the grandeur and magnificence of its results, is still more important than either of the preceding. We allude to the demonstrated connexion between the gravity of the earth and the

orbital motion of the moon. In venturing to express this opinion, we have not forgotten the words of Dr. Whewell, 'that this step in Newton's discoveries has generally been the most spoken of by superficial thinkers', which seems to be a fling at Professor Nichol, Sir David Brewster, Smythe, and the like; all of whom consider it 'impossible to over-estimate the value of this momentous step.'² But for whomsoever it may have been intended, it is a rather unfortunate circumstance for Dr. Whewell, that it falls upon Newton himself, with no less force than upon those who are thus denominated 'superficial thinkers.' For no one was ever more deeply impressed with the transcendent importance of this step than Sir Isaac Newton himself. Indeed, Dr. Whewell tells us, that as his calculations on this point 'drew to a close', he was 'so much agitated, that he was obliged to desire a friend to finish' them for him.

Now, we do not read, that as any former extension of his theory or law was about to be made, or as its light was about to burst from any other of the dark places of the universe, he was so completely overwhelmed with the glory of the vision. We do not even know, that the tranquillity of his great mind was at all disturbed, by the discovery of any other portion of the mechanism of the heavens. And no wonder that he thus trembled; for, as we shall see, by this stupendous step, the august temple of the universe was thrown open, and the glory of its interminable perspective revealed.

Hitherto he had merely beheld the law of gravity, as it extended from world to world, without perceiving that it controls the minuter objects attached to the worlds themselves. In one word, he had not, as yet, determined whether this wonderful power embraced all objects, the small as well as the great, or whether it included the last alone. He had not identified the force by which a pebble is drawn to the earth, or to the body of any other planet, with that mighty influence by which all the planets are held in their orbits. On the contrary, he had before tried and failed to make this most important extension of the law of gravity. In consequence of the error which then prevailed in regard to the length of a degree of the earth, and the

² *Architecture of the Heavens*, by Prof. Nichol.

error which thence resulted in relation to the length of the earth's radius — the base line and the starting-point of his calculations,— he necessarily failed to discover light in this line of research. It was overhung with clouds and darkness. A slight error in the measurement of a single line on the earth's surface, had spread itself over his calculations, and obscured the glory of the universe. Though light had broken out so magnificently in certain portions of the material firmament; yet others remained enveloped in impenetrable obscurity, and the grand vision for which his soul labored was concealed from view.

But when a degree of the earth was more accurately measured, he then discovered that the force which causes an apple to fall to the ground, is precisely the same as that which causes the moon to descend in her eternal round. This was no sooner accomplished, than the all-glorious truth, in all its grandeur and magnificence and beauty and universality, burst on his mind with overpowering effect. At once he saw, that one and the same law both regulates the domestic affairs of our planet, and determines its foreign relations. By analogy, and with the rapidity of lightning, the same law is extended to other worlds; and the same great truth is seen, on all sides, flashing light on the system of the universe. No former discovery had so wonderfully enlarged the boundaries of his vision. For by this step, his mind was freed from darkness and from doubt; his grand conception of the universal law was no longer cramped or clouded; and he then beheld it, not as confined to stupendous masses merely, but as literally pervading all things; extending its dominion, like the great Being by whom it was ordained, not only over the innumerable worlds around us, but also over every atom that floats through the intermediate spaces. Well may we say, then, in the language of Sir David Brewster, that 'the influence of such a result upon such a mind may be more easily conceived than described.'

The fourth step in his discovery is, the demonstration that all the bodies of the solar system, including the satellites as well as their primaries, are governed by the law in question. That the force of gravity is thus mutual and universal, had been previously asserted by Hooke, Borelli, and others; and Kepler be-

lieved that the inequalities of the moon's motions are produced by the disturbing force of the sun's attraction. But the glory of proving these truths, which had merely taken hold of the imagination of others, was reserved for the creator of Physical Astronomy. Assuming the law of gravity as a postulate, he deduced therefrom the inequalities of the moon's motion, as well as various other perturbations of the solar system, by which he gave an additional universality and beauty to his fundamental hypothesis.

We now come to the fifth and last step in the Newtonian discovery. We have already seen that when he identified the gravity of the earth by which a stone is made to fall, with that which holds the moon in its orbit, he did much to confirm the idea that the great universal force of nature obtains among the particles of matter; and that the attractive force of any mass is the resultant of the attractive forces of all its particles; just as the strength of a cord results from that of all the individual threads of which it is composed. But this hypothesis, plausible as it was, still remained, like the others, to be verified and converted into a valid theory, by the intellect of Newton.

'It does not appear, at first sight,' says Dr. Whewell, 'that the law by which the force is related to the distance, will be the same for the particles as it is for the masses; and in reality it is not so except in special cases. Again, in the instance of any effect produced by the force of a body, how are we to know whether the force resides in the whole mass as a unit, or in the separate particles? We may reason as Newton does, that the rule which proves gravity to belong universally to the planets, proves it also to belong to their parts; but the mind will not be satisfied with this extension of the rule, unless we can find decisive instances, and calculate the effects of both suppositions. Accordingly, Newton had to solve a new series of problems suggested by this inquiry; and this he did. These solutions are no less remarkable for the mathematical power which they exhibit, than the other parts of the *Principia*. The proposition in which it is shown that the law of the inverse square for the particles gives the same law for spherical masses, have that kind of beauty which might well have justified their being published

for their mathematical elegance alone, even if they had not applied to any real case.'

But fortunately for the progress of human knowledge, these beautiful theorems are applicable to real cases; inasmuch as the mighty masses of the universe are nearly of the spherical form. And thus Newton clearly established, *that each particle of matter in the universe attracts every other particle, by a force inversely proportional to the square of the distances between them.* To this law, the words in which Hooker has so eloquently described law in general, may be applied with peculiar force and propriety. 'Of law,' says he, 'no less can be said than this, that her seat is the bosom of God, and her voice the harmony of the world: all things in heaven and earth do her homage; the very greatest as not beyond her control, and the very least as not beneath her care.'³

It may be worthy of remark, in passing, that while this all-pervading gravity is the source of the order and harmony of the universe, it is also the cause of those minute irregularities and perturbations by which that sublime order and harmony are disturbed, without being materially impaired. May there not be something of the same kind in the moral universe? And may we not fail to reach its deep-toned harmonies, though in themselves unutterably grand, and more majestic in their swell than all the music of material things; just because these little souls of ours are too much jarred, and their fine strings put out of tune, by contact with the minor discords and disturbances of this lower world?

The foregoing is a most imperfect sketch of the bare results of some of the 'plodding calculations' of the *Principia*. Now, if we may estimate the force of Newton's genius by the effects which it produced, then he certainly deserves the pre-eminence to which the common voice of the scientific world has exalted him. But, according to a great French mathematician and astronomer, D'Alembert, it is a vulgar error to suppose that a cause is proportional to its effect, or may be measured thereby; for a small cause may produce a great effect. If this be so, then, after all, Newton may have been a common man; and we can not know him by his works.

³ We quote from memory.

But, indeed, we should sooner have expected such philosophy from a young Demosthenes or Cicero, just three feet high, than from a grave astronomer; from one whom we should 'scarce expect to speak in public on the stage', than from a man whose intellect has challenged and secured the admiration of the world. 'Tis true, we admit, that 'tall oaks from little acorns grow', but then do not the teeming earth, and the sweet heavens too, both labor at its growth, and help to bring it from the acorn to the oak? Is not the mighty sun, with his pervading warmth, and the genial rain, as necessary to build up the oak, as is the puny seed from which it springs? And if 'large streams from little fountains flow', how many drops do they contain, which from no fountain ever flowed? Or how much larger is the largest stream, than all the little fountains which therein concur?

The reader may be surprised, perhaps, that we should thus strive to silence the young Demosthenes or Cicero. But, in truth, this sage philosophy has more supporters than may at first appear. The French, for example, have a maxim invented on purpose to convince the world, that 'great effects from little causes flow.' 'If Helen's nose', say they, 'had been half an inch shorter, it would have changed the face of the world.' But we deny that Helen's nose, at least that Helen's nose alone, laid siege to Troy, or 'rooted its foundations up. Helen's nose, or Helen's beauty if you please, was but the spark to the mighty magazine of human passion that did the work.

How often are we told, too, that if an apple had not fallen once, or at a certain time, within the sight of Newton, the law of gravity, perhaps, had been forever hid from human eyes. Behold again, they cry, what great effects from little causes flow! But tell us, is the world indebted to the apple's fall, or to Newton's mind, for the sublime discovery he made? If to the apple, then was a magnificent effect, indeed, produced by a most small cause. But if to Newton's mind, then was not the cause commensurate with the effect? If accident, indeed, first led Newton's mind to think of gravity, even then, the accident was but the *occasion*, and not the mighty cause. The apple produced no part of the *Principia*. Nay, and should it rain apples,

or pumpkins either, on all the empty pates in Christendom from this until the day of doom, no such response would ever be made to all the teachings they would teach. 'Tis only to the genius of a mind like Newton's, that accidents whisper such glorious secrets of the universe.

But, in fact, this story of the apple is but a fable of the nursery. The idea that the earth's gravity might reach to the moon, had long been broached before Newton saw the light of day. Even by Plutarch, the conjecture was thrown out, that but for the velocity of the moon's motion, she would fall to the earth, just as any other body falls. But true as this conjecture was,—as marvellously true,—yet through what tracks of time did it remain a speculation and a dream, until the mighty thinker came to *think it into light!*

We have now briefly glanced at the grand results of Newton's labors. We have seen, that it was his mission, not so much to invent new hypotheses, as to verify and establish those which others had conceived. The originality, the power, and the depth of his intellect were displayed, not in the conception of new theories, so much as in the construction of new proofs. His sublime mission it was, to convert the dim hypotheses of the past, into the everlasting and radiant theories of the future.

The inconceivable energy with which he attempted the loftiest and most difficult things, combined with the unconquerable love of truth with which, for all his views, he demanded evidence; may be compared to the centrifugal and centripetal forces by which some mighty orb is moved along its course around the centre of eternal light. If the first had been weaker, he might have despaired of truth, and left the world as dark as he found it; or if the last had been less strong, he too might have been content with guesses and with dreams. But, as it was, he neither felt the dark despair which Socrates had taught; nor lost himself in the cloudy heights in which Plato loved to soar. By his inherent power and patient confidence, he is borne above the bottomless depths of doubt; and by his love of truth, no less unconquerably firm, is he kept beneath the misty heights of arrogance. Hence his majestic path lies right along the middle region of perpetual noon. The faint gleam of vague analogies,

and the unsteady rays of plausible conjecture, which, for a Kepler, a Galileo, a Hooke, and a Halley, had fallen on the dark stupendous scheme of things, were all dissolved and lost amid the grand illuminations of his path.

'God said, Let Newton be, and all was light.'

It is not true, that either nature, or nature's laws, lay hid in night; for long before his time the day had dawned,—most beautifully dawned! But then the sun, which had only cast those rays before which a Copernicus, a Galileo, and a Kepler had reflected upon the earth, rose high above the horizon, and 'all was light.'

ART. VIII.—*The Seven Weeks' War; its Antecedents and its Incidents.* In two volumes. By H. M. Hozier. Philadelphia. 1867.

The recital of events which occur in our own times, seldom rises to the dignity of History. The vision of contemporaries is often prejudiced or partial, and facts are either misrepresented or amplified beyond all due proportion. Not unfrequently both causes of error concur, and the violent conflict of party statements yields only to the mellowing influence of time, by which Reason is enabled to select fragments of truth from the crumbling ruins of falsehood and passion, and erect therefrom the stately edifice of History.

Hozier's narrative of the seven weeks' war in Germany is singularly free from these, the ordinary defects of contemporary writers; and although posterity may deem it too minute for general history, our generation can not fail to find it the well written record of events. The insidious initiation of a bold and unscrupulous

pulous policy ; a deep laid plan of treachery, long meditated, suddenly developed, and as suddenly executed ; a campaign of startling rapidity, admirable combinations, and unprecedented success ; and a consummation which finds its only justification in the actual fitness of things ; these constitute the main traits as boldly sketched by our author, and the details of which are narrated with a pleasing grace as well as with all the intrinsic evidence of truth. Success may possibly have tinged with a somewhat too roseate hue, his appreciation of Prussian strategy. But this is natural ; for in no other game does merit so hang upon the smiles of fortune as in that of war.

When the German Diet passed, in 1864, a decree of Federal execution against the King of Denmark as Duke of Holstein, it was intended that the decree should be carried out by the combined forces of the confederation, and the provinces of Schleswig-Holstein erected into an independent German State under the rule of the prince of Augustenburg, who stood foremost in his claims to that inheritance. But such a consummation of such a project little suited the designs of the House of Hohenzollern, whose hereditary appetite for territorial aggrandisement was more than ordinarily whetted by the many maritime advantages of these adjacent duchies. Unable as yet to appropriate them herself, Prussia proposed to Austria that they should constitute themselves the executors of the Federal Decree ; and the result of their combined military efforts against the kingdom of Denmark, was the treaty of Vienna of October, 1864, by which all the rights of sovereignty to the duchies of Schleswig-Holstein, and Lauenburg, were ceded to the sovereigns of Austria and Prussia. The first diplomatic paper of Count Bismark, after this event, is a document worthy of study. Utterly ignoring the title of all prior claimants, and boldly substituting therefor the right of conquest, he adroitly hints to the Austrian cabinet that the Prussian incorporation of these duchies would be greatly to the interest of his own master, and of no disadvantage to any other power ; and Austria, strange to say, was weak enough to recognise tacitly this basis, by intimating that her consent could only be given as an equivalent for an increase of her own German territory.

The discordant views of joint rulers produced in this instance, as it always and every where has done, a condition of affairs at once intolerable to the governed, and dangerous to the peace of the governors. Temporary relief was sought by assigning the provisional administration of Holstein to Austria, and that of Schleswig, the most northern province, to Prussia; while Lauenburg paid the penalty of its insignificance in being sold outright by the Emperor Francis Joseph to King William, for two million five hundred thousand Danish dollars. And so the Austrian garrison lay under General Gablenz in Holstein, the kingdom of Prussia behind them, and the Prussian troops of Gen. Mantuffel commanding the Duchy of Schleswig in their front; and for a time there was peace. Indeed, in the first ardor of the *entente cordiale*, Austria even rebuked the resolutions of the Frankfort Diet, condemning this convention known as that of Gastein of Aug. 14, 1865, and joined Prussia in protesting against a motion introduced by Bavaria, Saxony, and Hesse, calling for an assembly of the estates of Holstein and Schleswig, to express the public wish as to their own fate. But the interests of the two great powers were too diverse to allow of the long duration of such charming amity.

Not only common honesty, but policy, counselled Austria to as speedy an execution as possible of the trust which, in conjunction with Prussia, she had assumed, and the erection of the duchies into an independent member of the German Confederation. And indeed, although Austria did evince upon more than one occasion, symptoms of frailty which indicated that her virtue might not be proof against all temptation; yet her general policy toward the subject duchies manifested a consciousness that her administration of them was merely provisional, and there can be no doubt that she would not only have been willing, but even glad, to get honorably rid of the troublesome task she had assumed, in any way which would not enure to the aggrandisement of her rival.

While in Schleswig, therefore, all manifestations of public sentiment adverse to annexation with Prussia were repressed; in Holstein, the ultimate accession of the Prince of Augustenburg was never doubted. And while the Crown lawyers of

the House of Brandenburg elaborately exerted their learning to prove that the conquest from the Dane must be the sole foundation of all future title, an immense meeting of the Schleswig-Holstein Unions at Altona indicated very clearly the sentiments of the inhabitants themselves, and indirectly those of Austria and of Germany, upon that question. Count Bismark felt that the period for dilatory policy was approaching its termination; that the designs so long cherished must now be either finally abandoned or boldly declared, and unscrupulously executed. Assuming an air of injured innocence, he accused the Austrian cabinet of a breach of the Gastein Convention; and, demanding a definitive declaration of her attitude in reference to the duchies, intimated that any but a direct assent to the Prussian scheme of spoliation would compel the latter power to seek alliance elsewhere. This dispatch was of January 30th, 1866, and its almost open threat of Italian alliance may fairly be considered as a definitive declaration of war.

It were idle to follow our author further in the diplomatic history of the time. The reform of the Germanic Confederation subsequently proposed by Prussia; the submission by Austria of the question of the duchies to the Diet at Frankfort; the proposed mediation of France, England, and Russia; the alliance offensive and defensive between Italy and Prussia; and, finally, the invasion of Holstein by Prussia, and the consequent decree of Federal execution against her, constitute the principal events of the following winter and spring, when war succeeded to diplomacy, and the shock of battle to the interchange of protocols.

Seldom has a war more flagrantly unjust or unpopular, been undertaken by any power. Seldom has more been cast upon the hazard of a single die. And it was fortunate for Count Bismark, that he was able to perceive beneath the crust of popular opposition that longing for national unity, which would go far to reconcile men to any supremacy which would accomplish that result. The estates of Holstein were to have met at Itzehoe on the 11th June, 1866, in pursuance of an order of General Von Gablenz of the 5th of that month. To prevent such a demonstration, General Manteuffel was directed to march into

that duchy in a friendly sort of way, and resume the common administration thereof. He was to avoid any conflict with the Austrians; but permit no assembling of the estates. On the 8th, accordingly, the Prussian troops crossed the Eider and occupied Itzehoe, while the very position of the Austrian general not only rendered resistance useless, but instant retreat the only means of safety. He withdrew, therefore, into Hanover, and thence by railway to the Austrian army of the North in Bohemia. The sword had cut the knot which diplomacy had vainly attempted to unravel, and the question of the Danish provinces was arbitrarily but finally settled.

This act of Prussia was the immediate cause of the decree of Federal execution against her, passed by the Diet at Frankfort on the 14th June, 1866. On the evening of the day following, war was declared against Saxony, Hesse-Cassel, and Hanover, the adjacent states who had voted for that measure. General Gøben, with his division of 13,000 men, was directed to march from Minden eastward upon Hanover; and General Manteuffel, stationed at Harburg with a division of equal size, to march thence southward upon the same point; while General Beyer, leaving temporarily defenceless the Prussian enclave of Wetzlar, was at one and the same time to take possession of Hesse-Cassel, and bar the retreat of the Hanoverian army. Landwehr regiments replaced Manteuffel's division in Schleswig-Holstein; and the Prussian fleet, with a couple of regiments, took the fortresses of Stade, Fort William, and Emden, before the astonished Hanoverians realised that they were actually engaged in the conflict of which they had been so long talking.

Seldom has the importance of time in war been more signally displayed, than in the record of this brief and brilliant campaign. The flexible character of Prussia's military system had enabled her, in little more than fifteen days, to put her entire army in a condition to take the field, while the other states, who had nominally begun to arm some time before, were still unprepared. Had the army of King George of Hanover been properly organized, that monarch might, with a fair prospect of success, have marched against and defeated the division of Beyer at Cassel, and then, forming a junction with the forces of Bavaria

and the 8th Federal corps, have resumed the offensive with overwhelming forces against the two remaining divisions of Manteuffel and Gœben. Instead of which it was compelled, after ineffectually tearing up a few miles of railway, to fly to Göttingen, and there employ in perfecting its own organization the precious time which would have sufficed certainly for its own safety, possibly for the destruction of the enemy. Throughout the whole war, it is the story of unity of plan, thorough organization, and prompt execution, on the one side; vacillation, delay, and defeat, on the other. The four days which were necessary for the equipment of the army of Hanover of 20,000 combatants at Göttingen, sufficed for the Prussian divisions of Manteuffel and Gœben, 13,000 each, to concentrate at Hanover under Von Falkenstein, and for Beyer with 21,500 troops to occupy Cassel in their left rear. For six succeeding days, from the 19th to the 25th June, King George marched and countermarched between Göttingen and Gotha, multiplying despatches for aid to Bavaria and Frankfort, and apparently ignorant that comparatively few troops barred his passage southward. During this time Gœben and Beyer had united at Eisenach, while Manteuffel had reached Muldhausen, and had despatched General Flies, with five battalions and two batteries, to reinforce and command the Saxe-Gotha contingent, which alone, up to that time, had barred at Gotha the further retreat of the Hanoverians. King George had now entrenched himself at Langensalza, and despairing at last of any succor from his laggard allies, began to treat for a capitulation. On the 27th, General Flies, fearing that the Hanoverians might yet retreat by the circuitous route of Tennstedt before the other Prussian divisions had sufficiently closed in to render their capture certain, led his force of about 12,000 men against their position of Langensalza. The result was the battle of that name, of varying fortune and of considerable duration, in which the army of Hanover fully maintained its ancient reputation, and which finally resulted in the signal repulse of the Prussians with rather heavy loss. It is very doubtful whether King George or his generals ever contemplated so enterprising a movement as a retreat by Tennstedt. But if he had, this attack balked any possible effort in that

direction, and kept his army on the line of the Unstrut, to find itself completely surrounded by the Prussians. The 29th June witnessed the forced surrender of the entire Hanoverian army, and the morning sun of the 1st July shone upon 50,000 Prussian troops, tired by long marches and elated with victory, under General Von Falkenstein, at Eisenach.

During all this time Prince Charles of Bavaria, with 50,000 excellent troops, dawdled at Schweinfurt, and had now only advanced as far as Meiningen and Schmalkalden in time to hear of the forced surrender of his ally; and Prince Alexander, in command of the 8th Federal corps of 39,000 men, had at last dragged his slow length as far as Gneissen and Güninberg. Von Falkenstein, therefore, found an army of nearly equal force upon both his right and left fronts. To retreat, nay even to stand still, was to permit their junction. Safety lay in bold aggression. He lost no time. On July the 2d, he threw his whole army forward on the main road towards Frankfort, reaching Geiza on the 3d. On the 4th, the division of Gœben and Manteuffel crushed the leading columns of the Bavarians at Wiesenthal, while that of Beyer, pressing rapidly on toward Fulda, drove in the outposts of the 8th Federal corps at Hünfeld. The allied armies easily gave up the effort to form a junction, and each began to retire upon its own lines of communication; the Bavarians to Kissingen, and the 8th corps to the neighborhood of Frankfort; so that Falkenstein had no difficulty in concentrating his army at Fulda by the 7th July. The purposes of his enemy had been foiled; they were still separated, their troops disheartened by purposeless forced marches, their leaders cast down by the startling news of the crushing victory of Königgrätz in the east.

Still, each hostile army was nearly equal in numbers to that of the Prussian general. An advance by Gneissen would permit the 8th corps to join the Bavarians by the line of the Main, while a direct attack upon the 8th corps at Gelnhausen would expose his flank and rear to the forces of Prince Charles, posted upon the Saale. He determined, therefore, first to dispose of the latter, who was also considered the most formidable antagonist. Hence on the 8th, instead of pursuing the straight road

to Gelnhausen, as his enemy seems to have anticipated, he made a rapid movement to Brückenau, reaching that place on the 9th, whence a flank march was made to the left over the Hohe Rhon against the army of Prince Charles. On the morning of the 10th July, Beyer's division on the right marched against Hommelburg, Gøeben against Kissingen, and Manteuffel on the left against Waldaschach. The first and last positions were carried with comparatively little trouble. At Kissingen, the contest was more severe and prolonged, but even here the Bavarians were taken by surprise. But little of their artillery was massed in the place, their forces were loosely scattered at various unimportant points along the river, and only became available in time to meet the fate of the battalions whose defeat preceded their own, too late to save, just in time to add to the enemy's victory. These were gallant achievements and brave deeds; the troops fought well, but they had no general; and so thoroughly were they overthrown, that Manteuffel's division, sent in pursuit the next day, could not overtake even their rear guard.

Von Falkenstein was now at liberty to turn his undivided attention to the heterogeneous mass which, under Prince Alexander of Hesse, stood in the way of his advance to Frankfort. On the 11th July, the day after the battle of Kissingen, he resumed the movement by his right flank. Beyer's division was pushed by way of Hammelburg and Gelnhausen in the direction of Hanau and Gøeben's division, through the defile of Spessart upon Aschaffenburg. Manteuffel, recalled the next day from the pursuit of Prince Charles, followed Gøeben, and scoured the country in the direction of Winzburg. This fan-like dispersion of his victorious troops would have been extremely hazardous in front of an enemy of any enterprise. Centrally posted at Seiligenstadt, an energetic commander assuming the offensive with vigor, might easily have cut off Gøeben and Manteuffel, now widely separated from Beyer; and uniting with the forces of Prince Charles of Bavaria, at Schweinfurt, rolled back the tide of war into the heart of the Prussian dominions. But Prince Alexander was not a hero; his army was not homogeneous; the men fought bravely, but to no purpose. They met the enemy in detail, and their defeat was certain. And so it finally resulted,

that after two sharp actions at Laufach and Aschaffenburg, fought principally by Wrangel's, the leading brigade of Gœben's division, the converging columns of the army of the Main entered, on the evening of the 16th, the city of Frankfort, and the ancient seat of the Diet of Germany reluctantly became a part of the kingdom of Prussia.

No portion of the campaigns of the war is more worthy of commendation, than this of Von Falkenstein. The rapid and skilful manner in which he brought his widely scattered forces together around the Hanoverians at Langensalza; the boldness and promptness with which, within a day after the capitulation of that army, he launched his troops between two opposing armies, one quite and the other nearly equalling his own in numbers; and the easy and rapid combinations with which, while dealing heavy blows on each of his antagonists, he kept his own forces well in hand and constantly bearing towards the objective point of the campaign, can not be too highly commended. His vigor and energy form a striking contrast to the vacillation and imbecility of his antagonists.

While these events took place in the west, the main armies of Prussia met with still greater, because more important, successes in the plains of Saxony and Bohemia. The ultimatum of the 15th June, which so suddenly scattered the unorganized forces of Hanover and Cassel, came also like a thunderbolt upon the Court of Dresden. Equally unprepared to meet the Prussian attack within his own dominions, the King of Saxony retired with his army into Bohemia, where lay the headquarters of the Austrian army. The forces of Prussia in this part of the theatre of war consisted of three armies, numbering altogether about 280,000 combatants. They formed a continuous line in the shape of a crescent, from Torgau to the extreme eastern point of Prussian Silesia. The corps at Torgau and in its vicinity numbered about 40,000 men, under Herwarth Von Bittenfeld, and were known as the army of the Elbe. Between this place and Gœrlitz lay the first army, about 120,000 strong, under the command of the King's nephew, Prince Frederick Charles. Between Gœrlitz and Glätz, the Crown Prince commanded the second army, of nearly equal size with that under the immediate

command of his cousin. The occupation of Saxony having been determined upon, Bittenfeld moved from the north by Strehla, Dahlen, and Winzen, upon Dresden, while Prince Frederick Charles swept westward over the lower portion of the kingdom ; not incautiously, however, for there was the possible danger of an irruption upon his left flank by the passes of Gabel and Reichenberg. On the 17th June, an extension was made by the right flank to feel Bittenfeld's left, and the following day the advanced guards of the two armies entered Dresden without opposition. By the 20th, all Saxony, save the fortress of Kœnigstadt, was in the hands of the invaders. Beside the many political and material benefits derived from this occupation, it procured for the Prussians great strategical advantages in the reduction of their front by nearly one-half. The extreme left, the pivot point of the movement, still resting at Glätz, the right now lay at Schlückenan instead of Torgau, a difference of very nearly 100 miles. This, however, was one of the least advantages of the movement. Not only were the armies of Prussia more concentrated, but the aggressive designs of the Austrian general were completely frustrated. For it is clear that Benedek counted upon taking the field before his antagonists ; in which event it was his intention to guard the passes of the Sude-tic Hills against any efforts on the part of the Crown Prince, and throw the bulk of his army through the plains of Saxony against the armies of the right, under the command of Prince Frederick Charles, which he hoped to be able to crush before that of the Crown Prince could march to its assistance. The long line of the Prussian frontier, representing an immense semicircle, afforded great facilities for such an enterprise. The slow organization of the Austrian troops, and the rapid movements of the Prussian armies, compelled Benedek to abandon a plan of campaign which promised such great advantages.

Forced to assume the defensive, his next plan was to check the advance of Prince Frederick Charles with a detached force, until he should have inflicted a signal defeat upon the army of the Crown Prince ; and it was with this view that the series of engagements which preceded the pitched battle of Königgrätz were fought. Clam Gallas, with 60,000 men, was pushed for-

ward to the line of the Iser, with instructions to delay Prince Frederick Charles, until Benedek at the head of the main army had crushed the forces of the Crown Prince. The design was good, and the situation favorable. Occupying a central position in the plains of Bohemia, with two opposing armies separated by mountains and not in communication with each other, he stood very much in the same relation to his antagonists that Von Falkenstein did towards the Princes Charles and Alexander at the commencement of his campaign. Indeed, he possessed the great advantage of being nearly equal in numbers to both of his antagonists combined. The fault lay, not in the design, but in the manner of its execution. And it is difficult to say whether the failure is to be attributed to the torpor and interference of the Austrian cabinet, the inefficiency of subaltern officers, inferior arms and defective organization on the part of the troops, or to the want of capacity on the part of the commanding general. Perhaps all these causes had some influence. Probably we shall never know the degree of influence to be accorded to each. But amid this uncertainty, there are some facts which seem sufficiently manifest.

It seems clear that Benedek was compelled to abandon his purpose of offensive operations; a plan of campaign which offered decidedly the most advantages by the want of preparation on the part of his own government, and the wonderfully rapid organization and movements of the hostile armies. It would also appear, that after having determined to concentrate his forces against the Crown Prince, he allowed himself to be deceived as to the real point at which that general would break through into the Austrian territory. It resulted from this that he kept the different corps of his own army too far apart, and, in attempting to guard too many points, actually defended none. Napoleon's remark, that 'God is always on the side of the heavy battalions', has been much criticized. We admit it irreverent, but have yet to be convinced of its error. Indeed, there would be few things more instructive than the application of this principle to the operations of the Confederate armies during the late war. A general may supply by activity what he lacks in numbers, and with a smaller aggregate force

bring the 'heavy battalions' to bear on each decisive point; and no one understood this better than Napoleon. Perhaps the most famous examples since his day are Jackson's Valley campaign and the battle of Chancellorsville, and to these may possibly be added Von Falkenstein's campaign on Frankfort. But then his antagonists were princes, nay more, Bavarian princes. That Benedek understood this cardinal principle of military science, is manifest from the plan of campaign adopted by him; that he lacked the activity necessary for the successful application of it, as against the Prussians, even with superior forces, is equally manifest. Induced by a demonstration of the Crown Prince to fear that that General contemplated a passage through the mountains in the direction of Vienna, Benedek kept two of these corps under his immediate command in the neighborhood of Bohmisch Trubau, and only two near the defiles of Trautenau and Nachod. He omitted, also, to hold the pass and castle of Nachod, where a couple of brave battalions, well commanded, might have checked the advance of an entire corps for two or three days; a sufficient time for him to have concentrated his forces, widely scattered as they were, for offensive operations. The result was that when the one hundred thousand warriors of the Crown Prince commenced their advance in three columns, through the respective defiles of Trautenau, Eypel, and Nachod, they found their march unopposed; and the heads of the columns, debouching into the plains, met only one-half of the army which Benedek had under his own immediate command, at the most, not more than seventy thousand Austrians. The two Austrian corps which lay idly south of Josephstadt guarding against an imaginary inroad upon the communications of the imperial army, would have served to turn the tide of battle at Soor and Nachod and to overwhelm the columns of the Crown Prince, driving them back in huddled masses into the mountain defiles from which they were endeavoring to extricate themselves. Forty-eight hours later, and they arrived upon the field of active operations, to find their comrades worsted and the columns of the enemy deployed in the plains; nay more, in secure possession of the line of the upper Elbe, and even holding the important passes across that river. Of such importance is time in war.

This, however, was only preliminary work. He might reasonably have anticipated less determined valor than was shown by the Prussian troops; less activity and vigor on the part of their generals. In short, it was scarcely unreasonable to hope that 70,000 Austrians, occupying superior positions, should delay the junction of the three Prussian columns until the corps stationed below Josephstadt should arrive, and enable Benedek effectually to dispose of the Crown Prince. It might not be wise to incur the risk, slight as it might appear; but in war, and even in every-day life, risks must be encountered. After all, although some damage had unquestionably been done, the Austrian commander-in-chief might still have reasonably hoped to accomplish his purpose of overthrowing the army of the Crown Prince if the army of sixty thousand men under Clam Gallas had accomplished, even to a limited extent, the task entrusted to them. But here again there was a most lamentable failure, and one far less excusable. Clam Gallas, when detached upon this service, should have known and properly appreciated the necessity of gaining every possible instant of time, avoiding battle except where absolutely necessary to delay the enemy. His forces bore as large a proportion to those of the enemy as General Lee's army did to that of Grant at the commencement of the campaign of 1864, much more nearly equal than were the forces of Lee and Hooker at the battle of Chancellorsville, of the previous year. Nor did he stand at all in the same position as the Confederate general. The task of the latter was to foil and defeat his adversary, with the certain knowledge that the troops with him were all he could expect. The Austrian general was only required to delay the Prussian army for a week; nay, even for three days, so that his commander could have one good chance at the Crown Prince.

With brave troops, and the Austrians were brave, with good artillery, and in this arm the Imperial army excelled, one would not consider the task assigned Clam Gallas very difficult. And yet, in point of fact, that commander scarcely caused the loss of a day's march by the shortest route to the Prussian army. He was literally gobbled up at a hand-gallop. He seems to have underrated the prowess of the Prussian soldiers, and been

unprepared for the vigor of their commander. Entrenchments should have been thrown up at Turnau, Podoll, and Münchengrätz, where the three main roads cross the Iser. These points garrisoned, and the communication between them secured by his army, which was sufficiently large to hold the line from Turnau by Podoll to Münchengrätz, would have imposed upon the enemy the necessity of an attack in front under great disadvantages, or forced him to lose a week in a flank march over a rough and broken country to turn the position. In either event, he would gain what he wished — time. Instead of this, not only was the tête-du-pont at Turnau not fortified, but the bridge burnt, the town abandoned, and the enemy allowed a passage across the river without a struggle. At Podoll a sharp engagement, the first serious one of the war, took place between the advance of the Prussians and a brigade of Austrians. What should have been contested with all his power, was allowed to become an affair of out-posts. And after yielding to his antagonist full possession of two of the main bridges across the stream, he concentrated his forces at Münchengrätz, to await, without fortifications or any support for either flank, the approach of an army more than double the size of his own. He had but a short time to wait, and narrowly escaped capture by a precipitate retreat on Gitschin. But here the converging columns of his pursuers closed around his devoted army and inflicted upon him a crushing defeat, with the loss of over ten thousand men. The entire operations occupied only three days, in which time the Prussians advanced from the northern bank of the Iser to the vicinity of the Elbe.

On the morning of the 30th, Benedek learned the extent of this disaster of the previous night at Gitschin, which exposed his left rear to the attack of an army larger than that which lay in his front. It was no longer an affair of days, but of hours, nay, even of minutes, if the Austrian commander still purposed to maintain the advantages of his central position. A great warrior might have cried to his troops, pointing to the army in the rear, 'those are our prisoners,' and made them so, as did Napoleon at Rivoli. A rash warrior might have indulged in the same happy fancy, and found an inversion of the phrase suit

the occasion better, as did Pope at the second Manassas. In short, such predicaments are always excessively awkward, and ever impose upon one the necessity of getting out of them, either by blazing out, crawling out, or being put out. *In medio tutissimus*, and so it seems, thought Benedek, for his troops just hurried up from Josephstadt had an opportunity of enjoying the manœuvre celebrated in ancient rhyme, when

'The king of France with forty thousand men
Marched up a hill and then marched down again.'

How peculiarly inspiriting, especially to raw troops, such exercises are, those alone who have experienced them can properly estimate. But Prussian enterprise was not less diligent than Austrian caution. In the afternoon of the same day a detachment of cavalry, sent from Gitschin by Prince Frederick Charles, opened communications with the right of the Crown Prince at Arnau. And the telegraph announced to King William, through General Von Moltke, chief of the Royal Staff, that the crowning result of the Prussian plan of operations was on the eve of accomplishment, and his well appointed armies about to unite, in superior force, on the plains of Bohemia. In short, the main perils of a most hazardous campaign were over.

We would not underrate the battle of Königgrätz which followed, and yet we are disposed to think that Prince Frederick Charles hazarded unnecessarily much in attacking single-handed the army of his antagonist in a strong position, depending upon the possible co-operation at the critical juncture of the Crown Prince, then lying at so great a distance. The prompt movements of the latter Prince; the good fortune of Von Normand, who bore the message through a hostile country back and forth in a single night; the unaccountable break in the line of battle of the Austrian right, and the still more unaccountable ignorance of that fact on the part of the Austrian commander, combined to secure the victory. But suppose that the 40,000 Austrian reserves who idly remained all day in the rear of their guns until they were shattered in the vain and desperate attempt to re-take the position of Chlum, fortuitously lost; suppose this body of men had been passed earlier in the day by the Austrian left, and massed upon the right flank of the troops of Her-

warth Von Bittenfeld and Prince Frederick Charles, already divided by the Biarritz; might not such an attack, aided by a general advance of the Austrian left and centre, have caused Prince Frederick Charles to regret the experiment of attacking his enemy until sure of the co-operation of the Crown Prince? And yet it is just possible that Benedek's confidence that the Prussian armies would unite before attacking him, induced him to take no precautions for the contingency which actually happened. He gave little attention to the demonstration against his right flank, fancying that the bulk of the enemy lay in his front. The result was defeat, with the loss of 174 cannon, 20,000 prisoners, and 11 stand of colors.

The occupation of Frankfort in the west and the battle of Königgrätz in the east, constitute the culminating points of Prussian success. We do not propose to consider subsequent events. There were many brilliant manœuvres, some hard fighting, but the preponderance was henceforth so entirely on one side, that the story lacks all dramatic interest. And yet, the bearing of the Austrians under defeat will instruct as well as interest, for it throws light upon the true causes of their failure. As there are few things more admirable than fortitude in adversity, so nothing better illustrates the courage of a general and the *morale* of an army than their conduct in disaster. And in this respect our author does them full justice.

'The Prussians paused but a few moments among the taken guns, and then rushed on in pursuit. The summit of the ridge was quickly gained, and there before them they saw the whole hollow ground, between them and Kosnitz, filled with running white uniforms. The victorious battalions commenced a rapid fire upon them, and men dropped quickly from the flying ranks, rolling over and over as they fell on the sloping ground. The sixth corps, which the Crown Prince had directed more against the Austrian rear, caught the fugitives in flank, and raked the running ranks with their fire. The Prussian artillery was also quickly up, unlimbered and came into action on the summit of the ridge, and sent its shells bursting with a horrible precision among the heads of the flying soldiers. And yet the Austrians kept their formation, and never let their retreat become a rout.

Such a retreat under such circumstances, is as creditable to the valor of the Austrian soldiers as a battle won.' Nay, they even turned, from time to time, and poured telling volleys into the pursuing cavalry. The Austrian artillery, too, that arm *par excellence* of the imperial army, did as good service in the retreat as throughout the whole of this memorable day. It drew off slowly, coming into action on every successive ridge, sending shells rapidly among the cavalry, and striving by its fire to check the pursuers and gain for its own infantry time to retreat. 'Nor were the Austrian cavalry off the field, though they could not face the tremendous fire of the Prussians to charge and cover the retreat of their infantry; but when attacked by the enemy's cavalry, and when thus the guns could not fire upon them, they fought hard and sacrificed themselves to cover the retreat. Then as the 3d regiment of Prussian dragoons were rushing forward to charge some battalions firing near the village of Wresta, an Austrian cuirassier brigade, led by an Englishman in the Austrian service of the name of Beales, charged them in flank. They drove the Prussians back, and smiting them heavily with their ponderous swords, nearly destroyed the dragoons; but Hohenlohe's Prussian Uhlans, seeing their comrades worsted, charged with their lances couched against the Austrian flank, and compelled them to retire. Pressed hard by the lancers, they fell back fighting hard; but then Ziethen's hussars charged them in the rear. A fierce combat ensued, the Austrian horsemen struck strongly about them, fighting for their lives; but the lancers drove their lances into their horses, while the hussars, light and active, closed in upon them, and only ten Austrians are reported to have escaped unwounded from the *melée*. Beales himself was borne wounded to the ground.' Soldiers capable of such deeds in the hour of so terrible an overthrow, are entitled to demand that the blame of failure rest not on them. The short sketch we have given of the principal operations of the war, demonstrates, we think, a superiority of generalship and infinitely greater promptness of movement on the part of the Prussians. These are defects which are chargeable to the generals, or the government which directed them. There were, however, other causes; and that which took most hold of the popular mind at the time of

the war, was the Prussian needle-gun. Our author's remarks on that subject are especially interesting and practical. They occur in his reflections upon the action of Podoll, the first serious affair of the war. 'It was purely an infantry action, and the Prussians derived in it great advantage from the superiority of their arms over those of their opponents, not only in the rapidity, but in the direction of their fire; for a man with an arm on the nipple of which he has to place a cap, naturally raises the muzzle in the air, and in the hurry and excitement of action often forgets to lower it, and only sends his bullet over the heads of the opposite ranks; while the soldier armed with a breech-loading musket keeps his muzzle down, and if in haste he fires it off without raising the butt to his shoulder, his shot still takes effect, though often low; and a proof of this is that very many of the Austrian prisoners were wounded in the legs.' This superiority of armament was certainly a great advantage, and one which told terribly at close quarters and in the open field; but in wooded ground the muzzle-loading arm proved an efficacious weapon, and in this Austrian experience coincides with our own in the late war.

Our author seems disposed to give much weight to the superior physique of the Prussians. Of this he relates many instances. Perhaps the most striking is the following. Describing an encounter between the Prussian dragoons and Austrian lancers near the banks of the Scharzawa, he says: 'The fight was long and hard. The men, too close together to use their weapons, grappled with one another; the horses, frightened and enraged, snorted, plunged, reared, and struck out. But the Prussians had superior weight and strength, and pressed their antagonists back along the streets to a wider space in the centre of the town, where a high image of the Madonna carved in stone, looked down upon the fray. Here an Austrian officer, hurled from his saddle by a tall Prussian dragoon, had his brains dashed out against the foot of the monument, and another Austrian, bent backwards over the cantel of his saddle, had his spine broken by the strength of his assailant. The light Austrian men and horses had no chance in this close conflict, and soon they were obliged to turn, and fled down the street to where

their supports were drawn up behind the town.' Is not the generalization too sweeping which claims an absolute superiority from such isolated instances? This encounter happened after the battle of Königgrätz, and may not an unvarying succession of victory on one side and defeat on the other, have contributed as much as mere physical strength towards determining the result?

That the Prussians possessed most military talent is clear. In this we refer not merely to the commanders of the two armies. Often the abilities of a general are counteracted by want of capacity in his subordinate officers. In the Prussian army it is to be remarked, that in every instance save one, the commanders of corps, divisions, and even brigades, not only executed the duties assigned them with promptness, but frequently exhibited an enterprise and sound judgment which proved them worthy of independent command. While among the Austrians, though there were frequent instances of heroic valor on the part of subalterns, Benedek and Gablenz alone of the general officers gave proof of talent. It would be difficult to estimate, properly, the effect of this deficiency.

Next to this superiority in military talent must, in our opinion, be ranked the general organization, discipline, and economy of the Prussian army. They combined to make it a grand and magnificent machine, capable of executing complicated movements without jarring or discord. A system almost perfect in every particular, and especially in imparting that high tone even to the private soldier which is the best criterion of superior courage. The following extracts from our author will serve to support these views. Speaking of the march of the 1st army on its entry into Bohemia, he says: 'As the army passed between the hills in the early morning, the tops were shrouded in a dense mist which occasionally lifted high enough to show the upper part of the dense fir-woods which clothe the upper mountain-sides, but never to afford a glimpse of their summits. The rain fell heavily and without ceasing: it battered down the grain which grew in the fields by the way-side, and filled the mountain water-courses with rushing mud-colored streams. There was no wind to give it a slanting, direction and it came straight down on

the men's helmets, only to roll off in large drops upon their backs and shoulders, but it did not seem to depress the spirit of the troops. They stepped along cheerily, marching as well as they did the first day they left their garrisons, and many of the soldiers said that they preferred the wet weather to heat. All along the line of march the commander of the army was loudly cheered.' The following is one among the many descriptions of the *kräkenträger*, or ambulance corps: 'The sick-bearers, one of the most useful corps which any army possesses, were at work from the very beginning of the action. As the combatants passed on, these noble-minded men, regardless of the bullets and careless of personal danger, removed with equal hand both friend and enemy who were left writhing on the road, and carried them carefully to the rear, where the medical officers made no distinction in their care for both Austrian and Prussian. Not only was it those whose special duty is the care of the wounded, who alone were doing their best to ease the sufferings of those who had suffered in the combat; soldiers not on duty might be seen carrying water for prisoners of both sides alike, and gladly affording any comfort which it was in their power to give to those who over night had been firing against their own hearts. Nor is this wonderful; for after the flush of battle was over and the din of the musketry had died away, the men of the Prussian army could not forget that one common language linked them to their adversaries, and that after all it was probably German blood which, flowing from an Austrian breast, trickled over the white livery of the House of Hapsburg.'

Nor is it possible to imagine a greater contrast between this war and one of a kindred nature lately waged in this country, than the following account presents: 'The inhabitants of the towns had mostly fled on the approach of the Prussian army, but the country villagers, unable to afford to pay for transport, had been obliged to remain in their houses. Nor did they suffer by doing so, for the Prussian soldiers behaved well, and there was no plundering. In the towns, where there was no one to sell, the commissariat was obliged to take the necessaries of life, for the marches had been long, the roads had been crowded with troops, and the provision trains had not

always been able to keep up with the army. But the soldiers never used force to supply their wants. Forage for the horses was taken from the barns of the large landed proprietors who had deserted their castles and châteaux; but the men paid for what they had from the peasantry: unable to speak the Bohemian language, they by signs made their wants understood, and the peasantry, as far as lay in their power, supplied them readily, for none were found so ignorant as not to appreciate Prussian coin. The villagers were invariably kindly treated; no cottages had been ransacked, their poultry-yards had been respected, their cattle had not been taken away from them, and though the women of this country are beautiful, no Bohemian girl had cause to rue the invasion of her country.' And again: 'But the people had no cause to fear; they would have done better to remain, for some of the troops had to be billeted in the houses along the road, and when the inhabitants were not present the soldiers took what they required, and there was no one to receive payment for what they consumed. The children did not seem so timid; they were present along the road in large numbers, for the cherries were just ripening, and they took advantage of the panic among their elders to make a raid on the trees which grew in long strips by the side of the way. With them the soldiers soon became great friends. The boys ran along the battalions with their caps full of the fruit, and got coppers in exchange for handfuls of it; the sellers, exulting in the pocketsful of coin they soon collected, seemed to have no scruples as to whose property it rightfully was, but laughed with delight at this unexpected result of the war.' And after the battle of Königgrätz: 'The *morale* of the army had now risen high, and the soldiers were convinced that the Austrian troops could not stand against them — a feeling which was no contemptible augury of future victories. But though the soldiers were confident in themselves, their arms and their leaders, their confidence never stepped beyond just bounds; they were tender and kind to the wounded and prisoners, not only by attending to their wants, but by showing them much consideration, and never exulting over the victory in their presence, which could hardly be expected from men serving in the ranks. But the Prussian sys-

tem of recruiting enlists in the army as privates men of a high éducation and refined feelings, and these easily influence their comrades, who are naturally warm-hearted, to act kindly and charitably to the unfortunate.'

The system which can produce such an army can not be too highly extolled or too well understood ; and the apology which Mr. Hozier makes for the chapter devoted by him to that subject will be deemed wholly unnecessary by every intelligent reader. With nations as with individuals, good often springs from adversity ; and the subjugation of Prussia served to lay the foundation of her present military power. 'The terms of peace dictated by Napoleon after the Jena campaign, allowed the Prussian army to consist of only 42,000 men ; but no stipulation was made as to how long these men should serve. In order to secure the means of striking for independence on the first favorable opportunity, General Schamhorst introduced the Krümper system, by which a certain number of soldiers were always allowed to go home on furlough after a few months' service, and recruits were brought into the ranks in their place. Those drilled were, in their turn, sent away on furlough, and other recruits brought on for training.' . . . 'This army fought in the war of independence, and formed the first nucleus of the existing military organization of the kingdom — an organization which, dating from a terrible misfortune, the bitter experience of which has never been forgotten, has since been constantly tended, improved, and reformed, and with careful progress been brought to such a high pitch of excellence, that last year it enabled the Prussian troops to march and conquer with an almost miraculous rapidity, to eclipse in a few days the glories of the Seven Years' War, to efface the memory of Jena by thundering on the attention of the startled world the suddenly decisive victory of Sadowa, and to spring over the ashes of Chlum into very possibly the foremost place among the armies of the world.' . . . 'By this system, every Prussian capable of bearing arms was, without exception, liable to military duty, and to serve from his 20th to 23d year in the standing army ; from his 23d to his 25th in the reserve ; from his 25th to 32d in the first levy of the Landwehr, and from his 32d to 39th in the second

levy.' 'The great advantage of this system was, that in peace it necessitated but a small expense, and required but few men to keep up an army which, on the outbreak of the war, could be raised quickly to a large force. As it was arranged after the War of Independence, it endured without alteration during the reigns of Frederick-William III. and Frederick-William IV.' It was found, however, in 1848 and 1849, and again in 1850 and 1859, that there were many defects in the system. The men, taken up with their private occupations, obeyed unwillingly the call to arms, save in moments of great national excitement; the large proportion which the Landwehr formed of the active army caused fatal delays in the preparation of troops for the field; the officers and non-commissioned officers were little used to their duties. The increase in the population, too, caused the system adopted in 1815 to bear with injustice upon the people in 1850, and the revenues had also increased in direct ratio with the increase of population, and so admitted of an increase of the army and of the military expenses. These various reasons combined to induce King William I., while still Regent, to introduce in 1859 and 1860 a reorganization by which the first levy of the Landwehr was no longer, as a rule, to be sent into the field; and to attain this object, the standing army, including the reserves, was increased by as many men as the first levy of the Landwehr formerly provided — in fact it was nearly doubled. The time of service in the Landwehr was diminished by two years, and that in the reserve, in return, lengthened for the same period. 'By this organization, a recruit who joins the Prussian service serves for three years (from nineteen to twenty-two) in the regular army; for five years (from twenty-two to twenty-seven) in the reserve, and for eleven years (from twenty-seven to thirty-eight) is liable to be called up for duty as a Landwehr man.' These constitute the main outlines of a system which combines rigid economy with great military strength, and which possesses wonderful elasticity and rapidity in the mobilisation of immense armies. Although the order for putting the army on a war footing was issued by the Prussian government long after serious preparations were being made by Austria and her allies, yet the superiority of the system enabled her to take the field and

assume the aggressive long before the preparations of her antagonists were complete, 'In peace everything is always kept ready for the mobilisation of the army; every officer and every official knows during peace what will be his post and what will be his duty the moment the decree for the mobilisation is issued; and the instant that decree is flashed by telegraph to the most distant stations, every one sets about his necessary duty without requiring any further orders or any explanations.' When the troops are mobilised, or, to use our vernacular, placed upon a war footing, the reserves are called in, assigned to their respective battalions, and the army is increased from 217,000 to nearly 500,000 trained soldiers. If necessary, the Landwehr, or militia, also trained, follow in nearly equal numbers. Especially interesting to the soldier is the mode in which the waste of war in the several organizations is supplied, and yet the recruits sent forward for that purpose are so combined as to be easily handled, easily moved, yet formed in such due proportions of the different arms as to be capable of independent action. The military organization of the provinces annexed by the late war is, with slight modifications, upon the same system, and will add about 75,000 combatants to the standing army. In view of the important influence Prussia seems likely to exert hereafter in European politics, an acquaintance with her military resources can not but be desirable to the general as well as to the professional reader, and invests with peculiar interest the chapter which Mr. Hozier has devoted to that subject. The military reader would wish even more full and explicit details. Take the book as a whole, it is remarkable for accuracy of observation, clear sound criticism, and graphic narration, while the subject of which it treats is of unusual interest.

ART. IX.—*The Sumter and the Alabama; or Memoirs of his Services Afloat during the War between the States.* By Admiral Raphael Semmes, of the late Confederate States Navy. Baltimore: Kelly, Piet & Company. 1868. Pp. 833.

Admiral Semmes, the 'Stonewall Jackson of the Seas', has, in the volume before us, given a most graphic and profoundly interesting narrative of his adventures during the late War. We have not, for twenty years, devoured a novel with half the interest with which we have read this absorbing narrative of his own adventures, by one of the very truest, bravest, greatest heroes of the age. We shall let him speak for himself, for his comrades at sea, and for the cause in which they were enlisted. Our appreciation of his book, as well as of ourselves, is, indeed, far too just, to permit us to occupy the attention of the reader with any poor words of our own, to the exclusion of those of the gallant Admiral himself.

The book is all, nay, far more than all, that is imported by the title at the head of this article. It embraces the memoir, personal and historical, of the Admiral, from his withdrawal from the Federal navy to the close of the war; the operations of the *Sumter* and the *Alabama*; the running of various blockades by both ships; and, finally, the engagements of the *Alabama* with the *Hatteras* and the *Kearsarge*. It was the courage, the dash, the heroism, displayed in this last glorious engagement, which drew, with electric force, from the hearts of British naval officers, a wild, enthusiastic burst of admiration and applause, and, from their pockets, a present of the most beautiful sword the writer has ever seen; manufactured, by the best artists of London, expressly for the Admiral; and covered with significant costly devices, as well as blazing with precious stones and gems. Such a testimonial, coming, as it did, from officers of the British navy, speaks more for the gallantry of Admiral Semmes, than could a thousand articles from our poor pen.

The work, however, is not exclusively confined to the above

exciting themes. It is, on the contrary, diversified and enlivened with biographical sketches of his officers and men, with notices of the countries and peoples visited by him; with descriptions of terrible storms and dead calms, as well as of other interesting phenomena at sea, relative to land, air, ocean, and the starry heavens; and also with able and learned, though not tiresome, discussions of the most interesting questions of international law, which, in the course of his service, he was called upon, as a jurist, to examine and decide. In addition to these discussions, and to the grand glimpses of the glorious Cosmos around us, the Admiral notices the progress of the contest on land, and so skilfully interweaves this with its progress at sea, as to give the reader a comprehensive view of the whole drama of the war.

As to mechanical execution, the work is, like ‘apples of gold in pictures of silver’, in the best style of the art. The paper, the letter-press, the numerous steel engravings, and the chromolithographs, are all handsome. If some of the portraits are not handsome, the fault may possibly be in the originals; the likenesses, so far as we can judge from a personal knowledge, are certainly good. Who so absurd as to expect heroes to be handsome? A hero may be handsome, it is true; but then it is *as a woman*, rather than *as a hero*, that he dares to look an ugly world in the face with a handsome face of his own. The offence is a very serious one—far worse than the sin of ugliness itself. Ugliness is, we insist upon it, the only natural, normal condition of the hero. He departs from it at his peril. He is safe in no other condition. But then in the real hero, whether a Lee or a Semmes, there is always a certain simple, noble, majestic mien—the truthful expression of the soul within—which is infinitely better than beauty itself. Or, more correctly speaking, it is beauty itself—the beauty of mind, heart, soul—and not its outward sign merely in comeliness of form or feature. The outward sign, without the inward grace, or thing signified, is shadow without substance; a fair shadow, it is true, but fleeting as it is fair. The beauty of the soul, is the soul of beauty, and, like the soul itself, survives all fairest forms of dust.

But, from this short digression, we now return to Admiral

Semmes, and his book. This opens with a discussion of the great doctrine of Secession; and, in a simple, clear, satisfactory manner, sets forth the 'reason of the faith that was in us, of the South', who withdrew from the Union. 'The judgment which posterity', says he, 'will form upon our actions, will depend, mainly, upon the answers which we may be able to give to two questions: First, Had the South the right to dissolve the compact of government under which it had lived with the North? and, secondly, was there sufficient reason for such dissolution?' (p. 19.) We rejoice to see this discussion where it is, not only because it is so able and unanswerable, but also because the work containing it will be so extensively read, in all parts of the civilized world. The South needed such an advocate; and such an advocate the South has found in Admiral Semmes. It is not our purpose to dwell on this portion of his work; which, for the general reader, will be found far less exciting than those relating to the cruise of the *Sumter* and the *Alabama*. A few words only, in passing, is all we can devote to this great argument of an author, who is able to produce such noble prose in speculation, as well as such splendid poetry in action.

The first chapter, entitled 'A brief historical retrospect', sets forth the two great questions above-mentioned: Had the South the right to secede from the Union? and was there sufficient reason for such secession? In discussing these questions, he shows, in the first place, that the principle of law is settled. Both Webster and Story, the two great jurists of the North, concede that the right of secession results from the nature of the Constitution; if it be, indeed, 'a compact of the States.' (pp. 24-5.) Hence, it only remains for our author to settle the great question of fact, the only one in dispute, is the Constitution 'a compact between the States'? This question is discussed as follows: In 'Chapter 11', 'the nature of the American compact' is clearly exhibited, and illustrated by an appeal to opinions of its authors and other leaders of the country. In the following chapter, it is shown, that 'From the foundation of the Federal Government down to 1830, both the North and the South held the Constitution to be a compact between the States.' Having established this position, the Admiral proceeds, in the fourth chapter of his work,

to answer the question, 'Was Secession Treason?' It was not treason, he answers, because the Constitution was, as he had shown, a compact between the States, and because, as it is conceded by the great jurists of the North themselves, the States have a right to secede from such a compact, either with or without cause. 'It resulted', says he, in the opening of his fifth chapter, 'from this statement of the question, that the States had the legal and constitutional right to withdraw from the compact, at pleasure, without reference to any cause of quarrel.' (p. 52.) This was 'a constitutional right', says he, because it resulted from the very nature of the Constitution as 'a compact between the States.' Thus, having settled the first great question pertaining to the doctrine of secession, he proceeds to consider the second,—'Was there sufficient ground for the dissolution' of the Union? Not sufficient ground to justify it in the eye of the Constitution, for no ground or reason whatever was necessary for that purpose, inasmuch as secession was '*a constitutional right*', but to justify it in the eye of expediency, or according to the maxims of political wisdom. In this discussion, as well as elsewhere, our author bears in mind the distinction between the right of secession and the right of revolution. The first, as 'a constitutional right', is a peaceable remedy; the last, as an extra-constitutional right, is a violent remedy. The first claims, and is entitled to, the olive branch of peace; the last defies the sword of coercion. Such is the just distinction made and borne in mind, by our author; who, accordingly, never speaks of any cause as necessary to keep the act of secession,—the exercise of a clear 'constitutional right',—from being a breach or violation of the Constitution. The first cause of secession is thus stated:

'The American Republic, as has been said, was a failure, because of the antagonism of the two peoples, attempted to be bound together in the same government. If there is to be but a single government in these States, in the future, it cannot be a republic. De Tocqueville saw this, thirty years ago. In his "Democracy in America", he described these States, as "more like hostile nations, than rival parties, under one government.'

'This distinguished Frenchman saw, as with the eye of intuition, the canker which lay at the heart of the federal compact. He saw looming up, in the dim distance, the ominous and hideous form of that unbridled and antagonistic majority, which has since rent the country in twain—a majority based on the views and interests of one section, arrayed against the views and interests of the other

section. "The majority", said he, "in that country, exercises a prodigious, actual authority, and a moral influence which is scarcely less preponderant; no obstacles exist which can impede, or so much as retard its progress, or which can induce it to heed the complaints of those whom it crushes upon its path. . . . This state of things is fatal, in itself, and dangerous for the future. . . . If the free institutions of America are ever destroyed, that event may be attributed to the unlimited authority of the majority. . . . Anarchy will then be the result, but it will have been brought about by despotism."

'Precisely so; liberty is always destroyed by the multitude, in the name of liberty. Majorities within the limits of constitutional restraints are harmless, but the moment they lose sight of these restraints, the many-headed monster becomes more tyrannical than the tyrant with a single head; numbers harden its conscience, and embolden it in the perpetration of crime. And when this majority, in a free government, becomes a faction, or, in other words, represents certain classes and interests to the detriment of other classes and interests, farewell to public liberty; the people must either become enslaved, or there must be a disruption of the government. This result would follow, even if the people lived under a consolidated government and were homogeneous; much more, then, must it follow, when the government is federal in form, and the States are, in the words of De Tocqueville, "more like hostile nations, than rival parties, under one government." These States are, and indeed always have been, rival nations.'

What De Tocqueville so clearly saw, and so eloquently described, in 1830, is precisely what James Madison feared in 1788, namely, the remorseless tyranny of faction, or an interested majority, trampling on the rights of the minority. 'On a candid examination of history,' said Mr. Madison in 1788, 'we shall find that turbulence, violence, and abuse of power, *by the majority trampling on the rights of the minority, have produced factions and commotions, which, in republics, have, more frequently than any other cause, produced despotism. If we go over the whole history of ancient and modern republics, we shall find their destruction to have generally resulted from that cause. If we consider the peculiar situation of the United States, and what are the sources of that diversity of sentiments which pervades its inhabitants, we shall find great danger to fear that the same causes may terminate here, in the same fatal effects, which they produced in those republics.*'¹ Prophetic words! How fearfully were they, even in 1830-33, in progress of fulfilment in the great republic of this country! and how clearly was the appalling fact seen and described by De Tocqueville! In vain did Calhoun, from that period to the end of his life, plead the cause of truth,

¹ Elliotts' Debates. Vol. III., p. 87.

and justice, and mercy, against 'the tyranny of the majority', as the greatest of the dangers to American freedom. The dire disease of former republics ran its fatal course in this; becoming, in 1861, rampant, raging, and red with the elements of destruction to the devoted minority. That minority, whether *in* or *out* of the Union, was doomed to be, sooner or later, trampled under foot by the majority; which, in this case, was not so much a political party, as 'a hostile nation', both able and willing to destroy its hated rival—the South. Who did not see the danger? It was certainly most forcibly, and eloquently, depicted by Mr. Benjamin in his celebrated speech on secession, delivered in the Senate of the United States. Who, then, so blind as not to see this great danger to the South? Who so blind to the lessons of all history, both ancient and modern, as to fear nothing from the rise and appearance of such faction, or 'interested majority', on the theatre of the republic? Who so blind as not to fear the terrible monster which, in all former ages, had devoured the freedom of republics, and erected thrones of despotism amid their ruins? The answer to this question is fraught with infinite sadness. For, however unaccountable it may seem, there were petty politicians, and pretended statesmen, who apprehended no danger from the rise and appearance of that terrible faction, or 'the party of the North pledged against the South', and who, accordingly, sang a fatal lullaby to their followers at the South. Raphael Semmes was not one of these. He saw the great danger, and prepared to meet it like a man. While little politicians, not seeing, or rather not comprehending, the monster which had destroyed former republics, and which had raised its hideous head in ours, were discoursing eloquent nonsense about 'the omnipotence of truth' as a sufficient safeguard and protection to the South; the great sailor was getting ready to meet it with the sword. That is, to meet the Apollyon of republics, with the only weapon he could be made to feel. If, indeed, all our politicians and leaders had only been as wise and as heroic as Semmes, 'our present position might have been infinitely better than it is.'

But as it was, alas! many of the people of the South were never made to see the nature of the monster against which they

had taken up arms. As they neither knew what they *were fighting against*, nor what they *were fighting for*, nor comprehended the utter degradation, and ruin, and misery, to which they would be subjected in case of the triumph of their enemies, they grew weary of the great struggle, and deserted, by appalling thousands, from the banner of the South. Seduced by the cry of ‘peace, peace, when there was no peace’, the ranks of our armies were thinned by fearful desertions, as well as by fire, and famine, and sword; and when, finally, the remnant laid down their arms, vast multitudes looked for the return of happy days under the victorious and triumphant reign of the great Apollyon of republics. If all our politicians and leaders, we repeat, had been like Admiral Semmes, ‘our present position might have been infinitely better than it is.’

There are three things which we do not like: a trumpet which gives an uncertain sound; a politician on both sides of the fence; and a political creed with two meanings—one for the North, and the other for the South. Admiral Semmes was exactly the opposite of all these things; and this is the reason why we revere the man, as well as admire the hero and the statesman.

The second ground or reason for secession, as assigned by our author, was the sectional legislation, by which the wealth of the South was exchanged for the poverty of the North. Having quoted the eloquent words of Mr. Benton, in illustration of this point, he adds:

‘The picture is not overdrawn; it is the literal truth. Before the war, the Northern States, and especially the New England States, exported next to nothing, and yet, they “blossomed as the rose.” The picturesque hills of New England were dotted with costly mansions, erected with money of which the Southern planters had been despoiled, by means of the tariffs of which Mr. Benton spoke. Her harbors frowned with fortifications, constructed by the same means. Every cove and inlet had its lighthouse, for the benefit of New England shipping, three-fourths of the expense of erecting which had been paid by the South, and even the cod and mackerel fisheries of New England were *bountied*, on the bald pretext that they were nurseries for manning the navy.

‘The South resisted this wholesale robbery, to the best of her ability. Some few of the more generous of the Northern representatives in Congress came to her aid, but still she was overborne; and the curious reader, who will take the pains to consult the “Statutes at Large”, of the American Congress, will find on an average, a tariff for every five years recorded on their pages; the cormorants increasing in

rapacity, the more they devoured. No wonder that Mr. Lincoln, when asked, "Why not let the South go?" replied, "Let the South go! *where, then, shall we get our revenue?*"

In reply to this position, it is frequently said, that the South did not resist 'this wholesale robbery' in vain; but secured, at last, a reasonable tariff, such as her own statesmen had freely sanctioned. This is partly true. The position of parties, the influence of demagogues aspiring to place and power, as well as other circumstances of the times, did enable the South to secure a tariff, which, when compared with former ones, was exceedingly reasonable and moderate, but which, according to the standard as laid down by Alexander Hamilton himself, was a grievous and intolerable burden to the South. But even if it had been perfectly reasonable, or such as Madison and Hamilton had advocated, what did this signify? Where was the safeguard and security for the future? Shall we be told, that the nature of 'the cormorants' had been changed, or that the great roaring beast of faction had been tamed, by the sweet 'omnipotence of truth'? If so, we can only laugh at such idle mockery of all sound sense; for all histories, both ancient and modern, teach the same lesson, that such a faction, however restrained for a time, only awaits the power and the opportunity to renew its system of 'wholesale robbery.' Its vital breath, indeed, its animating principle, is the lust of 'power pursued for the gratification of avarice and ambition.'

The third ground of secession, is thus stated by our author:

'Great pains have been taken by the North, to make it appear to the world, that the war was a sort of moral and religious crusade against slavery. Such was not the fact. The people of the North were, indeed, opposed to slavery, but merely because they thought it stood in the way of their struggle for empire. I think it safe to affirm, that if the question had stood upon moral and religious grounds alone, the institution would never have been interfered with.'

'The Republican party, which finally brought on the war, took its rise, as is well known, on the question of extending slavery to the Territories—those inchoate States, which were finally to decide the vexed question of the balance of power, between the two sections. It did not propose to disturb the institution in the States; in fact, the institution could do no harm there, for the States, in which it existed, were already in a hopeless minority.'

Thus, according to our author, the three great causes or grounds of secession, were: 1. The ascendancy of the North, by which

the balance of power between the two sections was destroyed, and the formation of the larger section into a faction, or interested majority, which portended fearful evil, if not destruction, to the smaller section; 2. The 'wholesale robbery' of the system of tariffs, by which the North was aggrandized and enriched at the expense of the South; and, 3. The agitation, and unconstitutional treatment, of the question of slavery; into which the great question of the balance of power entered as the principal element of discord and dissatisfaction. The discussion of these three grounds, or reasons, of secession, ends with the 70th page of the work; leaving our minds impressed with the conviction, that our late Admiral is a statesman, no less than a sailor. In the seven hundred and sixty-three pages which follow, we have his exploits as a seaman, his views as a natural philosopher, and his powers as a descriptive writer. This portion of his work will, no doubt, prove far more interesting to the general reader, than his very able discussion of the principles of international law, or inter-State policy.

In the seventh chapter of his work, which treats of 'the formation of the Confederate Government, and the resignation of officers of the federal army and navy', the author describes, with no little feeling, the ties which had so long bound them to their former comrades, and to the old flag, and which, at the sacred call of duty, they were constrained to sever. In the course of these reflections, he says:

'As a general rule, the officers both of the Army and the Navy sided with their respective States; especially those of them who were cultivated, and knew something of the form of government under which they had been living. But even the profession of arms is not free from sordid natures, and many of these had found their way into both branches of the public service. Men were found capable of drawing their swords against their own firesides, as it were, and surrendering their neighbors and friends to the vengeance of a government, which paid them for their fealty. Some, with cunning duplicity, even encouraged their former messmates, and companions who occupied places above them, to resign, and afterward held back themselves. Some were mere soldiers and sailors of fortune, and seemed devoid of all sensibility on the subject, looking only to rank and pay. They were open to the highest bidder, and the Federal Government was in a condition to make the highest bids. Some of the Southern men of this latter class remained with the North, because they could not obtain the positions they desired in the South; and afterwards, as is the fashion with renegades, became more bitter against their own people than even the Northern men.

'Civil war is a terrible crucible through which to pass character; the dross drops

away from the pure metal at the first touch of the fire. It must be admitted, indeed, that there was some little nerve required, on the part of an officer of the regular Army or Navy, to elect to go with his State. His profession was his only fortune; he depended upon it for the means of subsisting himself and family. If he remained where he was, a competency for life, and promotion and honors probably awaited him; if he went with the South, a dark and uncertain future was before him; he could not possibly better his condition, and if the South failed, he would have thrown away the labor of a life-time. The struggle was hard in other respects. All professions are clannish. Men naturally cling together, who have been bred to a common pursuit; and this remark is particularly applicable to the Army and the Navy. West Point and Annapolis were powerful bonds to knit together the hearts of young men. Friendships were then formed, which it was difficult to sever, especially when strengthened by years of after-association, in common toils, common pleasures, and common dangers. Naval officers, in particular, who had been rocked together in the same storm, and had escaped perhaps from the same shipwreck, found it very difficult to draw their swords against each other. The flag, too, had a charm which it was difficult to resist. It had long been the emblem of the principle that all just governments are founded on the consent of the governed, vindicated against our British ancestors in the War of the Revolution, and it was difficult to realize the fact that it no longer represented this principle, but had become the emblem of its opposite; that of coercing unwilling States to remain under a Government which they deemed unjust and oppressive.'

On Feb. 15th, 1861, Commander Semmes tendered his resignation; and, on the same day, it was accepted in the following note:

'SIR,—Your resignation as a Commander in the Navy of the United States, tendered in your letter of this date, is hereby accepted.

I am, respectfully, your obedient servant,

J. TOUCEY.'

This note was addressed to 'Raphael Semmes, Esq., late Commander U. S. Navy, Washington.' Raphael Semmes, *Esquire*, having resigned, was permitted to go South, with the distinct and perfect understanding, that he intended to identify his fortunes with those of his adopted State. He adds, (p. 79):

'It was under such circumstances as these, that I dissolved my connection with the Federal Government, and returned to the condition of a private citizen, with no more obligation resting upon me than upon any other citizen. The Federal Government itself had formally released me from the contract of service I had entered into with it, and, as a matter of course, from the binding obligation of any oath I had taken in connection with that contract. All this was done, as the reader has seen, before I moved a step from the city of Washington; and yet a subsequent Secretary of the Navy, Mr. Gideon Welles, has had the hardihood and indecency of accusing me of having been a "deserter from the service." He has deliberately put this false accusation on record, in a public document, in the face

of the facts I have stated—all of which were recorded upon the rolls of his office. I do not speak here of the clap-trap he has used about "treason to the flag," and the other stale nonsense, which he has uttered in connection with my name, for this was common enough among his countrymen, and was, perhaps, to have been expected from men smarting under the castigation I had given them, but of the more definite and explicit charge of "*deserting from the service*," when the service, itself, as he well knew, had released me from all my obligations to it.'

Now who, but for the sad experience of human nature during the last few years, could have believed such mendacity possible in a high official, in a member of the Cabinet of the United States?

The author then disposes of the following silly accusation: 'Another charge, with as little foundation, has been made against myself, and other officers of the Army and Navy, who resigned their commissions, and came South. It has been said that we were in the condition of *élevés* of the Federal Government, inasmuch as we had received our education at the military schools, and that we were guilty of ingratitude to that Government, when we withdrew from its service. This slander has no doubt had its effect, with the ignorant masses, but it can scarcely have been entertained by any one who has a just conception of the nature of our federal system of government. It loses sight of the fact, that the States are the creators, and the Federal Government the creature; that not only the military schools, but the Federal Government itself, belongs to the States. Whence came the fund for the establishment of these schools? From the States. In what proportion did the States contribute it? Mr. Benton has answered this question, as the reader has seen, when he was discussing the effect of the tariffs under which the South had so long been depleted. He has told us, that four States alone, Virginia, the two Carolinas, and Georgia, defrayed three-fourths of the expenses of the General Government; and taking the whole South into view, this proportion had even increased since his day, up to the breaking out of the war.

'Of every appropriation, then, that was made by Congress for the support of the military schools, three-fourths of the money belonged to the Southern States. Did these States send three-fourths of the students to those schools? Of course not — this would have been something like justice to them; but justice to

the Southern States was no part of the scheme of the Federal Government. With the exception of a few cadets, and midshipmen "at large", whom the President was authorized to appoint — the intention being that he should appoint the sons of deceased officers of the army and navy, but the fact being that he generally gave the appointment to his political friends — the appointments to these schools were made from the several States, in proportion to population, and, as a matter of course, the North got the lion's share. But supposing the States to have been equally interested in those schools, what would have been the result? Why, simply, that the South not only educated her own boys, but educated three-fourths of the Northern boys, to boot. Virginia, for instance, at the same time that she sent young Robert E. Lee to West Point, to be educated, put in the public treasury not only money enough to pay for his education and maintenance, but for the education and maintenance of three Massachusetts boys! How ungrateful of Lee, afterward, being thus a charity scholar of the North, to draw his sword against her!

The visit of our author to Montgomery; his interview with Davis; his mission to the North; his contracts with Northern men for arms and munitions of war; these, and various other interesting events and interviews, are well described, before he comes to 'the commissioning of the *Sumter*, the first Confederate States' ship of war'. After many tedious delays, and difficulties, and disappointments, this little ship of war is ready for service. Its commander was, according to Federal ethics, (the prime article of which, during the war, seems to have been mendacity,) 'a deserter from the service', and the little ship itself 'a pirate's vessel'. Another charge this, which our author has, in the course of his work, for ever laid to rest, by an appeal to the principles and the practice of nations, and especially to those of the United States.

'Chapter XI. After long waiting and watching, the *Sumter* runs the blockade of the Mississippi, in open daylight, pursued by the *Brooklyn*.' We have read, with breathless interest, the description of this whole exciting scene of running the blockade by the gallant little *Sumter*, pursued by the magnificent *Brook-*

lyn. ‘Did Semmes’, the present writer has been asked, ‘show any courage, any heroism, in taking the sea to attack unarmed vessels, and prey on the commerce of the enemy?’ Let the inquirer, or doubter, read the thrilling story of running that blockade, to say nothing of others, and then answer his own question. Let him read, in addition to this, the whole history of the *Sumter*, alone on the wide sea, an object of vengeance to the whole Federal navy, and then, having witnessed how bravely and how coolly the little ship behaved itself in the midst of the most appalling dangers, let him blush at the remembrance of his thoughtless inquiry. Let him, in conclusion, take up the story of the *Alabama*, and watch all her daring adventures on the high seas, including her engagements with the *Hatteras* and the *Kearsarge*, if he wishes to see why it is, that the gallantry of Semmes was so greatly admired by officers of the British navy, as well as by others, on the other side of the Atlantic. Before his book was published in this country, a London house ordered a thousand copies; a mere *bonne-bouche* for the public of Great Britain. Other thousands will, no doubt, speedily follow, and be as greedily devoured by the people of that country.

We subjoin the following extracts, as a few specimens of the Admiral’s descriptive powers:

‘The evening of the escape of the *Sumter* was one of those Gulf evenings which can only be *felt*, and not described. The wind died gently away as the sun declined, leaving a calm and sleeping sea to reflect a myriad of stars. The sun had gone down behind a screen of purple and gold, and to add to the beauty of the scene, as night set in, a blazing comet, whose tail spanned nearly a quarter of the heavens, mirrored itself within a hundred feet of our little bark, as she ploughed her noiseless way through the waters. As I leaned on the carriage of a howitzer on the poop of my ship, and cast a glance toward the quarter of the horizon whence the land had disappeared, memory was busy with the events of the last few months. How hurried and confused they had been! It seemed as though I had dreamed a dream, and found it difficult upon waking to unite the discordant parts. A great government had been broken up, family ties had been severed, and war—grim, ghastly war—was arraying a household against itself. A little while back, and I had served under the very flag which I had that day defied. Strange revolution of feeling, how I now hated that flag! It had been to me as a mistress to a lover; I had looked upon it with admiring eyes, had dallied with it in hours of ease, and had had recourse to it in hours of trouble, and now I found it false! What wonder that I felt a lover’s resentment?’ (p. 121.)

The burning of the *Golden Rocket*, the first vessel captured by the *Sumter*, is thus described:

'The wind, by this time, had become very light, and the night was pitch-dark — the darkness being of that kind graphically described by old sailors, when they say, you may cut it with a knife. I regret that I cannot give to the reader the picture of the burning ship, as it presented itself to the silent and solemn watchers on board the *Sumter*, as they leaned over her hammock rails to witness it. The boat, which had been sent on this errand of destruction, had pulled out of sight, and her oars ceasing to resound, we knew that she had reached the doomed ship, but so impenetrable was the darkness, that no trace of either boat or ship could be seen, although the *Sumter* was distant only a few hundred yards. Not a sound could be heard on board the *Sumter*, although her deck was crowded with men. Every one seemed busy with his own thoughts, and gazing eagerly in the direction of the doomed ship, endeavoring, in vain, to penetrate the thick darkness. Suddenly, one of the crew exclaimed, "There is the flame! She is on fire!" The decks of this Maine-built ship were of pine, caulked with old-fashioned oakum, and paid with pitch; the wood-work of the cabin was like so much tinder, having been seasoned by many voyages to the tropics, and the fore-castle was stowed with paints and oils. The consequence was, that the flame was not long in kindling, but leaped, full-grown, into the air, in a very few minutes after its first faint glimmer had been seen. The boarding officer, to do his work more effectually, had applied the torch simultaneously in three places, the cabin, the mainhold, and the fore-castle; and now the devouring flames rushed up these three apertures, with a fury which nothing could resist. The burning ship, with the *Sumter's* boat in the act of shoving off from her side; the *Sumter* herself, with her grim, black sides, lying in repose like some great sea-monster, gloating upon the spectacle, and the sleeping sea, for there was scarce a ripple upon the water, were all brilliantly lighted. The indraught into the burning ship's holds, and cabins, added every moment new fury to the flames, and now they could be heard roaring like the fires of a hundred furnaces, in full blast. The prize ship had been laid to, with her main-topsail to the mast, and all her light sails, though cleared up, were flying loose about the yards. The forked tongues of the devouring element, leaping into the rigging, newly tarred, ran rapidly up the shrouds, first into the tops, then to the topmast-heads, thence to the topgallant and royal mast-heads, and in a moment more to the trucks; and whilst this rapid ascent of the main current of fire was going on, other currents had run out upon the yards, and ignited all the sails. A top-gallant sail, all on fire, would now fly off from the yard, and sailing leisurely in the direction of the light breeze that was fanning, rather than blowing, break into bright and sparkling patches of flame, and settle, or rather silt into the sea. The yard would then follow, and not being wholly submerged by its descent into the sea, would retain a portion of its flame, and continue to burn, as a floating brand, for some minutes. At one time, the intricate net-work of the cordage of the burning ship was traced, as with a pencil of fire, upon the black sky beyond, the many threads of flame twisting, and writhing like so many serpents that had received their death wounds. The mizzen-mast now went by the board, then the fore-mast, and in a few minutes afterward the great main-mast tottered, reeled, and fell over the ship's side into the sea, making a noise like that of the sturdy oak of the forests when it falls by the stroke of the axeman.'

We select the above descriptions, as specimens, not because they are the best in the book, (for there are many better), but

because they are average ones, and because they come first in the *Memoirs*. The work is replete with descriptions of equal power and beauty.

It is our design, not to rifle the pages of the *Memoir* before us, in order to enrich our own, but only to give our readers some notion of the rich repast, which Admiral Semmes has provided for their entertainment and instruction. We shall, in pursuance of this design, pass over the greater part of his most interesting volume; and only indicate, in passing, some of the scenes therein described, or topics discussed. 'Rapid work—seven prizes in two days—The *Sumter* makes her first port, and what occurred there.' . . . 'The *Sumter* on the wing again—Reaches the island of Curaçoa, and is only able to enter after a diplomatic fight.' . . . 'The capture of other prizes—Puerto Cabello, and what occurred there.' . . . 'Steering along the coast of Venezuela—The coral insect and wonders of the deep—The *Sumter* enters the Port of Spain, in the British island of Trinidad, and coals and sails again.' . . . 'The *Sumter* at Maranham—The hotel *Porto* and its proprietor—A week on shore.' . . . 'The *Sumter* at Martinique—at St. Pierre—Is an object of much curiosity with the inhabitants—Arrest of Mason and Slidell—Mr. Seward's extraordinary course on the occasion.' . . . 'Arrival at St. Pierre of the enemy's steam-sloop *Iroquois*—How she violates the neutrality of the port—The *Iroquois* blockades the *Sumter*—Correspondence with the Governor—Escape of the *Sumter*.' . . . 'Capture and burning of the *Arcade*, *Vigilant*, and *Ebenezer Dodge*—A leaky ship, and a gale—An alarm of fire.' . . . 'Christmas day on board the *Sumter*—Cape Flyaway, and the curious illusion produced by it—The *Sumter* boards a large fleet of ships in one day, but finds no enemy among them—Arrival at Cadiz.' . . . 'The *Sumter* is ordered to leave in twenty-four hours—Declines obedience to the order—Prisoners landed—Deserters—*Sumter* leaves Cadiz.' . . . 'The Pillars of Hercules—Gibraltar—Capture of the enemy's ships, *Neapolitan* and *Investigator*—A conflagration between Europe and Africa—The *Sumter* anchors in the harbor of Gibraltar—The Rock; the town; the military; the review and the Alameda.' . . . 'Ship crowded with visitors

— A ride over the Rock with Col. Freemantle—The “Galleries” and other subterranean wonders—A dizzy height, and the Queen of Spain’s Chair—The monkeys and the neutral ground.’ . . . ‘The *Sumter* in trouble—Combination against her, headed by the Federal Consul—Applies to the British Government for coal, but is refused—Sends her paymaster and ex-Consul to Cadiz—They are arrested and imprisoned at Tangier—Correspondence on the subject—The *Sumter* laid up and sold.’ . . . ‘Author in London—in Nassau—in Liverpool—The *Alabama* gone.’ . . . ‘A brief resumé of the history of the war, between the commissioning of the *Sumter* and that of the *Alabama*—Secretary Mallory, and the difficulties by which he was surrounded.’ . . . ‘The equipment of the *Alabama* illustrated by that of several colonial cruisers during the war of 1776—Benjamin Franklin and Silas Deane, as Chiefs of the Naval Bureau at Paris—The Surprise and the Revenge—Wickes, and Conyngham, and Paul Jones.’ . . . ‘Description of the *Alabama*—Preparing her for sea—A picture of her birth and death—Captain Bullock returns to England—Author alone on the high seas.’ . . . ‘The character of the sailor—The first blow struck at the whale fishery—The habitat and the habits of the whale—The first capture.’ . . . ‘Capture of the *Starlight*, *Ocean Dove*, *Alert*—Weather-Guage—A race by night—Capture of the *Atamaha*, *Virginia*, and *Eliza Dunbar*—A rough sea, toiling boats, and a picturesque burning of a ship in a gale.’ . . . ‘The *Alabama* changes her cruising ground—what she saw and did.’ . . . ‘Capricious weather of the Gulf stream—Capture of the packet-ship *Tonowanda*, the *Manchester*, and the *Lamplighter*—A cyclone.’ . . . But we must forbear, lest the reader should weary of the long bill of fare. He now has before him the topics of one-half of Admiral Semmes’ book; and they certainly do not decrease in interest as we proceed from the first half to the end of the volume. The engagement of the *Alabama* with the *Kearsarge*, which occurs toward the end of the volume, is, indeed, the most profoundly interesting portion of the work.

The last topic above-mentioned, ‘the cyclone’, occupies about nine pages of the *Memoir*, or from page 468 to page 478. As

this very spirited description is too long to be transferred to our pages, we must be content to lay before our readers only a short portion of it, which is in these words:—

'The storm raged thus violently for two hours, the barometer settling all the while, until it reached 28.64. It then fell suddenly calm. Landsmen have heard of an "ominous" calm, but this calm seemed to us almost like the fiat of death. We knew, at once, that we were in the terrible vortex of a cyclone, from which so few mariners have ever escaped to tell the tale! Nothing else could account for the suddenness of the calm, coupled with the lowness of the barometer. We knew that when the vortex should pass, the gale would be renewed as suddenly as it had ceased, and with increased fury, and that the frail little *Alabama*—for indeed she looked frail and small, now, amid the giant seas that were rising in a confused mass around her, and threatening every moment to topple on board of her, with an avalanche of water that would bury her a hundred fathoms deep—might be dashed in a thousand pieces in an instant. I pulled out my watch, and noted the time of the occurrence of the calm, and causing one of the cabin-doors to be unclosed, I sent an officer below to look at the barometer. He reported the height already mentioned—28.64. If the reader will cast his eye upon the diagram again—at figure No. 2—he will see where we were at this moment. The *Alabama's* head now lies to the south-east—she having "come up" gradually to the wind, as it hauled—and she is in the south-eastern hemisphere of the vortex. The scene was the most remarkable I had ever witnessed. The ship, which had been pressed over, only a moment before, by the fury of the gale as described, had now righted, and the heavy storm stay-sail, which, notwithstanding its diminutive size, had required two stout tackles to confine it to the deck, was now, for want of wind to keep it steady, jerking these tackles about as though it would snap them in pieces, as the ship rolled to and fro. The aspect of the heavens was appalling. The clouds were writhing and twisting, like so many huge serpents engaged in combat, and hung so low, in the thin air of the vortex, as almost to touch our mast-heads. The best description I can give of the sea is that of a number of huge watery cones—for the waves seemed now, in the diminished pressure of the atmosphere in the vortex, to *jut up into the sky*, and assume a conical shape—that were dancing an infernal reel, played by some necromancer. They were not running in any given direction, there being no longer any wind to drive them, but were jostling each other, like drunken men in a crowd, and threatening every moment to topple one upon the other.

With watch in hand, I noticed the passage of the vortex. It was just thirty minutes in passing. The gale had left us, with the wind from the south-west; the ship, the moment she emerged from the vortex, took the wind from the north-west. We could see it coming upon the waters. The disorderly seas were now no longer jostling each other; the infernal reel had ended; the cones had lowered their late rebellious heads, as they felt the renewed pressure of the atmosphere, and were being driven, like so many obedient slaves, before the raging blast. The tops of the waves were literally cut off by the force of the wind, and dashed hundreds of yards, in blinding spray. The wind now struck us "butt and foremost," throwing the ship over in an instant, as before, and threatening to jerk the little storm-sail from its bolt-ropes. It was impossible to raise one's head above the rail, and difficult to breathe for a few seconds. We could do nothing but cower under

the weather bulwarks, and hold on to the belaying pins, or whatever other objects presented themselves, to prevent being dashed to leeward, or swept overboard. The gale raged, now, precisely as long as it had done before we entered the vortex — two hours — showing how accurately Nature had drawn her circle.'

The Admiral's work has, of course, like all human productions, its defects. We do not regret that the sun has its spots. But we regret that the work before us, in this respect, like the sun; especially since it is the duty of the critic, even more than of the astronomer, to represent the blemishes, as well as the beauties, of the object of his admiration. The style of our author, then, appears rather too diffuse or wordy at times, to elicit our indiscriminate approbation and praise. A little more pruning, a little more of the *limæ labor*, would, it seems to us, have improved his style. By such a process, it might, perhaps, have lost more in warmth and glow of coloring, than it would have gained in depth and intensity of expression, and been, consequently, less attractive to the great majority of readers. Be this as it may, it *occasionally* flares into a species of 'fine writing', or a fanciful cast of expression, which seems inconsistent with severity of taste. We feel called upon to notice this blemish — for we can not but regard it as one — because it partakes of the great fault of most writers of this country.

There are, also, certain expressions of sentiment, which we are sorry to see in the work before us. The glowing tribute to the women of the South, for example, concludes with the following words: 'Glorious women of the South! what an ordeal you have passed through, and how heroically you have stood the trying test. You have lost the liberty which your husbands, sires, and sons struggled for, but only for a period. The blood which you will have infused into the veins of future generations will rise up to vindicate you, and "call you blessed."' (p. 76.) We are glad he said 'future generations.' For the blood of this generation, certainly, has no disposition to rise up to vindicate its liberty, except the great right, derived from the Almighty Ruler of the universe, to exist on the face of the globe, and to protect the memory and the honor of its sires, its sons, and its women. Too much of its blood, indeed, far too much of its very best blood, sleeps beneath the cold sod with Stonewall Jackson,

and Albert Sidney Johnston, and with a thousand other heroes in battle slain, for it to dream of insubordination to 'the powers that be.' And besides, the blood which still lives, and beats in our veins, is under a pressure far too dark and terrible, to dream of freedom, or anything beyond a supply of daily bread. This generation of the South, indeed, has but one mission; the sublime mission, namely, to bear its awful lot with quiet resignation to the will of Heaven, and with toiling fortitude in the discharge of present duties; remembering the time-honored adage, that 'Adversity makes men; and prosperity, monsters.'

If we had not eulogized, so highly, both the style and the substance of the book before us, we should not have considered it a duty to notice the above trifles; which, as we have said, are but *occasional*, and detract little, if anything, from its great merits. No book of the day, or, at least, no book written by a Southern man, will be read as extensively as the *Memoirs of Services Afloat*, by Admiral Semmes. It will be read now, as well as by future ages, and by foreign nations, as well as by our own people.

The interest of the story deepens as we approach the conclusion of the *Memoirs*. In its fifty-third chapter, we have 'the combat between the *Alabama* and the *Kearsarge*'; and, in the following chapter, we have 'other incidents' of that memorable conflict. We see, also, 'The rescue of officers and seamen by the English steam-yacht *Deerhound*—The United States Government demand that they be given up—British Government refuses compliance—The rescued persons not prisoners—The inconsistency of the Federal Secretary of the Navy.' Here we behold 'the chivalry', 'the diplomacy', and 'the justice', of 'the best government the world has ever seen.' How sad the spectacle! How melancholy the reflection it awakens in every soul not absolutely dead to every sentiment of honor, truth, courage, and courtesy! It appears, indeed, from a plain statement of facts—of unquestionable facts of record—that Mr. Gideon Welles, Secretary of the Navy, and Mr. William H. Seward, Secretary of State, were little better than epitomies of meanness and malice. It would be difficult to find their match in the history of modern diplomacy. It is said, by those who have most profoundly studied the nature of man, that we grow

like, or assimilate to, the objects of our worship. If so, Mr. Gideon Welles must have worshipped the 'Golden Calf', and Mr. Seward the 'Old Serpent.' But in this case, as in most others, the assimilation was not perfect. Hence, Mr. Gideon Welles became, not a *golden*, but only a *brazen*, calf. And as for Mr. Seward, he seems to have acquired all the qualities of the Serpent, except the golden attribute of 'wisdom'; an attribute which, by the way, he had little use for; since the low cunning of the fox was all he needed to deceive and destroy geese. Alas! what myriads, what flocks, of those innocent creatures, have been destroyed by the great Fox of the New World!

We see, also, in the same portion of the *Memoirs*, a strange transformation. We see an officer of the old Navy, once a gentleman and an ornament to his profession, become the tool of tyrants, whose policy was as crooked as it was cruel. Accordingly, he not only enters the fight with concealed armor on, but even after the *Alabama* has struck her flag, and offered to surrender, he fires five times on the sinking ship; and, standing sullenly aloof, leaves her officers and men to be rescued by English vessels! How else—poor fellow!—could he hope to please the 'brazen calf', or the 'heartless fox'? Bitter experience had, indeed, taught him the lesson, which a Federal General had, on being recalled from Fredericksburg by the authorities at Washington, so feelingly expressed in these words:—'Our Government has no use for the services of a gentleman.'

Nay, the English gentleman, Mr. Lancaster, who had the humanity to pick up the drowning officers and men of the *Alabama*, became an object of the mean vengeance of Mr. Seward. But, in this instance at least, the Federal Fox was not a match for the British Lion. He was robbed of his intended prey. The letter of Mr. Lancaster, so calm in its tone and so unanswerable in its facts, will stand as an everlasting reproach to the policy of Mr. Seward and Mr. Welles. But what care they for reproaches, or *anathemas*, or scorn and derision? The whole universe might, indeed, cry *shame! shame!* and yet there would be no shame in such men.

In relation to the letter of Mr. Lancaster, which fills three pages of the *Memoirs*, the author says: "Mark how a plain tale

shall put him down." There could not be a better illustration of this remark, than the above reply, proceeding from the pen of a gentleman, to Mr. Seward's charges against both Mr. Lancaster and myself. Mr. Adams having complained to Lord Russell, of the conduct of Mr. Lancaster, the latter gentleman addressed a letter to his lordship, containing substantially the defence of himself which he had prepared for the "Daily News." In a day or two afterward, Lord Russell replied to Mr. Adams as follows:

"FOREIGN OFFICE, July 26, 1864.

"SIR:—With reference to my letter of the 8th inst., I have the honor to transmit to you a copy of a letter which I have received from Mr. Lancaster, containing his answer to the representations contained in your letter of the 25th ult., with regard to the course pursued by him, in rescuing Captain Semmes and others, on the occasion of the sinking of the *Alabama*; and I have the honor to inform you, that I do not think it necessary to take any further steps in the matter. I have the honor to be, with the highest consideration, your most obedient, humble servant,

RUSSELL."

He adds: 'The Royal yacht squadron, as well as the Government, sustained their comrade in what he had done, and a number of officers of the Royal Navy and Army, approving of my course, throughout the trying circumstances in which I had been placed—not even excepting the hurling of my sword into the sea, under the circumstances related—set on foot a subscription for another sword, to replace the one which I had lost, publishing the following announcement of their intention in the London "Daily Telegraph":—

"JUNIOR UNITED SERVICE CLUB, S. W. }
June 23, 1864.

"SIR:—It will doubtless gratify the admirers of the gallantry displayed by the officers and crew of the renowned *Alabama*, in the late action off Cherbourg, if you will allow me to inform them, through your influential journal, that it has been determined to present Captain Semmes with a handsome sword, to replace that which he buried with his sinking ship. Gentlemen wishing to participate in this testimony to unflinching patriotism and naval daring, will be good enough to communicate with the chairman, Admiral Anson, United Service Club, Pall-Mall, or, sir, yours, &c.

BEDFORD PIM,
Commander R. N., Hon. Secretary."

Now, it is only necessary to know Commander Pim, or to read the *Memoir* of his deeds, to see in him one of the remark-

able men of the age, and as true a hero as ever trod the deck of a British man-of-war. He it was who, in profound sympathy with the gallantry of Semmes, first started the idea of presenting to him the beautiful sword referred to above, as well as in the first page of this article.

We can not tear ourselves from the pages of the *Memoirs* before us, without dwelling, for a moment, on the most pleasant reminiscence they have awakened in our minds. 'The Rev. F. W. Treelett', and 'his accomplished sister', planned a tour on the continent for the restoration of Semmes' health, and accompanied him on the tour. 'The Parsonage', and its more than most hospitable inmates, 'at Belsize Park, London'! what poor Confederate in that great wilderness of strangers has not found shelter, and comfort, and good cheer, under its roof? What naval officer, or other Confederate, can ever forget the indefatigable Rector of St. Peters', Belsize Park, who did more for Confederates in London, and for the Confederate cause itself, as well as made greater sacrifices of time and money, than any other man in England, or in Europe? The South, indeed, and the friends of the South, owe him, and his household, a debt of gratitude, which the wealth of worlds could not adequately discharge.

ART. X.—1. *A Comprehensive Geography, combining Mathematical, Physical, and Political Geography, with important Historical Facts, designed to promote the Moral Growth of the Intellect.* By Benjamin F. Shaw and Fordyce A. Allen. Philadelphia: J. B. Lippincott & Co. 1864.

2. *The Common-School Geography: an Elementary Treatise on Mathematics, Physical and Political Geography.* By D. M. Worren, Author of a Treatise on Physical Geography, etc., etc. Philadelphia: Cowperthwait & Co. 1867.

A Philadelphia journal of August 25, 1865, under the head of SOUTHERN GEOGRAPHY, ridicules a Geography for Begin-

ners, 'published last year at Richmond, Va.,' 'which was intended to supercede [supersede] the "Yankee" geographies at the South.' But a 'Yankee' geography was also published in the same 'last year' of 1864, at Philadelphia. Let us subject this to the test, not of ridicule, but of impartial examination.

It is known that in 1820 a negro colony was founded in Liberia, (a colony which every just man must wish to be successful,) and that since 1830, Algeria has been in the possession of the French, who have engrafted European civilisation upon a Semitic white race already considerably advanced, 'elementary instruction having been established at Algiers for ages past, on a method somewhat resembling the Lancasterian.' (*Penny Cyclopædia*.) The white races of North Africa have had for ages well built cities, while, according to Murray's *Encyclopædia of Geography*, (London, 1834,) 'There is not, perhaps, in all native Africa, a house built of stone; wood, earth, leaves, and grass are the only materials. One traveller compares their villages to groups of dog kennels rather than of houses.'

The Algerines and other natives of the southern coast of the Mediterranean, developed navigation at an early day, while there has never been a negro nation of ship-builders and navigators, although Africa is surrounded by water; nor has the black race had sufficient intellect to adopt the civilisation of Phœnicia, Egypt, Carthage, Greece, Rome, Arabia, or modern Europe. The physiology of the negro is peculiar; his twelve cubic inches of deficiency in brain, as compared with the Caucasian race, gives him permanently an intellect no better than that of a white child of fourteen years of age. As children, there seems to be no great difference between the races; a fact observed by the abolitionists, who used it to prove that the subsequent difference in the adult state arose from 'not giving the negro a chance', as if the original opportunities of the races were not about equal. Much stress is laid upon the weak argument, that in America the blacks were not allowed to read; but there was a time when every race was without books, and under the great difficulties surrounding the Chinese in California, their children are taught their most difficult system of writing. We are apt to forget that the matter of books, and the intellect which

requires them, must exist before books; and that it is only when the intellectual materials of history, poetry, and civilisation become too cumbrous for the memory, that writing is invented, as labor-saving machines are constructed when the necessity for them arises.

In the diagram of the *States of Society*, (p. 41) the authors of the *Comprehensive Geography* admit the four degrees of enlightened, civilized, barbarous, and savage; and the colony of Liberia is represented as one degree in advance of Greece, India, Hawaia, and China, and two degrees beyond Algeria in civilisation; Liberia being represented as *enlightened*, Greece as *civilized*, and Algeria as *barbarous*. In their anxiety to assert for the negro this high position, the authors forgot to make his religion conform, and in the companion diagram of the principal religions, Liberia and the surrounding region are represented as Pagan. It is remarkable that such a real or affected ignorance of ethnology should exist in Philadelphia, where the researches of the illustrious Morton were made, and that such a book should emanate from the respectable publishing house of Lippincott, which issued the important works of Nott and Gliddon.

Upon a plan which huddles such heterogeneous materials into a single book, one might suppose that the grandiloquent Headley-O-M-Mitchel style would give way to simple narration, not only because the dignity of science requires it, but because little space could be spared for 'thrilling narrative' and matter of 'absorbing interest'; and, when an author prefers them, it is in most cases safe to conclude that he is not fit to write on scientific subjects, or to instruct as a teacher. We quote the initial paragraphs as specimens.

'1. The blades of grass and the leaves of trees, that flourish for a season in the warm sunshine, wither and die. The giant oak, that braves the storms of many winters, falls, and turns to dust. Man, the noblest inhabitant of the earth, himself passes away.

'2. These changes have occurred for ages, but not always. Many, many thousand years ago, God alone existed. He had made neither plants nor animals. He had created neither earth, nor sun, nor moon. No star twinkled in the heavens. There was no other being or form than God.'

The former of these paragraphs has been dilated by verbiage into three sentences, devoted to the blades alone of grass, the

leaves alone (meaning probably deciduous leaves) of trees, next the oak itself entire, ending with the single animal man. Grass and leaves *die*, the oak *falls*, and man *passes away*—recalling the statement of Mr. Marcius Willson, that ‘*Birds* as well as *hens* build nests.’ Describing a figure: ‘Moving from the worm towards the right is a trilobite; near by are two others that have rolled themselves into balls, like wood-lice, and a certain kind of armadillo.’ From the structure of the sentence, the pupil will mistake one of the figures for that of an armadillo. Trilobite is defined as a kind of *shell-fish!* Stone-lilies are defined as ‘singular animals’, but the pupil is not told why they are called *stone-lilies*. In the figure: ‘the nautilus is represented as sailing before the breeze.’ The next paragraph (11) is devoted to the fables regarding this mollusk, winding up with the words, ‘but it now appears that the animal never sailed.’ Then why give such prominence to a false view, both in the figure and the text? We italicise part of paragraph 20:

‘The *hungry* long-necked Plesiosaurus is seizing by the wing a *young Pterodætyl*, that will furnish him an agreeable *repast*. This unlucky flying-reptile . . . has been caught *while in pursuit of insects*, or while *winging over the bay in search of fish*. While seeking to devour other creatures, it has fallen into the jaws of a monster *as greedy and merciless as itself*.—21. [The *Teliosaurus*] killed and ate *with unvarying satisfaction, strangers, acquaintances, and relations*.’

In paragraph 24 we have the *immense* mammoth, the rhinoceros with its *terrible* horn, ‘while horses and cattle roamed the plains, *regaling themselves on the sweet pasture*.’ In paragraph 27: ‘The willow *waved its green tresses in the breeze*; the *stewart* (?) maple, the *wide-branching* beech, the *sombre* pine, and the *giant, gnarly* oak raised their forms from the soil.’ The water of some springs is ‘*intensely* cold.’ Certain views are repeatedly advanced. For example: ‘without *light* and *heat* nothing could live on the earth.’ ‘Animals and vegetables could not live without’ *water*. ‘The *Ocean* is essential to the existence of animals and plants’ . . . ‘what a dreadful place’ (to what? or to whom?) ‘the earth would be without *vegetation* . . . no vegetation of *any sort* to yield food’ to non-existent stomachs. This silliness of hypothesis reaches its climax in paragraph 97, which closes with a forceful *all*, which must refer to certain non-existent animals:

'Vegetable matter by decaying makes the soil richer. Many animals eat vegetable food solely, others feed mostly on the vegetable-eating animals; so that if there were no food for those that eat plants, there would be no animals for the food of the flesh-eaters; starvation and death would ensue to all.' 1

'Herbivorous animals that have a backbone' are mentioned, and the ox, sheep, horse, hog, and others, are included; but these characteristics apply to rabbits, certain fishes, certain *cetacea*, and certain bats.

'The vegetable-eating, or herbivorous animals, remove vegetation *that would otherwise be too abundant*, and in decaying would fill the air with gases injurious to life; while some of them remove the leaves from trees *so that the sunshine may reach the ground to make new plants grow.*' (p. 11.)

'The western breezes, water-laden over the Atlantic though they are, have their moisture dissipated by the heat of the plain' (p. 56); 'dissipated' is defined in a note as 'scattered', but the phenomenon is explained by neither word. The pupil gets the idea that the moisture goes somewhere else, and if he is properly instructed, he will wish to be informed as to its new location. On page 55 there is a figure of 'The Dodo, restored.' Here then we have people discussing science who do not know the meaning of the scientific terms they use. Their figure does *not* represent a restoration, but the dodo itself (about to catch an eel!), of which figures exist which were taken from the living bird. The dodo and several other animals have become extinct within the last three centuries, and our authors give us thereupon the curious statement, that 'this is the only animal that has ceased to live on the earth during the recollection (!) of man.' We are told that 'the climate and other conditions of the country have, doubtless,' caused the African to 'become black and ill-featured.'

In arts, 'Italy is more celebrated for the works of a past age than for those of the present.' But the Laocoon and the Transfiguration belong to different ages. There is not a word about art in the description of Rome, and instead of alluding to the antiquarian library and art-treasures of the Vatican, we are told that 'The Vatican, in which the Pope resides, is the largest palace in Europe.' They make amends, however, by saying that '*Florence* contains the finest collections of paintings and statuary in Italy.' In paragraph 859, we are told that Herculaneum and

Pompeii are in process of excavation, when it is well known that nothing has been done at the former city for many years. No mention is made of the articles found which illustrate ancient civilisation; but we are told that 'remains of men, women, and children' were found. Both cities are stated to have been overwhelmed with ashes, although Herculaneum was chiefly destroyed by lava. The Germans cultivated church music, as we are informed in the following curious normal-school sentence — 'They originated the Gothic style of architecture, and in their churches and monasteries, whose gloomy and majestic aisles were lighted by the colors of beautiful paintings on glass, cultivated music.' Although the pronunciation of hard words is usually given, 'Tuileries' is avoided, and 'Champs élysées' is converted into '*Shomp sel-es-azé.*' When Brazil became independent, 'Portugal lost the richest jewel of her crown.'! Religion and Education are mentioned under Holland, but not under Belgium.

Of our own country we are told, that 'in its progress in all that attends the highest civilization,—it surpasses every other country of the earth.' This must account for the excellency of our science, literature, art, public buildings, normal-schools, reading books, and treatises on geography; for the purity of our politics, in which even clergymen of the most puritanic stamp can take part without suffering moral defilement; and it accounts for the honesty of our officials, since it is seldom that we read of the punishment of defaulters, as in other countries. Even our slaves are so intelligent, that manumission alone is sufficient to make them fit to become legislators. Dr. Franklin 'invented the lightning rod and made wonderful discoveries in electricity'; but independently of the lightning rod, his electrical discoveries were not wonderful. 'Among the scientific establishments are the Smithsonian Institute', the official title of which is *Smithsonian Institution*. The causes of the recent rebellion are thus summarily disposed of:

'The desire to secede from the Union, manifested by South Carolina in 1832, never entirely died out. Originating in the spirit of disobedience to the General Government, it revived whenever weighty opposition was made to the ambitious designs of Southern statesmen, who desired to extend slavery into the free territories of the Union, and to rule, as they themselves might deem best, the whole country. If they could not govern, and, too, with a large degree of the absoluteness enjoyed

upon their slave-worked plantations, where, in the relation of master, most of them had received their first lessons in the art, they preferred to leave, the Union. (p. 96.)

'The rebellion of 1861-4, . . . resulted from the ambition and cupidity of her (South Carolina's) "statesmen."''

As far as we can learn from the 'history' given in this geography, the Northern forces in the late war seem not to have suffered defeat in any battle. Under the head of Texas, the defeat of General Banks is not mentioned. Gettysburg was 'a *signal* victory', Missionary Ridge 'a *splendid* Union victory', Shiloh and Murfreesborough '*terrible* victories', and Beaufort 'the scene of a *splendid* Union naval victory', while

'At Bull Run, Fredericksburg, Leesburg, Winchester, the Wilderness, and at Yorktown, Williamsburg, and other places on the York peninsula, have been fought some of the most *terrible* battles of the war.'!

The maps of this work are meagre, and much below the American standard of excellency. In any system of educational geography, the maps should be full and explicit, with sufficient text to make the pupil familiar with the chief features of his own locality. Most households have no other atlas than that from which the children learn geography, and if the position or name of a county is required, the school atlas is referred to. Thus, in writing to Belton, a county town in Texas, on referring to Mitchell's atlas, we found that it was in Bell county, and on turning to Worren, we found neither town nor county. In fact, the Worren map of Texas is worthless. We do not approve of teaching the counties of the several States, but the pupil should have them at hand.

The style of Worren's Geography is loose, illogical, inaccurate and unscientific, as will appear from an examination of several of the early chapters. Mr. Worren has been many years before the public as a geographer, he is 'author of a treatise on physical geography', a subject which requires a strictly scientific method and a mind of a different calibre from that to which the Common-School Geography owes its form. We have before us a copy of the 'last revised edition', in the Preface of which it is stated that

'Acknowledgments are due to many Educators, in various parts of the country, for useful suggestions kindly offered, and especially to Mr. P. W. Bartlett, late

Master of the Chapman School, Boston, whose extensive geographical knowledge has contributed largely to the general accuracy of the work.'

In the first lesson we are told, that 'The earth is nearly round.' So is a pancake, but he means spherical, and the word *sphere* is used in Lesson V. The earth 'is flattened on two opposite sides', which sides the pupil may fancy to be on the east and west; and not until the third lesson is he told that it is flattened *at the poles*. This is in the Harper-Willson mode of making school-books. 'Mountains and valleys do not affect the form of the earth.' They affect its form sufficiently to make rivers and to affect climate.

'If he could see as much of the earth at a time as he can of the wooden globe, it would appear to him to be what it really is, a great globe.' Not so: the apparent size of a globe, of the moon, or of a more distant planet, depends upon the visual angle. 'The tops of the masts of a ship coming *into port* are *always* seen before the hull.' As at New Orleans? or Baltimore? or Philadelphia? (This is given more accurately in Mitchell, p. 18, § 55.)

'Thus the axle-tree is the axis of a wheel.' No, the axis is not always even in the line of the axle-tree of a vehicle. As an orange revolves on a wire—'So the earth revolves upon its axis. Yet the axis of the earth is not a reality'—'Has the earth a real axis, like a wheel?' The answer expected is *No*, but it should be *Yes*, because the earth has as definite an axis as a wheel on gudgeons, a stick in a lathe, or a vessel on a potter's wheel; and so has a spinning top, a bullet shot from a rifle, or a coin whirled on its edge, and in all these cases the axis is as much a real axis as a diameter is a real diameter, although it may be an *imaginary* line. 'The axis of the earth is inclined to the plane of its orbit at an angle of about $23\frac{1}{2}$ degrees.' *Plane of its orbit* is unexplained, and the definition of *orbit* is deferred to the next lesson. (See Mitchell's or any other real geography.) 'The motion of the earth is so steady and uniform, that we do not perceive it.' Rather because we partake of the motion, as stated farther on.

It must be borne in mind that the next definition is made by a physical geographer. 'A circle is a curved line, every point

of which is equally distant from the centre.' From the centre of the line? or is the circle a figure? Overlooking the fact that a circle is a *plane* figure, his definition is equally applicable to a spiral, and to many other figures. There may be some consolation, however, in knowing that 'the general accuracy of the work' has been secured by the 'extensive geographical knowledge' of Boston, a city which, according to the Geography of Shaw and Allen, is 'the Athens of America', and 'the first city of the Union in literature and society.' It appears that the authors, contributors, revisers, teachers, and proof-readers who have been connected with Worren's Geography, do not know the meaning of the word *Antipodes*; and while they mention the pericecian relation incidentally, they avoid the use of that dangerous word *Periceicians*, which might have proved as disastrous to them as *Ornithorhynchus* proved to Mr. Marcius Willson.

Mr. Worren runs off a definition with parrot-like glibness, to the effect that the '*Antipodes* are those who live on exactly opposite sides of the globe.' But not satisfied with this, he strays away in the manner of a parrot, to obscure his previous words, by asserting that 'Our antipodes are the Chinese; their feet pointing directly towards ours.'! The Chinese are not our antipodes, but our periceicians; their feet are not towards ours, and even in common discourse the word is applied to things which are considered to be diametrically opposite, while antipodes of the Worren School would be able to shake hands at the north pole without destroying their (not antipodism but their) perioikism.

The illustrative cuts are engraved in a good style of art, and are properly adapted to their subjects. They are not, however, always accurate; the view of Notre Dame at Paris, for instance, is quite incorrect; the large circular window, perhaps thirty feet in diameter, and the most conspicuous feature of the front, being omitted.

ART. XI.—NOTICES OF BOOKS.

- 1.—**MAN AND WOMAN**; or, the Law of Honor applied to the Solution of the Problem—Why are so many more Women than Men Christians? By the Rev. Philip Slaughter, Rector of Calvary Church, Culpeper County, Virginia. With an Introduction by A. T. Bledsoe, LL. D. Philadelphia: J. B. Lippincott & Co. 1860.

THIS little book was published just before the war; and, though it was well received by the public, it did not meet with a sale commensurate with its merits. It is, then, with real pleasure, that we now comply with the suggestion to notice it in the *SOUTHERN REVIEW*. It deserves such a notice. Few persons, if any, suffered more from the war, than the venerable and beloved author of the pious little book in question. His library was burned, or destroyed, or scattered to the four winds, by the Vandals of the Northern army; and it fared little, if any, better with his furniture, house, and other property. Merely because he entertained the sentiments which animated the heart of every true son of the South, was he thus visited, in his old age, with utter ruin, destitution, and houseless poverty. Sincerely hoping that his little book may have, *in the market*, the success which it so richly deserves, we shall conclude this notice of it with a paragraph or two from 'the introduction', which was written by us for its first edition. It begins as follows:—

'I will not offend the modesty of the author, nor the taste of the Christian reader, by writing a panegyric on the merits of the following volume. It can and will speak for itself. All it needs is a fair hearing. But the interests of truth require me to say that, while discussing a subject of the highest importance, it exhibits one of the best attributes of good writing, in being at once both *obvious* and *original*. So obvious, indeed, are some of its trains of reflection when once stated, that the reader can scarcely resist the impression that he must have seen them before; and yet they are so original, that he may search whole libraries for them in vain. Nor is this the chief merit of the book. It partakes of the nature of Divine truth itself, in that it is alike adapted to interest the child and the sage, or, what is still better, to awaken serious thought and confer lasting benefit on the reader who, like the present writer, is neither a child nor a sage. Only let it be read, and it can not fail to do good wher-

ever the name of Christianity is respected, or the best interests of society are understood and valued.

'The problem discussed by the author is, Why do so many more women than men become Christians? This is the one point from which all his reflections depart, and to which they return. It is not my purpose to anticipate him, by giving anything like an abstract of his work, or by putting his very suggestive thoughts in any words but his own. I merely intend, by way of introduction, to offer a few additional reflections, which have been suggested by "the infidel solution of the problem", as set forth in the second chapter of the volume. This solution is, in substance, that woman is the weaker vessel, and is therefore more easily deceived by the shams and sophistries enlisted in the cause of Christianity. The spirit of this solution, even when not expressed in words, often lurks in the heart of man, and, with many other things of the same kind, serves to harden it against the influence of the truth. He feels as if religion is an affair for women and children, but not for the higher order of intellectual beings, like himself. He may admit, perhaps, that it is a good thing for "the vulgar herd", as he is pleased to call the uneducated multitude; but he very surely imagines that one who has reached the sublime heights of reason should lay aside "the prejudices of his infancy." This spirit, which lies concealed and unsuspected in the hearts of so many, sometimes speaks out in right plain and intelligible words. Thus, Laplace, in his great work, *La Systême du Monde*, turns aside to deplore the fact that even some of the greatest minds, such as Leibnitz and Newton, have not been able to overcome "the prejudices of infancy", as he expresses himself, and rise above the vulgar multitude into the region of pure reason, where neither a film of prejudice nor a shadow of superstition ever intercepts the view of men or of angels. He seems to stand on some one of the stars in the *Mécanique Céleste*, and look down, with an eye of pride and pity, on the greatest minds of earth, such as Descartes and Pascal and Leibnitz and Newton, because in the fetters of an infantile faith they are still associated with the weaker vessels of humanity.'

We hope, for the sake of our friend, Mr. Slaughter, that the reader is very anxious to see our reply to Laplace, Gibbon, &c., as well as the little book itself; and that he will gratify his curiosity, as soon as possible, by the purchase of the work. He will do a good thing; and he will get a good book.

- 2.—A NEW PRACTICAL HEBREW GRAMMAR, with Hebrew-English and English-Hebrew Exercises, and a Hebrew Chrestomathy. By Solomon Deutsch, A. M., Ph. D. New York : Leypoldt & Holt. 1868.

WHOEVER will master this volume of 268 pages, 8vo., about half of it grammar, and the other half exercises, chrestomathy, and vocabulary,—and two hours a day for six months, will secure the mastery of it,—will find himself able to read the Hebrew Bible by himself, with only an occasional consultation of the Lexicon. It is indeed an admirable manual for theological students, far superior, as such, to the grammar of Gesenius ; and Dr. Deutsch deserves, and we trust will receive, from them a substantial acknowledgment of their indebtedness to him for his labor in their behalf. The getting up of the book is by a Baltimore printer, C. W. Schneidereith, and is, we confess, an agreeable surprise to us ; for excellence of typography, both Hebrew and English, it may challenge comparison with the best work of the Riverside press.

- 3.—A HISTORY OF MARYLAND UPON THE BASIS OF McSHERRY, for the use of Schools. By Henry Onderdonk, A. M., late President of the Maryland Agricultural College. Baltimore : John Murphy & Co. 1868.

WE have here, what our teachers have long felt the want of, a school history of Maryland, in moderate compass, written in a manner to attract and interest the youthful student. We are glad to learn that it is rapidly winning its way to public favor, and hope it will, ere long, come into general use in our schools and academies. We have noticed an occasional discrepancy in the dates of the text and of the chronological tables, which should be corrected in another edition.

- 4.—RICHMOND DURING THE WAR; Four Years of Personal Observations. By a Richmond Lady. New York : G. W. Carleton & Co. 1867. Pp. 38.

In the above volume, an intelligent and cultivated lady gives, from her point of view in Richmond, her observations during the four years of the war. They are exceedingly interesting, and recall many recollections of alarms, panics, battles, heroic deeds, and sufferings by fire, and sword, and famine, and disease. We shall never forget 'Pawnee Sunday.' We were not in Richmond on that memorable day, but we arrived there on the following Monday or Tuesday, and found the city filled with merriment at its recent alarm, and a thousand amusing stories were afloat with respect to the incidents of 'Pawnee Sunday.' It was understood that, in case of danger, 'the bell on the Square'

should sound the alarm ; and some one, foolishly enough, rang the people to arms, while most of them were engaged in Divine service on the Sabbath. No one knew what it portended ; and, indeed, if the whole Northern army had been in the act of entering the city, the excitement could hardly have been greater than it was. 'In an instant,' says our author, 'all was confusion. The men, in the excitement, rushed pell-mell from the churches ; and the women, pale and trembling with affright, clung to their sons and husbands, wherever they could — but getting no response to their tearful question — "What is the matter? What is the matter?"' Hasty embraces, sudden wrenchings of the hand, tearful glances of affection, and our men rushed to their armories, to prepare *they knew not for what*. On every female face was the pale hue of dismay ; but mingled with it, the stern, unmistakable impress of heroic resolution to yield up their hearts' "most cherished idols upon the altar of their country, if need be." Now, all this excitement, and wild confusion, arose from the idle rumor that the *Pawnee*, a Federal iron-clad, was ascending James river to shell Richmond ; or rather from the silly act of ringing 'the Square Bell' in consequence of that rumor. The people of Richmond, however, soon got accustomed to such rumors, and minded them no more than the idle wind. Nay, they soon got accustomed to the stern realities of war ; and often have we thought of 'Pawnee Sunday', as we have seen the men, women, and children, of Richmond, calmly engaged in conversation respecting the fortunes of the day, even while the tremendous roar of the enemy's cannon was sounding in their ears.

In the work before us, we are, indeed, presented with a lively picture of 'Richmond during the War.' But who can describe Richmond as it was before, and as it is since, the war? How strange the contrast! How wonderful the change! We seldom permit ourselves, indeed, to think of that beautiful and beloved city, otherwise than as she was before the war,—before 'stern ruin's ploughshare drove clate full on her bloom.' No city in the world, unless we are greatly deceived, could boast a more delightful society than existed in Richmond before the war. For real hospitality, for genuine refinement of sentiment and manners, and, in short, for all the amenities of social life, we have certainly never known, nor do we desire to know, its superior. Much of that society remains, we are aware, and it will not undergo any material change during the present generation. But what the

society of Richmond, as a whole, now is, or is likely to become, is a question which we shall never have the time or the heart to investigate. The emancipation of its slaves, and the frightful influx of Northern coarseness, will, no doubt, do the work of social deterioration and debasement in Richmond, as well as in all other parts of the South, as surely as night follows the day.

In conclusion, we cordially recommend the little work entitled, 'Richmond During the War', as a readable and interesting production.

- 5.—**DAVIES' ARITHMETICAL SERIES.** New York: A. S. Barnes & Burr.
 Davies' Primary Arithmetic. Practical Arithmetic.
 Elements of Written Arithmetic. University Arithmetic.
 Intellectual Arithmetic.
- RAY'S ARITHMETICAL SERIES.** Cincinnati: Sargent, Wilson & Hinkle.
 Primary Arithmetic. Practical Arithmetic.
 Rudiments of Arithmetic. Test Examples in Arithmetic.
 Intellectual Arithmetic. Higher Arithmetic.
- VENABLE'S ARITHMETICAL SERIES.** New York: Richardson & Co. 1868.
 First Lessons in Numbers. Pure and Commercial Arithmetic.
 Mental Arithmetic.
- FELTER'S ARITHMETICAL SERIES.** Baltimore: Kelly & Piet. 1868.
 First Lessons in Numbers. Practical Arithmetic.
 Primary Arithmetic. Arithmetical Analysis, Intermediata.
 Intellectual Arithmetic. Arithmetical Analysis, Commercial.
- ROBINSON'S ARITHMETICAL SERIES.** New York: Ivison, Phinney, Blakeman & Co. 1867.
 Rudiments of Arithmetic. Practical Arithmetic.
 Progressive Primary Arithmetic. Higher Arithmetic.
 Intellectual Arithmetic.

We came home, the other day, with a basket full of arithmetics. Arithmetics in a basket? Yes, a market basket filled with arithmetics evidently made for the market — why not? It is certainly a good thing to have a good market supplied with good articles; and what harm if, on occasion, they be carried in a market basket?

But all these books — almost too much of a good thing! — were sent to us for notice in the *Southern Review*. What reviewer, however, can do a hundred and one things, and, at the same time, read and examine a hundred and one books? Now, to be honest with our readers, we have not read one of them. As we could not read all, so we resolved to read none; being determined to preserve a strict impartiality as to these candidates for public favor. Still, we intend to make this battalion of books, considered from a military point of view, the subject of a few reflections.

The first reflection which occurs to us is, that we live in 'a progressive age'; and hence the almost innumerable 'progressive series' of school books in different departments of science and letters. Progressive readers; progressive copy-books; progressive arithmetics; progressive all things! Every thing, indeed, seems to be progressive now-a-days, except students. The spirit of progress has, we fear, got out of the minds of our children, and taken up its residence in their school books.

Why, when we were boys — say some forty-five years ago — only one arithmetic was put into our hands. If, in the wide world, there was any other arithmetic but one, we were permitted to live and grow in blessed ignorance of the fact. *Pike* constituted the whole of our 'progressive series'; which was a series of propositions or principles, and not of books. And this — we here solemnly record the fact — was all that we ever needed for our own progress; and this progress has been through algebra, geometry, trigonometry, analytical geometry, the differential and integral calculus, the *Principia* of Newton, &c., &c. That is to say, we have progressed from the first to the last round of the ladder of mathematics, without aid from any elementary arithmetic besides our old precious *Pike*. Why, then, are we, in this progressive age, afflicted with so many progressive series of arithmetics?

This is a very serious question. It seems to admit of several solutions, more or less probable, if not altogether satisfactory and complete. One is, perhaps, that in this progressive age, there must be progress in every thing. Hence, as there is no great room for progress on the first round of the ladder, so this must be split into three, or four, or five, or six, or seven pieces; and so arranged that the student may progress from one part to another of the same round. Or, in other words, one round is split up, and made into a nice little ladder, along which the feet of the delighted little climber may gradually ascend, from his *Primary* to his *Elements of Arithmetic*; from his *Elements* to his *Intellectual Arithmetic*; from his *Intellectual* to his *Practical Arithmetic*; and from his *Practical* to his *University Arithmetic*. Nor is this all; for we sometimes find in the same series a *Speller* and a *Grammar of Arithmetic*. Thus does it require four, and sometimes as many as eight, different volumes, in order to complete one of our modern 'progressive series' of arithmetics.

Cui bono?

We may well say, *Cui bono?* For this is a *practical*, as well as a *progressive*, age; and we may be sure, that all this *division* of subjects and *multiplication* of books, is due to something besides a pure love of science, or abstract delight in the ground rules of arithmetic. Why, then, all this *division* and *multiplication*? It has occurred to us, as a *possible* solution of this question, that this new theory of division and multiplication has been introduced with a view to the practical advantages of addition and subtraction; the great practical advantage, namely, of subtracting from the contents of one pocket, and of adding to the contents of another. We may be greatly deceived; the thought may be very uncharitable; nay, infinitely derogatory to this wonderfully progressive age, in which the old love of money has so entirely given way to the pure love of science; still we can not otherwise begin to comprehend this excessive multiplication and extension of 'progressive series' of arithmetics, and of other school books. It is certain, that as the delighted student takes each new step in the 'progressive series', or rises from one book to another, some hand is thrust afresh into his pocket. All this may be, in some mysterious way or other, for the benefit of pure science alone; but if it is, the *modus operandi* is not perfectly clear to our minds. We really fear, on the contrary, that the love of money still occupies some little corner in the hearts of our book-makers, as well as of our booksellers, and shows itself, occasionally, in the expansion and multiplication of their 'progressive series.' It is certain, that of all the laws of the Bible, none is so completely observed or fulfilled by these books, as the injunction to 'increase and multiply.' They may intend to replenish the earth; they certainly do replenish some one's pockets.

We like the series of Professor Venable, not because we have read it, but because it consists of only three books. There may be good reason for a course of two or three volumes. For, as the great majority of pupils will not go beyond the *Primary Arithmetic*, it is well that they should be able to procure all they need, and no more, in a single cheap volume. We can, then, cheerfully tolerate a series of two or three arithmetics; but a series of six, or seven, or eight volumes, is quite beyond the compass of our charity.

We have, indeed, selected for our own use, Felter's *Practical Arithmetic*; partly because it is a good book, and partly because it is published in Baltimore. In the last edition of this work,

several errors of the previous edition have been corrected, but not all. These errors, or even greater faults, would occasion but little inconvenience, and might even be productive of good, in the hands of a master of the principles, and of the processes, of arithmetic. But books do not always fall into such hands. The living teacher, who is the master of his work, can make one arithmetic answer the purpose of education nearly as well as another. But as, in some cases, the book does more than the living teacher, for the education of the young; so it is highly desirable that it should be as perfect as possible.

6.—*CASH AND CREDIT.* By F. M. Fitzhugh. Baltimore: Printed by Sherwood & Co. 1868. Pp. 14.

THIS is a small book on a great subject. But we do not judge of a book, any more than of a man, by its size. John Philpot Curran, when asked, on one occasion, how he felt in a company of men each six feet high, replied, 'like a silver sixpence among a parcel of coppers.' Our author's little book is worth a dozen of its larger contemporaries.

We can not, it is true, subscribe to all of its positions, at least without material qualifications; and some of them, it must be admitted, are sufficiently commonplace. It could hardly have been otherwise. In discussing the great subject of finance, the commonplaces of political economy must, of course, enter into the performance, however small. Yet, after all deductions are made, there is enough of original matter in the book before us, to entitle it to the serious and respectful consideration of every thoughtful mind. Its suggestions are, indeed, food for reflection; and on no subject is reflection more needed, at this present moment, than on the great subject of finance. Some rich man might, it is believed, render his country an essential service, by offering a prize of five hundred dollars for the best essay on the means of improving its present financial condition. We should be happy to publish such a prize essay in the pages of the *SOUTHERN REVIEW*.

The function of cash is utterly insignificant, as compared with that of credit, in a country of such intense commercial activity as ours. Hence, as credit in some form or other is absolutely indispensable, the only question to be considered is, not whether it be expedient or wise to use credit, but what is the best form it can be made to assume. It is in the discussion of this great question, that the little book before us presents its chief claims to our attention.

The author is, it seems to us, more successful in exposing the evils incident to present and past forms of credit, than in suggesting a better one for the future. He discards all bank-notes; because they are bills of credit, which the banks promise to pay on *demand*; a promise they are unable to perform. This, says he, 'looks less like an absurdity than a case of attempting to obtain money under false pretences'. (p. 7.) Yet, as he himself admits, no one is deceived by such 'false pretences', as he calls them; for 'every body knows', just as well as the bank itself, that 'this currency, in the last resort, is *not convertible*'. (p. 7.) Hence no one is deceived; for every one knows that the banks do not pretend to keep on hand a sufficient amount of coin to redeem all their notes, if presented for payment. Banks may, and do, no doubt, frequently abuse the confidence of the community, by swelling and inflating the currency beyond all bounds of reason and moderation; having an eye to their own gains, rather than to the good of society. Hence the terrible crises in the financial condition of the country, (of which our author so bitterly complains,) or the periodical return of seasons of feverish excitement and wild speculations, and corresponding ones of deep depression and gloom. Hence the depreciation of the currency, and the demoralization of the country. Hence, in fine, the fear, the panic, the rush, the suspension, and the tremendous crash. The land is covered with instances of appalling bankruptcies, misery, ruin, and with universal distrust. Then the cry is, *Down with the banks!* but the question is, what will you put in their place? Our system of banking is, like our system of government, 'beautiful in theory'; *but it does not always work well in practice.*

What, then, shall we put in the place of banks, or bank-notes? Government greenbacks? By no means, says our little book; for they, too, are promises to pay on *demand*, which Uncle Sam, like a hollow bank, has not the least possible intention of performing. Our 'present currency' of greenbacks is, says he, 'to speak plainly, a circulation of national lies.' (p. 13.) Great is the pity, indeed, that our money should be 'lies'. If, on the other hand, lies were only money, would we not have a rich Government?

If our author, then, will have neither bank-notes nor greenbacks, what will he have? What sort of currency, or 'form of credit', will he recommend? We shall answer this question in

his own words: 'For the credit of any corporation, no matter how good and how well guarded, I propose to substitute the credit of the Government, pure and simple. The right to furnish currency should be withdrawn from all banks and individuals. The issues of State banks may be taxed, if not directly legislated out of existence. The national bank currency which now rests on the credit of the Government, and on which the Government practically pays a subsidy of some twenty millions of dollars per annum, and all the greenbacks now in circulation, should be withdrawn as fast as possible, and a new issue of a different character be made in their stead. That issue should be as follows: while the notes should be, in appearance and amounts, similar to greenbacks, instead of promising to pay coin on demand, which the Government can not do now, and never should attempt so long as it purposes to furnish a paper currency, let each bear on its face the promise that when presented at the Treasury in amounts of \$100, or a multiple of \$100, the Government will issue in lieu thereof its coupon bond, bearing five per cent. interest, rédeemable at pleasure after a given year — principal and interest payable in coin. Let the bonds so issued also bear on their face the stipulation that Government currency of an equal amount will be exchanged for them.'

Such is the scheme recommended by our author. 'A very little reflection', says he, (p. 10) 'will show the superiority of this kind of currency over any that has ever been proposed heretofore.' And a very little more reflection, will, perhaps, show that 'this kind of currency' would be far less beautiful in practice, than it is in his theory. This question, however, we shall not discuss at present; especially since this notice is already so long. We will only add, in conclusion, that *experience*, the great test of theories, has very little to say in favor of bills of credit, or paper currency issued by Governments, whether with or without promises to pay on demand. Governments have, in fact, abused their power to stamp paper, and put it in circulation as currency, as much as banks have ever done. It was, in view of such abuse, so frightful both in its extent and in its consequences, that the authors of the Constitution of the United States inserted the provision, that no State shall 'emit bills of credit'. All the wise men of that era, indeed, looked with horror on the power of a Government to manufacture its blank paper into currency. The root of the great evil is an over

issue of paper currency; a temptation to which governments, as well as banks, have too often yielded. We do not see how this great evil would be cured by the convertibility of such paper currency into the interest-bearing bonds of the Government, and *vice versa*. *A paper basis for a paper currency!* Why, this looks like all *credit*, and no *cash*. How can a paper basis cure the evils of a paper currency, or prevent an over issue of it? Will it cure on the great homœopathic principle, *similia similibus curantur*, or will it only aggravate the evil? Is it not, indeed, just as easy to make bonds as to make groenbacks? Our only safety lies, it seems to us, in a return to the old-fashioned principle of a cash basis for our system of credit. 'Cash and credit' are both good. But we protest against all credit and no cash. Cash is, in our opinion, the true remedy; and we are willing to try it, not only on good old-fashioned allopathic principles, but also in allopathic doses.

BOOKS RECEIVED FOR NOTICE.

TABLETS. By A. Bronson Alcott. Boston: Roberts Brothers: 1868.—THE CONFEDERATE SOLDIER. By Rev. John E. Edwards, A. M., D. D. New York: Blelock & Co.: 1868.—AID TO THOSE WHO PRAY IN PRIVATE. By Rev. D. F. Sprigg. Boston and New York: E. P. Dutton & Co.: 1869.—RURAL POEMS. By William Barnes. Boston: Roberts Brothers: 1869.—A BOOK FOR BOYS. By A. R. Hope. Boston: Roberts Brothers: 1869.—LITTLE WOMEN. By Louisa M. Alcott, illustrated by May Alcott. Boston: Roberts Brothers: 1868.—MADAME DE BEAUPRE. By Mrs. C. Jenkin. New York: Leypoldt & Holt. 1869.—ACTA ET DECRETA CONCILII PLENARII BALTIMORENSIS SECUNDI. Baltimore: Murphy & Co.: 1868.

Notices in our next issue.

NOTE.—We had hoped, from information received from the printer, to insert several other notices of books in this number of THE REVIEW; but, contrary to his expectations, the matter already in hand has exhausted our space. Hence we must reserve them for our next issue. One is a notice of *Our Châlires in Heaven*, a beautiful little work from the pen of Dr. Holcombe, and gotten up in exquisite style by J. B. Lippincott & Co. In another, we discuss the *Commercial Position and Prospects of Baltimore*; a subject which we desire to expand into an elaborate article for THE REVIEW. Any information, on the subject, from the merchants of Baltimore, or from any other source, will be gratefully acknowledged by the Editor.

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VOL. V.

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¹ This is the proper title of Article VI.

THE SOUTHERN REVIEW.

No. X.

APRIL, 1869.

ART. I.—*On Liberty*. By John Stuart Mill. People's Edition. London: Longman, Green, Longman, Roberts, and Green. 1865.

We have, more than once, been reminded of our promise to lay before the readers of the *Southern Review* our own definition of the nature of Liberty; a promise which, by the way, we have neither forgotten, nor intended to neglect. For, as we have said, 'Having examined, so freely, the notions of Mill, and Liéber, and Russell, as to the nature of Liberty, we may be reasonably expected to give our own views on the subject. We should be glad,' it is added, 'to do so in the conclusion of this article, [for July, 1867], if our space were not too limited; for we do not shrink from the severe ordeal of criticism to which we have subjected others. We should, on the contrary, court and covet its most searching scrutiny, as the best possible means to eliminate truth from the mass of error in which it is still embedded. . . There is, indeed, no subject under the sun, in regard to which mankind stand in greater need of clear and distinct knowledge, than the nature of Liberty. A work containing such knowledge is still a *desideratum* in English literature. Hence, no mean cowardice or fear of the critic's lash, shall keep us from the resolute endeavor, at least, to contribute our mite toward so great and desirable a work. Especially since no people on earth are more interested in the dissemination of real

knowledge on this subject, than are the inhabitants of the United States. On the capitol at Washington, there is a bronze statue of Liberty, [more than half Ethiopian in hue ;] on which all persons, as well as members of Congress, may freely gaze. But this would give no one an idea of Liberty, any more than poring over the heavy pages of John Stuart Mill, or of Dr. Francis Liéber. The members of Congress should, indeed, inscribe on the pedestal of that statue the words—*To the Unknown Goddess.*'

The above promise has already been partially redeemed. For, in our April issue for 1868, the nature of civil liberty is discussed, with a view to explode certain obstinate fallacies connected with the subject, and open the way to a clear and satisfactory apprehension of this great idol of the modern world. In that discussion, it is shown, unless we are greatly deceived, that the formula of 1787, or rather the great maxim of the past, that 'on entering into society, individuals give up a share of their natural rights, or liberty, in order to secure the rest,' has no foundation in the nature of things. That it is, on the contrary, not a principle of science, but only the creation of political theorists. For, by the organization of society, individuals are, indeed, protected in the enjoyment of all their natural rights ; so that Liberty, instead of being abridged, is really introduced and established, by the State. The State is, then, if properly organized, the author and the finisher of our Freedom. These conclusions, so different from those usually adopted, show the necessity of a re-statement of the great problem of society, as well as indicate a more perfect solution of that problem.

A further confirmation of this view, is derived from a study of *The State of Nature*, as it is called ; which is considered in an article for July, 1868. In that article, it is shown, that the great boasted liberty of such a state is, in reality, a distorted phantom of the imagination, and not a true form of the passionless reason. Or, in other words, it is there shown, that in a state of nature, as it is called, there is license, not liberty ; or ferocity, and not freedom. In such a state, in short, there is violence, anarchy, chaos, and not order, peace, harmony, or *security in the enjoyment of rights.* This, under God, is due to

the State; and this is Liberty. As it is license, and not liberty, which needs the restraint of penal codes and human laws; so the great trouble of society is, not how far the natural freedom, but only how far the natural depravity, of mankind shall be limited and restrained by the edicts of society.

We glorify the State, and we honor its laws. 'The struggle between Liberty and Authority', says Mr. Mill, 'is the most conspicuous feature in the portions of history with which we are earliest familiar, particularly that of Greece, Rome, and England.' Now this struggle, this antagonism, between Liberty and Order, is purely imaginary. Liberty and Order, like twin stars, lend mutual support to each other, and each shines with the borrowed lustre of its fellow, as well as with its own. But despotism is not Order, any more than license is Liberty. Despotism is, on the contrary, inimical to that wholesome public Order, or Authority, which is the source of our social peace and joy, tranquility and rest. It is, indeed, the reign of Authority, of just Government and Laws, which prevents the wrongs, and protects the rights, of all; and thereby ordains Liberty, or 'the secure enjoyment of rights.' The State is, then, the true *Leviathan*, the mortal god which, under the immortal God, holds the flaming sword of justice for the protection of the innocent and the terror of the guilty. Hence, in its origin, in its nature, in its sanctions, and in its effects, it is truly divine.' [Southern Review, for July, 1868.] Having thus opened and prepared the way for the introduction of the idea of Liberty, as well as explained some of its most indispensable conditions, we now proceed to define the thing itself.

M. Guizot, as we have already seen, [in our issue for Jan. 1867,] discredits the attempt to define such complex facts as civilization or freedom. If we repeat here, in part at least, our reply to his objection; this is because the *Southern Review* for 1867, has long been out of print, and cannot be seen by many of our present subscribers. And besides, this reply, by giving the true idea of a 'scientific definition', will enable the reader to judge for himself whether our definition of Liberty be scientific or otherwise, true or false. It is, indeed, in more respects than one, an essential part of the present article. Hence, we must

beg leave to repeat briefly, in this place, the substance of our reply to the above celebrated objection of M. Guizot; especially as it stands directly in the way of our present design, as well as casts discredit on all future attempts to give a 'scientific definition' of the term *freedom*, or *liberty*.

M. Guizot, says Alison, 'is a man of the very highest genius, taking that word in its loftiest acceptation'; and 'if ever the spirit of the Philosophy of History was embodied in a human form, it was in that of M. Guizot.' It is, then, all the more important that, while the authority of his great name is duly respected, and his opinions carefully weighed, his errors should be opposed.

'In the usual general acceptation of terms', says he, 'there will nearly always be found more truth than in the seemingly more precise and rigorous definitions of science. It is common sense which gives to words these popular significations, and common sense is the genius of humanity. The popular signification of a word is formed by degrees, and while the facts it represents are themselves present. As often as a fact comes before us which seems to answer to the signification of a known term, this term is naturally applied to it, its signification gradually extending and enlarging itself, so that at last the various facts and ideas which, from the nature of things, ought to be brought together and embodied in this term, will be found collected and embodied in it. When, on the contrary, the signification of a word is determined by science, it is usually done by one or a very few individuals, who, at the time, are under the influence of some particular fact which has taken possession of their imagination. Thus it comes to pass that scientific definitions are, in general, much narrower, and, on that very account, much less correct, than the popular signification given to words.' He thus repudiates the scientific definition of words, and relies on their popular significations as given by common sense.

'So,' he continues, 'in the investigation of the meaning of the word *civilization* as a fact, by seeking out all the ideas it comprises, according to the common sense of mankind, we shall arrive much nearer to the knowledge of the fact itself than by attempting to give our own scientific definition of it, though

this might at first appear more clear and precise.' Thus, in pursuit of the meaning of the term *civilization*, M. Guizot turns his back on *science*, and appeals 'to common sense', to the 'genius of humanity', for light and knowledge. Now, is this course really sanctioned by science, or by common sense? Or can we escape from the darkness and confusion of the subject, and gain any clearer or more distinct conceptions, by any such vague appeal to any such vague tribunal? If we may judge from the success of M. Guizot, we are bound to answer this question in the negative. For, having interrogated his great oracle 'common sense', he seems to know as little as ever respecting the nature of freedom; as may be easily shown.

'One would suppose, for example, that if any two things on earth should be distinguished from each other, they are human *liberty* and human *depravity*. Such a distinction should, most assuredly, be in every man's mind like the difference between light and darkness. Yet, as experience has shown, it is quite possible for a historian and a philosopher to overlook this distinction, even in pronouncing judgment on the most momentous of questions. M. Guizot, for example, in following his guide 'the popular signification of words,' perpetrates this blunder, and plunges into some of the most wonderful errors ever committed by historian or philosopher. In the great historic struggle 'between liberty and power,' says he, 'the Church has usually ranged itself on the side of despotism.' If so, then this is surely just because the Church has become corrupt, and proved false to her sublime mission to free mankind from the bondage of every corruption, whether internal or external, and restore them to the glorious 'liberty of the sons of God.' But M. Guizot thinks quite otherwise. If the Church has stood forth as the champion of despotism, 'one need not,' says he, 'be much astonished at this, nor charge the clergy with too great a degree of human weakness, nor suppose it a vice peculiar to the Christian religion.' No, none of these things will explain the attitude of the Church, in her unholy alliance with the enemies of God and man. 'There is,' says he, 'a more profound cause.' And strange to say, he finds this more profound cause in the very nature of religion in general, and of

the Christian religion in particular. 'All religion,' says he, 'is a restraint, a power, a government. It comes in the name of a divine law, for the purpose of subduing human nature. It is human liberty, then, with which it chiefly concerns itself; it is human liberty which resists it, and which it wishes to overcome. Such is the enterprise of religion, such is its mission and its hope.' Nothing could be more deplorably untrue. Yet, if the term *depravity* be substituted for the word *liberty*, nothing could be more perfectly true. For Christianity comes, in the name of a divine law, to subdue human *depravity*. It is human *depravity*, then, with which it chiefly concerns itself; it is human *depravity* 'which resists it, and which it wishes to overcome.' Such is the sublime hope and mission of the Christian religion. It wages war with every species of corruption on earth, and especially with every form of despotism. M. Guizot defends the Church at the expense of Christianity; and, writing an apology for the pretended followers of Christ, he indites a libel against the Master himself; making him the natural ally of despotism, and the enemy of freedom. He generously admits, however, that this 'vice' is not 'peculiar to the Christian religion,' but common to all religions!

It is true, that most 'scientific definitions' of liberty, as they are called, are narrow, one-sided, and utterly inadequate. This is, however, not because they are 'scientific definitions', but just because they are unscientific. 'Done by one or a very few individuals, who, at the time, were under the influence of some particular fact, which had taken possession of the imagination'! Aye, there lies the evil,—done at the time! in the heat of the moment! and under the dominant influence of some particular fact tyrannizing over the imagination! That was not *the time* to define liberty. Nay, there is no particular time for such a work; for it is the work of time itself. As to the 'scientific definitions' of freedom, falsely so called, it is just the business of science to go about with her hammer, and, breaking them all in pieces, to set up the true image of freedom in their stead.

'Done at the time, and under the influence of some particular fact.'! Such a definition is not, as M. Guizot alleges, 'determined by science.' It is the spurious coinage of a false imagi-

nation, and bears not the sacred impress or stamp of science. It is, indeed, the business of science, properly so-called, to emancipate the mind of man from every such misguided and misleading imagination, and bring it up to the pure region of truth. It is not science, but only the blind votary of science, that sinks under the influence of 'some particular fact.' Science, on the contrary, casts off the fetters of particular facts, and emancipates herself from all one-sided, narrow, and contracted views. Her vision is as free as it is clear. She comprehends all the great facts she deals with, and, above all, the relations of the facts to one another.

The appeal of M. Guizot from science to common sense, is, indeed, highly unphilosophical; since the natural course of knowledge is from the few to the many, not from the many to the few. The loftiest peaks are the first to catch the rising beams of knowledge, and it is often centuries before these descend on the plains and the valleys below. We did not go to mankind, we went to M. Guizot as one of the great teachers of mankind, in quest of light and knowledge respecting the nature of *freedom*; and he gave us only 'the popular signification of the word.'!

No one can, indeed, define the term *freedom*, except those who understand the nature of freedom. But the question as to the nature of freedom, is one of advanced science, and not of popular decision, much less of popular delusion. Hence, if science be not sufficiently advanced to tell what freedom is, the remedy is not an appeal from science to 'common sense', or to 'the genius of humanity', but a still further advance in science itself. For science must toil on, until the nature of freedom be fully comprehended, and clearly revealed, or else mankind must still remain a prey to the infinite legion of misunderstandings, errors, and confusions, by which they have been so long tormented. She must elevate herself, and common sense also, above their present low level, and show the mind of man the glorious image, freedom, as it is in itself, or else the world must still grope in darkness, and madly rush into 'all imaginable excesses.' The long, deep, earnest, energetic search of science, is the only ground of hope.

But is it not wonderful that any man, and still more that the great embodiment of 'the Philosophy of History', should, in this nineteenth century, disparage the teachings of science, as if they were inimical to the dictates of common sense? All that has been done, all the proud victories and achievements of the human mind, are indeed but the work of good sense or science. For science is only good sense cultivated, developed, expanded, and raised above the dead level of common sense into the bright and shining region of eternal truth. Science is, in fact, only common sense emancipated from its distracted condition, and set on high, in order that it may, far above the distorting medium of prejudice and passion, see visions of glory in the great book of God's creation and providence. This is only good sense, and this is science. Or, in other words, science is good sense transfigured by the power of pure thought and the progress of clear ideas. And if common sense is any thing different from this, then we refuse to follow it as an oracle, or to respect its decision. Science is, indeed, the emancipation and the freedom of common sense; and, consequently, in appealing from the former to the latter, M. Guizot prefers the bond-maid to the mistress.

No where, perhaps, in the whole domain of human knowledge, are the kind offices of science more needed than in the reformation of men's notions of freedom or liberty. For it is here that the delusions of common sense have done their worst, and wrought the direst calamities to the human race. If, indeed, we should judge from the last century, we should be justified in the mournful conclusion, that men do not think about liberty at all; that they merely effervesce. Nor is this all; for getting drunk on the '*vinum demonum*', as St. Augustine calls falsehood or fiction, they madly plunge into 'all imaginable excesses', and overwhelm the world with unalterable horrors and calamities. Thus Liberty, so grossly misconceived and frightfully distorted, is even now the false god to whom more human victims are sacrificed, than were ever immolated to appease the wrath of Moloch, or to satiate the bloody maw of any deity of the heathen world. How important, then, that all thinking men concur, if possible, to form a true idea or defini-

tion of Liberty; and thereby declare to all these blind and drunken devotees of Freedom, the goddess whom they so ignorantly worship!

It is evident, that such a definition or image of freedom should contain every essential element and feature of the thing defined. To hold up 'some particular fact' of freedom as if it were the whole, would indeed be as absurd, as unscientific, as to represent 'the human face divine' as all mouth, or all eye, or all nose. The one would no more be a 'scientific definition' of liberty, than the other would be an artistic portrait of the human face. In both cases each and every feature should be exhibited in its true proportion, and in its proper relation to each and every other feature, or the image will be incomplete and unsatisfactory, or deformed and monstrous.

Or if we should undertake to define the solar system, and should only notice the sun without the planets, or any one of the planets without the sun; this would be a most imperfect description. It would be like M. Guizot's 'scientific definitions', far too 'narrow, one-sided and imperfect' to give any real idea or knowledge of the thing defined. The true definition of the solar system must, it is obvious, contain all the bodies belonging to it, in their proper magnitudes, and in their natural relations to each other. In like manner, the true, or really scientific, definition of any complex term, such as *freedom*, which embraces a multitude of facts or ideas in its meaning, must exhibit each of these facts or ideas in its proper position, and in its due relation to all the others. This term, indeed, embraces a system of correlated facts or ideas, and can no more be fairly represented by a single fact or idea, than the solar system could be represented by a single planet, or the human face by a single feature. The great misfortune is, that in most of the attempts to define liberty, the great central sun-like idea is omitted, while some little dark planetary fragment is made to stand for the whole.

In proceeding to define *liberty*, then, we shall endeavor to omit none of 'the various facts and ideas which, from the nature of things, ought to be brought together and embodied in this term.' We shall strive to exhibit them all; not, however, in a

confused, heterogeneous, and chaotic mass, as they usually appear in the crude contents of common sense, or for the most part, in the writings of M. Guizot and other celebrated authors. We shall aim, on the contrary, to define each essential fact or idea, to show its place in the system to which it belongs, and its relation to the other facts and ideas of the same system. This, and nothing less than this, can be called a scientific definition of liberty; unless, indeed, it be the object of science to mislead and deceive by one-sided, partial, and false views of nature, rather than to fix in the mind a clear, full, round, and complete pattern of her divine forms.

The term *freedom* is frequently applied to the human will, in which case it denotes a fact of nature, with which political philosophy *as such*, has nothing to do. Hence it need not be defined in this place. It belongs exclusively to the province of the metaphysician. Blackstone appears to have confounded this fundamental fact of our nature with the idea of natural liberty, when he says that natural liberty was the gift of God to man at his creation, by which he was endowed with the faculty of free-will. The two things are perfectly distinct. The one is a power, inherent and immutable, having been stamped on the soul by God in the act of creation; the other is a contingent fact, and depends on external circumstances for its existence. If there were no human laws, the will would be free; but, as our natural rights could not be enjoyed, there could be no natural liberty, but only violence and wrongs and oppression. The philosophy of history has much to do with the doctrine of free will; but the science of government, or the philosophy of politics, *as such*, deals not with the profound metaphysical abstractions of that abstruse doctrine. On the contrary, it stays at home, in this little planet of ours, with Bacon, and Aristotle, and Montesquieu, and Burke, instead of making the grand tour of the universe with Plato and Cudworth, or Leibnitz and Clarke.

The same term is also employed to signify a moral state or condition; including a deliverance of the *intellect* from the dominion of ignorance and error, of the *heart* from the reign of evil passions and propensities, and of the *will* from the galling

tyranny of vicious habits. The word is used in this sense by the poet, when he says :

‘ He is the freeman whom the truth makes free,
And all are slaves beside ’ ;

and also by the inspired penman in the declaration, that ‘ where the Spirit of the Lord is, there is Liberty.’ It is this threefold freedom of *intellect*, *heart*, and *will*,—this harmonious and perfect development of all the god-like faculties of the soul,—which constitutes ‘ the glorious Liberty of the sons of God.’

Freedom, in this sense, is not merely a gift ; it is, under God, the highest achievement of man. It is the Freedom for which all other freedom exists ; and in comparison with which all other freedom is as the small dust of the balance. It is, indeed, the Freedom for which man himself exists, the great end and aim of human life, the final cause of the world, and the glory of the universe. Hence all human laws and institutions, if wisely framed, tend to secure this great, central, sun-like Freedom of the spiritual world. All other freedom, whether of the will or of the body, is a blessing, or a curse, in proportion as it promotes, or retards, this glorious Freedom of Spirit. All other freedom, whether *personal*, *political*, or *civil*, bear to this Freedom the subordinate relation of means to an end, and derive all their value from their relation to this great end, or final cause, of human life and the world.

It is an inattention to this great truth, to this all-important relation of all other kinds of freedom to the moral freedom of the soul, which has engendered so much error and confusion among men. God lays the principal stress on moral freedom, or that, in other words, by which we became like himself in *thought*, in *feeling*, and in *will* ; while men, for the most part, in their blind zeal for personal or political liberty, despise and trample under foot the infinitely higher claims of the all-glorious freedom of the spiritual world itself. Hence it is, that in the eyes of would-be reformers, or blind zealots in the cause of freedom, the very wisdom of God itself respecting liberty and slavery is such infinite foolishness. Every law, every institution, every government, and every measure, which hinders, more than it helps, the moral development, or emancipation, of the people

to whom it is applied, is an abomination in the sight of God. On the other hand, every law, institution, government, or measure, which promotes the moral freedom, or progress, of society, is among the means or methods of infinite wisdom for the restoration of a fallen and dilapidated world. All the schemes of men, however grand and imposing, or insignificant and contemptible, in our eyes, should be estimated and valued, not according to their outward appearance, but according to their intrinsic relation to the emancipation of mankind from the dark dominion of 'the world, the flesh, and the devil.' Every thing which answers this end, is good; and any thing which opposes this end, is bad. It should, however, be always borne in mind, that nothing unjust, or immoral, or wrong in itself, can ever answer such an end, or any good purpose whatever.

Political despotism itself is desirable, when, in any case, it serves to promote the moral freedom of man, or the great object for which he exists upon earth. This is, indeed, conceded by the blindest devotees of Freedom; not even excepting Mr. Mill himself. Accordingly, in his work *On Representative Government*, Mr. Mill says: 'A people in a state of savage independence . . . is incapable of making any progress in civilization *until it has learnt to obey* A constitution in any degree popular, . . . would fail to enforce the first lesson which pupils, in this stage of their progress, require, [that is, the lesson of obedience]. Accordingly, the civilization of such tribes, when not the result of juxtaposition with others already civilized, is almost always the work of an *absolute ruler*, deriving his power either from religion or military prowess; very often from foreign arms.' Thus, in the case of savage tribes, political despotism, the most absolute, is deemed indispensable to render them capable of the very first step in civilization, or social progress.

Nay, on the same page of the same work, personal servitude itself, is recommended as the means of promoting the 'freedom' of such tribes. 'Uncivilized races', says he, 'and the bravest and most energetic still more than the rest, are averse to continuous labor of an unexciting kind. Yet all real civilization is at this price; without such labor, neither can the mind be

disciplined into the habits required by civilized society, nor the material world prepared to receive it. There needs a rare concurrence of circumstances, and for that reason often a vast length of time, to reconcile such a people to industry, unless they are for a while compelled to it. *Hence even personal slavery*, by giving a commencement to industrial life, and enforcing it as the exclusive occupation of the most numerous portion of the community, may accelerate the transition to a *better freedom* than that of fighting and rapine.' If, indeed, Mr. Mill had only known how deep, and solid, and permanent, is the foundation of his own apology for 'personal slavery' in the nature of savage tribes, he could scarcely have been so fierce an advocate of the violent emancipation of the blacks of this country, or of the terrible crusade preached by the abolitionists for that purpose. Be this as it may, we have, at least, his own explicit admission, that slavery, is, in certain cases, one of the means or methods of 'freedom' itself.

This was emphatically true in regard to 'the savage tribes' of Africa. By 'personal slavery,' or servitude, the Africans brought to this country were, indeed, delivered from a bondage infinitely more frightful than any the New World has ever seen,—from a bondage to 'the flesh and the devil,' which no words can describe, and which no imagination could possibly conceive, without a careful study of the actual history of such brutalized and debased tribes. We cannot dignify their beastliness with the name of vice, nor their fetichism with the name of idolatry, or atheism. The terms *ignorance* and *superstition* would, indeed, be exceedingly weak, if applied to their gross conceptions of man, and nature, and powers of the invisible world, or to the monstrous diablerie growing out of such wonderful misbeliefs and wild absurdities. If, indeed, any 'savage tribes' ever needed the necessary discipline of 'personal slavery,' it was those of the African race. In an introduction to *the Philosophy of the Plan of Salvation*, Professor Stowe, the husband of Mrs. Harriet Beecher Stowe, declared that God, in order to prepare his chosen people for their mission, sent them into slavery for four hundred years. May we not suppose, then, that if the African race has any mission upon earth, a portion

of them was sent into American servitude, in order to prepare them for that mission? The above learned Professor of Theology would, no doubt, have answered this question in the affirmative, if *Uncle Tom's Cabin* had not taken the place of the Bible in his affections. As it was, he struck out the above passage from his introduction to the work referred to, and the philosophy of J. J. Rousseau rooted out of his mind *The Philosophy of the Plan of Salvation*. It is, however, some consolation to reflect, that the greatest mind New England has ever produced, as well as the most profound student of the Bible, wrote a treatise to show that slavery was, in its *effects* and in its *providential design*, a grand missionary scheme for the conversion of the heathen to the Christian religion. On precisely the same ground it is, that great thinkers and biblical students have, in past ages, justified the institution of slavery, and the eternal word of God in which that institution is sanctioned as one of the methods of mitigating the bondage of 'savage tribes' and raising them in the scale of Freedom. That is to say, the great thinkers and biblical students of past ages, before the world ran mad on the subject of slavery. During the present age, indeed, there has been much froth, and foam, and fury, on the subject of freedom and slavery, and but little deep patient, or sober thought. Hence, in this age, the loud, vehement cry for 'an anti-slavery God and an anti-slavery Bible', from the would-be reformers of the world, who, in their infinite conceit of wisdom, exalt themselves 'above all that is called God.' These men were foreseen and perfectly described, by the inspired penmen, nearly two thousand years ago, in the following words: 'Let as many servants (i. e. *δουλοι*, slaves,) as are under the yoke count their masters worthy of all honor, that the name of God and his doctrine be not blasphemed. And they that have believing masters, let them not despise them, because they are brethren; but rather do them service, because they are faithful and beloved, partakers of the benefit. *These things teach and exhort. If any man teach otherwise, and consent not to wholesome words, even the words of our Lord Jesus Christ, and to the doctrine which is according to godliness, he is proud, knowing nothing, but doting about questions and*

strifes of words, whereof cometh envy, strife, railings, evil surmisings, perverse disputings of men of corrupt minds, and destitute of the truth, supposing that gain is godliness: from such withdraw thyself. But instead of permitting us to withdraw ourselves from them, they pursued us with fire, and sword, and desolation, and misery, and death, till they brought us back, not into the Union, but only into the remorseless clutches of their power. All this was done in the name of Freedom.

Slavery had, it must be admitted, achieved much for the African race. In their native land, for example, the ages have seen forty millions of this race in bondage to ignorant, cruel, and brutal masters, without the least hope of mental or moral improvement. In America, we have seen some four millions of the same race under the control of humane and Christian masters, advancing, continually, from barbarism and bondage toward the goal of civilization and freedom. We do not believe, indeed, that they had become equal to the whites of this country, as their too partial admirers have alleged; for, however beneficent the institution of slavery in its application to such tribes, it did not make them in two centuries, (only half the period for which God sent his chosen people into bondage,) quite equal to those who had experienced fifteen centuries of discipline, training, and progress in civilization and freedom. But, though they were not equal to the white men of America, they were incomparably superior to the savage tribes of their native wilds and jungles. In this imperfect world of ours, civilization and barbarism, liberty and slavery, are, like light and darkness, *relative* only, and not absolute. The dark spots on the sun are, as astronomers tell us, far brighter than the most intense light ever created by human art. Hence, if the insufferably bright light of the argand lamp itself, be held between the eye of the observer and one of the sun's spots, it will be made to appear dark by the superior effulgence of the spot; just as the spot itself appears dark in the fiercer flame of the adjacent portions of the sun's disc. In like manner, the civilization or freedom of the African race in this country, which seems so dark on the blazing disc of American civilization, becomes, if turned and viewed on the back-ground of African barbarism and debase-

ment, bright, and cheering, and beautiful to behold. It forms, indeed, the only bright spot in the history of the African race. If, then, we are not greatly deceived; nay, if all ages except this have not been greatly deceived; there was a profound wisdom in the injunction of God to his chosen people, commanding them to buy their 'bondmen and bondmaids' of the heathen nations round about them. Even Moses Stuart, a learned divine of Massachusetts, who had devoted a long and laborious life to the study of the Scriptures, was compelled, in spite of his aversion to slavery, to recognize the wisdom of the injunction to 'buy bondmen and bondmaids' of the heathen that were round about them. For this decision, he assigns the two following reasons: First, 'the heathen master possessed the power of life and death, of scourging or imprisoning, or putting to excessive toil, even to any extent that he pleased. Not so the Hebrews. *Humanity* pleaded there for the protection of the fugitive. The second and most important consideration was, that only among the Hebrews could the fugitive slave [or bondman] come to the knowledge and worship of the only living and true God.' Thus it was, and thus it ever has been, the office of slavery, when properly applied, to promote the moral emancipation and freedom of its patients. The two reasons above assigned, it is scarcely necessary to remark, applied with peculiar force and emphasis to the past servitude of Africans in this country. But the people did not see this. On the contrary, they neither considered the reasons of the institution, nor the application of those reasons to the 'savage tribes' of Africa, before they set to work, in the name of Freedom, to turn the world up-side-down. Having become, in their own conceit, wiser than all past ages, and even wiser than God himself, they would not condescend to weigh his words, or to consider his reasons. Hence it is that, in their blindness, they have laid the temple of Freedom, so carefully planned and erected by the architects of 1787, in melancholy and appalling fragments on all sides around us. Such is the misery and the madness of man: with whom the wisdom of God itself is foolishness.

Earl Russell, a truly representative abolitionist, expected the most glorious results to flow from the forced emancipation and

freedom of the slaves of the South. Hence, in a speech, delivered on the occasion of his installation as Rector of the University of Aberdeen, he exulted, as he said, in beholding, through all the darkness and tempests of this country, one bright and beautiful vista into its glorious future; the vista, namely, opened by the sudden emancipation of four millions of blacks from personal servitude. But if this was anything more than a flight of fancy, or brilliant outburst of the fashionable fanaticism of the time, there was, at least, no principle in the philosophy of the noble Earl, by which its rationality could be vindicated. For in the very same speech, he laid it down as a law of nature, illustrated by all history, that if two different and independent races occupy the same territory, the inferior race is doomed to disappear before the superior, and become extinct. If viewed, then, in the light of history, or in the light of his own principles, 'the bright and beautiful vista' of the noble Earl, could have shown him, not the freedom, but only the utter extermination, of the four millions of freed blacks of the South. How could his philanthropy, then, exult or rejoice in the contemplation of such an event? Was his love of freedom the hatred of the freed-men? Did he really wish to see them disappear from the face of the earth? The simple truth seems to be, that, in the blindness of his fanatical zeal for freedom, he bestowed little or no real thought at all on the subject of the future destiny of the negro. Whether four millions of his fellow-men should finally reach the goal of freedom, or disappear forever in the abyss of annihilation, was a question far too practical to engage the attention of his abstract philanthropy. Hence, without serious reflection, he favored measures which, according to his own principles, doomed four millions of living men to destruction, and blotted out the only bright prospect in the whole history of the African race. All this, too, was done in the name of Freedom.

Personal and civil liberty, then, stand related to moral freedom, as means to an end. How often, in this world of fanatical reformers, is the end sacrificed to the means! How often is the moral freedom of mankind,—ay, and vast hecatombs of human beings too, sacrificed in the mad pursuit of personal or

civil freedom! If, on the contrary, we would not sacrifice the end to the means; there are cases, and very important ones too, in which civil despotism, or even personal servitude, should be adopted, as a provisional method, to effect a transition from the bondage of savage tribes to the freedom of civilized men; or, in other words, to promote the moral freedom of mankind, on which all other kinds of freedom, whether personal, political, or civil, depend, even as the planets depend on the sun.

The Church, however, rather than the State, is ordained to promote, as far as possible, the moral freedom of mankind. But the relation of the Church and the State to each other, and of each to the moral freedom, or regeneration, of the world, present, for our consideration, some of the most profoundly interesting problems that could possibly engage the attention of man. This is not the place, however, to discuss any of these problems. We shall only observe, in passing, that although human laws should, in certain stages of human progress, be framed without any direct reference to the moral freedom of society, they should never be allowed to interfere with its claims. That is to say, if we would really and clearly understand the complex and profoundly complicated subject of human liberty, we must view the whole system of its correlative facts from the central and sun-like idea of moral Freedom, instead of losing ourselves, with modern reformers, in some little, dark, planetary notion of freedom, from which every thing is seen amiss. It was, indeed, for the advancement of moral freedom, that man was created, and endowed with the faculty of free-will; and it is for the promotion, and for the preservation, of this freedom, that both the Church and the State are ordained of God; the one, as the organ by which the life of society is replenished from within, and the other, as the body by which it is protected against destroying influences from without. Or, to change the metaphor, the one as the channel for imparting life and growth to the kernel, or the budding flower, of society, and the other, as the shell, or the leafy envelope, to shield its life and growth from the manifold external causes of destruction.

But though civil liberty is a means to an end, that is, to moral liberty, this is no reason why it should be lightly es-

teemed. It is, indeed, among the greatest of earthly blessings; and should be extended to all men as far as is consistent with the higher interests of their moral freedom. Civil liberty is, in its cause, the protection which good government and laws confer on the governed; and it is, in itself, the secure enjoyment of natural rights under and by virtue of that protection. Hence it consists of two parts: first, protection against the infliction of positive wrong; and, secondly, against the omission of what is prescribed by the law of nature, or, in other words, by the moral law of the world.

The celebrated word of Sieyes, 'You seek to be free, and yet you know not how to be just,' recognizes the relation between freedom and justice, without pointing out, or defining, that obscure relation. It is this: By justice good laws and governments are ordained; and by good laws and governments, freedom is introduced and established. Hence, without justice, as the fountain of good laws and government, there is no such thing as freedom or *the secure enjoyment of rights*.

Civil liberty is, then, under good laws, the secure enjoyment of our natural rights. From the necessary imperfection and limits of all human laws, it is impossible for them to protect us in the enjoyment of all our natural rights. Hence, as we have shown, [*Southern Review* for April, 1868, Art. I.] civil liberty does not cover, with the broad shield of its protection, the whole ground of natural rights. But in so far as it does go, it proceeds on the principle of the protection of natural rights, either against some act of omission or commission, and never requires a surrender or sacrifice of them. This ground is, in spite of his general doctrine to the contrary, assumed by Burke himself. For, though he contends that when we enter into society we put all our natural rights at the disposal of the governing power; this is only when he is engaged in controversy with the infidel philosopher of France. He no sooner lays aside the partizan, and puts on the philosopher, than he gives utterance to the great truth for which we here contend. 'Every body,' says he, 'is satisfied that a conservation and *secure enjoyment of our natural rights*, is the great end and ultimate purpose of civil society; and that therefore all forms

whatsoever of government are only good as they are subservient to that purpose, to which they are entirely subordinate.'⁽¹⁾ Here, then, is the great truth clearly announced, as self-evident and satisfactory to every one, that good government is, not the surrender or sacrifice of natural rights, but only and always our protection in *the secure enjoyment of them*, which is the definition of *civil liberty*.

The philosophers of the French revolution held two doctrines: First, that 'civil government is instituted for the protection of rights;' and, secondly, that 'all men have the same or equal rights.' The first is the strong, and the last is the weak, point of their philosophy. Sir James Mackintosh, in his *Vindicæ Gallicæ*, unfortunately embraced both doctrines—the false and the true. Hence he was necessarily doomed to self-contradiction. For, if we assume with him, that 'all men have the same or equal rights;' it necessarily follows, that it is impossible to organize society, or to establish public order, without a surrender or sacrifice of some of these rights. Hence, Sir James was compelled to adopt the notion of such a partial surrender of rights. But, as Mr. Burke says, 'if we may be required to surrender a portion of our rights,' why not all? If we sacrifice a part of our rights, does not the amount sacrificed cease to be a question of principle, and become one of 'convenience' merely? Most assuredly it does. But the question is, do we sacrifice a part? This has never been shown, [*Southern Review* for April, 1868], and until it is, the existence of such a sacrifice of rights should not be asserted.

Burke attacked the strong point in the doctrine of the French philosophers, that 'civil liberty is the protection of all our rights,' and he failed to examine its weak part, that 'all men have the same or equal rights.' If, on the contrary, he had sufficiently considered the nature, the ground, and the limitations of human rights, he must have seen that all men are very far from having the same rights; or in other words, if he had refuted the error of his opponents, he would have been under no necessity of denying the truth they had asserted only to re-affirm it again; and thereby contradict himself. In like

(1) Burke's Works, Vol. III, p. 265.

manner, if Sir James Mackintosh had not embraced the same error, he might have steadily and consistently held the great truth which he sometimes maintained. But as it was, he deserts the truth which he had advocated, that 'civil government is a protection of rights,' and which Burke attacks only to re-assert as a doctrine with which 'every body is satisfied.'

Every body is, or should be, indeed, satisfied with the doctrine, that civil government is instituted to secure the governed in the enjoyment of their rights. But, then, all men have not 'the same or equal rights.' One man, for example, who has the capacity to govern himself, or to take care of his own interests, has the right to do so. Hence, it would be an outrage to place him, or his interests, under the control of another. On the other hand, the child, or the man who has not the capacity to take care of himself, or his interests, has a sacred right to the guidance and control of those who are wiser, and better, and stronger than himself. A more anarchic maxim, or wild disorganizing doctrine, it would be difficult to conceive, than that which asserts that 'all men have equal rights.' It is indeed big with a thousand revolutions, as terrible and as bloody as that which desolated France in 1789, or America in 1861.

As civil liberty is subordinate to moral; so is 'political liberty' subordinate to civil. Civil liberty is, in fact, the immediate end for which the State exists; and 'political liberty,' as it is called, is one of the means by which that end is secured. Indeed, if we examine the nature of the thing which is called 'political liberty,' we shall find that it is merely a power, and no part of liberty, properly so called. It is important to bear in mind this subordination in the order of things, this gradation and relation in the complex facts, or fictions, of freedom, if we would avoid the darkness and confusion, the misunderstandings and errors, by which the frame of society has been so often unhinged, and a wild deluge of calamities let loose on a guilty world.

In the institution of civil liberty, it is necessary to protect the rights of man, not only against individuals and masses, but also against the very government introduced for their protection.

Hence, the people are admitted to a share of power in every free government, in order to enable them to protect themselves against the abuses and oppressions of those by whom its co-ordinate powers are possessed. In Great Britain, for example, the people, by their representatives in the House of Commons, hold such a check on the other branches of the Government as to secure themselves against the enactment of unjust and oppressive laws. This power of the people is called 'political liberty;' and no one is supposed to enjoy this liberty, who is not allowed to vote for representatives in Parliament.

But no greater error can be committed, than to confound this power of the people, or this guarantee of civil liberty, with the idea of liberty itself. Though essential to the existence of liberty, it is no more liberty itself than air is the fire, or the life, to whose preservation it is indispensably necessary. It is evident, that if good laws be made, and civil liberty be enjoyed under their protection, it matters but little by whom they are made. It is not necessary that they should be made by the people themselves, or by their representatives, except so far as may be requisite to secure good ones. It would, indeed, be a great blessing if the people could enjoy all the advantages of good laws, without the necessity of devoting their time and labor to their enactment. But they can not have these advantages without a share of power to protect themselves against the passage of unjust and oppressive laws. If they have sufficient power for this purpose, it is all they need, and more would tend to defeat the end of its existence. But this obvious dictate of plain, practical sense, is often lost sight of, and the best interests of society sacrificed, in the pursuit of imaginary rights, or of power under the guise and name of 'political liberty.' In America, this power of the people, having its roots in universal suffrage, was first transformed from a guarantee of liberty into an element of liberty itself; and then, like Aaron's rod, this element was made to swallow up all the others; becoming the despotism of mere numbers and brute force.

'In every State,' says Earl Russell, 'where either the monarch, the aristocracy, or the multitude, is allowed too much power, civil liberty is incomplete.' Here it is called 'the power of the

multitude;’ and is regarded as a safeguard, or guarantee, against the power of the monarch, and the aristocracy. This is well said. It is part and parcel of that good sense, which is the grand inheritance of the English statesman. But in the definition of his Lordship, this power of the people ceases to be one of the means by which liberty is secured, and becomes an element of liberty itself. ‘The greatest advantages,’ says he, ‘which a community can procure itself, by uniting under one government, may perhaps be comprehended under the titles of civil liberty, personal liberty, and political liberty.’ ‘By political liberty,’ says he, ‘I mean the acknowledged right of the people to control their government, or to take a share in it.’ Now which turn of this alternative shall we take? If we say, ‘the acknowledged right of the people to *control* their government,’ this is an American idea. That is to say, it is the controlling, but uncontrolled, sovereignty of the multitude, which, in America, has not only rendered ‘civil liberty incomplete,’ but entirely banished it from the land. If the people be set above the government, if their right to control it be acknowledged and the power given them to execute this right; then will it soon be found, that ‘the multitude have too much power,’ and that it needs to be controlled as well as to control. The truth is, when Earl Russell speaks of the balance of power between the monarch, the aristocracy, and the multitude, as the guarantee of civil liberty, we behold the hereditary good sense of the Englishman. But when he calls this power of the people their ‘political liberty,’ and identifies it with their ‘acknowledged right to control their government,’ the good sense of the Englishman disappears, and his mind is darkened with the vague and visionary conceptions of the political dreamer. The great fact of freedom is then eclipsed by the fiction of an imaginary right.

On the other hand, if we say, ‘the acknowledged right of the people to take a share in their government,’ this is a truly English idea. It admits that the people are not absolutely sovereign, and need to be governed as well as to govern. But the question at the bottom of all this is,—Is this share in their government the *power* of the people, or is it their *right and liberty*? or, in other words, is it an external arrangement of

expediency, or is it an inherent individual right? The people, no doubt, have a right to a share of power in their own government. For, as Earl Russell truly says, 'the only efficient remedy against oppression is for a people to retain a share of that supreme power in their own possession.' But while they have a right to this power as a remedy against oppression, they have an equal right to protection against their own power by the powers of the monarch and of the aristocracy; or, in one word, to that balance of power which is essential to the existence of civil liberty. They have no other, or greater right to their share of power in the government than they have to the existence and protection of the other powers of the government. In fact, the one power is no more a part of the Liberty of the people than the other; and there is no reason why the one should be dignified with the high sounding name of political liberty to the exclusion of the others. If this were all, however, we should say nothing; inasmuch as we abhor all controversies about mere words. But our author proceeds to say: this power of the people 'is called political Liberty. And what is called a love of Liberty means, the wish that a man has to have a voice in the disposal of his own property, and in the formation of the laws by which his natural freedom is to be restrained. It is a passion inspired, as Sidney truly says, by Nature herself.' Now passing by the supposition, or hypothesis, that natural freedom is restrained by laws, (an error already refuted in our pages,) let us notice the assumption, that the natural wish of every man to take part in the laws by which he is governed, is founded in *a natural right*. This fatal confusion of the desire of power in the individual with the love of liberty, with the idea of natural right, points and leads directly to universal suffrage,—the broad and beaten road to political perdition. If the wish, the desire to take part in making the laws have its roots in nature, or in natural rights; then to deprive any man of its enjoyment is just so much slavery. If this desire is love of liberty, then the thing desired is liberty, and to deprive any one of it, is oppression. This is the opinion, the favorite dogma, of Northern politicians. 'A statesman, or founder of States,' says Mr. Seward, 'should

adopt as an axiom,' the declaration, 'that all men are created equal,' and consequently should 'have equal rights in society.' Hence, he draws the conclusion, 'we of New York are guilty of slavery still by withholding *the right of suffrage* from the race we have emancipated.' In like manner, Mr. Chase declared in the Senate of the United States, that the great and all-important democratic principle is an 'equality of natural rights, guaranteed and secured to all by the laws of a just, popular government. For one [he continues] I desire to see that principle, [a perfect equality of natural rights,] applied to every subject of legislation, no matter what that subject may be.' He calls this great principle an 'element of liberty.' By such anarchic maxims it was, that the leaders of the Northern multitude opened, in the name of Freedom, the flood-gates of radicalism, revolution, and ruin.

The power of the people is first called their liberty, is first regarded as the inherent right of every man, because 'all men are created free and equal'; and then this natural right is pushed to its consequences, regardless of all good sense, of all practical wisdom, of all true statesmanship. Thus it is that the power of the people, 'the only efficient remedy against oppression', becomes worse than the evil. The end is sacrificed to the means—civil liberty disappears beneath the shadow of political liberty, as it is called, and the masses rule with despotic, lawless sway. All the checks of the Constitution, by which its framers hoped to restrain the tyranny of the multitude, give way, leaving only the naked and frightful dominion of the absolutely free majority. The free majority? No! the absolutely fierce and licentious majority.

Earl Russell, in his *History of the Constitution and Government of England*, spake wisely when he said: 'In every State, where the monarch, the aristocracy, or the multitude, is allowed too much power, civil liberty is incomplete', (p. 86.) But he utterly loses all his hereditary wisdom out of him, when, in the same work, he declares that 'political liberty', or 'the power of the multitude', 'should be allowed to exist in as great a degree as possible.' It cannot be too great. It may open its mouth, and cry, like the horse-leach, give! give! But still it

cannot have too much. Make it as great as possible. Thus, while the noble Earl himself pursues all the little by-paths, and crooked ways, of the petty politician ; he sends the great people down the broad road of universal suffrage to destruction. When the final plunge comes, as come it must, the astonished universe will hear again, as it so lately heard on this side of the Atlantic, the roaring thunders and wild rage of the bottomless pit of radicalism. And all this, too, will be done in the name of Freedom. How tremendous, indeed, are the bloody sacrifices to that unknown Goddess !

Let us briefly state, in conclusion, the results of the preceding analysis and discussion. Civil liberty is the direct object or aim of human legislation ; at least in the present stage of human progress, or development. But yet, in such legislation, the claims of moral liberty should never be ignored or neglected. For moral liberty is, in nature and in kind, higher and nobler than even civil liberty. It is, in a word, the emancipation of the mind *of the man himself* from ignorance, error, vice—from all manner of imperfection and evil—and his restoration to the image of his Maker. The Christian religion has for its object the development of this kind of freedom, or liberty. The State, on the other hand, has the creation and perfection of civil liberty, *or the secure enjoyment of rights*, for its great end and aim. But, in the prosecution of this great end, the State should never forget the higher claims of moral freedom, nor fail to promote them as far as possible. The State should never disregard, or violate, the principles and conditions on which moral freedom depends ; but, on the contrary, should aid that freedom in all possible ways, even if necessary or expedient, by the use of personal servitude, or civil despotism itself. This higher knowledge of moral freedom is, indeed, as essential to the perfection of human legislation in its efforts to establish civil freedom, as a knowledge of the stars is to a correct survey of the earth, or a satisfactory view of the planet on which we dwell.

The Roman lawyers, as we have seen, viewed civil liberty as merely ‘the power to do what the laws permit.’ They had no higher views than this ; because they knew no higher object

than the State. With them, the State was every thing, and the individual nothing. Or, at least, all his rights were determined by the State, and not by the word of God. This, having brought an immortality of life to light, invested the individual man with an infinite value, solemnity, and grandeur, by the side of which all interests that knew a period sink into utter insignificance. Along with this sublime revelation or disclosure, there was, at the same time, necessarily introduced 'the doctrine of natural rights'; the most dangerous, because the most exciting and the most easily misconceived, doctrine, that ever inflamed the brain of man. The adequate analysis and discussion of this doctrine, is still a *desideratum* in the political literature of the world. If, in the discussions of this paper, or of preceding papers, only one ray of light has been thrown on the great doctrine of rights; then have our poor labors been more than rewarded. But not until that great doctrine shall be more fully explored, analyzed, and discussed, can the true image of Liberty be constructed by the human mind, and erected on a perfectly clear, satisfactory, and solid basis.

ART. II.—*Geographisches Jahrbuch*. II Band. Gotha. Justus Perthes. 1868.

When God created man in his own image and blessed him, He said: Be fruitful and multiply, and replenish the earth and subdue it. This command has ever since moved man, age after age, to go forth and examine his wide domain. Thousands of years have rolled by, and he has, as yet, seen only a comparatively small portion of the globe thus handed over to him by the Creator. But every year adds to his knowledge; new lands are discovered and new brethren become known to him; new means of communication are opened and new sources of well-being placed in his power. The Germans, admirable com-

plers as they are in all departments of knowledge, have begun to record the increase of information as to our globe, and the above excellent work contains a vast amount of useful and interesting matter. It is overwhelming, however, in its massiveness, and is serviceable only for purposes of reference. As our countrymen are growing more and more into genuine cosmopolites, and as such claim, first and foremost, possession of the great domain, we thought it not amiss to extract from the enormous mass of information accumulated in the two volumes of the above mentioned annual and from other similar works, a brief account of the most recent journeys undertaken for the purpose of extending our knowledge of the globe.

If it has been correctly stated that one-fifteenth part of the earth is, as yet, utterly unknown to us, and the mystery shrouding it is still so great that we are not even able to draw the line between land and sea, we must not forget that this vast *Terra Incognita* includes the Polar Regions. The Arctic Zone, irresistibly attractive in spite of the many victims it has already destroyed, has of late been sought more eagerly than ever; although political commotions in Europe and with us, have prevented our country and England from sending out large expeditions. Captain Sherard Osborn, famous by his exploits and his undaunted perseverance, proposed to reach the pole on sleds from Baffin's Bay by the left shore of Smith's Sound and Kennedy's Channel, but the failure of Whympers, well known by his successful ascent of the Wetterhorn, has induced him to postpone the enterprise. Whympers attempted in 1867, in company with the experienced naturalist, Brown, to travel in sleds across the almost unbroken ice, which covers Greenland in summer as well as in winter, but he encountered, unfortunately, the mildest weather ever known in the Arctic regions, and found impassable rivers and lakes of molten snow, which prevented his progress.

The great geographer of Germany, Dr. Petermann, started in May, 1868, a small yacht, under Koldervey, for the East coast of Greenland, in order to explore those regions beyond the point where Scoresby and Clavering had ended their labors. This expedition, also, was foiled by immense masses of ice, and

was attended with no other success than that of having penetrated to the $81^{\circ} 5'$ N. Lat. the highest point in northern latitude ever reached by a vessel.

At the same time an attempt was proposed by a Frenchman, G. Lambert, to pass through Behring's Straits into the Polar basin. He appealed to the public for contributions, and received from the Emperor at once 50,000 francs, but does not intend to sail until the whole requisite sum of \$120,000 is in hand; so as 'to make the expedition worthy of the greatness of France.' Even in Sweden, the poorest of European states, new efforts have been made to provide the means for another effort to examine the Archipelago of Spitzbergen, and the two learned Professors, Nordenskjöld and Lilliehöök, were sent, with the aid of their government, which furnished a steamer, and of the city of 'Gottenburg, which provided the money, on their bold enterprise to reach the Arctic from that direction. They have returned with valuable information, but without having achieved the great end of their voyage.

While men of science everywhere deplored these failures, news was suddenly brought that daring whalers from our own shores had succeeded in finding again, a land which had been first discovered by Kellett in 1849, to the northwest of Behring's Straits, and then lost again, so that its very existence was doubted. Capt. Thomas Long, in command of the bark Nile, saw—according to his report published in the Pacific Commercial Advertiser of Honolulu—on the evening of the 14th August, 1867—land, and, on the following morning, approached within 18 nautical miles of it. He was enabled to make careful observations, and found himself in $70^{\circ} 46'$ N. Lat. and $178^{\circ} 30'$ E. Long. The lower parts of the land were free from ice and looked green as if they were covered with vegetation. The space between the ship and the coast, however, was filled with drift ice, and as there were no whales in sight, the captain did not feel himself justified in exposing his vessel to the great danger it would have incurred in an attempt to go nearer to the land. He followed the coast for two days longer, always keeping it close in sight, and, at times, approaching it as near as 15 miles; on the third day he saw a mountain,

apparently an extinct volcano, and, by rough measurement, 2,480 feet high. The south-eastern cape he called Cape Hawaii, and from there he saw the coast and a lofty chain of mountains stretch northward as far as the eye could reach. From all appearances, he judged the land to be inhabited, since there were large numbers of walrus in the neighborhood, and the country looked much greener than the coast of the continent. To the west of Cape Jakar, on the Siberian coast, he observed another cape of most peculiar appearance. The summit and the sides were covered with countless pillars, some upright and others prostrate, some resembling pyramids and others like obelisks. They were scattered over the surface, lying in groups of 15 or 20, and separated from each other by hundreds of yards. Another whaling captain, Phillips, of the *Monticello*, joined him here and called his attention to a large black substance on the slope of a hill. They examined it carefully with their glasses, and came to the conclusion, that it was coal, and evidently used by the inhabitants. He named the re-discovered land, Wrangel's Land, in reverent acknowledgment of the man who had spent three years in these inhospitable regions and was probably the first to declare boldly in favor of the existence of an open Polar Sea. The western cape was called Cape Thomas, after the man who first sighted it from the masthead.

Master G. W. Raynor, of the ship *Reindeer*, reports to the same paper, that the land usually called Plover's Island, an extensive land with high summits, had been thoroughly examined by him in the summer of 1867, and proved to be a continuous continent extending as far as the 72° N. Lat. He sailed three times all along the south and east coast, and had no idea that there was water beyond, so as to make them islands. Capt. Bliven, finally, was at the same time beating about near Herald's Island, at a distance of about 80 miles from the south-eastern cape of Wrangel's Land, and saw the mountains extend towards the north as far as the eye could reach. He had no doubt, that an open passage existed along this coast, which would finally lead into an open Polar Sea. All the informants agree as to the unusually favorable charac-

ter of the summer of 1867, both on account of the clear weather that prevailed and the remarkably small masses of ice in the Arctic waters. It is all the more to be regretted that so favorable an opportunity should have been allowed to pass unimproved.

The second great mystery of our globe is, beyond doubt, the interior of Africa, and here also some progress has been made during the last three years. The most important discoveries—Dr. Livingston's report has not reached us—were made by a German explorer, Gerhard Rohlfs, who failed in his effort to travel through the whole of the Eastern Sahara and thus to reach Waday, a land well known but not yet visited by any European; but, on the other hand, he succeeded (the first traveller who did so) in traversing the continent from the Mediterranean Sea to the coast of Guinea. He had proved his courage and his unequalled tact in former journeys, during which he explored the whole of the Maroccan Sahara, crossed the Atlas and penetrated through Mohammedan tribes full of bitterest hostility against Christians, to the oasis of Tuat, in Central Africa. His magnificent work on the results of his perilous travels, has not yet been published, but some of the fruits of his labor have become known. Thus he has established, beyond doubt, that there are two transition zones between the Sahara and the Soudan, a vast fertile plain under 16° N. Lat., and a Mimosa forest which extends from Belkashifari to the Tsad, forming a belt of dense wood so broad, that it took several days' journey to traverse it, and probably stretching through the whole of Northern Africa along the line of the Soudan. The forest stands upon soil which has evidently been a desert; it is now rich humus, but not the smallest pebble can be found in its vast breadth, exactly as on the great plain of Hindostan. Another fact of which he became convinced on the spot, is the gradual extension of the fertile soil northward, so as to diminish the Saharas. The great contrast between the two zones, the Sahara and the Soudan, he ascribes exclusively to the influence of the prevailing winds, and believes that as long as the north-easterly tradewind comes as a dry wind, from Asia to Africa, the Sahara must

remain essentially in its present shape. To the south of its limits, on the other hand, there blows for many months a south-westerly wind, known as the West African Monsoon; it comes from the coast of Guinea and is laden with moisture; hence it brings fertility as far as it reaches, and marks the line of the Desert southward. Nor are his suggestions as to trade and commerce with the interior less important, especially as his early training in Bremen had fitted him well for such purposes. He urges strenuously the opening of a trade with Bornoo from the coast of Guinea, on the ground, that the country levies no tolls or customs of any kind, while yet the transport on the usual road through Tripoli and the Sahara is too expensive for Europeans to enable them to compete with the Arabs and the Berbers. The proposed road is up the Niger and Benue by water, and then by land for about 300 miles to Kuka, a journey which would be little expensive and free from all danger. His main merit lies, however, in his thorough knowledge of the Mohammedan African; he knows the Arab, the Berber, and the Tibboan thoroughly, and gives most interesting accounts of their national peculiarities. Every now and then we gain thus a startling insight into the mind of these barbarous races. Thus he tells us of the Tibboans, that they have largely preserved their independence under despotic rulers by requiring each new king, when he succeeds his father, to distribute all his property and thus render himself unable to oppress his people! Their Sultans are only judges in peace and leaders in war; they can neither levy taxes nor dispose of the lives of their subjects. Strangely enough they put blacksmiths under the ban; no Tibboan would eat with one of that useful craft from the same dish or sleep with him under the same roof. To call a man a smith is a mortal offence. But not unlike the manner in which executioners were treated in the middle ages, here also contempt and a peculiar reverence go hand in hand. To beat or to kill a smith, is a heinous crime; the decision of a blacksmith's wife is an oracle, and when physician and faki alike are helpless by the sick-bed, the sword-maker is called in as a last resort. They profess Mohammedanism, but comply only externally with the laws of the Islam; as wives are more

highly esteemed among them than elsewhere, the missionaries try to gain an influence through them; the schools are filled with girls rather than boys, and, after the manner of Southern freedwomen, the Tibboan lady parades all day long with her slate under her arm, to show that she is a scribe. The Arabic is their common language, but their knowledge of it very limited. The slave trade is here as flourishing as elsewhere in Africa, having received a new impetus from the inability to export as heretofore; and in Borneo even the subjects of the Sultan may be seized at any moment to be sold as slaves for his benefit. Rohlf's topographical labors are invaluable and furnish the most important additions to our knowledge of Central Africa, since the admirable work of Barth was published. He has recorded accurately the all-important route from Moorzook by way of Bilma to Kooka, and to the south-west of the latter city he has trod upon entirely new soil. His visit to Tibesti, one of the principal Tibboo countries of the Eastern Sahara, was all the more fruitful, as he was the first European who had reached that rich and fertile country.

A French expedition has likewise been crowned with brilliant success. A former governor of Senegal, General Faidherbe, had clearly perceived the necessity of putting the interior of the Soudan, especially the banks of the Upper Niger, into communication with the French colonies of the west coast, and directing their trade into this channel, if Senegambia was ever to become a self-supporting dependency. For this purpose a navy officer, E. Mage, and a ship surgeon, Dr. Quintin, were sent up the Senegal and Bafing, and reached, after many delays and dangers, Segou Sikoro on the Niger, in 1864. They were compelled to await there the return of messengers whom they had sent back to Senegal, became involved in domestic broils and civil wars, and did not return till 1866. Their reports were published in the *Revue Maritime and Coloniale* for 1868, and contain most valuable information about large districts hitherto utterly unknown, accounts of very great changes in the latitude of important points, and maps and charts of surpassing beauty. The whole journey is a striking evidence of modern gallantry, and remarkable for the economy

with which it was accomplished: it cost little over a thousand dollars.

In the south of Africa the name of Karl Mauch has become illustrious by his exploration of the Transvaal Republic, a district very imperfectly known before, and by the discovery of immense gold fields in the north. During 1866 and 1867 he accompanied the intrepid elephant hunter, Hartley, on his expedition northward, penetrated the unknown land as far as the sources of the Umfule, which falls near Mpata above Zumbo into the Zambezi, and explored a large portion of the unknown watershed between the Limpopo and the Zambezi. He found it a table land nearly 7,000 feet high and often thirty miles wide, with numerous conical mountains rising from the surface; the rock was mainly granite, with metamorphic formations upon it, while the summits showed diorite and basalt. The vegetation is not at all tropical; there being neither palm trees nor tree ferns here, but only thick grass with thinly scattered trees, and upon the rich pastures innumerable herds of game. The result of the hunt in 1867, was 91 elephants, 5 rhinoceros, 2 hippopotami, 8 elands and a host of smaller game, with 4,000 pounds of ivory of the best quality. The population is astonishingly thin; the native Mashona have been conquered and nearly exterminated by the Metabele and the few survivors are kept as slaves. Beyond Mosilikatze the travellers found vast districts utterly abandoned; here and there deserted homesteads spoke of former better times, and where the gold mines were discovered at the head-waters of the Umfule and the Unniati; here traces of former workings were also discerned. It must be borne in mind, however, that the Portuguese knew centuries ago of the existence of gold in those regions, and obtained thence large quantities. Dr. Petermann even thinks that K. Mauch has discovered again the Ophir of King Solomon.

Heretofore unable to pursue his plans independently, and compelled to join others on their hunting expeditions, the intrepid traveller has, at last, been provided with such means as will enable him to travel hereafter according to his own wishes and the demands of science. He started immediately

once more northward in May, 1868, and great expectations are entertained from his new journey.

The great name of Dr. Livingstone promises, of course, the largest additions to our knowledge of this mysterious continent, when his reports shall reach England. He left the coast early in 1866 to sail up the Rovuma, which he had already twice ascended in his little steamer, and had skirted the southern end of the N'yanza when he was reported to have been murdered by thievish Zooloo Caffres. The British government sent an expedition out under E. D. Young, who reached the spot on which the murder was said to have been committed in 1867, and found that Livingstone had passed safely beyond it, although deserted by his hired men. In the meantime, reports of the presence of a white man at the southern end of Tanganyika Lake reached Zanzibar, and an elephant hunter met near the Victoria Falls on the Zambezi a number of men, who had been hired by Livingstone long after the date of his reported death. The hopes thus excited were not doomed to disappointment; for in April, 1868, letters from the great traveller reached England, which had been confided in February, 1867, at Bemba, to an Arab messenger, who had taken a year to reach Zanzibar. The latest news bears date October and December, 1867, when Dr. Livingstone was on his way to Udjidji on the eastern shore of Tanganyika Lake, waiting for the close of a war between natives before proceeding further. He had received letters and provisions sent to him from Zanzibar. It is supposed, that he has pushed on from there to the Albert N'yanza, in order to decide the question, whether that lake is connected with the Tanganyika. The results of his exploration cannot fail to add to his fame and to crown the work of the indefatigable traveller, who, for the greater honor of God and the welfare of his fellow men, has lived since 1840 in Africa, and has made since 1849 the most brilliant record achieved by modern explorer.

It is sad, that the annual tribute of life, so rigorously exacted by the dark regions of Africa, has at last been paid by a man of unusual promise. This was the French officer, Le Saint, who went in 1867, supported by the Geographical Society of

Paris, to the land of the Nile, with the purpose of passing through the continent from Khartoum to Gaboon. He had the great advantage of being aided by the brothers Poncet, the largest and most intelligent ivory dealers on the Upper Nile. Unfortunately he had no sooner set out on his perilous journey, accompanied by a well-armed force in the pay of that firm, than the relations of the native tribes near the White Nile and Bahr el Gasal became hostile, and civil war broke out all over that country. Their last trading station was already beyond the territory of the Njam-Njam and probably outside of the region watered by the Nile and its tributaries. But here also lay a great point of interest. The brothers Poncet had in their possession undoubted information of a great river Babura, flowing from east to west and forming near 16° E. Long. from Paris, a lake, called Metuasset, which sent a tributary on one side to the Benue, and on the other to the Tsad Lake. Besides, they had been told that this unknown river came directly from the Albert N'yanza, and that another river, called 'Suë, connected it with the Tsad Lake. This information, startling enough to excite serious doubts, was yet amply supported by previous testimony; the most careful observers, like Petherick, Heuglin, and Barth himself, had all heard of such a river flowing westward, and on Hassenstein's admirable maps of Central Africa a lake is placed on the very spot where Metuasset Lake was reported to be found. A whole series of reports, old and new, had previously been collected, all agreeing in the existence of such a river and such a lake, and Le Saint burned with the desire to settle the question by his own observation. He was not fated to accomplish his purpose, for death overtook him before he reached the Equatorial regions.

The short campaign of a British expeditionary force against King Theodore, of Abyssinia, has furnished much valuable information as to the races which inhabit that land of spurious Christianity; but its soil, climate and physical conformation were previously so well known, that few additions have been made here to our knowledge. The only important point is the extremely interesting fact that there is a region in that country, between the Houakeel Bay and the lake Alelbad, which

✓ lies 193 feet below the level of the Red Sea, a depression far surpassing that of the Bitter Lakes near Suez, which it is intended to fill up for the purposes of the great Suez canal.

Next to the Polar regions and the mysterious sources of the Nile, Australia presents by far the greatest attractions for the adventurous traveller and the scientific explorer. The brilliant accounts of men like Burke, Stuart, Landsborough, Walker, Howitt, and a whole host of others less fortunate, have led the world to expect great results in rapid succession from such enterprises, and the last few years have formed no exception.

Unfortunately most of these travellers were without that thorough scientific preparation, which alone can make such explorations of permanent value. They possessed a noble spirit of self-denial, and often truly marvellous strength of purpose combined with very uncommon physical powers; but they were imperfectly qualified for scientific researches, if we except Babbage, who confined himself to the regions near Torrens and Eyre Lake, and Wills, whose sudden death by starvation left his otherwise invaluable diary in an imperfect state. No class of travellers in any portion of the world is superior to these men in the instinctive ability to scent water, to treat horses judiciously in most trying situations, and to endure sufferings of every kind and every degree; but they lacked the tact to connect cause and effect, to seize at a glance the characteristic features of a landscape, to divine, as it were, the natural boundaries and watersheds, and to discern the great principles underlying a number of single features. The contributions they have made to the maps of Australia are, therefore, of the greatest value; but they left unknown the general characteristics of climate and temperature; they could not give the elevations of mountains and table-lands, nor were they able to classify the results of their observations of the Flora and Fauna of that remarkable continent.

It was, therefore, a matter of special congratulation, that two of the later expeditions, those of McIntyre and Warburton, could furnish a series of measurements and an insight into the true nature of the interior of Australia, such as had never before been obtained. A committee of ladies in Victoria had

already, in 1865, collected funds for the purpose of sending men out in search of the remains of poor Leichhardt, who had disappeared in Queensland without leaving a trace behind him. Duncan McIntyre, who had discovered traces of the unfortunate traveller, was sent out with 12 camels and many horses. He followed the Parru upwards and then went northwestward to Cooper Creek, but the fearful drought of that year soon deprived him of all his animals and of half of his companions, whom he was forced to send back to the colony. With the remaining portion he continued, undaunted by his sufferings, his journey along the Barkee, crossed it at a point above Kennedy's remotest explorations and reached, in 1866, the McKinley range and the Flinders river. On this line he measured nine elevations with the aid of the barometer, but unfortunately chose for the purpose the summits of low hills, which could not have been more than a few hundred feet above the general level of the country. He ascertained the height of the watershed between the Barkee and the Flinders not to exceed 1000 feet, and in Eastern Queensland he found the table-land to rise nowhere above 2000 feet. Unfortunately, he also succumbed soon afterwards to a malignant fever, which was then prevailing near the Gulf of Carpentaria. His companion, Sloman, followed him a few days later, and his successor in the command, W. F. Barnett, returned, in 1867, to Sidney, without having discovered any traces of Leichhardt.

Major Warburton, whose name has of late become famous in the annals of Australian explorations, reached, in 1866, the as yet unknown northern end of Eyre Lake, and discovered on the eastern side the mouth of a large river, which he sailed up, and recognized as a branch of the Barkee. If this discovery be connected with the facts, that Strzelecki Creek has been found to be a southern branch of the same river, that McKinley and Howitt have found a northern branch falling into Lipson Lake on the Hope Plains, and that Moravian missionaries have, in 1867, met with still another southwestern branch, falling into Eyre Lake, then it is evident, that the Barkee forms a gigantic delta, twice as large as that of the Nile, and that its waters do not find an outlet into the sea, but are lost in a

vast, internal basin, of which lake Eyre forms the largest and lowest part. This is the almost unique feature of Australia: a vast low region in the very centre of the continent, surrounded by the Flinders, McKinley and McDonnell mountain ranges, and containing a complicated network of rivers, all of which are at one time swelled to overflowing by heavy rains and at another altogether lost amid sand and debris.

Landsborough is another name of great renown and good omen in the history of the young colony. Living as government resident in Burketown on the Albert river near the gulf of Carpentaria, he examined, in 1867, the Morning Inlet, which falls into this gulf between Leichhardt and Flinders river and found it navigable for quite large vessels up to 18° N. Lat., opening thus a valuable region for settlers. Next he ascertained that the so-called Bynœ river is nothing but the mouth of the Flinders, bordered on both sides with rich pasture lands. On the Norman river he founded a new city. When, in 1841, Capt. Stokes called the southern shore of the Gulf of Carpentaria the Plains of Promise, only a small corner of Queensland near Moreton Bay was settled. This part of Australia was next separated from New South Wales as an independent colony, and now it contains over 100,000 inhabitants, and its prosperity is amazing. As soon as settlements were established, a desire was excited to explore the new colony and to ascertain its physical peculiarities, and efforts in this direction have been crowned with success. This is evidently, in Australia, the only safe and profitable way of obtaining valuable knowledge. In other portions of the country, where the explorations have preceded the settlement, they have rarely, if ever, led to happy results. We abstain, therefore, from recording here the numerous expeditions, which have been sent out to other parts of Australia, although some were richly provided for by the government, and others led to the exhibition of almost sublime courage and energy.

In Polynesia great, though not particularly valuable, discoveries have been made. A Dr. E. Graeffe was sent out by the liberality of a Hamburg merchant, Godefroy, to visit, in 1866 and 1867, a number of islands in the Great Ocean. He dis-

covered several new ones, and furnished most minute maps of all, with very interesting reports as to their Fauna and Flora.

New Zealand is still the scene of Julius Haast's indefatigable labors. His main purpose is to explore the Southern Alps. Everywhere he has met with remarkable evidences of the glacier-period, and his maps are looked for with great interest. The well-known botanist, J. Buchanan, ascended in 1867, in the province of Marlborough, the Kaikora Mountains, and in Taranaki, Mount Egmont; he found the former 9,700 feet and the latter 8,270 feet high. He corrected the error of Dieffenbach, who thought he had observed a snow-line on Mount Egmont, for in February, 1867, there were only a few patches of snow seen in former craters, which lay several hundred feet below the summit, and these also had disappeared in May.

A very important acquisition to our knowledge of that ocean and to the commerce of the world, was the survey of Brook's Island by Capt. Reynolds in 1867. Discovered by Capt. Brooks in 1860, it was found to be situated to the north-west of Pearl and Hermes Reef, in $28^{\circ} 14'$ N. Lat. and $177^{\circ} 23'$ W. Long., a mere atoll with a few tiny islands in the basin and a good harbor, Welles Harbor, not unlike that of Honolulu, but larger and safer. It serves now as a station for the vessels of the Pacific Steam Company, which run between San Francisco and Japan and China, and is admirably adapted for the purpose of a coaling station, since it lies exactly on their course and offers great natural advantages. The Hydrographic Bureau of the United States has therefore given to the whole group, including Ocean Island, Sand Island, Green Island, and Pearl and Hermes Reef, the common name of Midway Islands.

Asia has been quite recently the scene of a journey accomplished under perfectly unique circumstances. Capt. T. G. Montgomerie, under whose superintendence the first scientific surveys of the district of the Himalaya and the Upper Indus have been carried on for some time, has availed himself of every opportunity to extend these valuable labors beyond the limits of the British territory. Thus he induced Captain Austen, in 1863, to go from Leh across the Tschang-La pass to the Pangong lake; Johnson, in 1865, from the same point across the

Karakorum and Kuen Luen to Eltschee in Khootan; and a Hindoo well practised in the use of geodetic instruments, to Jarkand. Finally, he prepared two Pundits—learned Brahmans of the higher classes—for making surveys and observations, and then despatched them to travel through Thibet proper, from Lake Manasarawar in the west, to the capital Lassa, to examine thoroughly the great route which was said to exist between these two points, and to learn all they could as to the course of the Brahmapootra within Thibetan territory. They were thus to complete what Huc and Gabet had not been able to accomplish; for though the latter had reached Lassa, they had come from China, and the whole western plateau belonging to Thibet was yet utterly unknown. After many fruitless efforts to obtain permission from the Chinese authorities, one of the two Pundits succeeded at last in entering Thibet, though he had to promise, upon his life, that he would not attempt to visit Lassa. He had started in March, 1865, from Khabmandoo, but it was July before he could cross the frontier at Kirong, and September before he found himself travelling on the great route itself along the Brahmapootra. Joining a merchant from Ladak, he pursued his way eastward, and was bold enough to enter the forbidden city early in January, 1866. He remained there till the end of April, visited several of the great Buddhistic convents in the neighborhood, saw the Dalai-Lama, and even conversed with him, and then returned on the same road as far as the Manasarawar Lake, left it at Dartshang, and crossing the Himalaya, found himself once more on British soil. The young man whose name has been kept secret for evident reasons, had thus accomplished his aim with rare self-denial and surpassing courage. Faithfully obeying his instructions, he surveyed with minute care the whole road for 1,200 miles! For this purpose he travelled invariably on foot, and counted his steps, passing at every hundredth step a bead of his Thibetan rosary, which he wore in his left hand, after the manner of the people among whom he was. In order not to be disturbed in this monotonous occupation, he always walked either before or behind his companions, and if any one approached him with an intention to speak to him, he turned

industriously his little prayer-cylinder, and his apparent devotion kept all at a distance, so that he could use unobserved even his compass. The cylinder, however, did not contain, like others, a paper roll with the Buddhistic prayer, but long narrow strips of paper, on which he jotted down the bearings of the compass, the number of steps, and other important notes. Far more difficult was it to use, without being discovered, the quadrant and the thermometer, which he had smuggled over the frontier in the false bottom of his little travelling-box. A wooden bowl, such as in Thibet is worn by everybody in the belt, filled with the mercury which he carried in a tiny phial, served as an artificial horizon. All these difficulties were enhanced by his want of money, as the unexpected delay at the frontier and other points had exhausted his scanty supply. He had to work for his living, and to earn a pittance by teaching native merchants the keeping of accounts as used in India. In Lassa he was more than once on the point of starving to death. At the same time he had to tremble continually, lest he should be discovered, and one day he actually met in the streets of the capital the very governor to whom he had pledged his life that he would not visit Lassa! His pluck and his endurance appear all the more remarkable, when it is remembered that he was not borne up by the religious zeal of the missionaries, nor the ambition nor the scientific ardor of European travellers, nor even by a wild and adventurous spirit. Under all trials and in all emergencies he remained perfectly calm and resigned, though at times nearly despairing, and his sole motive seems to have been a strong sense of duty. Surely a noble member of the great family of discoverers and explorers, whose name will one day shine bright in the annals of Geography! Captain Montgomerie has published the result of his labors and his most interesting diary, adding to the work a superb map of Thibet. How important his contributions to science are, may be judged from the simple fact, that Lassa was found to lie a whole degree further south than all known maps indicate, and that consequently the whole course of the Brahmapootra within Thibet has to be changed. He found the elevation of the great public road on which he

travelled, far beyond what had been expected—the lowest point which it ever reached was still 11,300 feet above the level of the sea, and at various passes it rose to a height of 16,000 feet, exceeding that of the summit of Mont Blanc! The extreme dryness of the whole plateau of Thibet was another striking feature which he observed: from September to May he saw no rain and only three times snow, while the Himalaya was covered with perpetual snow. The road itself was simply a cleared space, with heaps of stones at regular intervals at the side, and flags to show the way to the traveller in winter; nevertheless it is so admirably laid out, that horsemen never alight except when fording large rivers. Along the whole length—which amounts to 800 miles—station-houses are erected at distances of from 20 to 70 miles, with a supply of djaks in the lower, and asses in the upper, regions to carry loads, and horses for the travellers furnished in abundance by the nomadic natives, who encamp in the neighborhood. Couriers are continually passing, and the Pundit saw some who had just finished the whole journey of 800 miles, without stopping by day or by night for any other purpose than to take their meals and to change horses! Their faces were bleeding, their eyes blood-shot and deep-sunk, and the whole body covered with ulcers; for the clothes of the poor creatures are sealed up, so that they cannot take out the despatches, and only at the end of their journey an officer breaks the seal and allows them to clean themselves. The Pundit obtained, besides, most valuable information about the spiritual rule of the Dalai Lama and his position relatively to the secular head of China, and ascertained that at all events he did not possess the boasted power of reading the secret thoughts of men, since he deceived him as easily as other Thibetans.

A French expedition under Captain de Lagrée ascended, in 1866, the Mekong river, crossed the mountain chain, that divides it from the Irawaddy and explored the frontier districts between China and Burmah. The results are of the greatest importance to our knowledge of those regions, and for the revival of the trade between the two countries.

It is remarkable that although the Chinese and the Indian Empires contain fully one-half of all mankind, and although the two countries are utterly different in their richest productions and most skilful industry, as well as in the wants of their dense populations, no commerce is carried on between them. Efforts have not been wanting to establish communications, and Sprye and other Englishmen, familiar with the locality, have long since agitated the opening of commercial roads between Burmah and the Chinese province Yunnan. A railroad from Ragoon through the Laos states to Yunnan was proposed and the route actually surveyed. Insuperable difficulties, however, prevented the execution of the plan for the time. Then it was determined to examine the roads, which had formerly been used for the purpose, and Captains Sladen and Williams were sent out in January, 1868, with a strong escort of Mohammedans and Burmese, to Bhamo; from whence they will make their way on mules to Tali-fu in Yunnan, and then return through the Laos states. The native authorities lend efficient aid, and great results are expected.

Of recent Chinese explorations only one is important, that of A. S. Bickmore, of Cambridge, Mass., who, after having visited several points in the Indian Archipelago, travelled through Southern China, went as far as the Tung-ting Lake, and descended again the Yang-Tse-Kiang. He touched at several ports of Japan, visited the coal mines in the western provinces, passed through the seas of Tataria to the Amoor and returned to Siberia, and thus to Europe. He is a geologist, and has made valuable discoveries in his department, and his general observations are as interesting as his personal adventures are exciting.

Russia does not cease its immense labors in Asia, and can accomplish all the more as they redound as much to the furtherance of her military plans as to benefit science, and are, on this account, supported by the War Department as well as by the Imperial Geographical Society. Prince Krapotkin, already well known through his explorations in the Amoor District, undertook, in 1866, a long journey along the Lena southward, accompanied by the naturalist Poläkou, and well

provided with excellent instruments. He has made barometrical measurements, added much to our knowledge of the Fauna and Flora, and examined the geological formation of those wild, waste regions, in which a few Tungoose and Jakooto families live amid countless deer, foxes, musk-oxen, and reindeer. Another expedition has since started on an exploration of northwestern Siberia.

Great results have been recently obtained by the recent conquests in Toorkistan, where the staff officers of the victorious armies, followed by astronomers and topographic engineers, have produced a perfect revolution in the maps that were heretofore in use. The labors of English officers in Palestine have made less brilliant progress, though they also have brought to light many new and interesting facts. Anderson and Warren have been able to furnish the material for an accurate map of more than three-fourths of the Holy Land, and their excavations in Jerusalem have been rewarded with large additions to history, as well as to archæology.

In Europe there is, of course, no longer room for voyages of discovery, and the only additions to our knowledge of the land must necessarily refer to details. Meanwhile, expeditions are constantly sent out from there for the purpose of obtaining information abroad, which is subsequently made valuable by home industry. Among such stands foremost the French expedition for the determination of geographical positions. In the summer of 1867, four French Navy officers were dispatched to four different stations on our globe, in order to measure accurately their exact position. One was ordered to Montevideo, the Magellan Straits, Valparaiso, Callao, Panama, and Honolulu; another to Muscat, Zanzibar, Reunion, and Pondicherry; the third and fourth to Shanghai, Hongkong, Yokohama, Teneriffe, the Antilles, Cayenne, and the Azores. By means of careful observations made with the aid of partly newly invented instruments, such as the *lunette méridienne portative*, it is hoped that the longitude of these places can be determined accurately down to a second, and the advantage of such labors for geography generally, and for sailing vessels, chronometers, and maps, in particular, cannot well be over-rated.

In our own country, America, many and valuable additions have been made to the science. The plan to connect the Russian-American telegraph line with the American terminus in British Columbia, had to be given up for climatic and political reasons; but the labors undertaken for that purpose have by no means been lost. The most important gain for geographical science has been the thorough exploration of the Kwichpak or Yukon river, the principal stream in our new acquisition, Alaska. A corps of young Russian naturalists, under Captain Kennicutt, ascended the river in a small steamer for 1500 miles, establishing thus its fitness for navigation so far; but Captain Kennicutt died, in 1866, and the results of his investigations have not yet become public. In 1867, however, W. H. Dall and Frederick Whymper came down the same river from the point where the Porcupine falls into it to its mouth, and Whymper made a complete and accurate map of its course.

Equally important additions to our knowledge of the new territory were made by an expedition sent out by the government for the purpose of exploring the coast and the islands of Alaska. It was under the direction of George Davidson, assistant in the Coast-survey, and contained an astronomer, two hydrographers, one botanist, one conchologist, and several other men of science, specially chosen for the purpose. The geologist, T. A. Blake, was the first to make the results of his investigations known, and mentions especially the very interesting ascension of the Makuschinski volcano, 5,600 feet high, on the northern end of the island of Unalashka.

Robert Brown, who some years ago earned great renown by his successful researches in Oregon, and in 1867 accompanied Whymper on his journey to Greenland devoted himself afterwards to the thorough examination of Vancouver Island, and is now preparing a new map of that country. The whole topography of the island is changed, the lakes in the interior appear larger and more numerous, and all the elevations are carefully inserted.

On the Atlantic side, the Canadian government sent an expedition up the Ottawa river, to explore its whole length and

its sources, which had never before been visited. They accomplished this in 1867, and found the length of the river about 1,000 miles, and the source only some fifty miles distant from that of the Saguenay river. A new lake, Gros Lake, was discovered, through which the river passes, and which is reported to cover 400 square miles. Navigation was interrupted by rapids near this lake. The soil on the upper Ottawa was found to be excellent, but the climate much colder than that of Lower Canada, so that the large lake itself was partially frozen over as late as the 24th of May.

Captain Hall, who had already, in 1862, explored the regions near Hudson Strait, and then discovered that the so-called Frobisher Strait was closed on the west side, and therefore, only a bay, renewed his journeyings in 1864, and continued his explorations for several years, though so far without special results. In 1867, he made, in company with five sailors from whaling ships, and two Esquimaux, a six week's journey to Pella Bay, 150 miles north of Repulse Bay, where he had made his headquarters, in order to obtain sledge dogs. In 1868, he visited with five men King William's Land for the purpose of examining the graves of the Franklin Expedition.

While the admirable work of Mexican surveys has ceased with the French occupation, California has, on the other hand, been thoroughly examined. A New York Company purchased, in 1866, the upper half of the peninsula, from the American frontier in the north, to $24^{\circ} 20'$ N. Lat. in the south, of the Mexican government; leaving the sovereignty to the latter, but acquiring the right of property in all unoccupied lands. Two geologists, J. Ross Browne—now U. S. Minister to China—and W. M. Gabb, and a skillful engineer, F. Loehr, were sent out in 1867, and the admirable map drawn up by the latter, gives an entirely new aspect to the whole peninsula. It appears naturally divided into three distinct parts: the southern, belonging still to Mexico, from Cape San Lucas to the latitude of San Borja Bay, consists of a mass of granite, which rises in the San Lazaro mountain to a height of 6,000 feet, and abounds in valleys teeming with tropical fertility. The Central part is formed by gigantic deposits of tertiary sandstone, broken in

upon by volcanic formations. A chain of mountains, from 3 to 4,000 feet high, runs parallel to the eastern coast and falls off towards the west into lowlands, which are rich and fertile, near Magdalen Bay—a harbor vieing with that of San Francisco in size and security, but changing northward into deserts without water. The third part consists again of granite, but abounds like the central part, in volcanic formations. The whole population does not exceed 8,000 souls, one-half of whom live in the southern part, a race of mixed Spanish and Indian blood, entirely ignorant of the world and its troubles.

Of Central American explorations only Collinson's survey deserves to be mentioned. He examined, in 1867, the line between the Nicaragua Lake and Pim Bay, for the purposes of a railroad which was projected there and found it admirably suitable; the highest point was only 748 feet and the lake itself was found to be 128 feet above the sea-level.

In South America, it is mainly the thorough examination of the Amazon river which has furnished amazing additions to all the natural sciences. The work began in reality as early as 1860, when Manoel Urbano explored, by order of the Brazilian government, the Purus with its tributary, the Aquiry, in order to find the reported communication between it and the upper Madeira. In 1862, began the great expedition under the Captains J. da Costa Azevedo and J. S. Pinto, which surveyed the Amazonas from the mouth of the Tapajoz, where the French survey ended, to Tabatinga, and resulted in an accurate map differing largely from the previous maps furnished by the English travellers, Smyth and Low, in 1835, and Captain Herndon, of the U. S. N., in 1851. Thus Tabatinga was found to lie a whole degree farther north, and 40 minutes farther east than its position on Herndon's maps. The following years witnessed the exploration of the Tocantins and Japura by Brazilians, and of the Purus and Aquiry by the Englishman Chandless; the Peruvians sent the first steamers up the Ucayali and Pachitea, and found them navigable as high up as the mouth of the Maypu, near a Tyrolese colony, and all these investigations furnished most valuable results for science, as well as for the material interests of those countries.

They were destined, however, to be eclipsed by the brilliant expedition of Agassiz from April, 1865, to July, 1866. The Swiss savant received every assistance from his adopted country and a most brilliant reception in Brazil, such as would have honored a Humboldt. A magnificent steamer was placed at his disposal for the voyage from New York to Rio, and Mr. Thayer, a merchant prince of Boston, furnished him with a whole staff of scientific assistants at his own expense. When he arrived at Rio, the Emperor, the highest authorities, and the people themselves, all were eager to assist him and to further his plans. His public lectures were attended by the Court, and what had never before happened, by the ladies of the city; his birth day was celebrated by public festivities, and when he began his journey up the river, every facility was offered and every courtesy extended to him, so that his excursion assumed the form and proportions of a royal progress.

The main results of this great expedition were the ichthyological labors of the great naturalist and his investigations of the evidences of the ice-period in those regions. He was, of course, mainly interested in studying the fish of the Amazonas, and to examine all traces of glacier-activity in the whole valley of the giant river. In both respects his sanguine expectations were more than fulfilled. Before he left Pará he had already received 63 species of fish, or more than had up to that date been described in the whole district, and among these he found 49 entirely new species; during his journey on the Amazonas he collected not less than 1,800 to 2,000 varieties, and thus established the remarkable fact, that this one river holds at least twice as many species as the Mediterranean Sea, and a larger number than the Atlantic Ocean from pole to pole. All the rivers of Europe, from the Tagus to the Volga contain not quite 150 varieties of fish—and Agassiz found in a single small lake Hyanury near Manaos, more than 200 varieties! But even more remarkable than this astounding variety, is the fact that each one of these numerous species is strictly limited to a very small region. Such a limitation is of course not to be wondered at in a river, like the Mississippi, which flows through three distinct zones, forms its bed now in one geological formation

and now in another, and sees at its sources an Arctic and at its mouth a tropical vegetation on its banks. But Agassiz met different genera at very moderate distances from each other, in a river, which showed neither in the temperature of its waters, nor in the vegetation on its banks, an essential difference, and the same strict limitation was found in the tributaries and lakes.

As for evidences of the glacier-period, they greeted the great naturalist almost as soon as he left Rio; he saw traces, at least, at Tijuca, a short distance from the sea; he then met them again in Southern Minas Geraes, to which he made an excursion from the capital and along the eastern coast as far as Pará. Everywhere along the stream he encountered the same recent deposit, a reddish clay, which he calls drift, and which he thinks was brought by glacier-ice from the Andes, and after the melting of the ice, deposited in the Amazonas Valley. Agassiz has no doubt that at a certain period the whole of this magnificent plain, in which the Amazonas flows, was covered with glacier-ice in the same manner as in the region between the Alps and the Jura. The outer edge of this colossal glacier, he believes, has long since been swallowed up by the ocean, which here continually gains upon the continent, while elsewhere the rivers form deltas, and thus encroach upon the ocean.

By the side of these important scientific results, we must not forget that the great savant, fully identified with the views and leading ideas of our people, gave much of his attention to the political future of this remarkable region. He found thus, for instance, that while the grant of free navigation had been everywhere hailed with delight, too sanguine expectations had been entertained as to the immediate fruits of this measure. It had been forgotten, that the population was extremely sparse and indolent, that the whole vast valley contained but one large town, Pará, with, perhaps, 20,000 inhabitants, and that the next largest, Manaus, had only 8,000. Days and days passed, during which the exploring party saw nothing but endless forests. He found the whites not only few in number but low in character; the higher race had here, contrary to general experience, adopted the type of the lower race and

sunk down to the level of the savages. A better class of immigrants is evidently needed, and he looked forward to the day when the Saxon settler would take the place of the idle, listless Portuguese, who associates too readily and too fully with the low natives.

ART. III.—1. *Die Frauen in Kunstgeschichte*. Von Ernest Guhl. Berlin. 1858.

2. *Life, Letters, and Posthumous Works of Fredrika Bremer*. Edited by her sister. New York. 1868.

3. *A Commonplace Book of Thoughts, Memories, and Fancies*. By Mrs. Jameson. New York. 1855.

‘Here is an error, sir; you have made “Genius” feminine!’ ‘Palpable, sir,’ cried the enthusiast. ‘I know it. But’ (in a lower tone,) ‘it was to pay a compliment to the Duchess of Devonshire, with which her Grace was pleased. She is walking across Coxheath, in the military uniform, and I suppose her to be the Genius of Britain.’ JOHNSON. ‘*Sir, you are giving a reason for it; but that will not make it right. You may have a reason why two and two should make five; but they will still make but four.*’¹

It is pretty certain that the poet, whose toadyism was thus leniently dealt with by Dr. Johnson, is not singular in attributing femininity to Genius. We shall not stop to inquire if those who have imitated him have been sincere, or, like him, have simply wished to compliment some duchess or other, who has public or private means of rewarding the flattery. But we do propose, as far as the limits of the present article will permit, to investigate the validity of woman’s claims, not indeed to genius itself, for those every one will concede, but to that

¹ Boswell’s Life of Johnson.

kind of genius in the exercise of which man has chiefly distinguished himself, and especially to that kind of genius which can only express itself by means of what is called the Artistic Faculty.

The analogy of nature is certainly against woman, for it is only the male bird that sings, and he only in mating time; but we shall not permit analogies to weigh while there are facts to be had, nor shall we shift upon woman the burthen of proof.

Are there any women artists? Honest old Georgio Vasari, who ought to know, asserts very stoutly, albeit with some singular qualifying phrases: 'It is a remarkable fact that, whenever women have at any time devoted themselves to the study of any art, or the exercise of any talent, they have, for the most part, acquitted themselves well; nay, they have even acquired fame and distinction.'* 'Nor is this to be wondered at,' he remarks somewhere else, 'since they, who so well know how to produce living men, should certainly be able to make the painted semblance,'—a proposition which, if it did not conceal a fallacy, would unquestionably be unanswerable. Georgio further quotes the *Orlando Furioso* in support of his position, and concludes by triumphantly adducing and enumerating the works of Madonna Propertzia Rossi, a woman-artist who carved a crucifixion upon the circumference of a peach-seed, and engraved a *gloria*, with sixty figures, in *basso rilievo* upon the small surface of a cherry-stone! Can argument be more conclusive?

In point of fact, this question of the existence of woman-artists is one in which we have taken great interest. We had seen, and admired, some of the remarkable works of Rosa Bonheur, though we could not see under which rule of the proprieties a girl should find occasion to go about making pictures of all the roaring bulls of Bashan. We had fully sympathized with Mrs. L. Maria Child in her somewhat agonized zeal to justify the peculiarities and eccentricities of Miss Harriet Hosmer, an artist who shoots pistols, wears trowsers, and rides horseback *à la mode*, as well as sculptures Pucks and Zenobias; and we had set to work in good faith to examine the annals of

* Vasari: Life of Propertzia di Rossi.

Art, trusting to discover therein evidence in support of woman's claim to the possession of a genuine artistic faculty. We were quite sensible that man has been unjust to woman, and has wantonly excluded her from many pursuits, whether for the reason assigned by Spenser³ or not, we would not say, but the fact stands, nevertheless; and moreover, our own investigations had inclined us to give a measureable assent to the words of the eloquent writer who claims that: 'Women have just as keen intelligence as men; less powers, may be, of abstract reasoning, but far finer perceptive and linguistic faculties. They need not be trained to exhaustive scholarship; but refinement of mental culture suits them, perhaps, even more than it does our sex. I imagine that the Lady Jane who read her Phaedo when the horn was calling, had as pretty a mouse-face as you ever saw in a dream; and I am sure that gentle girl was a better scholar than any lad of seventeen is now in any school of England or Scotland.'⁴ Why, then, should not woman, with her warmth of soul, her enthusiasm, her quick perceptions, and her nimble intellect, be able to apply her keen sense of the beautiful to the cultivation of Art?

The result of our investigations has not been very encouraging. A survey of nearly the whole field of Art has scarcely revealed to us any woman-artist who has risen above mediocrity; nor has it revealed a single one entitled to a place in the front rank, among great artists. Woman has played upon the steps of the Temple of Art from the beginning—indeed, if we may credit Pliny, it was a woman's hand,⁵ impelled by love, that traced the first portrait ever limned—but she has never gone within the threshold, never seen, much less mastered, the mysteries of the adytum. The list of woman-artists, though not long, is respectable, and the catalogue embraces some

³ 'But by recorde of antique time I finde
That woman went in warres to beare most sway,
And to all great exploits themselves inclind,
Of which they still the girlond bore away;
Till envious man, fearing their rules decay,
Gan coigne streight lawes to curb their liberty.'
Fuery Queene, III. ii. 2.

⁴ D'Arcy Thompson: *Day Dreams of a Schoolmaster*.

⁵ Kora, daughter of Dibutades, of Corinth.

pleasing performances,—but that is all. With a few exceptions, these women have become artists *by position*, as it were, from the circumstance of their fathers, brothers, or husbands pursuing Art. With a few exceptions, likewise, they have excelled chiefly as copyists, or in the minor branches of decoration, embroidery, and engraving, to which their delicate fingers fitted them. In sculpture, there have been Properzia, Sabina von Steinbach, Mrs. Damer, Miss Hosmer,⁶ to set against the whole bed-roll of mighty masters of the chisel among the other sex. Sabina, who was the daughter of Erwin von Steinbach, the architect of Strasburg Cathedral, has won considerable renown in connection with the ornamental part of that sublime building, which was entrusted to her. But it seems beyond all question that she did little more than sculpture the figures after designs furnished by her father, though to her hand those groups may very well owe something of the purity and depth of feeling so conspicuous in them.’ Among women painters, the most prominent names are those of Sophonisba Anguisciola, Elizabetta Sirani, Maria Robusti, Lavinia Fontana, Onorata Rudiano, Irene de Spilimberg, Madame Lebrun, Angelica Kauffmann, and Rosa Bonheur,—not one of which names, we opine, would offer any attractions to ‘shoddy,’ when he goes abroad in quest of ‘old masters’ with which to stock his gallery. Maria Robusti, who was Tintoretto’s daughter, and Elizabetta Sirani, the pupil of Guido, were certainly artists of very great promise, but both died too young to have performed much, and, in estimating what they *might* have done, we must judge them by the achievements of their sex, rather than by those of ours. Angelica Kauffmann was deemed by her contemporaries (who likewise found surpassing genius in Benjamin West,) a rival to Raphael, but modern criticism has decided that her design was poor, her touch feeble, her color cold, and without truth. Onorata Rudiano is, perhaps, the most distinguished of all the female artists for *positive* achievement, but we must not look for these in the line of Art. She had only begun to paint, when, being one day at work for the tyrant of Cremona,

⁶ And Miss Vinnie Ream.

⁷ Von Guhl.

one of his minions insulted her and she stabbed him to the heart. Thereupon, she fled to the mountains in man's attire, joined a company of Condottieri, fought herself into the chief command, and for thirty years played the swashbuckler up and down Italy, with a renown that has come down to our own times, and with a self-satisfaction equal to that of Captain Dugald Dalgetty.

Now it cannot be said that the sex has failed to produce its Raphael, its Lionardo, its Michelagnolo, through lack of opportunity, or by reason of those repressive influences of prejudice, social custom, legislation, or the like, which, it is claimed, have kept woman out of the professions, and prevented her from freely developing her capacity to do man's work. On the contrary, even in the darkest periods of woman's history, there has been instinctive recognition of the apparent relation between her chaste, flexuous, subtile organism, and the delicate graces and refinement of art-work, and no less an eager appreciation of all that she has done or tried to do in that regard. Even in this hypercritical and sceptic age we are always ready and ardent to welcome a poem by a woman, whether it be poetry or not, as if there was a certain consciousness at the bottom of our minds that the poet *ought* to come from that side of the house, whether he will or not. Hence, the cause of failure must be sought deeper than in the lack of occasion—it seems, indeed, to be contained in that defective artistic sense which is characteristic of the whole sex. Woman, indeed, has the longing after Art, but she does not possess the true artistic insight, nor has she a hand firm enough to execute even her own imperfect conceptions. We must not be deceived by the present apparent tendencies of woman towards the artistic life into belief in her genuine capacity for that life. To do so would be conceding to appetite the unlimited power of satisfying itself. These tendencies, in fact, are rather the result of the atmosphere she breathes than of the blood in her veins. As Goethe has said, apropos of a kindred matter: 'What misleads young people is this: we live in a time when culture is so diffused that it has become the atmosphere which a young man breathes; poetical and philosophical thoughts, which he has

imbibed with the air he breathes, live and move within him; he fancies them his own, and utters them as such. But, after he has restored to the time what it gave him, he remains a poor man. He is like a fountain, which spouts forth a little water which is drawn into it, but ceases to give a drop when the loan is exhausted.'* And this is pretty much the case with the abounding artist-women of this era, whose nimble fancy transmutes their genuine admiration of art-work into capacity to reproduce art-ideas. How great is the error into which they fall may be very sadly known by a comparison between the innumerable women-copyists in the galleries of Paris, Florence, Rome, Munich, Dusseldorf, London, and the few women-artists who set up studios and attempt original pictures of their own.

That this artistic defect is a general one, and not confined to the graphic and plastic departments of Art, is apparent as soon as we look away from these to other branches of Art. We shall not ask where is the woman-orator,⁹ for in this field she may justly plead '*absit momentum occasioque*,' but, where are the women-dramatists, the female Shakspeares, Calderons, Lopes, Molières? Where are the female Homers, Miltons, Dantes, Virgils? They do not exist—they never have existed—never will exist. Even upon the stage, where woman certainly has won distinction, she has excelled rather by force of feeling and exquisite taste in rendition, than by great creative powers. Mrs. Siddons, large-natured, generous, passionate woman as she was, owed much more to her Kemble kinship and her education upon the stage, than to her innate powers. As for Rachel, Mrs. Jameson denies that she was an artist at all; she was merely a highly finished actress, practiced in every trick of her *métier*, but not able to conceal her art, which, indeed, she had not evolved from her own consciousness, but had laboriously studied in the death-wards of hospitals, at the Morgue, and by the amputating table.

The history of the world's treasured *love-literature* reveals to us a curious fact in this connection. Of this literature

* Eckermann's *Conversations with Goethe*.

⁹ 'Sir, a woman's preaching is like a dog's walking on his hind legs. It is not done well; but you are surprised to find it done at all.'—*Dr. Johnson*.

woman has been the storehouse, the supplying fountain; of it she has drunk most deeply, most enthusiastically, most frequently to intoxication, and of love itself she knows each rill and abounding stream and all the deepest reservoirs and hidden crypts. Surely to her we should turn for the best exemplars of that which she has experienced so well and felt so deeply. But, we should turn in vain, for, excepting the supposititious verses of Sappho, and Mrs. Browning's 'Sonnets from the Portuguese,' (themselves a very passionate but very slightly idealized recital of her own courtship,) we have no love-literature by women of the noble sort. What we have is in the style of the Heloise abandon, or in the style of the nun's relinquishment. We find no creative energy, no grand palpitating flights of sublime passion. If men have it in them at all, love at once awakens within them the creative impulse; they set their passion to music, they play with it upon the gamut of colors, they send it to soar aloft on the expansive wings of an inflamed ideal, and we have a Vita Nuova of Dante, a Tasso series, a Fiametta of Boccace, a Toerther of Goethe, an Amoretti of Spenser, a Genevieve of Coleridge, or the like. Even stately Corneille, a grave lawyer, became a poet by force of love, and Ludwig Beethoven, dedicating some of his grandest pieces to his mistress, rapturously exclaims: 'Is not our love a true heavenly palace, also as firm as the fortress of heaven!' But love does not excite the creative impulse in woman, or does so very rarely.¹⁰ It rouses in her the more selfish desire to possess the beloved object, and this desire is so exigent that it absorbs all other passions. Consequently it is with woman generally, as Sir Richard Steele said it was with Mrs. Aphra Behn: 'she understands the *practick* part of love better than the speculative.' Or, as Marivaux once remarked of a contemporary: 'il connoissoit tous les sentiers du cœur, mais il en ignoroit les grandes routes.'

What then constitutes this artistic faculty in which woman is believed to be deficient? 'Art,' says one of the greatest of women, and the truest artist of all her sex—

¹⁰ In Mrs. Browning's case, the masculine type of her intellect must go into the account.

‘Art
Sets action on the top of suffering :
The artist’s part is both to be and do.’

But this same lady says again, forgetting the positive part of the above definition, and by that very circumstance exposing her sex’s incapacity to grasp the highest Art—

‘What is Art
But life upon the larger scale, the higher ?
It pushes towards the intense significance
Of all things, hungry for the Infinite.
Art’s life,—and where we live, we suffer and toil.’

Now just here is the fallacy in woman’s view of Art, which is *not Life*, but *Result*—and result as much of living as of other things. If Art were Life, women would be the greatest artists, because they live most intensely and most sincerely. And, although it is indeed true that ‘where we live we suffer and toil,’ it is none the less true that we artists—men, at least—are very far from painting or sculpturing that suffering and that toiling, or the lines of care that come thereby, nor the groans thence evoked. On the contrary, Shakspeare and Raphael put their art as completely aside from their lives as they put off their garments when they went to sleep. Raphael had trained his mind to throw off its conceptions in form as completely as we train our minds to embody our conceptions in phrase; to Shakspeare, Lear and Othello had as perfect and rounded an individuality within his mind as belonged to his personal sensations of hunger and thirst. He knew them apart, and would no more have thought of confusing with them emotions peculiar to his own personality, than he would have thought of taking a glass of water to alleviate hunger. ‘Claude Lorraine,’ says Goethe,¹² ‘knew the real world by heart, but used it only as a means to express the world of his fair soul. That is the true Ideality, so to use the means afforded by the actual world, that the truth evolved may at first appear to be actual too.’ And this is what it means to be an artist: to be a man capable of living wholly self-contained, and in intimacy with, or subjection to, nothing whatsoever besides the very object itself which he seeks to idealize and embody. He must rise

¹² Eckerman.

out of the present ; he must exalt himself above the world ; he must soar into that sublime atmosphere of indifference where he will not be sensible of the petty noxia effervesced out of the soil, the corruptions of real things, the discontents, the agitations, the passions, the hopes, the longings that infect and weigh down the unspiritualized existence, the inartistic being. He must teach himself to look down from an Olympian height upon common things ; neither melancholy, nor excess of joy must enfilade the march of his destiny, but only serene, complacent, ever-active, mild enjoyment fill up the measure of his blissful hours. He must float along in a sort of harmonious waking dream, in which each event of life shall be but a modulation of the predominating rhythm, all made tunable and ravishing to his symphonious soul. He must possess genuine feeling, to be sure, acute susceptibility, and an eye alive to every truth and every impression of Nature, from the simplest to the grandest. Yet, while seeing all things in their most intimate lights and their most multitudinous aspects, and while awake to all emotions with the most vivacious and the tenderest sensibility, he must always be the master of these forces within him, never their slave ; he must never suffer his mind nor his hand to be restricted from the freest plastic power over them, but to continually modify, mould anew, or recast whatever may come within the scope of his mental, moral or physical retina. Once losing this grasp, once yielding this mastery, he loses the best part of his artistic faculty forever. For the artistic faculty is compound of the power of accurate insight and the power of thorough elimination, and the artist must possess these powers in equal measure if he would attain to the summit of his work. Goethe, beyond all others, exercised these two powers consciously, and with a thorough comprehension of their purport ; all great artists exercise them somewhat. And so, when the Marquis de Custine said of Rahel von Euse, that ‘she was an artist and an apostle, yet had not ceased to be a child and a woman,’ he enunciated not only a paradox, but an impossibility. Rahel *was* an apostle—for her sex—she was an innocent child, and a pure, high-thoughted, suffering woman ; but she was *not* an artist, and she proved that she was not by her inability to

clear away the mists, the vapors and obscurities that bedimmed and nullified her utterances. She wrote like a genuine woman, the noblest of her sex, but her books, like those of nearly all women, were deficient 'in that indescribable quality called Art.' She could not merge her own personality in her task, and so, could not attain to the highest.

Woman herself is fully conscious of this 'impotence in Art,' generated, Mrs. Browning says, from the fact of her being 'too apt to look to *one*.'

'We strain our natures at doing something great,
Far less because it's something great to do,
Than, haply, that we, so, commend ourselves
As being not small, and more appreciable
To some one friend.
Love strikes higher with his lambent flame
Than Art can pile the faggots.'

Another female writer of great eminence and very remarkable character—Margaret Fuller Ossoli—speaking of her sex, says: 'In vigor and nobleness of expression, most female writers are deficient. They do not grasp a subject with simple energy, nor treat it with decision of touch. They are, in general, most remarkable for delicacy of feeling, and brilliancy or grace in manner.'¹³ Mrs. Jameson, in one of her prefaces, modestly confesses: 'I lack that creative faculty which can work up the teachings of heart-sorrow and world-experience into attractive forms of fiction or of art.' And elsewhere, in reproducing Mrs. Browning's faulty definition of Art, she has unconsciously betrayed why it was that this power was lacking to her: 'It is *the desire of sympathy* which impels the artist-mind to the utterance in words, or the expression in forms, of that thought or inspiration which God has sent into his soul.' Ah, Mrs. Jameson! it is this, indeed, which impels the mind of the woman-

¹³ This very remarkable woman, the originator of almost all that is reputable in the 'Woman's Rights' movement, seems to have had a full consciousness of her sex's deficiency in respect of the artistic faculty. She writes: 'If men are often deficient in delicacy of perception, women, on the other hand, are apt to pay excessive attention to the slight tokens, the little things of life. Thus, in conduct or writing, they tend to weary us by a morbid sentimentalism.'

Of Mrs. Browning, she says: 'She has the vision of a great poet, but little in proportion of his plastic power. . . . She is singularly deficient in the power of compression.'

And again: 'We have seen women use with skill and grace the practical goose-quill, the sentimental crow-quill, and even the lyrical, the consecrated feather of the swan. *But we have never seen one to whom the white eagle would have descended.*'

artist—but was it ‘the desire of sympathy,’ or was it the uncontrollable joy of creation, which impelled Raphael, Shakespeare, Homer, to utter the thought that was in them? Whose sympathy could the old Greek claim, or feel proud of, as he begged along the streets, singing his divine rhapsodies for bread? Whose sympathies might comfort the lone Stratford player, getting himself together that decent house and fortune by making comedies and tragedies for the Globe Theatre? Whose sympathies should Raphael desire, he, the heavenly-thoughted, painting angels and goddesses for the goddess Leo?

Pauline Viardot, the actress, naively confesses: ‘D’abord je suis *femme*, avec les devoirs, les affections, les sentiments, d’une femme; et *puis je suis artiste*.’¹⁴ But there is a little anecdote in Mrs. Jameson’s *Commonplace Book* which so completely illustrates the concrete character of woman’s conceptions of Art, that we cannot do better than to quote it. ‘On a certain occasion, when Fanny Kemble was reading *Cymbeline*, a lady next to me remarked that Imogen ought not to utter the words, “Senseless linen! happier therein than I!” aloud, and to Pisanio,—that it detracted from the strength of the feeling, and that they should have been uttered aside, and in a low, intense whisper. ‘Iachimo,’ she added, ‘might easily have won a woman who could have laid her heart so bare to a mere attendant!’

‘On my repeating this criticism to Fanny Kemble, she replied just as I had anticipated: “Such criticism is the mere expression of the natural emotions or character of the critic. *She* would have spoken the words in a whisper; *I* should have made the exclamation aloud. If there had been a thousand people by, I should not have cared for them—I should not have been conscious of their presence. I should have exclaimed before them all, “Senseless linen! happier therein than I!”’

‘And thus the artist fell into the same mistake of which she accused her critic—she made Imogen utter the words aloud,

¹⁴ This monstrous catechresis of paradox reminds us of one of Hayward’s notes to *Faust*, *apropos* of a similar *lapsus*: ‘I think it is Miss Letitia Hawkins who called Eve an overgrown baby, with nothing to recommend her but her submission and her fine hair.’ Eve would have made a good artist after the M’lle Viardot pattern.

because *she* would have done so herself. *This sort of subjective criticism in both was quite feminine; but the question was not how either A. B. or F. K. would have spoken the words, but what would have been most natural in such a woman as Imogen.*'

It seems probable that it is to this consciousness of her weakness in respect of the artistic faculty, and her incapacity to cope with man creatively, we owe the rather blatant style of self-assertion which is common now-a-days among the 'strong-minded' of the sex. They whistle very loud to keep their courage up, and are properly indignant if you suspect them of whistling, like Dryden's Cymon, 'from want of thought.' It is no new thing, indeed, for woman to cry out; nor is the style of the outcry—even as interpreted by Miss Anna Dickenson—modern. It is as old as the *Lysistrata*, and the *Eccelesiastuzæ* of Aristophanes.

' Sithence I loathed have my life to leade,
As ladies wout, in pleasure's wanton lap,
To finger the fine needle and nyce thread;
Me lever were with point of foeman's speare be dead,'¹⁵

says Spenser's amazon, and echo the cohorts marshalled by Mrs. Stanton and Miss Anthony, and encouraged by George Francis Train and John Stuart Mill—'*impar nobile fratrum.*' It was this consciousness which made Madame de Stael 'a whirlwind in petticoats;'¹⁶ this which gave pungency and bitterness to the reflections of Mrs. Browning in *Aurora Leigh*; which cut off Madame Dudevant's hair, put her feet into boots, and re-baptized her *George Sand*. To this consciousness the world owes most of its *femmes incomprises*—recalcitrant 'sultanas of mind,' like de Stael, who, impatient of the obstructions of sex, and bitterly ill with 'the disease of the times—a great longing to create, and little power of creation,'—rush into print, into Art, into publicity, upon the stage, the rostrum, the pulpit, and into the editor's chair, and make haste to justify the very charge their champion has been at greatest pains to repudiate, that

'A woman's function plainly is—to talk!'

¹⁵ Faery Queene, III., iii., 6.

¹⁶ Heinrich Heine.

This class of persons has always been prompt to deny what, nevertheless, is very certainly the fact, that there is an essential and material difference between the sexes in respect of mental and moral development; that 'man is not man, nor woman woman, primarily, by virtue of their *formal* differences from each other, but by virtue of their spiritual or interior differences, the differences of their genius, or temper of mind;' and that in this interior and spiritual difference of development we must seek for the causes of the discrepancies between them in respect of Art culture. No philosopher, who seeks to found his system upon the submergence of the distinctions of sex, will be able either to benefit his own age, or win the attention of posterity. For these distinctions are not only as permanent and immutable in the mental and moral as in the physical aspect, but their effects are interwoven throughout all history and all the social fabric, and are meant to continue thus pervasive, so that each sex may 'find in the other its best appreciation,' and the system of checks and balances by which the whole economy of the universe is kept up, may find its most elaborate illustration in God's most beautiful creation. 'Woman,' says the Cabala, 'is man reversed, his mirrored image; whilst he is a self-acting principle, productively stirring outwards, and ever seeking the universal, the infinite, the woman is the negative principle, acting from without inwards, from the circumference to the centre, receptive, ready from man's expansive energy to reduce concrete forms. Thus by the Jews is woman called the house of the man, and the Talmud designates woman as the wall which is erected around man. . . . Man and woman are an inseparable whole—one forming the ideal, the other the real. In man, the ideal has sway,—in woman, feeling; thus she adheres to the concrete and external, and has an innate living sense. She is possessed of an inward presentiment of the world: thus, she is endowed with unerring tact, and arrives at maturity sooner than man, who desires to attain all knowledge through his own exertions. The aspiration of woman is towards the pure and noble, and she attracts to herself man, who is ever seeking after that peculiar nature

with which woman is endowed.'¹⁷ There are distinctive traits in man and woman which *must* be interpreted as meaning differences insuperable to education, to time, to any absorption, however total, of prejudice. The cartilage of woman's larynx is never ossified, and so, her voice can never fall into the depth of the bass; but this physical testimony to the perpetuity of a line of demarkation is not near so convincing, nor its permanency better established, than a thousand mental and moral traits that could be pointed out. These points of difference, of distinction, are so numerous that the difficulty is to select from them for illustration. Mrs. Jameson has remarked: 'A woman's patriotism is more of a sentiment than a man's, —more passionate; it is only an extension of the domestic affections, and with her *la patrie* is only an enlargement of home. In the same manner, a woman's idea of fame is always a more extended sympathy, and is much more a presence than an anticipation. To her the voice of fame is only an echo—fainter and more distant—of the voice of love.' 'Bettina,' says she, in another place, tracing the characteristics of Bettina Brentano; 'Bettina does not describe nature, she informs it with her own lips; she seems to live in the elements, to exist in the fire, the water, like a sylph, a gnome, an elf; she does not contemplate nature, she *is* nature.'

Goethe observed that woman could form no idea of 'a mere sympathetic veneration for the creations of the human intellect, apart from some extraneous associations;' nor, indeed, can she form such an idea with respect to the creations of the Divine Intellect, and, consequently, her worship, like her faith, differs essentially from man's—

'He for God only, she for God *in him*!'

Woman sees everything under individual aspects. She cannot generalize—'no, not even grief.' As Mrs. Browning has said, addressing her sex—

'You gather up
A few such cases, and, when strong, sometimes
Will write of factories and slaves, as if
Your father were a negro, and your son
A spinner in the mills.'¹⁸

¹⁷ History of Magic. By Dr. J. G. Ennemoser.

¹⁸ This is a palpable squint at Mesdames Gaskell and Beecher Stowe.

Woman is incapable of philanthropy, which is the love of all mankind. She loves only man, and cannot be taught to bestow her affection upon the race. The conception is too vague for her affection, the motive too vast for her strictly practical genius. She believes only in the concrete, the tangible, the visible, and her mission, as they call it, is strictly proportionate. Hence, she has no idea of humanity or charity: she is simply humane and charitable. Her pulse never beats one degree quicker because the race went wrong—

(' Show me a tear
Wet as Cordelia's, in eyes bright as yours,
Because the world is mad' —)

but, admonish her of a particular grievance, an individual wrong, an especial injury or woe, and how quickly her tears rain down, how promptly her purse-strings are unloosed! For the rest, she is impatient of reasoning, trite and shallow in argument, seldom dispassionate, seldom impartial: yet she will not permit you to question the validity of her processes, much less of the judgment she founds upon them. 'Les femmes,' said that very shrewd observer, Madam Maintenon, 'les femmes ne savent jamais qu' à demi, et le peu qu' elles savent les rend communément fières, dédaigneuses, causeuses, et dégoûtées des choses solides.'

Woman's tendencies do not bear her upon the path of what we call *Genius*—that meteoric capacity for shooting ahead of the general destiny of the race, for casting a magic light before and after, and for anticipating with a burst the results toward which the common race plods slowly and drearily on—a capacity always miraculously conjoined with an intense ideal force, an indefatigable faculty of production, and a grandly confident mastery over, and skill in, the employment of the resources of Art. For woman's quality does not tend towards ambition, but towards ease; she seeks not to tickle her palate with new dainties, but to satiate her appetite with comfortable fare. She would never have discovered with Copernicus; she would never have accepted what Copernicus discovered, for her life-long motto is 'quieta non movere,' and the god Terminus always gathers moss when he stands within her boundaries.

She is, as Jean Paul says of her: 'the spiral spring of a domestic machine—the theatrical directress of a great household drama'—and it is commonly not a tragedy, but a *comédie bourgeoise* that is put upon the stage she manages. Her virtue is an extempore one, active only in the present tense, indifferent alike to the past and to the future, and satisfying every instinct of her heart so long as it enables her to be ever 'the busy blessing of the present hour.' But, this fact 'disqualifies her for all didactic dignity,' makes her content to substitute expedient for performance, makeshift for product, and constrains her to rattle off the entire music of life *staccato*. So, her arrows are never bound into a sheaf—so, her influence, though intensive, is narrow.

'Therefore this same world
Uncomprehended by you must remain
Uninfluenced by you. Women as you are,
Mere women, personal and passionate,
You give us doating mothers, and chaste wives,
Sublime Madonnas, and enduring saints!
We get no Christs from you,—and verily
We shall not get a poet, in my mind.'

When the impulse to art-work seizes a woman—and this influence is commonly what Goethe's physician called merely 'an intellectual impulse of sex'—it stirs her in another way from that in which it urges man along. The law of the *ne quid nimis* has no place in her code. The dominant fancy, 'like Aaron's serpent, swallows all the rest,'—including the judgment. 'Had I not felt like Dido,' said M^{lle} Clairon, the actress, 'I could not thus have personified her.' And this lady was so enraptured with her art, that she never could persuade herself to come off the stage. 'If I am only a vulgar and ordinary woman during twenty hours of the day,' she said, 'whatever effort I may make, I shall only be a vulgar and ordinary woman in Agrippina or Semiramis, during the remaining four hours.'¹⁸ This preposterous pleonasm of fancy, this irrepressible flutter of enthusiasm, which is in her mind, when at work she unconsciously incorporates into the work itself, until we are forced to wish that a special 'law of parsimony' could be enacted against the whole sex. When Perrault

¹⁸ Disraeli. *Curiosities of Literature*.

wrote his fairy tales, he was briskly followed by Mesdames Murat and D'Aulnay, and M'lle De la Force. But, while Perrault was considerate to his supernatural machinery, sparing it all he could, 'these ladies seem to have vied with each other in excluding nature from their descriptions, and to have written under the impression that *she* must bear away the palm whose palace was lighted by the greatest profusion of carbuncles, whose dwarfs were the most diminutive and hideous, and whose chariot was drawn by the most unearthly monsters.'¹⁹

This default of sobriety is peculiarly unfortunate to the woman-artist. Being, as it were, driven to interfuse her whole being with the work she has undertaken, to make it part of the very breath of her body, so to speak, and being at the same time much more susceptible than man to the reactive influences of temperament, she is necessarily compelled, instead of rising to the proper height of her great argument, to bring the work down to her own level, or abandon it altogether, from the lack of sustaining strength. The man, having reserved forces and discretion in their employment, can go to the mountain top and return safely; the woman, out of breath at the start, must abide at a low level, or succumb from exhaustion in an atmosphere too rare and chill. Hence, her art-work is almost invariably petty, inadequate, mean.

Moreover, since the pure imagination seldom furnishes her with a sufficient impulse, since the cold ideal is not competent to inspire her concrete nature, her standard is necessarily less elevated. She gets her inspiration from things real, actual, and therefore commonplace, and a commonplace inspiration is the natural result. This also is detrimental to her power in Art, for it encourages in her a want of diligence, and it contributes to corrupt her artistic *conscience*—that highest quality of the true artist. She works to supply the present need, and, so long as the extemporaneous effect of what she does seems adequate, she is fully satisfied with the result. She has, naturally, from the nimbleness of her intellect, a sort of facility which man does not possess, and she does not require more of her

¹⁹ Dunlop. *History of Fiction*.

powers. She does not, like man, erect for herself a lofty ideal standard, a brazen serpent in the wilderness, to turn away from which is death. She fetters herself with no iron gyves of rigid requirement, nor has Art for her any absolute appalling splendor before which her powers must shudder and turn away, as Daphne shrank before Phœbus, dreading his divinity. Easily working, easily contented with her work, what she produces has almost invariably that fatal half-baked quality, for which true genius has no toleration and true Art no place. She ventures everywhere, conquers nowhere. 'Miss Joanna Baillie's tragedies and comedies,' says Hazlitt, 'one of each to illustrate each of the passions separately from the rest, are heresies in the dramatic art. With her, the passions are, like the French Republic, one and indivisible: they are not so in Nature, nor in Shakspeare. . . . Her comedy of the Election appears to me the perfection of baby-house theatricals. Everything in it has such a do-me-good air, is so insipid and amiable. . . . She treats her grown men and women as little girls treat their dolls—makes moral puppets of them; pulls the wires, and they talk virtue and act vice, according to their cue and the title prefixed to each comedy or tragedy, not from any real passions of their own, or love of either virtue or vice.'

Finally, the art-impulse in woman is always a subsidiary, never an original, force. It is only the disappointed woman who turns to Art; it is only those who have lost something in the line of their affections, in the line of their true development, who seek in the distractions of Art a compensation for their pains. 'When women are married, and have children to take care of, they do not often think of writing poetry.' But Art will not be served in a corner. The true artist must find his children, his friends, the centre and circumference of his affections, in Art itself. This, woman cannot do, and, therefore, she cannot become the true artist.

But, insist those strenuous appellants in behalf of 'Woman's Rights' who occupy so many lecturing desks; elevate woman from her inferior place in society, and you will not have to complain any longer of her inferiority in achievement. Give her the ballot, and she will turn you out ready-made state-

women; endow her with the pencil, and you shall have Leonardinas and Raphaelettas! But, in point of fact, is not woman's social position a testimony in itself to her inferiority *quoad hoc*? In the East, indeed, woman would have always found it difficult to rise, for there she was the subject only of passion, never of esteem. But, among the Germanic races, men have always, even in the rudest ages, sought to make women 'their equals and companions, whose esteem, as valuable as their other favors, could only be obtained by constant attentions, by generous services, and by a proper exertion of virtue and courage.'²⁰ In Iceland and Scandinavia, woman was in every way protected, and in every way upon an equality with man. In chivalrous Provence, during the Middle Ages, man, indeed, seems to have been bitten with a love-madness, so that woman to his eyes *vera incessu patuit dea* under all circumstances. Here, then, were periods when there was neither social oppression, nor the charge of intellectual inferiority, to bear woman down. Why did she not illustrate these periods? Why have we not poems of the Lady of Tripoli to Rudel, as well as poems of Rudel to the Lady of Tripoli? Why did not woman preserve her equality when she was revered as a prophetess, when she had unlimited right of divorce, and absolute control of her property, and not an obstacle in her way? The reason is, that woman's true sphere is the sphere of the affections, and that whenever she rises intellectually to an abnormal degree, she begins to sink morally, by the virtue of her very nature, and so loses that saving respect among men which is her true shield and only safe guardian. There were plenty of clever women in Greece, women of brilliant culture and superior intellect; but, they

²⁰ Mallet. *Northern Antiquities*. 'But the Scandinavians went still further, and were not tenacious of independence in relation to the fair sex. Women were the organs by which they communicated with deity, prophetesses, oracles, &c.'

Cæsar, Tacitus, Strabo, bear testimony to their position in council and in the administration of public affairs.

'A great respect for the female sex had always been a remarkable characteristic of the Northern nations. The German women were high-spirited and virtuous. . . . The love of God and the ladies was enjoined as a single duty. He who was true to his mistress was held sure of salvation in the theology of earth.'—Hallam. *Mid. Ages*.

were—courtezans! In point of fact, every period marked by great intellectual cleverness, and, consequently, great intellectual preponderance of women, is also marked by an excessively low moral condition of woman; and the rule holds good for persons as well as for periods. We recognize this clearly in the period of Aspasia, in the period of the Scandinavian Valor, in the period of Chivalry and of the Troubadours, in the period of Madame de Longueville and the Fronde, in the period of Ninon de L'Enclos, in the period of Madame Du Deffaud, in the period of Madame Recamier and the Parisian *salons*, in the present status of intellectual women in Paris and in London. We discover the principle at work in Sappho and in Heloise, in Madame de Stael and Mary Wolstoncraft, in George Sand and George Eliot. The intellectual woman is *une femme incomprise*—a woman out of her sphere, an anomaly, an imperfection.

‘ You stand aside,
You artist women, of the common sex,
You share not with us.’

‘It is most certain,’ says that earnest and accomplished woman, Mrs. Jameson, ‘that among the women who have been distinguished in literature, *three-fourths* have been either by nature, or fate, or the law of society, *placed in a false position* ;’ but she adds: ‘the cultivation of the moral strength and the active energies of a woman’s mind, together with the intellectual faculties and tastes, will not make a woman a less good, less happy wife and mother, and will enable her to find content and independence when denied happiness.’²¹ Unquestionably this is so; but the difficulty (and it is a difficulty which no advocate for woman’s equality has as yet fairly met,) lies in the fact that the cultivation of the moral strength of a woman does not go hand in hand with the cultivation of her intellectual faculties, and that so far the result of culture has unfortunately been to pamper the latter at the expense of the former. In other words, no safe means has yet been found to emancipate woman from her place in the sphere of the affections.

²¹ ‘ *Winter Studies and Summer Rambles in Canada.*’

After all, will it not be best if these means never should be found? Is it not best that the intellectual should not preponderate in woman over the affectionate? Is it not best that her artistic faculties should remain in abeyance to her domestic nature? It has been acutely remarked that 'no man believes or ever will believe in woman as a teacher, until he has grown indifferent to her as a woman.' It is the natural inequality of the sexes which brings about the union between them, which produces that mutual veneration and that mutual love which are the corner-stones of the fabric of society. And we discern this rule at work even in the strong-minded women, who turn away from the strong-minded of the other sex, seeking in their mate qualities the opposite of those they themselves possess. Madame de Stael loved Rocca—but Rocca was a woman, except for his beard, and de Stael was a man, minus the beard. If the qualities of men and women were similar, we should have, instead of our present society, a perpetual war of the Amazons and the Giants. The true relation of the sexes is founded upon this very disparity which seems so much to irk the *femme incomprise*. Both sexes derive from it personal traits they would not otherwise possess, personal virtues they might otherwise sigh for in vain. It has been well said, that 'neither man nor woman disclose themselves truly, that is, poetically, save to each other, because neither has a perfect faith in themselves, but only in the other.' And this true relation presupposes the inferiority of woman to man, so far forth as breadth of nature is concerned, and so far forth as perfection of development is concerned. She is inferior to him in strength of passion, she is inferior to him in strength of intellect, and she is inferior to him in strength of body. But this inferiority does not lower her in the scale of being, by any means, but rather exalts her. For these qualities are of the earth, earthy; while in the qualities which take one nearest Heaven, in depth of moral purpose, in purity of thought, in embrace of affection, in sublimity of soul, woman is, and always must be, eminently man's superior. Whenever we conceive an angel, we conceive him under the guise, and with the form, the features, and the saintlike exaltation of

a woman. And however we may look upon woman as mentally our inferior, we always concede to her at least an equal insight with us into divine things. In all the pride of our intellect and all the restlessness of our ambition, we are not able to exclude the consciousness within us, that a woman, quietly searching in the cup of a modest flower, or the blue eyes of a child, *finds* in those simple finities more than the Infinite which we madly seek in space, like blind Orion clutching at the stars.

This is why it is not given to woman to go forth into the world sounding a trumpet, for the wooing tones of her voice at home reach farther and penetrate deeper; and the blare of the trumpet would drown the cradle-song forever.

For, after all, woman fills an equal place in nature with man, and is equally important, equally indispensable, in the economy of the globe. There is a class of ideas which we derive from woman, and a class of feelings which originate with woman, to which the world is fully as much indebted as it is to all the intellectual endeavor, all the passion, and all the physical conquests of man. Woman's finer sensibilities, her keener appreciation of beauty, her instinctive unerring taste, her exquisite sense of order and of fitness,²² have left their enduring marks all around us, in our common speech, in our daily life, in the ornaments of our homes, in our hourly round of duty. Comfort is a word which would signify a new and unknown sense, but for woman. Buffon, to indicate man's rapid progress in ameliorating characteristics, used the formula: 'Les races se féminisent.' Comte, in his scheme for the social dynamics of the future, ascribes to woman the bringing about of 'la prépondérance de la sociabilité sur la personnalité,' in other words, the substitution of charity for selfishness; and he asserts, unqualifiedly, that woman's mission is the moral regeneration of man. The moral firmness of woman is a lesson perpetually teaching itself to all of us—she is like the *Justina* of Calderon:

²² 'Willet due genau erfahren was sich ziemt,
So frage nur bei edlen Frauen an—'
Goethe: *Tasso*.

‘This agony
Of passion which afflicts my heart and soul
May sweep imagination in its storm ;
The will is firm.’

It was said of Madame Roland: ²² ‘Elle avait du caractère plutôt que du génie’—yet that character has had a mightier influence upon the sympathies of men than all the tempestuous genius of Mirabeau, or all the grand marches of Napoleon. For woman teaches by example, after all, not by precept, nor by act of hand. And it is due to the impulsive, impetuous nature of woman that her example penetrates so deeply. ‘The women are all before,’ said Mephistopheles to Faust, on the route to the Blocksberg; ‘for, in going to the house of the wicked one, woman is a thousand steps in advance.’ Equally far is she in advance of man on the path to the House of the Blessed One. And herein is the error in Bunyan’s great allegory, for, had he been true to nature, he would have depicted Christiana as not only the first to make the journey, but also as returning after Christian to encourage him on the way, and *to share his burthen with him!*

After all, and in spite of all the twaddle of the half-breeched spasmodists, who are fretting to be unsexed, woman is thoroughly aware of the work set apart for her to do in the world; and she goes to her task with a perfect confidence, and that perfect love which casteth out fear. She knows that it is her function, ‘by natural and divine right,’ to bring happiness into the world; and this is the only work to which she cordially applies herself, and with which she is perfectly well pleased. In this sphere of her activity she moves on like the poet’s star, neither hasting nor resting, refreshing herself, indeed, instead of being fatigued; ever following upon man’s toiling footsteps to glorify with her smiles and her comforts, her love and her blessing, the regions that he has painfully conquered—planting flowers about every cabin newly hewn out in the wilderness. The Bohemian phantasmists may try to lift her from this sphere; the *femmes incomprises* may gnash their teeth at their own incompetence to move aright therein, but the true woman passes on, serene, and smiling, and content, knowing exactly

²² By Chateaubriand.

her work, and performing it grandly. Within this sphere she is at home, iron-rooted, inexpugnable. In this sphere, she is happy, bestowing happiness, and culling the flowers of love; and, whatever storms may come, so long as she still abides here, they cannot wrest the smile from her face nor the blessedness from her heart. She is often martyred here, but even her martyrdoms have their ample compensations, for then, her 'whole life becomes the school of eternity.'²⁴

We may well say, then, with Thomas de Quincey: 'Thou, therefore, daughter of God and man, all-potent woman! reverence thy own ideal; and in the wildest of the homage which is paid to thee, as also in the most real aspects of thy wide dominion, read no trophy of idle vanity, but a silent indication of the possible grandeur enshrined in thy nature; which realize to the extent of thy power,—

'And show us how divine a thing
A woman may become!'

ART. IV.—1. *Hortensius; or the Advocate*. B. William Forsyth, Esq., M. A., Barrister-at-Law. London: John Murray, Albemarle street. 1849.

2. *The Relation of the Legal Profession to Society*. A Lecture delivered before the Maryland Institute, March 9th, 1868, by Geo. Wm. Brown. Baltimore: Kelly, Piet & Co. 1868.

It is interesting to study the peculiar sentiments with which the members of the Bar are regarded by the rest of mankind. The dullest understanding can perceive and admit the necessity of laws, of judges to expound and of inferior officers to execute them. But when the necessity of practising lawyers is suggested, such admission, even from understandings that have

²⁴ M. de Custine.

been highly cultivated by study, and observation, and reflection, comes sometimes with reluctance and for the most part with allowance. Even men of letters, even poets, whom we have been taught to regard as our best teachers, are found to fling their pleasant satires at the lawyers. That seemed to be a most unhappy stress of difficulties upon one of Lord Byron's heroes when

'No choice was left his feelings or his pride,
Save death or Doctors' Commons—so he died.'

We have read of the Gammons and Heaps, the Buzfuzzes and Tulkingshorns, and we smile at the absurdities and shudder at the iniquities of such a class of fools and rascals.

Yet lawyers live and prosper. With the increase of wealth and the advancement of civilization, they multiply in numbers, they rise to the highest places, and they lead in all the legislation which controls the world. In public they are the framers of laws, international, constitutional, and municipal: in private they are the counsellors of the people, in the ascertainment of all their rights of person and property, and then they make their last wills and testaments, and settle and distribute their estates after they are dead. We may have our suspicions, and apprehensions, and dislikes of lawyers as a class; but every one of us who has anything which he desires to keep for himself or for those who are to come after him, knows one among them who receives his most intimate confidence, and in whom he feels that his surest reliance, whether he himself be to live or to die, may be placed. Him he consults, both in the matters of his business and the matters of his conscience; and none but lawyers know how much wicked litigation has been avoided, how much meanness has been repressed, how much justice has been wrung for the weak and the innocent out of the hands of the powerful and the guilty—all in the secret counsellings of lawyers' offices.

Let us inquire somewhat into these contrary opinions. Why this suspicion in the general, and this confidence in the particular? Why these universal warnings against the class, and this life-long resort to the individual in all the most important and secret affairs of life? We cannot undertake to answer

these questions fully. A Frenchman once said, that every lover has no doubt of the infidelity of all mistresses except his own. Something of this there may be in the relation of lawyers and clients, and indeed in every relation where confidence must be given, because it renders one miserable and afraid to withhold it. But the better and more substantial causes are other than such as this. We shall mention one or two.

We must premise what we have to say about the suspicions concerning this class of professional men wherever it exists, by observing that they attach to them *as lawyers*. We have sometimes been intensely amused to notice how many persons have been puzzled by their own conflicting sentiments regarding some of the best men of our acquaintance. While the latter have been known to be perfectly upright in their personal concerns, beloved in their families, and admired by all their neighbors for being kind and liberal, the former have seemed to be touched with an indefinable sort of compassion or regret at being obliged to consider them as unscrupulous in the courtroom, mystifiers of the law, perverters of the truth, and the fast friends of knaves of many descriptions.

The principal reasons for these irreconcilable opinions, are such as grow partly out of the law itself, and partly out of some misapprehensions as to the duties of lawyers: misapprehensions that are not confined to outsiders, but are held by not an inconsiderable number of the profession itself. Especially is this the case with that system of laws by which the people of this country and those in Great Britain are controlled. Our ancestors, so far removed from the ancient seats of European civilization, had the misfortune to fail to obtain the benefits of the Civil Law, that best and noblest monument of genius that was ever erected. Founded upon the teachings of the wise and good of all nations,¹ it enjoined not only the fullest justice, but it invited to the most delicate and scrupulous honor. It sought to lift mankind out of the fiery struggles, the selfish aims, and the mean desires of life, and present to their view a

¹ In the year B. C. 452, three Commissioners were sent 'beyond seas' to collect, in Greece especially, such notices of the laws and constitutions of other peoples as might be of service to the wants of Rome.—*Grapel on the Civil Law*.

higher scale, yet fully practicable for this world, on which justice and honor might journey, hand in hand, and all men, great and small, might joy in the sight. To live justly, to hurt no man, to give every one his own, were its leading maxims, and whoever followed them strictly attained as close an approximation to perfection as is in the capacity of human nature. What people were those Romans! Great in all things; even in those which time and different civilizations have destroyed or modified; but greatest of all in this, that their laws, the work of all their ages, are yet made to control all the countries over which their rule was extended.

But our ancestors, separated from the rest of the world by intervening seas, in a bleak region, where to live was difficult, and poverty was a more common and a harder misfortune than in the South, in the absence of wise men to think and devise for them, could only find laws for themselves in the midst of their dealings among themselves. In the failure of positive legislative enactments, their usages became the standards by which the common disputes were to be composed. Out of these usages, some of them absurd, some of them atrocious, sprang up that Common Law which, with what modifications it has undergone in the lapse of centuries, together with such restraints as Equity has been obliged to impose whenever its operation has been grossly unconscionable, is the system under which we live. Less humane than the Civil Law which was founded upon the idea of what mankind ought to be and might be, it has been builded upon the observation of what mankind *are*. Yet it is a great system, and in the main sufficiently regardful of the rights of those who have it to obey. If it seems sometimes to present temptation to bad men to entrap the unwary, its general provisions are designed to afford abundant protection to the circumspect; and the tendency of recent legislations and recent judicial rulings is, we are gratified to observe, in the direction of that larger and more generous policy which recognizes in humanity the possibilities of things higher than mere common honesty, and persuades to their exercise. Nor can we forbear to admit that among the Romans there were tricksters who were at once the disgrace of the pro-

fession, and the butt of the satirist's ridicule, and the honorable man's contempt. There were the *Leguleius* ² and the Rabula, ³ the former a mere man of books, and the latter a mean pettifogger. They had their ways in Rome as their likes have them with us, and as all such characters in all vocations will have their ways until the world becomes many times wiser than it is or has been.

Yet every system of laws must necessarily fall short of some of its purposes, and thus create in the minds of men unlearned in its mysteries incorrect views of the duties of those who practise it. The law is founded upon general principles, the very universality of which sometimes must operate disastrously in particular cases, and give to bad men the opportunity to injure the just with impunity. In vain did the Prætor among the Romans, and in vain do Courts of Equity with us interfere by injunction with their strict enforcements, whenever their execution is unconscionably oppressive. There are frauds and other wrongs which no Courts can reach, which spring from the very laws which were intended to prevent them, and which do prevent them in general. Thus, the statute for the prevention of frauds, a most wise and beneficent law, offers temptations to the dishonest, of which they too often avail themselves to ensnare the upright. So the maxim, '*ignorantia legis non excusat,*' necessary as it is, operates most injuriously sometimes, and it thus operates most frequently upon those who, being most honest, are least apprehensive of suffering wrong. Neither lawyers, nor Courts, are responsible for these infirmities, which are but evidences to be added to those furnished by other systems of man's devising, that nothing he does can be made perfect.

Difficulties of the sorts just mentioned, (and we may allude to others as we proceed,) common to all laws, and some peculiar to those under which we live, lead to misapprehensions as to what are the duties as well as what are the rights of lawyers.

² 'Qui enim leges, quas memoria tenet, non intelligit, Leguleius vocatur a Cicerone.' Heineccius. *Elementa Juris.*

³ 'Qui ergo nulla accuracione juris notitia imbutus, cruda studia in forum propellit, evertendisque aliorum fortunis quaestum facit, Rabula vocatur ab eodem Cicerone.'—*Ib.*

It is worthy of remark, that many men, whose careers, while at the bar, were not very remarkable, whether in the matter of professional ability, or professional deportment, when they have gone upon the bench, have risen in a comparatively brief period into unexpected and extravagant credit. The people, from having seen such men practise for a long time those little arts which inferior minds are the quickest to learn, seem often to be thankful to see such a man lay all such arts aside, rule vexed questions without embarrassment, and endeavor, with decent magisterial severity, to repress all unbecoming things in the officers of his Court. Now it is much easier to decide a case than to argue it. Some men, though feeble lawyers, make respectable judges—not great judges—for these can be made only of great lawyers. Such a judge, if he preside over an able bar, and if with ordinary understanding he have acquired a fair professional education, may decide most cases aright. Besides, the mere exaltation to office carries to the majority of mankind the credit of deserving it. Lord Jeffreys said to Robert Wright, who was notorious both for his ignorance and his knaveries, ‘As you seem to be unfit for the bar, or any other honest calling, I see nothing for it but that you should become a judge yourself;’ and in spite of the remonstrances of the Prime Minister, he was knighted, and afterwards made Lord Chief Justice of England. This is an extreme case, we admit, but there was some wisdom (of its kind,) in the magnate who thus elevated him, and who foresaw that much of his unfitness for office would disappear from the eyes of men on the day of his installation.

But what is yet more to be noticed in this connection is this: The duties of a judge are essentially different from those of a lawyer. Upon the former there is the obligation, formed by his oath and the solemn behests of office, to pursue the *truth*, singly and always. But the truth in judicial causes has many similitudes, and is difficult to be ascertained, and varies with every circumstance of life. Out of the innumerable transactions of mankind, and the multifold and subtle agencies which bring them on and attend and follow them, there must constantly arise, even among the upright, conflicts of opinion re-

garding the ultimate truth, and the best legal minds will differ as to where it is to be found. The judge himself is often incompetent to its ascertainment until after argumentation between these contending similitudes. It is, therefore, not only the right of the advocate, but it is his duty to present his similitude with whatever ability he can command, to strive for its establishment, provided that he attempt no perversions, either of facts or of laws already ascertained, and feel in his breast throughout the conflict a love for the honor of his profession, and a reverence for the justice, which it is his mission to conserve, that are superior to the desire for his client's success, and the reward which is to follow it. A rule of morals which would fix his responsibilities higher than this would be unreasonable and impracticable.

It is after, and by means of, the contests of men like this that the judge, whose understanding meanwhile has been oscillating between contending similitudes, decides which is the real truth, and which is only its image. When this decision is rendered in the unimpassioned and decorous terms becoming such a tribunal, although it is frequently rendered with hesitation, it is curious to see how submissively bystanders bow to the judgment, and with what admiration and even reverence they contemplate the calm dignity so unlike the heated combats of the men to whose elaborate endeavors, though unknown to them and too often unacknowledged by the Court, he is indebted for the power to decide aright when he does so decide.⁴

It is thus that many persons while they condemn the advocate, revere the magistrate. With the former they suppose the love of truth to be behind the desire of fame and especially of money. The latter, upon that lofty seat, is regarded as freed from the love of praise and self, above all prejudice and passion, and taking an almost holy delight in frowning upon the fierce conflicts of the world and its representatives, in estab-

⁴ Cicero, whose work on morals is the greatest of all uninspired writings, allows a little more latitude to lawyers. 'Judicis est,' he says, 'semper in causis verum sequi; patroni, nonnunquam veri simile, etiamsi minus sit verum, defendere.'—*De Officiis*, Lib. 11, Cap. XIV. But he does so with some hesitation, and only upon the authority of Panaetius. Thus he continues: 'Quod scribere (praesertim cum de philosophia scriberem) non auderem, nisi idem placeret gravissimo stoicorum Panaetio.'

lishing justice, and maintaining the peace. They seem to regard lawyers as the especial enemies and persecutors of these benign things, justice and peace, and but for that blessed man on the bench they would be lost in the midst of their subtleties, and quilllets, and clamorous contentions.

It is remarkable that while we can make allowance for the progress of every other science and every other business of life, we cannot allow for mutations in that which is at once the most variant and profound and important of all. At every session of every court of extensive jurisdiction, there arise disputes which involve new questions, or variations of old questions, and which must be settled anew, and that only by long, ardent, and able argumentation. To wonder at this eternal conflict is as unreasonable as to wonder at the various faces, and forms, and dispositions of men. The principles of the law have grown, like the human race, from a few in the beginning up to ever increasing multitudes, generations of the one dying away and generations of the other becoming obsolete, yet every generation of both inheriting from its predecessors something which must be made to conform to the multiplying necessities of the world. These necessities arise in all places where the hands or the understandings of men are wont to labor in order to increase whatever they may wish to have for any of the purposes of life. They arise day by day, in the field of the farmer, in the shop of the mechanic, in the storehouse of the merchant, in the cloister of the student, everywhere, on the land, upon the waters, in the air, wheresoever God has allowed men to abide, or to explore, in order to find and to gather whatever it is lawful to possess. Thus, with the lapsing years, and the changing and multiplying pursuits of men, new principles have to be established, new punishments must be applied to new offences, and sometimes to old ones, when by the changes of manners and tastes they have grown to be inadequate or oppressive. Inasmuch as the laws are general in their terms, and cases arising under them are special in their own particulars, every judge needs new argumentation, long, and able, and ardent, we repeat it, in order to be

enabled to find, in the midst of these accretions from every source, the Truth, which it is his province to dispense.

‘What is truth,’ said jesting Pilate, ‘and would not stay for an answer.’ Wiser and better men than Pilate ask the same question after long, and patient, and loving search. That truth is difficult to be ascertained, the thousands of sects, and parties, and wars, both of books and swords, declare. On the question of what is truth, good and wise men differ even as do bad men and fools. In our degenerate estate, truth seems to assume many shapes, and to vary them in different places and before different beholders. It was a beautiful fancy of the poet, in which the followers of truth are likened to the bereaved Isis and her priesthood in their pious search for the mangled and scattered members of the body of the good Osiris. Philosophers and law-givers admit the impossibility of fixing perfectly just principles of truth even in the general. ‘We have no solid and express effigy of Law, and of Justice, her sister. We can only employ their shadow and their images.’ These are the words of one who, in our opinion, was as complete a man as has lived in any time—Cicero, the lawyer and orator, the consul and philosopher. Yet, in praising even the golden rule of the Civil Law, that all transactions of business ought to correspond with the good conduct of good men with one another, he sighed to be compelled to add these following: ‘But who are good men? and what is good conduct? These are great questions.’⁵ In the numberless relations of men, good and bad, among the different views which, from their various positions they have of the right, an approximation to its ascertainment is all that can be hoped for, and while we believe that this approximation to all its intentions is closer in the law than in any other science not based upon mathematical demonstrations, this is due mainly to those same forensic conflicts which men are so wont to criticise and to blame. There is nothing, therefore, in the fancied anomaly of an honest man

⁵ ‘Sed nos veri juris germanaque justitiæ solidam et expressam effigiem tenemus; umbra et imaginibus utimur. Quam illa aurea, **UT INTER BONOS BENE AGIER OPORTET ET SINE FRAUDATIONE!** Sed, qui sint boni, et quid sit bene agi, magna questio est.’—*Cic. De. Off., Lib. III., Cap. XVII.*

who is a dishonest lawyer. Whenever such a man comes to the Bar, there comes a mighty blessing to his neighborhood. If, in the ardor of the devotion which he carries to the causes of his clients, he seems sometimes to combat too zealously for his own similitude before the real right has been ascertained, we shall make a great mistake if we suppose that the real right can be ascertained otherwise than by the combats of him with others such as him. And we shall make a greater mistake if we suspect that he has lost, or is apt to lose, the heart to love and adore the truth when, after such combats, it is unveiled before his eyes.

But the misapprehensions that are most hurtful to the profession are those which are entertained by a considerable number of its own members. For the infirmities of these, in spite of its shining ornaments, it has always suffered and must continue to suffer. A lawyer who is a bad man is the most mischievous and dangerous person with whom one can be confronted. It is sad to contemplate the annoyance and distress which such a man may inflict, during a lifetime, upon even the good men of society. Such a man may become a spy upon other men, and obtain an incredible amount of acquaintance with all their most important concerns. This is especially the case in agricultural communities, where men are less familiar than those in cities and towns with those forms of business which are necessary to its safe and proper conduct. In the intercourse of the citizens of such communities, the omission of such forms with the best and most honest men render their transactions unintelligible to those who, after lapse of time, come to look upon their records. The confidence which they have in one another, so beautiful to behold, and so sweet to feel, induces a neglect much beyond what mere ignorance would create; and the usages of friendship and good neighborhood make them satisfied with settlements which are too often unaccompanied by written memoranda. By and by, some of these good men become alienated from one another. By and by some of them die. Old friendships seldom descend from one generation to another. Besides, it is a sad truth that the greatest robberies are those that are committed by the living upon the dead.

All thieves, little and great, from the grave-digger and the coffin-maker upward, understand that.

Now this especial bad man, who is worse than all other thieves and robbers, and whose wont it has been to prowling about Probates' offices, and pore over ancient and imperfect records, and pick news-mongers and retailers of old scandals, makes up *his* record, and to the covetous, and prodigal, and bankrupt, he complains how they have been wronged, and insinuates how, through his means, their wrongs may be redressed; and then a small retainer and a great contingent, are the preliminaries to suits upon Administrators' bonds or to Bills in Equity, which charge every form of mismanagement and fraud upon the best men and involve them or their representatives in long and ruinous litigation. We have known very many of such cases, and we have sighed, and could have wept to witness the misery which they have produced. Many a good man, in his abhorrence of courts, though conscious of perfect innocence, and though assured by reliable counsel of eventual release, prefers to buy his peace with a price which enables the mean pettifogger to live in comfort for a long time afterwards. Another, less timid and less averse to strife, elects to fight it out on the line proposed, indulging himself to an occasional imprecation upon the head captain of his enemies, and in time may have his verdict. But the payment of his own counsel, the charge of sundry items, about which he and all his friends have forgotten, the fees of witnesses, the loss of other interests by his attendance upon courts, all convince him that his more timid neighbor, who bought himself off, was wiser than he who fought himself out; and he is denied even the consolation of feeling that his imprecations have done either harm or good to the man whom he is right in regarding as the worst of all rascals. Cases like these are frequent in some communities, and they sometimes occur in all. How many miseries they produce, how many alienations of friends and families, how many wrongs of all sorts and forms, only God above knows. Perhaps in this we mistake. Perhaps they are all known to the great Spirit of Evil below, and he has his antepast of enjoyment. If not now, they will be known in

season ; for they are done by his inspiration, and upon him will devolve their settlement at the last.

Much above those we have described is another class whose misapprehensions as to the scope of their duties, are more hurtful to the profession than they are apt to be aware. With this class the standard of professional deportment does fall somewhat below that which they are in the habit of maintaining in the other relations of life. In the eagerness with which many young men desire notoriety, which they suppose to be necessary to speedy success, they are thrown into cases of doubtful right by the aid of injudicious friends, or by their own volunteering ; and thus they form habits of asseverating unformed opinions and clamoring for doubtful points which must tend to diminish the love, and even obtund the sense of truth. Some of such men come to believe that it is not wrong to take any case that presents itself, and having appeared in it, that their duty, or at least their right, is to push it along without considering any question except what may appertain to the interests of their clients. With an able and upright judge, these are not wont to do a very great amount of mischief to the public ; but they hurt both themselves and their better brethren. They hurt themselves by failing, through their own fault, to rise as high as different deportment would elevate them ; and they hurt their better brethren by carelessly lowering their profession in the eyes of mankind and subjecting it to unjust reproach. And they assuredly do some harm to society in this, that their too frequent and unfair defence of transactions plainly unjust, makes them often appear to disregard the principles both of law and morality.

It is an unhappy mistake that many lawyers who are not bad men make, in believing that the *whole* question of conscience resides always with their clients. Every lawyer should feel that it is his duty to be a conservator of those things which the laws enjoin ; and while he may rightfully aid a client in obtaining the benefit of any law that is applicable to his case, he ought to counsel against the acceptance of that benefit when it is to operate gross injustice to others. For example : While it is not unprofessional, nor in any degree wrong, to

file a plea of usury, he owes this much to everybody, himself, society, and especially his client, to persuade him, if possible, to refrain from accepting a dishonest release from the fulfilment of his own solemn obligation. The men who refuse to consider such counsel as coming within the intention of their professional duties, may be, and many of them are, upright in their own personal lives, humane, generous, social; but they fall short of conserving, and even of beholding, the great, superior purposes of the law, and they miss that very highest felicity of this lower life, the opportunities of doing good.

But there is a class of lawyers who do well employ these blessed opportunities. Many such there are in many communities. Would that there were more, and that they were in all. To be such men the highest intellectual abilities are not requisite. While in that middle class just described, there are sometimes found men of intellect enough to rise to any eminence by the persistent love and pursuit of justice, it is most pleasing to find in this upper class men in whom such love and pursuit have lifted understandings that are less than first-rate up to the power to see and to advocate truth, which is superior to the genius that, for the want of these virtues, loses in the lapse of time, both the power to see and the power to advocate. For truth, even in this world, rewards her worshippers, while she punishes her enemies. The latter she sometimes blinds in the knowledge of how to come to her shrine, even when they seek to come with serious devotion, but after having been wont to come too seldom and with too reluctant sacrifice. The former, who never bow the knee elsewhere, become so accustomed to her presence and her inspiration, that they seem to partake even of her divine nature. How many men have we known at the bar who, although they did not seem at first to be qualified for its successful pursuit, yet, by patient labor and the continuous practice of integrity, have attained to fame; while others, apparently more gifted, by failing to learn or to practise the great duties of the profession, have ended their careers without honor.

Now while we are far from claiming for such men perfection, we do think that they attain as close an approximation to it as

any men in any earthly vocation ; and that in the matter of usefulness they ascend higher than all others. The science of the law embraces every business of life. Those two things, *rights* and *wrongs*, attach themselves every moment of time, to all mankind from the highest to the lowest. They are as interesting to one man as they are to another ; the poor as well as the rich. The houseless beggar, the sad lunatic, the raving maniac, the driveling idiot, the infant, the infant not yet escaped from its mother's womb, the outlaw, the felon, yea, the convicted felon who is awaiting in his cell the day of execution, all have their rights and may have their wrongs ; and the law irregular, and desultory, and rambling, and self-contradicting as it seems to be, is ever striving to provide for them all. There is nothing more important, indeed, in the merely human business of life, there is nothing so important as that these rights and wrongs be well understood, in order that the former be faithfully defended, and the latter be adequately redressed. It is a happy thing for society when a young man of the true generous breed applies himself to this good work. In his early years he gives, and he has to give to it his days and his nights. While he is learning it well, his youth is gone. Before he has learned it all, age comes upon him and he retires to die. Yet, by the full ripening of his manhood, he has reached a position in which he may safely be trusted by all who need his knowledge and his service. When men come to him for counsel the studies of years enable him, and the habitual practice of honor prompts him, to bestow that counsel wisely and truly. When their rights have been assailed, he defends them against every form of attack. When they are only supposed to be injured, he counsels them to withdraw from the contest, and if he be not hearkened to, he dismisses them to other men who are less scrupulous. When from the peculiar circumstances he be uncertain sometimes whether those rights be assailed or not, then, unless they can be adjusted by compromise, he brings or defends their suits, and maintains his own similitude of the right until judgment is rendered by the courts.

Now it is just here, in courts, that are to be seen those most common misapprehensions of the public in regard to the duties

of lawyers. They think it strange that two men, who claim to be considered upright and sincere, should meet from court to court, from day to day, in constant, ardent antagonisms. But the public does not sufficiently consider that these antagonisms have their inception with parties itself, and that it rarely, if indeed it ever happens, that the most honest client blames the ardor of his patron's advocacy. Then the public does not reflect that its non-acquaintance with laws, except their most general principles, disqualifies it from recognizing the infinite variety of circumstances which may take, or seem to take, a newly arisen case out of the circle of former precedents, and that judges, notwithstanding their decent deportment and learned books, are incapable, until after such argumentation, to determine how he ought to adjudicate. Besides, among the different men who have been upon the Bench, rulings, even upon the same points, have been variant according to their capacities, and dispositions, and likings, and prejudices. It makes a vast difference whether Labeo be the magistrate, or Capito; whether Mansfield or Kenyon. While the mind of one leans to liberal constructions, and seeks to bring the laws along with the changing conditions of a nation's civilization, that of another is found to overrule all innovations, and strives to restore every ancient landmark that, from whatever cause, has been, or he believes to have been, removed.

This reference to the different sorts of judges opens to our view a wide field, if we had the time to speculate upon it. We have said that it was less difficult to adjudicate a case than to argue it. But it must not be understood that we maintain that it is not very difficult to be a good judge. To be a good judge requires a combination of so many gifts that it *ought* to be surprising to consider how many men desire that office, and what kinds of men sometimes are nominated to it. One of the most difficult questions for statesmen to determine has been, how it is best for judges to be made, and what should be the duration of their incumbency. Many a man has risen from the Bar whose judicial career has widely differed from that which his professional behavior foretold. It is singular what a temptation there seems always to have been to newly-

elected judges to distinguish their administrations by unexpected deflections from the ways of former administrations. From the impossibility, resulting from the infinitude of its subtleties, of fixing perfectly settled principles of law in all cases, a hazardous amount of discretion must be allowed to every judge which he may hurtfully abuse. It was so much abused in the times of our ancestors, that Lord Camden designated it 'the law of tyrants.' In its exercise many a fantastic trick has been played by many a magistrate, small and great. In the bewilderment in which juries, unlearned in the law, are wont to be involved by the strivings of opposing counsel, the magistrate has a fair opportunity to exercise that discretion according to his temper, his constitution, his passion, or the expectations that he may found upon the opinions which men may have of his administration. The histories, and the traditions, and our own observations tell us how capricious that exercise has been. In the early struggles between liberty and prerogative, it varied little from a decided preponderance in favor of the latter. We shudder to know that the Bench, that most solemn of all places upon earth, except the Pulpit, has been pressed by so ignorant a knave as Wright, so loathsome a mass of moral and physical depravity as Saunders, so bloody-minded a villain as Scroggs, so hideous a devil as Jeffreys. Such men passed away with the despotisms that created them, and there is little danger that their likes will be seen again. Yet, under the rule of upright judges, caprice, or some other infirmity, single among many great virtues, sometimes hinders that fair and equable dispensation of justice which all good men desire. In one, there is that disposition before mentioned, to distinguish his administration by rulings which overturn past rulings that are sufficiently good precedents. In another, there is an overweening ambition to reform society in impracticable ways, as by indecent harshness to defendants in criminal prosecutions, and a too speedy suspicion of frauds in some or other sides in civil suits. 'The only shade,' says Lord Campbell, 'in the character of Chancellor Osmond was his great severity to penitents, which was caused by his own immaculate life.' What a commentary on life!

on the life of even a good man! Even Sir Matthew Hale, great and good as he was, was *so* good that he believed it to be a part of his mission to hang poor witches, and, in the nervous apprehension of being suspected of selling justice, sometimes hindered or delayed it. It seems almost to be a requisite in a judge, (at least of a Criminal Court,) that he have some infirmity for which he desires and needs forbearance and forgiveness. A man who leads what is generally styled an 'immaculate life,' when raised to the Bench, is often strangely apt to regard his elevation as a special and blessed interposition of Providence for the good of mankind, and to seek for the culmination of his fame by the attempt of a wholesale clearance of vices as well as crimes. In this country it is especially difficult to obtain able judges, because the salaries are too small to tempt the best lawyers, unless they be already rich, or be ready to retire from the labors of the profession, or unless they prefer the honors of office to its other rewards.

In the presence of courts presided over by magistrates of so various casts, lawyers, who are as good men as the earth ever produced, are made sometimes to appear at a disadvantage that is undeserved. The court being the standard, both of law and every propriety, and having frequent occasions to overrule even its best and ablest advocates, many men feel surprise mingled with reproach, that such men should so often maintain, without blushing, such apparent wrongs and absurdities. Such persons, honest themselves, cannot understand how men, who would like to be considered as honest, can appear at the instance of a mean or bad man against the charge of a good one. But let it not be forgotten, what we have said before, that every human being in society has rights, and that they are as sacred and as dear in one as in another. The good man can no more take from the bad what is his due, than the bad can take it from him. If a poor knave have a legal right which a good man, as does sometimes occur, cannot for many reasons recognize, it would be a shame upon the law if he could not find an advocate among the best and bravest at the bar to aid him in its vindication. Indeed it often requires the best and bravest to vindicate rights which, to good men, seem sometimes to be so

strangely located. Therefore, no rule could be made that would fall further short of attaining a just adjudication of causes, than the rule of deciding according to the relative standing of parties in litigation. As the advocate cannot determine by such a standard, no more can the magistrate. Let us imagine one ruling thus summarily. Let him open his docket and turn to a couple of cases. *A against B.* By the Court. 'Let the defendant have his verdict, since he is a good man and A a bad.' *C against D.* By the Court. 'In this case, the plaintiff must have judgment, he being the good man.' But, may it please your Honor, who then are good men? Alas! says Cicero, 'That is a great question.' The truth is, unhappy as it is, that all men, good and bad, make mistakes concerning the rights of others, when they seem to conflict with their own. More unhappy yet it is, that good men are very often apt to undervalue the rights of the bad. The bad have no friends, and they deserve to have none, save in the laws of the land. These laws cover all. Designed mostly to protect the good from the bad, they must afford also a shelter to the bad whenever they are too rigorously pursued, or whenever the few rights which they have not forfeited, are assailed.

From all the considerations hereinbefore mentioned, the nature of municipal laws in general, and the Common Law in particular, the infinite variableness of its application to the different circumstances of men's lives, the frequent impossibility of its ascertainment except by means of public discussions, the habits of some lawyers, and the characteristics of some magistrates, the large number of shining lights of the profession, among whom are to be found some of the kindest and justest men, are undervalued by the world. Too many of the world regard all lawyers alike, as delighting in strifes, as barrators, disturbers of peace, and unscrupulously eager for fame and money. Yet, how many of these greater lights are never found in offices or in the paths that lead to them. How few of them accumulate fortunes. What becomes of the great fees which look so like, what they are sometimes styled, extortions upon the estates of men living and dead? First, these fees are

neither so large nor so frequent as is believed. Then, they go in humane benefactions, in liberal allowances to their families, in answerings to charitable claims, in purchasing of books, and pictures, and objects of virtu, and in other ways that commend themselves to men of generous minds and cultivated tastes.

Such men as these are the most efficient conservators of social tranquillity. Their profession affords them the most frequent opportunities, and their humanity prompts them ever, to be such. Instead of being the fomenters of useless litigation, their counsel is mainly given in discouraging it. While they are ever ready to defend the good against the assaults of the bad, they are as ready for that other ungracious but necessary duty, the defence of the bad against the assaults of the good. And it is their crowning honor that, through their means, a vaster amount of litigation is withheld from the public than is inflicted upon it.

If we could know all that is said and done in the offices of this class of men during one year, we should be astonished to find how much distress and anguish have been spared to private men, and how much expense and disgust have been turned away from the public. It is impossible to calculate the good that is done by such men, because it is impossible to know its greatest and noblest part. This part, like all the best charities, is done in secret. It is in the secret chambers of offices, that selfish men are warned from the prosecution of their aims. It is there that the thoughtless are admonished of the laxity in business or in conduct which is to be stayed in order to prevent pecuniary and moral ruin. It is there that just and liberal settlements are wrung from hard parents and mean husbands. It is there that bad men, who come to have unjust testaments executed, are made ashamed and afraid to prolong their injustice beyond the grave and into the eternal world. But it is especially to the upright that blessings come from these secret chambers. It is there that they are forefended against the evil plots of the vicious, and that they are aided and guided in their benign endeavors for the good of others. It is there that they are comforted in their anxieties regarding the bestowment of the fruits of their labors upon the objects of their love who are

to survive them. And then, it is there, sometimes, that mirrors are held before their eyes, in which they are made to behold in their own characters things that surprise and pain them; yet, by the sight of which, they are made humbler and better. This is, indeed, the true charity. To our minds this is the very exaltation of charity. The great fees come not from these silent labors. They come from those loud and fierce antagonisms which these silent labors often prevent, and are intended to prevent. This is the charity that is kind. And it is the more beautiful and blessed, in that it doth not behave itself unseemly, but performs its most benign work unnoticed by the world.

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- ART. V.—*Cours de Philosophie Positive*. Par M. Auguste Comte. 6v. 80. Paris. 1830–42.
2. *History of Civilization in England*. By Henry Thomas Buckle. London: John W. Parker & Sons. 1858.
3. *A System of Logic, Ratiocinative and Inductive*. By John Stuart Mill. New York. 1846.
4. *An Historical and Critical View of the Speculative Philosophy of Europe in the Nineteenth Century*. By J. D. Morell, A. M. New York. 1848.

‘Positivism,’ says M. Guizot, in his *Meditations*, ‘is a word—in language, a barbarism; in philosophy, a presumption.’ Its genius is sufficiently indicated by its chosen name; in which it qualifies itself, not like other sciences, by its object, but by a boast. The votaries of physics have often disclosed a tendency to a materialism which depreciates moral and spiritual truths. The one-sidedness and egotism of the human understanding ever inclines it to an exaggerated and exclusive range. Man’s sensuous nature concurs with the fascination of the empirical method applied to sensible objects, to make him overlook the

spiritual. Physicists become so inflated with their brilliant success in detecting and explaining the laws of second causes, that they forget the implication of a first cause, which constantly presents itself to the reason in all the former; and they thus lapse into the hallucination that they can construct a system of nature from second causes alone. This tendency to naturalism, which is but an infirmity and vice of the fallen mind of man, no one has avowed so defiantly, in our age, as M. Auguste Comte, the pretended founder of the *Positive Philosophy*, and his followers. His attempt is nothing less than to establish naturalism in its most absolute sense, to accept all its tremendous results, and to repudiate as a nonentity all human belief which he cannot bring within the rigor of exact physical science.

Although it is not just to confound the man and the opinions, we always feel a natural curiosity touching the character of one who claims our confidence. Guizot says of him, when he appeared before that statesman, with the modest demand that he should found for him a professorship of the *History of Physical and Mathematical Science*, in the College of France: 'He explained to me drearly and confusedly his views upon man, society, civilization, religion, philosophy, history. He was a man single-minded, honest, of profound convictions, devoted to his own ideas, in appearance modest, although at heart prodigiously vain; he sincerely believed that it was his calling to open a new era for the mind of man and for human society. Whilst listening to him, I could hardly refrain from expressing my astonishment, that a mind so vigorous should, at the same time, be so narrow, as not even to perceive the nature and bearing of the facts with which he was dealing, and the questions which he was authoritatively deciding; that a character so disinterested should not be warned by his own proper sentiments—which were moral in spite of his system—of its falsity and its negation of morality. I did not even make any attempt at discussion with M. Comte; his sincerity, his enthusiasm, and the delusion that blinded him, inspired me with that sad esteem that takes refuge in silence. Had I even judged it fitting to create the chair which he demanded, I should not for a moment have dreamed of assigning it to him.

‘I should have been as silent, and still more sad, if I had then known the trials through which M. Auguste Comte had already passed. He had been, in 1823, a prey to a violent attack of mental alienation, and in 1827, during a paroxysm of gloomy melancholy, he had thrown himself from the Pont des Arts into the Seine, but had been rescued by one of the King’s guard. More than once, in the course of his subsequent life, this mental trouble seemed upon the point of recurring.’

The reader, allowing for the courteous euphemism of Guizot, will have no difficulty in realizing from the above, what manner of man Comte was. His admiring votary and biographer, M. Littré, reveals in his master an arrogance and tyranny, which claimed every literary man who expressed interest in his speculations, as an intellectual serf, and which resented every subsequent appearance of mental independence as a species of rebellion and treachery to be visited with the most vindictive anger. That his mental conceit was, beyond the ‘intoxication’ which M. Guizot terms it, a positive insanity, is manifest from his own language. On hearing of the adhesion of a Parisian editor to his creed, he writes to his wife: ‘To speak plainly and in general terms, I believe that, at the point at which I have now arrived, I have no occasion to do more than to continue to exist; the kind of preponderance which I covet cannot henceforth fail to devolve upon me.’ . . . ‘Marrest no longer feels any repugnance in admitting the indispensable fact of my intellectual superiority.’ And to John Stuart Mill, at one time his supporter, he wrote of ‘a common movement of philosophical regeneration everywhere, when once Positivism shall have planted its standard—that is, its lighthouse I should term it—in the midst of the disorder and of the confusion that reigns; and I hope that this will be the natural result of the publication of my work in its complete state.’ (This work is his *Course of Positive Philosophy*, finished in 1842.)

Positivism takes its pretext from the seeming certainty of the exact sciences, and the diversity of view and uncertainty, which have ever appeared to attend metaphysics. It points to the brilliant results of the former, and to the asserted vagueness and barrenness of the latter. It reminds us that none of

the efforts of philosophy have compelled men to agree, touching absolute truth and religion ; but the mathematical and physical sciences carry perfect assurance, and complete agreement, to all minds which inform themselves of them sufficiently to understand their proofs. In these, then, we have a satisfying and fruitful quality, Positivism ; in those, only delusion and disappointment. Now, adds the Positivist, when we see the human mind thus mocked by futile efforts of the reason, we must conclude, either that it has adopted a wrong *organon* of logic for its search, or that it directs that search towards objects which are, in fact, inaccessible, and practically non-existent to it. Both these suppositions are true of the previous philosophy and theology of men. Those questions usually heated by philosophy and theology which admit any solution—which are only the questions of sociology—must receive it from Positivism. The rest are illusory. History also, as they claim, shows that this new philosophy is the only true teacher. For when the course of human opinion is reviewed, it is always found to move through these stages. In its first stage, the human mind tends to assign a theological solution for every natural problem which exercises it ; it resolves everything into an effect of supernatural power. In its second stage, having outgrown this simple view, it becomes metaphysical, searches in philosophy for primary truths, and attempts to account for all natural effects by *à priori* ideas. But in its third, or adult stage, it learns that the only road to truth is the empirical method of exact science, and comes to rely exclusively upon that. Thus, argue they, the history of human opinion points to Positivism, as the only teacher of man.

But Comte, while he denies the possibility of any science of psychology, save as a result of his Positivism, none the less begins with a psychology of his own. And this is the psychology of the sensationalist. He virtually adopts as an *à priori* truth (he who declares that science knows no *à priori* truths) the maxim of Locke, *Nihil in intellectu quod non prius in sensu*, and holds that the human mind has, and can have, no ideas save those given it by sensitive perceptions, and those formed from perceptions by reflexive processes of thought.

Science accordingly, knows, and can know, nothing save the *phenomena* of sensible objects, and their laws. It can recognize no cause or power whatever, but such as metaphysicians call second causes. It has no species of evidence except sensation and experimental proof. 'Positive philosophy is the whole body of human knowledge. Human knowledge is the result of the study of the forces belonging to matter, and of the conditions or laws governing those forces.'

'The fundamental character of the positive philosophy is that it regards all *phenomena* as subjected to invariable natural laws, and considers as absolutely inaccessible to us, and as having no sense for us, every inquiry into what are termed either primary or final causes.'

'The scientific path in which I have, ever since I began to think, continued to walk, the labors that I obstinately pursue to elevate social theories to the rank of physical science, are evidently, radically, and absolutely opposed to everything that has a religious or metaphysical tendency.' 'My positive philosophy is incompatible with every theological or metaphysical philosophy.' 'Religiosity is not only a weakness, but an avowal of want of power.' 'The "positive state" is that state of the mind, in which it conceives that *phenomena* are governed by constant laws, from which prayer and adoration can demand nothing.'

Such are some of the declarations of his chief principles made by Comte himself. They are perspicuous and candid enough to remove all doubt as to his meaning.

He also distributes human science under the following classes: It begins with mathematics, the science of all that which has number for its object; for here, the objects are most exact, and the laws most rigorous and general. From mathematics, the mind naturally passes to physics, which is the science of material forces, or dynamics. In this second class, the first subdivision, and nearest to mathematics in the generality and exactness of its laws, is astronomy, or the *mécanique céleste*. Next comes mechanics, then statics, and last chemistry, or the science of molecular dynamics. This brings us to the verge of the third grand division, the science of organisms; for the

wonders of chemistry approach near to the results of vitality. This science of organism then, is biology, the science of life, whether vegetable, insect, animal, or human. The fourth and last sphere of scientific knowledge is sociology, or the science of man's relations to his fellows in society, including history, politics, and whatever of ethics may exist for the Positivist. Above sociology there can be nothing; because, beyond this, sensation and experimental proof do not go, and where they are not, is no real cognition. Comte considers that the fields of mathematics and physics have been pretty thoroughly occupied by Positivism; and hence the solid and brilliant results which these departments have yielded under the hands of modern science. Biology has also been partially brought under his method, with some striking results. But sociology remains very much in chaos, and unfruitful of certain conclusions, because Positivism has not yet digested it. All the principles of society founded on psychology and theology are, according to him, worthless; and nothing can be established, to any purpose, until sociology is studied solely as a science of physical facts and regular physical laws, without concerning ourselves with the vain dreams of laws of mind, free agency, and divine providence.

Such, in outline, are the principles of Positivism. Let us consider a few of its corollaries. One of these, which they do not deign to conceal, is a stark materialism. Their philosophy knows no such substance as spirit, and no such laws as the laws of mind. For, say they, man can know nothing but perceptions of the senses, and the reflexive ideas formed from them. 'Positive philosophy,' which includes all human knowledge, is 'the science of material forces and their regular laws.' Since spirit, and the actings of spirit, can never be *phenomena*, properly so called, events cognizable to our senses, it is impossible that science can recognize them. This demonstration is, of course, as complete against the admission of an infinite spirit as any other; and the more so, as Positivism repudiates all absolute ideas. Nor does this system care to avail itself of the plea, that there may possibly be a God who is corporeal. Its necessarily atheistic character is disclosed in the declaration, that true

science cannot admit any supernatural agency or existence, or even the possibility of the mind's becoming cognizant thereof. Since our only possible knowledge is that of sensible *phenomena*, and their natural laws, nature must of course bound our knowledge. Her sphere is the all. If there could be a supernatural event, (to suppose an impossibility,) the evidence of it would destroy our intelligence, instead of informing it. For it would subvert the uniformity of the natural, which is the only basis of our general ideas, the norm of our beliefs. Positivism is, therefore, perfectly consistent in absolutely denying every supernatural fact. Hence the criticism of its votaries, when like Strauss and Renan, they attempt to discuss the facts of the Christian Religion, and the life of Jesus Christ. Their own literary acquirements, and the force of Christian opinion, deter them from the coarse and reckless expedient of the school of Tom Paine, who rid themselves of every difficult fact in the Christian history by a flat and ignorant denial, in the face of all historical evidence. These recent unbelievers admit the established facts; but having approached them with the foregone conclusion that there can be no supernatural cause, they are reduced, for a pretended explanation, to a set of unproved hypotheses, and fantastic guesses, which they offer us for verities, in most ludicrous contradiction of the very spirit of their 'positive philosophy.'

What can be more distinctly miraculous than a creation? That which brings nature out of *nihil* must of course be supernatural. Positivism must therefore deny creation, as a fact of which the human intelligence cannot possibly have evidence. As the universe did not begin, it must, of course, be from eternity, and therefore self-existent. But, being self-existent, it will of course never end. Thus matter is clothed with the attributes of God.

The perspicacious reader has doubtless perceived that these deductions, when stripped of their high-sounding language, are identical with the stupid and vulgar logic which one hears occasionally from atheistic shoemakers and tailors. 'How do you know there is a God? Did you ever see him? Did you ever handle him? Did you ever hear him directly making a

noise?' Those who have heard the philosophy of tap-rooms, redolent of the fumes of bad whiskey and tobacco, recognize these as precisely the arguments, uttered in tones either maudlin or profane. Is not the logic of Positivism, when stated in the language of common sense, precisely the same?

Once more, Positivism is manifestly a system of rigid fatalism; and this also its advocates scarcely trouble themselves to veil. Human knowledge contains nothing but *phenomena* and their natural laws, according to them. 'The positive state is that state of mind, in which it conceives that *phenomena* are governed by constant laws, from which prayer and adoration can demand nothing.' 'The fundamental character of positive philosophy is, that it regards all *phenomena* as subject to invariable laws.' Such are Comte's *dicta*. The only causation he knows is that of physical second causes. These, of course, operate blindly and necessarily. This tremendous conclusion is confirmed by the doctrine of the eternity and self-existence of nature; for a substance which has these attributes, and is also material, must be what it is, and do what it does, by an imminent and immutable necessity. Positivism must teach us, therefore, if it is consistent, that all the events which befall us are directed by a physical fate, that there is no divine intelligence, nor goodness, nor righteousness, nor will concerned in them; that our hopes, our hearts, our beloved ones, our very existence, are all between the jaws of an irresistible and inexorable machine; that our free-agency, in short, is illusory, and our free-will a cheat.

But the positive philosophy, with its sweeping conclusions, influences the science of this generation to a surprising degree. We are continually told that in France, in Germany, and especially in Great Britain, it is avowed by multitudes, and boasts of prominent names. The tendencies of physicists are, as has been noted, towards Naturalism: the boldness with which the school of Comte lifted up their standard, has encouraged many to gather around it. Its most deplorable result is the impulse which it has given to irreligion and open atheism. Thousands of ignorant persons, who are incapable of comprehending any connected philosophy, true or erroneous, are emboldened to

babble materialism and impiety, by hearing that the 'positive philosophy' knows 'neither angel nor spirit,' nor God. And this is one of those sinister influences which now hurries European and American society along its career of sensuous existence. We detect the symptoms of this error in the strong direction of modern physical science to utilitarian ends. Even Lord Macaulay, in his essay on Bacon, seems to vaunt the fact that the new *Organon* aimed exclusively at 'fruit.' He contrasts it in this respect, with the ancient philosophy, which professed to seek truth primarily for its intrinsic value, and not for the sake of its material applications. He cites Seneca, as repudiating so grovelling an end, and as declaring that if the philosopher speculated for the direct purpose of subserving the improvements of the arts of life, he would thereby cease to be a philosopher, and sink himself into an artizan, the fellow-craftsman of shoemakers and such like. And the witty essayist remarks that, for his part, he thinks it more meritorious to be a shoemaker, and actually keep the feet of many people warm, than to be a Seneca, and write the treatise *De Ira*, which, he presumes, never kept anybody from getting angry. The truth, of course, lies between the unpractical spirit of the ancient, and the too practical spirit of the modern philosophy. Man has a body, and it is well to study its welfare; but he also has a mind, and it is better to study the well-being of that nobler part. Truth is valuable to the soul in itself, as well as in its material applications. To deny this, one must forget that man will have an immortal, rational existence, without an animal nature, when truth will be his immediate and only *pabulum*. So that an exclusive tendency to physical applications of science savors of materialism. To represent the splendid philosophy of the ancients as nugatory, is also a mischievous extravagance. It did not give them all the mental progress of the moderns! True. Perhaps no philosophy, without revelation, could do this. But it gave them the ancient civilization, such as it was. And surely, there was a grand difference in favor of Pericles, Plato, and Cicero, as compared with Hottentots and Australians! Pagans who, like the Positivists, have neither a psychology nor a natural theology.

When we look into Great Britain, we see startling evidence of the power of the new philosophy. John Stuart Mill presents one of these evidences. He has long since (in his *Logic*) committed himself to some of its most fatal heresies; and these he reaffirms and fortifies in his more recent *Examination of Sir William Hamilton's Philosophy*. He holds in the main to the dogmas of the Sensualistic Philosophy. He flouts the primitive judgments of the human mind. He intimates, only too plainly, the ethics of utilitarianism. He disdains the idea of power in causation, and reduces man's intuitive judgment of adequate cause for every known effect, to an empirical inference. Matter he defines, indeed, as being known to the mind as only a possibility of affecting us with sensations; thus parting company, in a very queer way, with his natural kindred, the more materialistic positivists. While upon the subject of fatalism and free-will, his 'trumpet gives an uncertain sound,' he deserves the credit of correcting some of the errors of both the opposing schools, and stating some just truths upon these doctrines. His association with the anti-Christian school represented by the *Westminster Review* is well known. We are now told that Mill is quite 'the fashion' at one, at least, of the Universities, and is the admitted philosopher of Liberalism.

Another of these evil portents in the literary horizon is Henry Thomas Buckle, in his *History of Civilization in England*. His theory of man and society is essentially that of the Positivist. He regards all religion as the outgrowth of civilization, instead of its root; and is willing to compliment Christianity with the praise of being the best religious effect of the British mind and character; (provided Christianity can be suggested without its ministers; whose supposed bigotry, ecclesiastical, and theological, never fails to inflame his philosophic bigotry to a red heat,) although he anticipates that English civilization will, under his teachings, ultimately create for itself a religion much finer than that of Christ. He, of course, disdains psychology; he does not believe a man's own consciousness a trustworthy witness; and he regards those general facts concerning human action which are disclosed, for instance, by statistics, the only materials for a science of man

and society. He commends intellectual skepticism, as the most advantageous state of mind. He is an outspoken fatalist, and regards the hope of modifying immutable sequences of events by prayer, as puerile. He regards 'positive' science as a much more hopeful fountain of well-being and progress, than virtue or holiness.

It is significant, also, to hear so distinguished a naturalist as Dr. Hooker, now filling the high position of President of the British Association, in his inaugural address, terming natural theology 'that most dangerous of two-edged weapons,' discarding metaphysics, as 'availing him nothing,' and condemning all who hold it as 'beyond the pale of scientific criticism,' and declaring roundly, that no theological or metaphysical proposition rests on positive proof.

As Americans are always prompt to imitate Europeans, (especially in their follies,) it is scarcely necessary to add, that the same dogmas are rife in our current literature. Even an Agassiz has been seen writing such words as these: 'We trust that the time is not distant, when it will be universally understood, that the battle of the evidences will have to be fought on the field of physical science, and not on that of the metaphysical.'

All these instances are hints of a tendency in English and American philosophy. We have referred to Positivism, as giving us their intelligible *genesis*. Our purpose is, in the remainder of this article, to discuss, not so much individual Englishmen, or their particular theories, as the central principles of that school of thought, from which they all receive their impulse. To debate details and corollaries is little to our taste; and such debate never results in permanent victory. He who prunes the offshoots of error has an endless task; a task which usually results only in surrounding himself with a thicket of thorny rubbish. It is better to strike at the main root of the evil stock, from which this endless outgrowth sprouts. Hence, we propose to examine a few of the general objections against the body of the system, rather than to follow, at this time, the special applications of one or another of the representative men named above.

Let us, then, look back again at Positivism fully pronounced. We have pointed to that gulf of the blackness of darkness, and of freezing despair, towards which it leads the human mind; a gulf without an immortality, without a God, without a faith, without a providence, without a hope. Were it possible or moral for a good man to consider such a thing dispassionately, it would appear to be odd and ludicrous to him, to witness the surprise and anger of the Positivists at perceiving, that reasonable and Christian people are not disposed to submit with entire meekness to all this havoc. There is a great affectation of philosophic calmness and impartiality. They are quite scandalized, to find that the theologians cannot be as cool as themselves, while all our infinite and priceless hopes for both worlds are dissected away under their philosophic scalpel! Such bigotry is very naughty in their eyes. Such conduct sets Christianity in a very sorry light, beside the fearless and placid love of truth, displayed by the apostles of science. This is the tone affected by the Positivists. But we observe, that whenever these philosophic hearts are not covered with a triple shield of supercilious arrogance, they also burn with a scientific bigotry, worthy of a Dominic, or a Philip II. of Spain. They also can vituperate and scold, and actually excel the bad manners of the theologians. The scientific bigots are fiercer than the theological, besides being the aggressors. We would also submit, that if we were about to enter upon an Arctic winter in Labrador, with a cherished and dependent family to protect from that savage clime, and if a philosopher should insist upon it that he should be permitted, in the pure love of science, to extinguish by his experiments, all the lamps from which we were to derive light, warmth, or food, to save us from a frightful death, and if he should call us testy blockheads, because we did not witness those experiments with equanimity, with any number of other hard names; nothing but our compassion for his manifest lunacy should prevent our breaking his head before his enormous folly was consummated. Seriously, the monstrous pretensions of this philosophy are not the proper objects of forbearance. We distinctly avow, that the only sentiment, with which a good and sober man ought to

resist these aggressions upon fundamental truths, is that of honest indignation. We pretend to affect no other.

The first consideration which exposes the baseless character of Positivism is, that we find it arrayed against the rudimental instincts of man's reason and conscience, as manifested in all ages. That the mind has some innate norms regulative of its own thinking; that all necessary truth is not inaccessible to it; that a universe does imply a Creator, and that nature suggests the supernatural; that man has consciously a personal will, and that there is a personal will above man's, governing him from the skies; these are truths which all ages have accepted, everywhere. Now, we have always deemed it a safe test of pretended truths, to ask if they contravene what all men have everywhere supposed to be the necessary intuitions of the mind. If they do, whether we can analyze the sophisms or not, we set them down as false philosophy. When Bishop Berkeley proved, as he supposed, that the man who breaks his head against a post has yet no valid evidence of the objective reality of the post, when Spinoza reasoned that nothing can be evil in itself, the universal common sense of mankind gave them the lie; there was needed no analysis to satisfy us that they reasoned falsely, and that a more correct statement of the elements they discussed would show it, as it has in fact done. This consideration also relieves all our fears of the ultimate triumph of Positivism. It will require something more omnipotent than these philosophers, to make the human reason deny itself permanently. Thank God, that which they attempt is an impossibility! Man is a religious being. If they had applied that 'positive' method, in which they boast, to make a fair induction from the facts of human nature and history, they would have learned this, at least as certainly as they have learned that the earth and moon attract each other. That there is an ineradicable ground in man's nature, which will, in the main, impel him to recognize the supernatural, is as fairly an established fact of natural history as that man is, corporeally, a bimanous animal. His spiritual instincts cannot but assert themselves, in races, in individuals, in theories, and even in professed materialists and atheists, whenever the hour of their

extremity makes them thoroughly in earnest. No; all that Positivism, or any such scheme, can effect is, to give reprobate and sensual minds a pretext and a quibble for blinding their own understandings and consciences, and sealing their own perdition, while it affords topic of debate and conceit to serious idlers, in their hours of vanity. Man will have the supernatural again; he will have a religion. If you take from him God's miracles, he will turn to man's miracles. 'It is not necessary to go far in time, or wide in space, to see the Supernatural of Superstition raising itself in the place of the Supernatural of Religion, and Credulity hurrying to meet Falsehood half-way.' The later labors of Comte himself give an example of this assertion, which is a satire upon his creed sufficiently biting to avenge the insults that Christianity has suffered from it. After beginning his system with the declaration that its principles necessarily made any religion impossible, he ended it by actually constructing a religion, with a calendar and formal ritual, of which aggregate humanity, as impersonated in his dead mistress, was the deity! 'He changed the glory of the incorruptible God into an image, made like to corruptible man.'

Here also it should be remarked, that it is a glaring misstatement of the history of the human mind, to say that when true scientific progress begins, it regularly causes men to relinquish the theory of the supernatural for that of metaphysics, and then this for Positivism. It was not so of old; it is not so now; it never will be so. It is not generally true either of individuals or races. Bacon, Kepler, Sir Isaac Newton, Leibnitz, Cuvier, were not the less devout believers to the end, because each made splendid additions to the domain of science. The 16th century in Europe was marked by a grand intellectual activity in the right scientific direction. It did not become less Christian in its thought; on the contrary, the most perfect systems of religious belief received an equal impulse. The happy Christian awakening in France, which followed the tragical atheism of the first Revolution, and which Positivism so tends to quench in another bloody chaos, did not signalize a regression of the exact sciences. The history of human opinion and progress presents us with a

chequered scene, in which many causes commingle, working across and with each other their incomplete and confused results. Sometimes there is a partial recession of the truth. The tides of thought ebb and flow, swelling from secret fountains of the deep, which none but Omniscience can fully measure. But amid all the uncertainties, we clearly perceive this general result, that the most devout belief in supernatural verities is, in the main, concurrent with healthy intellectual progress.

2. We have seen that fatalism is a clear corollary of the positive philosophy. It avows its utter disbelief of a personal and intelligent will above us; yea it is glad to assert the impossibility of reconciling so glorious a fact with its principles. It makes an impotent defence of man's own free-agency. But our primitive consciousness demands the full admission of this fact. If there is anything which the mind thinks with a certainty and necessity equal to those which attend its belief in its own existence, it is the conscious fact of its own freedom. It knows that it has a spontaneity, within certain limits; that it does itself originate some effects. No system then, is correct, which has not a place for the full and consistent admission of this primitive fact. But this fact alone is abundant to convince the Positivist that he is mistaken in declaring the supernatural impossible, and in omitting a Divine will and first Cause from his system. Nature, says he, is the all: no knowledge can be outside the knowledge of her facts and laws; no cause, save her forces. These laws, he asserts, are constant and invariable. But, remember, he also teaches, that science knows nothing as effect, save sensible *phenomena*, and nothing as cause, save 'the forces belonging to matter.' Now, the sufficient refutation is in this exceedingly familiar fact; that our own wills are continually originating effects, of which natural forces, as the Positivist defines them, are not the efficient; and that our wills frequently reverse those forces to a certain extent. Let us take a most familiar instance, of the like of which the daily experience of every working-man furnishes him with a hundred. The natural law of liquids requires water to seek its own level: requires this only, and always. But the peasant, by the inter-

vention of his own free will, originates absolutely an opposite effect: he causes it to ascend from its level in the tube of his pump. He adopts the just empirical and 'positive' method of tracing this *phenomenon* to its true cause. He observes that the rise of the water is effected by the movement of a lever; that this lever, however, is not the true cause, for it is moved by his arm; that this arm also is not the true cause, being itself but a lever of flesh and bone; that this arm is moved by nerves; and finally, that these nervous chords are but conductors of an impulse which his consciousness assures him, that he himself emitted by a function of his mental spontaneity. As long as the series of *phenomena* were affections of matter, they did not disclose to him the true cause of the water's rise against its own law. It was only when he traced the chain back to the mind's self-originated act, that he found the true cause. Here then, is an actual, experimental *phenomenon*, which has arisen without, yea, against, natural law. For, according to the Positivist, it discloses only the forces of matter; this cause was above and outside of matter. It was, upon his scheme, (not ours,) literally supernatural. Yet, that it acted, was experimentally certain; certain by the testimony of consciousness. And if her testimony is not experimental, and 'positive,' then no *phenomenon* in physics is so, even though seen by actual eyesight; because it is impossible that sensation can inform the mind, save through this same consciousness. But now, when this peasant is taught thus 'positively,' that his own intelligent will is an original fountain of effects outside of, and above, nature, (the Positivist's nature,) and when he lifts his eyes to the orderly contrivances and wonderful ingenuity displayed in the works of nature, and sees in these the 'experimental' proofs of the presence of another intelligence there, kindred to his own, but immeasurably grander, how can he doubt that this superior mind also has, in its will, another primary source of effects above nature? This is as valid an induction as the physicist ever drew from his maxim, 'Like causes, like effects.' We thus see, that it is not true that the 'positive method' presents any impossibility, or even any difficulty, in the way of admitting the supernatural. On the contrary, it requires the

admission; that is to say, unless we commit the outrage of denying our own conscious spontaneity.

3. The positive philosophy scouts all metaphysical science, namely, psychology, logic, morals, and natural theology, as having no certainty, no Positivism, and as being, therefore, nothing worth. These fictitious sciences, as it deems them, have no *phenomena*, that is, no effects cognizable by the senses, and therefore it deems that they can have no experimental proofs, and can be no sciences. But we assert, that it is simply impossible that any man can construct any other branch of knowledge, without having a science of psychology and logic of his own. In other words, he must have accepted some laws of thought, as sufficiently established, in order to construct his own thoughts. This he may not have done in words, but he must have done it in fact. What can be more obvious, than that the successful use of any implement implies some correct knowledge of its qualities and powers? And this is as true of the mind as of any other implement. When the epicure argues, (in the spirit of Positivism,) 'I may not eat stewed crabs to-day with impunity, because stewed crabs gave me a frightful colic last week,' has he not posited a logical law of the reason? When the mechanic assumes without present experiment, that steel will cut wood, has he not assumed the validity of his own memory concerning past experiments? These familiar instances, seized at hap-hazard, might be multiplied to a hundred. Every man is a psychologist and logician; (unless he is idiotic;) he cannot trust his own mind, except he believes in some powers and properties of his mind. These beliefs constitute his science of practical metaphysics.

We urge farther, that the uniformity of men's convictions concerning *phenomena* and experimental conclusions thereupon, obviously implies a certain uniformity in the doctrines of this common psychology. For, whenever one accepts a given process of 'positive' proof, as valid, this is only because he has accepted that function of the mind as valid, by which he apprehends that proof. Unless he has learned to trust the mental power therein exercised, he cannot trust the conclusion. If, then, physics do not possess the glory (claimed for this science

by the followers of Comte) of 'positivity;' if their evidence are so exact that all men accept them, when understood, with confidence, this is only because they have all accepted with yet fuller confidence, those mental laws by which the physicist thinks. So that the very Positivism of the positive philosophy implies that so much, at least, of metaphysics is equally 'positive.'

The Positivist, of course, has a psychology, although he repudiates it. 'If he had not ploughed with our heifer, he had not found out our riddle.' And this psychology, so far as it is peculiar to him, is that of the *sensualistic* school. The partial inductions, errors, and natural fruits of that school, are well known to all scholars. This is not the first instance, in which it has borne its apples of Sodom, materialism and atheism. Hume, starting from the fatal maxim of Locke, very easily and logically concluded that the human reason has no such intuition as that of a cause for every effect, and no such valid idea as that of power in cause; for in a causative (so called) sequence, is anything else seen by the senses, than a regular and immediate consequent after a given antecedent? Hence he deduced the pleasant consequences of metaphysical scepticism. Hence he deduced that no man could ever believe in a miracle. Hence he inferred, that since world-making is a 'singular effect,' of which no one has had ocular observation, all the wonders of this universe do not entitle us to suppose a first Cause. Hence Hartley and Priestly, in England, deduced the conclusion that the mind is as material as the organs of sense, and perishes with them, of course. Hence the atheism which in France prepared the way for the Reign of Terror, and voted God a nonentity, death an eternal sleep, and a strumpet the Goddess of Reason. We do not wonder that the Positivist, viewing psychology through this school, should have a scurvy opinion of it; indeed, we quite applaud him for it. The fact that he still employs it, notwithstanding his ill opinion, only proves how true is the assertion that no man can think without having a psychology of his own.

The relationship of the positive philosophy to these mischievous and exploded vagaries, appears especially in its argu-

ment against the credibility of supernatural effects or powers. Thus, says the Positivist, since our only knowledge is of the *phenomena* and laws of nature, the supernatural is to us inaccessible. Let us now hear Hume: 'It is experience only which gives authority to human testimony, and it is the same experience which assures us of the laws of nature. When, therefore, these two kinds of experience are contrary, we have nothing to do but subtract the one from the other, and embrace an opinion either on the one side or the other, with that assurance which arises from the remainder. But according to the principles here explained, this subtraction, with regard to all popular religions, amounts to an entire annihilation; and, therefore, we may establish it as a maxim, that no human testimony can have such force as to prove a miracle, and make it a just foundation for any such system of religion.'

The only true difference here is, that the recent Positivist is more candid; instead of insinuating the impossibility of the supernatural in the form of the exclusion of testimony, he flatly asserts it. 'The supernatural,' says he, 'is the *anti-natural*.' In reply, we would point to the obvious fact, that this view can have force only with an atheist. For, if there is a Creator, if He is a personal, intelligent, and voluntary Being, if He still superintends the world he has made (the denial of either of these postulates is atheism or pantheism,) then, since it must always be possible that He may see a moral motive for an unusual intervention in his own possessions, our experience of our own free will makes it every way probable, that He may, on occasion, intervene. No rational man who directs his own affairs, customarily on regular methods, but occasionally, by unusual expedients, because of an adequate motive, can fail to concede the probability of a similar free-agency to God, if there is a God. This noted demonstration of Positivism is, therefore, a 'vicious circle.' It excludes a God, because it cannot admit the supernatural; and lo! its only ground for not admitting the supernatural is the gratuitous assumption, that there is no God. But, in truth, man's reliance on testimony is not the result of experience; the effect of the latter is not to produce, but to limit, that reliance. The child be-

believes the testimony of its parent, before it has experimented upon it; believes it by an instinct of its reason. How poor, how shallow, then, is the beggarly arithmetic of this earlier Positivist, Hume, when he proposes to strike a balance between the weight of testimony for the supernatural, and the evidence for the inflexible uniformity of nature! The great moral problems of man's thought are not to be thus dispatched, like a grocer's traffic! The nature of the competing evidence is also profoundly misunderstood. Our belief in the necessary operation of a cause is not based on simple experience, but on an intuition of the reason. The Positivist sees in the natural flora of England and France only exogenous trees. May he, therefore, conclude that nature has no forces to produce endogenous? The testimony of those who visit the tropics would refute him. The truth is, (and none should know it so well as the physicist, since it is taught expressly by the great founder of this inductive logic—Bacon,) a generalization simply experimental can never demonstrate a necessary tie of causation, between a sequence of *phenomena*, however often repeated before us. It can suggest only a probability. We must apply some canon of induction, to distinguish between the apparently immediate antecedent and the true cause, before the reason recognizes the tie of causation as permanent. If, therefore, reason (not empiricism,) suggests from any other source of her teachings, that the acting cause may be superseded by another cause, then she recognizes it as entirely natural to expect a new effect, although she had before witnessed the regular recurrence of the old one a million of times. If, therefore, she learns that there may, even possibly, be a personal God, she admits just as much possibility that His free will may have intervened, as a superior cause.

The truth is, nature implies the supernatural. Nature shows us herself, the marks and proofs that she cannot be eternal and self-existent. She had, therefore, an origin in a creation. But what can be more supernatural than a creation? If it were indeed impossible that there could be a miracle, then this nature herself would be non-existent, whose uniformities give the pretext for this denial of the miraculous.

Nature tells us, that her causes are second causes; they suggest their origin in a first cause. Just as the river suggests its fountains, so do the laws of nature, now flowing in so regular a current, command us to ascend to the Source who instituted them.

4. We carry farther our demonstration of the necessity of practical physics to physical science, by an appeal to more express details. We might point to the service done to the sciences of matter by the *Novum Organum* of Bacon. What physicist is there, who does not love to applaud him, and fondly to contrast the fruitfulness of his inductive method, with the inutility of the old dialectics? But Bacon's treatise is substantially a treatise on this branch of logic. He does not undertake to establish specific laws in physical science, but to fix the principles of reasoning from facts, by which any and every physical law are to be established. In a word, it is metaphysics; the only difference being, that it is true metaphysics, against erroneous. So, nothing is easier to the perspicuous reader than to take any treatise of any Positivist upon physical science, and point to instances upon every page, where he virtually employs some principle of metaphysics. Says the Positivist, concerning some previous solution offered for a class of *phenomena*: 'This is not valid, because it is only hypothesis.' Pray, Mr. Positivist, what is the dividing line between hypothesis and inductive proof? And why is the former, without the latter, invalid? Can you answer without talking metaphysics? Says the Positivist: 'The *post hoc* does not prove the *propter hoc*.' Tell us why? We defy you to do it without talking metaphysics.

The Positivist fails to apply his own maxims of philosophy universally; his observations of the effects in nature are one-sided and fragmentary. He tells us that philosophy must be built on facts; that first we must have faithful and exact observation of particulars, then correct generalizations, and last, conclusive inductions. Right, say we. But the primary fact, which accompanies every observation which he attempts to make, he refuses to observe. When it was reported to the great Leibnitz, that Locke founded his Essay on the maxim,

Nihil in intellectu quod non prius in sensu; he answered: *Nisi intellectus isse*. These three words disclose, like the spear of another Ithuriel, the sophism of the whole *sensualistic* system. In attempting to enumerate the affections of the mind, it overlooked the mind itself. At the first fair attempt to repair this omission, Positivism collapses. Does it attempt to resolve all mental states into sensations? Well, the soul cannot have a consciousness of a sensation, without necessarily developing the idea of conscious self, over against that of the sensuous object. 'As soon as the human being says to itself "I," the human being affirms its own existence, and distinguishes itself from that external world, whence it derives impressions of which it is not the author. In this primary fact are revealed the two primary objects of human knowledge; on the one side, the human being itself, the individual person that feels and perceives himself; on the other side, the external world that is felt and perceived; the subject and the object.' That science may not consistently omit or overlook the first of these objects, is proved absolutely by this simple remark, that our self-consciousness presents that object to us, as distinct, in every perception of the outer world which constitutes the other object; presents it even more immediately than the external object, the perception of which it mediates to us. We must first be conscious of *self*, in order to perceive the *not self*. Whatever certainty we have that the latter is a real object of knowledge, we must, therefore, have a certainty even more intimate, that the former is also real. Why, then, shall it be the only real existence, the only substance in nature, to be ostracised from our science? This is preposterous. Is it pleaded, that its affections are not *phenomena*, not cognizable to the bodily senses? How shallow and pitiful is this; when those bodily senses themselves owe all their validity to this inward consciousness!

We now advance another step. Every substance must have its attributes. The ego is a real existence. If our cognitions are regular, then it must be by virtue of some primary principles of cognition, which are subjective to the mind. While we do not employ the antiquated phrase, 'innate ideas,' yet it

is evident that the intelligence has some innate norms, which determine the nature of its ideas and affections, whenever the objective world presents the occasion for their rise. He who denies this must not only hold the absurdity of a regular series of effects without a regulative cause in their subject, but he must also deny totally the spontaneity of the mind. For, what can be plainer than this: that if the mind has no such innate norms, then it is merely passive, operated on from without, but never an agent itself. Now, then, do not these innate norms of intelligence and feeling constitute primitive facts of mind? Are they not proper objects of scientific observation? Is it not manifest that their earnest comprehension will give us the laws of our thinking, and feeling, and volition? Why have we not here a field of experimental science, as legitimate as that material world, which is even less certainly and intimately known?

Dr. Hooker would discard natural theology as entirely delusive. But now we surmise that this science has some general facts which are as certain as any in physics, and certain upon the same experimental grounds. He believes in the uniformity of species in zoology. If one told him of a tribe of one-armed men in some distant country, he would demur. He would tell the relator that experimental observation had established the fact, that members of the same species had by nature the same structure. He would insist upon solving the myth of the one-armed nation, by supposing that the witness was deceived, or was endeavoring to deceive him, or had seen some individuals who were one-armed by casualty, and not by nature. But psychologists profess to have established by an observation precisely like that of the naturalist, this general fact, that all human minds have those moral intuitions, which we call 'conscience.' The utmost that science can require of them is, that they shall see to it, that their observations are faithful to fact, and their generalization of them is correct. When they submit the result to this test, why is not the law of species as valid for them as for Dr. Hooker? Why shall he require us to be any more credulous concerning the natural lack of this moral 'limb,' than he was of the story of the one-armed tribe?

But if conscience is an essential, primitive fact of the human soul, then it compels us to recognize a personal God, and his moral character, by as strict a scientific deduction as any which the physicist can boast. For, obligation inevitably implies an obligator; and the character of this intuitive imperative, which speaks for Him in our reason, must be a disclosure of His character, since it is the constant expression of his moral volition.

5. This instance suggests another capital error of Positivism, in that it proposes to despise abstract ideas, and primitive judgments of the reason; and yet it is as much constrained as any other system of thought, to build everything upon them. Mathematics, the science of quantity, is the basis of the positive philosophy, according to M. Comte; for it is at once the simplest and most exact of the exact sciences. Now when we advert to this science, we perceive at once, that it deals not with visible and tangible magnitudes, and quantities of other classes, but with abstract ones. The point, the line, the surface, the polygon, the curve, of the geometrician, are not those which any human hand ever drew with pen, pencil, or chalk line, or which human eye ever saw. The mathematical point is absolutely without either length, breadth, or thickness; the line absolutely without thickness or breadth; the surface absolutely without thickness! How impotent is it for M. Comte to attempt covering up this crushing fact, by talking of the *phenomena* of mathematics! In his sense of the word *phenomena*, this science has none. The intelligent geometrician knows that, though he may draw the diagram of his polygon or his curve with the point of a diamond, upon the most polished plane of metal which the mechanic arts can give him; yet is it not exactly that absolute polygon or curve of which he is reasoning? How then can he know, that the ideas which he predicates, by the aid of his senses, of this imperfect type, are exactly true of the perfect ideal of figures? He knows that the true answer is this: abstract reasoning assures him that the difference between the imperfect visible diagram, and the ideal absolute figure, is one which does not introduce any element of error, when the argument taken from the diagram is applied to the ideal. But, on the contrary, the reason sees that the more

the imperfection of the diagram is abstracted, the more does the argument approximate exact truth. But we ask, how does the mind thus pass from the *phenomenal* diagram to the conceptual; from the imperfect to the absolute idea? Positivism has no answer. So, the ideas of space, time, ratio, velocity, momentum, substance, upon which the higher *calculus* reasons, are also abstract. Positivism would make all human knowledge consist of the knowledge of *phenomena* and their laws. Well, what is a law of nature? It is not itself a *phenomenon*; it is a general idea which, in order to be general, must be purely abstract. How preposterously short-sighted is that observation, which leaves out the more essential elements of its own avowed process? These instances (to which others might be added) show that the admission of some *à priori* idea is necessary to the construction of even the first process of our *phenomenal* knowledge.

But the most glaring blunder of all is that which the Positivist commits, in denying the prior validity of our axiomatic beliefs, or primitive judgments, and representing them as only empirical conclusions. That psychology and logic of common sense, in which every man believes, and on which every one acts, without troubling himself to give it a technical statement, holds, that to conclude implies a premise to conclude from; and that the validity of the conclusion cannot be above that of this premise. Every man's intuition tells him, that a process of reasoning must have a starting point. The chain which is so fastened as to sustain any weight, or even sustain itself, must have its first point of support at the top. That which depends, must depend on something not dependent. But why multiply words upon this truth, which every rational system of mental science adopts as a part of its alphabet? It can scarcely be more happily expressed than in the words of a countryman of Comte's, M. Royer Collard: 'Did not reasoning rest upon principles anterior to the reason, analysis would be without end, and synthesis without commencement.' These primitive judgments of the reason cannot be conclusions from observation, for the simple ground, that they must be in the mind beforehand, in order that it may be able to make conclusions.

Here is a radical fact which explodes the whole 'positive' philosophy.

Its advocates cannot but see this; and hence they labor with vast contortions, to make it appear that these primitive judgments are, nevertheless, empirical conclusions. Comte's expedient is the following: 'If,' says he, 'on the one side, every positive theory must necessarily be founded upon observation, it is, on the other side, equally plain that to apply itself to the task of observation, our mind has need of some 'theory.' If, in contemplating the *phenomena*, we do not immediately attach them to certain principles, not only would it be impossible for us to combine these isolated observations, so as to draw any fruit therefrom; but we should be entirely incapable of retaining them, and in most cases, the facts would remain before our eyes unnoticed. The need at all times of some 'theory' whereby to associate facts, combined with the evident impossibility of the human mind's forming, at its origin, theories out of observations, is a fact which it is impossible to ignore.' He then proceeds to explain, that the mind, perceiving the necessity of some previous 'theories,' in order to associate its own observations, *invents them*, in the form of theological conceptions. Having begun, by means of these, to observe, generalize, and ascertain positive truths, it ends by adopting the latter, which are solid, and repudiating the former, which its developed intelligence has now taught it to regard as unsubstantial. His idea of the progress of science, then, seems to be this: the mind employs these assumed 'theories' to climb out of the mire to the top of the solid rock, as one employs a ladder; and having gained its firm footing, it kicks them away! But what if it should turn out, that this means of ascent, instead of being only the ladder, is the sole pillar also, of its knowledge? When it is kicked away, down tumbles the whole superstructure, with its architect, in its ruins. And the latter is the truth. For if these 'theories' are prior to our observation, and are also erroneous, then all which proceeded upon their assumed validity is as baseless as they. It is amusing to note the simple effort of Comte to veil this damning chasm in his system, by calling these assumed first truths 'theories.' They are, according to

his conception, manifestly nothing but *hypotheses*. Why did he not call them so? Because then, the glaring solecism would have been announced, of proposing to construct our whole system of demonstrated beliefs upon a basis of mere hypothesis. Nobody could have been deceived. Nor does the subterfuge avail which his follower, Mill, in substance proposes. It is this: that as the sound physicist propounds an hypothesis, which at first is only probable, not to be now accepted as a part of science, but as a temporary help for preparing the materials of an induction; and as this induction not seldom ends by proving that the hypothesis, which was at first only a probable guess, was indeed the happy guess, and does contain the true law; so the whole of our empirical knowledge may be constructed by the parallel process. In other words, the pretension of Mill is, in substance, that all our primitive judgments are at first only the mind's hypothetical guesses; and that it is empirical reasoning constructed upon them afterwards, which converts them into universal truths. Now, the simple and complete answer is this: That this proving or testing process, by which we ascertain whether our hypothesis is a true law, always implies some principle to be the *criterion*. How, we pray, was the test applied to the first hypothesis of the series, when, as yet, there was no ascertained principle to apply, but only hypothesis? *Quid rides?* Mr. Mill's process must ever be precisely as preposterous as the attempt of a man to hang a chain upon nothing! No; the hypothetical ladder is not the foundation of our scientific knowledge. Grant us a foundation, and a solid structure built on that foundation, the ladder of hypothesis may assist us to carry some parts of the building higher; that is all. And the parts which we add, carrying up the materials by means of the ladder, rest at last, not on the ladder, but on the foundation.

The accepted tests of a primitive intuition are three: that it shall be a first truth, i. e., not learned from any other accepted belief of the mind; that it shall be necessary, i. e., immediately seen to be such that it not only is true, but must be true; and that it shall be universal, true of every particular case always and everywhere, and inevitably believed by all sane men, when

its enunciation is once fully understood. The sensualistic school seem all to admit, by the character of their objections, that if the mind have beliefs which do fairly meet these three tests, then they will be proved really intuitive. But they object, these beliefs do not meet the first test, for they are empirically learned by every man, in the course of his own observation, like all inductive truths. And here they advance the plea of their amiable founder, Locke, (who little dreamed, good man, what dragon's teeth he was sowing.) It is this: that the formal announcement of sundry axioms, in words, to unthinking minds, instead of securing their immediate assent, would evoke only a vacant stare. We have to exhibit the application of the axioms in concrete cases, before we gain an intelligent assent. Very true; but why? It is only because the concrete instance is the occasion for his correctly apprehending the abstract meaning of the axiomatic enunciation. Is not the argument preposterous, that because the reason did not immediately see, while as yet the verbal *medium* of intellection was darkness, therefore the object is not an object of direct mental vision? Because a child is not willing to affirm which of 'two pigs in a poke' is the bigger, it shall be declared forsooth, that the child is blind, or that pigs are not visible animals! .

Now, against all this idleness of talk, we demonstrate by proof both as empirical and deductive as that of the Positivist for any law in physics, that observation and experience are not, and cannot be, the source of intuitive beliefs. Let us grant just such a case as Locke claims against us. We meet an ignorant, sleepy, heedless servant, and we ask: 'My boy, if two magnitudes be each equal to a third magnitude, must they, therefore, be necessarily equal to each other?' We suppose that he will, indeed, look at us foolishly and vacantly, and, if he says anything, profess ignorance. Our words are not in his vocabulary; the idea is out of his ordinary range of thought. We say to him: 'Well, fetch me three twigs from yonder hedge, and we will explain. Name them No. 1, No. 2, No. 3. Take your pocket knife, and cut No. 1 of equal length to No. 3. Lay No. 1 yonder, on that stone. Now cut No. 2 exactly equal to No. 3. Is it done?' 'Yes, sir.' 'Now, boy,

consider; if you should fetch back No. 1 from the stone yonder, and measure it against No. 2, do you think you would find them equal in length?' If you have succeeded in getting the real attention of his mind, he will be certain to answer with confidence: 'Yes, sir, they will be found equal.' 'Are you certain of it?' 'Yes, sir, sure.' 'Had you not better fetch No. 1 and try them together?' 'No, sir, there is no need; they are obliged to be equal in length.' 'Why are you sure of it, when you have not actually measured them together?' 'Because, sir, did I not cut No. 1 equal to No. 3, and is not No. 2 equal to No. 3? Don't you see that No. 1 and No. 2 cannot differ?' Let the reader notice here, that there has been *no experimental trial* of the equality of the first and second twigs in length; hence it is simply impossible that the servant's confidence can result from experiment. It is the immediate intuition of his reason, because there is, absolutely, no other source for it. Obviously, therefore, the only real use for the three twigs, and the knife, was to illustrate the terms of the proposition to his ignorant apprehension. Let the reader note, also, that now the servant has got the idea, he is just as confident of the truth of the axiom, concerning all possible quantities of which he has conception, as though he had tested it by experiment on all. This suggests the farther argument, that our intuitive beliefs cannot be from experiment, because, as we shall see, we all hold them for universal truths; but each man's experience is limited. The first time a child ever divides an apple, and sees that either part is smaller than the whole, he is as certain that the same thing will be true of all possible magnitudes, as well as apples, as though he had spent ages in dividing apples, acorns, melons, and everything which came to his hand. Now, how can a universal truth flow experimentally from a single case? Were this the source of belief, the greatest multitude of experiments which could be made in a lifetime could never be enough to demonstrate the rule absolutely, for the number of possible cases still untried would still be infinitely greater. Experience of the past by itself does not determine the future.

Moreover, several intuitive beliefs are incapable of being experimentally inferred, because the cases can never be brought under the purview of the senses. 'Divergent straight lines,' we are sure, 'will never enclose any space, though infinitely produced.' Now, who has ever inspected an infinite straight line with his eyes? The escape attempted by Mill, with great labor, is this: One forms a mental diagram of that part of the pair of divergent lines which lies beyond his ocular inspection, (beyond the edge of his paper, or black-board,) and by a mental inspection of this part, he satisfies himself that they still do not meet. And this mental inspection, of the conceptual diagram, saith he, is as properly experimental as though it were made on a material surface. On this queer subterfuge we might remark, that it is more refreshing to us than consistent for them, that Positivists should admit that the abstract ideas of the mind can be subjects of experimental reasoning. We had been told all along that Positivism dealt only with *phenomena*. It is also news to us, that Positivism could admit any power in the mind of conceiving infinite lines! What are these, but those naughty things, absolute ideas, which the intelligence could not possibly have any lawful business with, because they were not given to her by sensation. But, chiefly, Mill's evasion is worthless in presence of this question. How do we know that the straight lines, on the conceptual and infinite part of this imaginary diagram, will have the identical property possessed by the finite visible parts on the black-board? What guides and compels the intelligence to this idea? Not sense, surely; for it is the part of the conceptual diagram, which no eye will ever see. It is just the reason's own *à priori* and intuitive power. Deny this, as Mill does, and the belief (which all know is solid,) becomes baseless.

In a word, this question betrays how inconsistent the sensualistic philosopher is, in attempting to derive first truths from sensational experience, and ignoring the primitive judgments of the reason. How has he learned that sensational experience is itself true? Only by a primitive judgment of the reason! Here, then, is one first belief, which sense cannot have taught us, to wit: that what sense shows us is true. So impossible is

it to construct any system of cognitions, while denying to the reason all primary power of judgment.

When we propose the second test, that intuitive judgments must be 'necessary,' Positivism attempts to embarrass the inquiry by asking what is meant by a necessary truth. One answers (with Whewell, for instance,) it is a truth, the denial of which involves a contradiction. It is, of course, easy for Mill to reply to this heedless definition, that then every truth may claim to be intuition, for is not contradiction of some truth the very character of error? If one should deny that the two angles at the base of an isosceles triangle are equal, he could soon be taught, that his denial contradicted an admitted property of triangles. (And this, indeed, is the usual way we establish deduced truths, which are not intuitive.) We affirm the definition of common sense, that a necessary truth is one, the denial of which is immediately self-contradictory. Not only does the denial clash with other axioms, or other valid deductions, but it contradicts the terms of the case itself, and this, according to the immediate, intuitive view which the mind has. Does not every one know that his mind has such judgments necessary in this sense? When he says, 'the whole *must be* greater than either of its parts,' his mind sees intuitively that the assertion of the contrary destroys that feature of the case itself which is expressed in the word 'parts.' Who does not see, that this axiom is inevitable to the reason, in a different way from the proposition? 'The natives of England are white, those of Guinea, black.' The latter is as true, but obviously, not as necessary, as the former.

Or, if Whewell answers the question, what is meant by a truth's being 'necessary,' that it is one the falsehood of which is 'inconceivable,' Mill attempts to reply, that this is no test of the primariness of a truth, no test of truth at all, because our capacity of conceiving things to be possible, or otherwise, depends notoriously upon our mental habits, associations, and acquirements. He points to the fact that all Cartesians, and even Leibnitz, objected against Sir Isaac Newton's theory of gravitation and orbital motion, when first propounded, that it was 'inconceivable' how a body propelled by its own *momen-*

tum should fail to move on a tangent, unless connected with its centre of motion by some substantial bond. There is a truth in this and similar historical facts. It is that the antecedent probability of the truth of a statement depends, for our minds, very greatly upon our habits of thought. And the practical lesson it should teach us is moderation in dogmatizing, and candor in investigating. But for all this, Mill's evasion will be found a verbal quibble, consisting in a substitution of another meaning for the word 'inconceivable.' We do not call a truth necessary, because, negatively, we lack the capacity to conceive the actual opposite thereof; but because, positively, we are able to see that the opposite proposition involves a self-evident, immediate contradiction. It is not that we cannot conceive how the opposite comes to be true, but that we can see, that it is impossible the opposite should come to be true. And this is wholly another thing. The fact that some truths are necessary in this self-evident light, every fair mind reads in its own consciousness.

As the third test of first truths, that they are universal, the sensualists ring many changes on the assertion, that there is debate what are first truths; that some propositions long held to be such, as: 'No creative act is possible without a pre-existent material;' 'Nature abhors a vacuum;' 'A material body cannot act immediately save where it is present;' are now found to be not axiomatic, and not even true. The answer is, that all this proves, not that the human mind is no instrument for the intuition of truth, but that it is an imperfect one. The same line of objecting would prove with equal fairness, (or unfairness,) that empirical truths have no inferential validity; for the disputes concerning them have been a thousand-fold wider. Man often thinks incautiously; he is partially blinded by prejudice, habit, association, hypothesis, so that he has blundered a few times as to first truths, and is constantly blundering, myriads of times, as to derived truths. What then? Shall we conclude that he has no real intuition of first truths, and by that conclusion compel ourselves to admit (by a proof reinforced a thousand-fold) that he certainly has no means, either intuitive or deductive, for ascertaining derived truths? This is blank

skepticism. It finds its practical refutation in the fact, that amidst all his blindness, man does ascertain many truths, the benefits of which we actually possess. No; the conclusion of common sense is, that we should take care, when we think. But the fact remains, that there are axiomatic truths, which no man disputes or can dispute; which command universal and immediate credence when intelligently inspected; which, we see, must be true in all possible cases which come within their terms. For instance: Every sane human being sees, by the first intelligent look of his mind, that any whole must be greater than one of its own parts; and this is true of all possible wholes in the universe which come within the category of quantity, in any form whatsoever. Is it not just this fact which makes the proposition a general one, that man is a reasoning creature? What, except these common and primitive facts of the intelligence, could make communion of thought, or communication of truth from mind to mind, possible? It is these original, innate, common, primary, regulative laws of belief.

The most audacious and the most mischievous assertion of Mill against absolute truths, is its denial to the mind of any intuitive perception of causation and power. The doctrine of common sense here is, that when we see an effect, we intuitively refer it to a cause, as producing its occurrence. And this cause is necessarily conceived as having power to produce it, under the circumstances. For it is impossible for the reason to think that nothing can evolve something. Nothing can result only in nothing. But the effect did not produce its own occurrence, for this would imply that it acted before it existed. Hence, the reason makes also, this inevitable first inference, that the power of that cause will produce the same effect which we saw, if all the circumstances are the same. But the sensualistic school asserts that the mind is entitled to predicate no tie between cause and effect, save immediate invariable sequence, as observed; because this is all the senses observe, and *Nihil in intellectu quod non prius in sensu*. The inference, that the like cause will in future be followed by the like effect, is, according to them, an empirical result only of repeated observations, to which the mind is led by habit and association.

Now our first remark is, that only a sensualistic philosopher could be guilty of arguing that there can be no real tie of causation, because the senses see only an immediate sequence. The absurdity (and the intended drift also) of such arguing appears thus: that by the same notable sophism, there is no soul, no God, no abstract truth, no substance, even in matter, but only a bundle of properties. For did our senses ever see any of these? How often must one repeat the obvious fact, that if there is such a thing as mind, it also has its own properties; it also is capable of being a cause; it also can produce ideas according to the law of its nature, when sense furnishes the occasion? Sensation informs us of the presence of the effect; the reason, according to its own imperative law, supposes power in the cause.

It is extremely easy to demonstrate, and that by the Positivist's own method, that mental association is not the ground, but the consequence, of this idea of causation. We all see certain 'immediate, invariable sequences' recurring before us with perfect uniformity; yet we never dream of supposing a causative tie. We see other sequences twice or thrice, and we are certain the tie of power is there. Light has followed darkness, just as regularly as light has followed the approach of the sun. Nobody dreams that darkness causes light; everybody believes that the sun does cause it. It thus appears experimentally, that association has not taught us the notion of cause; but that our knowledge of cause corrects our associations and controls their formation.

The experience of a certain *phenomenon* following another a number of times can never, by itself, produce a certainty that under similar circumstances it will always follow. The mere empirical induction gives only probability. The experience of the past, were there no intuition of this law of causation by which to interpret it, would only demonstrate the past; there would be no logical tie entitling us to project it on the future. We ask our opponents, if it be the experience of numerous instances which give us certainty of a future recurrence, how many instances will effect the demonstration? Is their answer, for instance, that one hundred uniform instances, and no fewer,

would be sufficient? What then is the difference between the ninety-ninth and the hundredth? According to the very supposition, the two instances are exactly alike; if they were not, the unlike one could certainly contribute nothing to the proof, for it would be excluded as exceptional. Why is it, then, that all the ninety-nine do not prove the law; but the hundredth instance, exactly similar to all the rest, does? There is no answer. The truth is, the reason why an empirical induction suggests the probability that a certain, oft-repeated sequence contains the true law of a cause, (which is all it can do,) is but this: Intuition has assured us in advance, that the second *phenomenon* of the pair, the effect, must have some cause, and the fact observed, that the other is its seeming next antecedent may be as yet undetected. We, therefore, resort to some test grounded on the intuitive law of cause, to settle this doubt. Just so soon as that doubt is solved, if it be by the second observation, the mind is satisfied; it has ascertained the causative antecedent; it is now assured that this antecedent, if arising under the same conditions, will inevitably produce this consequent, always and everywhere; and ten thousands of uniform instances, if they do not afford this test, generate no such certainty. Yea, there are cases in which the conviction of causative connection is fully established by one trial, when the circumstances of that one trial are such as to assure the mind that no other undetected antecedent can have intervened, or accompanied the observed one. For instance, a traveller plucks and tastes a fruit of inviting color and odor, which was wholly unknown to him before. The result is a painful excoriation of his lips and palate. He remembers that he had not before taken into his mouth any substance whatever, save such as he knew to be innocuous. The singleness of the new antecedent enables him to decide that it must have been the true cause of his sufferings. That man thenceforward knows just as certainly, that this fruit is noxious, whenever he sees it, to the millionth instance, without ever tasting it a second time, as though he had tasted and suffered nine hundred thousand times.

Indeed, as Dr. Chalmers has well shown, experience is so far from begetting this belief in the law of cause, that its usual effect is to correct and limit it. A child strikes its spoon or knife upon the table for the first time; the result is sound, in which children so much delight. He next repeats his experiment confidently upon the sofa-cushion or carpet; and is vexed at his failure to produce sound. Experience does not generate, but corrects, his intuitive confidence, that the same cause will produce the same effect; not by refuting the principle, but by instructing him that the causative antecedent of the sound was not, as he supposed, simple impact, but a more complex one, namely, impact of the spoon, and elasticity of the thing struck.

Mill himself admits expressly, what Bacon had so clearly shown, that an induction merely empirical, gives no demonstration of causative tie. To reach the latter, we must apply some canon of induction, which will discriminate between the *post hoc*, and the *propter hoc*. Does not Mill himself propose such canons? It is obvious that the logic of common life, by which plain people convert the inferences of experience into available certainties, is but the application of the same canons. Let us now inspect an instance of such application, and we shall find that it proceeds at every step on the intuitive law of cause as its postulate. Each part of the reasoning which distinguishes between the seeming antecedent, and the true cause, is a virtual syllogism, of which the intuitive truth is major premise. Let us select a very simple case; the reader will see, if he troubles himself to examine the other canons of induction, that they admit of precisely the same analysis. We are searching for the true cause of an effect which we name D. We cannot march directly to it, as the traveller did in the case of the poisonous strange fruit; because we cannot procure the occurrence of the *phenomenon* D, with only a single antecedent. We must therefore reason by means of a canon of induction. First we construct an experiment in which we contrive the certain exclusion of all antecedent *phenomena* save two, which we name A and B. It still remains doubtful which of these produced the effect D, or whether both combined to do it. We contrive a second experiment, in which B is excluded, but

another *phenomenon*, which we call C, accompanies A, and the effect D again follows. Now we can get the truth. Here are two instances. In the first, A and B occurred, and D follows immediately; all other antecedents being excluded. Therefore the cause of D is either A or B, or the two combined, (thus the inductive canon proceeds.) But why? Because the effect D *must* have had its immediate cause, which is our *à priori* and intuitive postulate. In the second instance, A and C occurred together, and D followed. Here again, the true cause must be either A or C, or the combined power of the two. Why? For same intuitive reason. But in the first instance C could not have been the cause of D, because C was absent then; and in the second instance, B could not have been cause, for B was then absent. Therefore A was the true cause all the time. Why? Because we know intuitively that every effect has its own cause. And now we know, without farther experiment, that however often A may occur under proper conditions, D will assuredly follow. Why? Only because we knew, from the first, the general law, that like causes produce like effects.

It thus appears, that the intuitive belief in this law of cause, is essential beforehand, to enable us to convert an experimental induction into a demonstrated general truth. Can any demonstration be clearer, that the original law itself cannot have been the teaching of experience? It passes human wit to see how a logical process can prove its own premise, when the premise is what proves the process. Yet this absurdity Mill gravely attempts to explain. His solution is, that the law of cause is 'an empirical law coextensive with all human experience.' In this case he thinks an empirical law may be held as perfectly demonstrated, because of its universality. May we conclude, then, that a man is entitled to hold the law of cause as perfectly valid, only after he has acquired 'all human experience?' This simple question dissolves the sophism into thin air. It is experimentally proved, that this is not the way in which the mind comes by the belief of the law; because no man ever acquires all human experience, to the day of his death; but only a part, which, relatively to the whole, is exceedingly minute; and because every man believes the general law of

cause as soon as he begins to acquire experience. The just doctrine therefore is, that experimental instances are only the occasions upon which the mind's own intuitive power pronounces the self-evident law.

John Stuart Mill is both a Positivist in his logic, and the accepted philosopher of English Radicalism. The reader has in the above specimens, a fair taste of his quality. With much learning and labor, he combines subtlety and dogmatism. His style, like his thoughts, is intricate, ill-defined, and ambiguous, having a great air of profundity and accuracy, without the real possession of either. When one sees the confused and mazy involutions in which he entangles the plainest propositions that are unfriendly to his sensualistic principles, he is almost ready to suppose him the honest victim of those erroneous postulates, until he observes the astute and perspicacious adroitness with which he wrests the evidences of the truth which he dislikes.

But we return, and conclude this branch of the discussion by resuming the points. Positivism denies all primary and absolute beliefs. We have now shown that in this it is inconsistent; because such beliefs are necessary premises to those experimental processes of proof, which alone it affects to value. It is by these primitive truths of the reason, that the soul reaches a realm of thought above the perception of the senses, and ascends to God, to immortality, to heaven.

6. Comte and his followers claim that the physical sciences have the most fruit, and the most satisfying certainty, because they have received the 'positive' method. Metaphysics, including psychology, ethics, and natural theology, had remained to his day, worthless, and barren of all but endless differences and debates, because they had attempted a different method, and refused Positivism. But he undertook to reconstruct so much of these as he did not doom to annihilation, upon the strict basis of the observation of the bodily senses, and experimental reasoning, under the name of 'sociology.' In this instance, with the help of biology, he proposed to deduce all the laws of mind from physical experiments and observations upon its organs, the brain, and nervous apparatus; and from the visible acts of men's bodies as moved by the mind. Then, from the laws of

mind, with the facts of human history, he professed to construct an experimental and positive science of ethics and government. It is instructive to notice that the Positivists, just so soon as they approach these sciences of mind, morals, human rights, and government, disagree with each other as much as the rest of us unpositive mortals. The Priest of Humanity has been compelled to expel many of his earliest admirers from his Church. Somehow, Positivism itself, when it approaches these topics, is no longer 'positive;' it guesses, dogmatizes, dreams, disputes, errs, fully as much as its predecessors. What, now, does this show? Plainly that the experimental methods of the physical sciences are incapable of an exact and universal application, in this field of inquiry. The objects are too immaterial; they are no longer defined, as in physics, by magnitude, or figure, or quantity, or duration, or ponderosity, or velocity. The combinations of causation are too complex. The effects are too rapid and fleeting. The premises are too numerous and undefined, for our limited minds to grasp with uniform exactness and certainty. If Positivism, with all its acknowledged learning, and mastery of the sciences of matter, with its boasts and its confidence, has failed to conquer these difficulties in the little way it professes to advance in the science of the human spirit, shall we not continue to fail in part? 'What can he do that cometh after the king?'

Let us couple this fact, that the sciences of psychology, morals, and natural theology have ever been, and are destined to remain, the least exact and positive of all the departments of man's knowledge, with this other, that they are immeasurably the most important to his well-being and his hopes. The latter statement commends itself to our experience. It is far more essential to a man's happiness here, that he shall have his rights justly and fairly defined, than his land accurately surveyed. It is far more interesting to the traveller to know whether the ship-captain to whom he entrusts his life has the moral virtue of fidelity, than the learning of the astronomer and navigator. It is more important to us to have virtuous friends to cherish our hearts, than adroit mechanics to make our shoes. It is more momentous to a dying man to

know whether there is an immortality, and how it may be made happy, than to have a skilful physician, now that his skill is vain. We see here, then, that human science is least able to help us where our need is most urgent. M. Comte reprehends the human mind, because 'questions the most radically inaccessible to our capacities, the intimate nature of being, the origin, and the end of all *phenomena*, were precisely those which the intelligence propounded to itself, as of paramount importance, in that primitive condition; all the other problems, really admitting of solution, being almost regarded as unworthy of serious meditation. The reason of this it is not difficult to discover, for experience alone could give us the measure of our strength.' Alas! the reason is far more profound. Man has ever refused to content himself with examining the properties of triangles, prisms, levers, and pulleys, which he could have exactly determined, and has persisted in asking whence his spiritual being came, and whither it was going, what was its proper rational end, and what its laws; not merely because he had not learned the limits of his power, but because he was, and is, irresistibly impelled to these inquiries by the instinctive wants of his soul. His intuitions tell him that these are the things, and not the others, which are of infinite moment to him. It appears, then, that it is unavoidable for man to search most anxiously where he can find least certainty. His intellectual wants are most tremendous, just in those departments where his power of self-help is least. To what should this great fact point us? If we obey the spirit of true science, it will manifest to us the great truth, that man was never designed by God for mental independence of Him; that man needs, in these transcendent questions, the guidance of the infinite understanding; that while a 'positive philosophy' may measure and compare his material possessions, the only 'exact science' of the spirit is that revealed to us by the Father of Spirits. This, we assure the Positivist, is the inevitable conclusion to which the sound and healthy reason will ever revert, as the needle to its pole, despite all his dogmatism and sophistry. If there were nothing else to ensure it, the intolerable miseries, crimes, and despair, into which Positivism

will ever plunge the societies which adopt it, will always bring back this result. He may draw an augury of the destiny of his wretched creed from the parsimony of its present followers. M. Comte drew up a scheme for the support of the ministers of his new 'Worship of Humanity,' under which the 'High Priest of Humanity' was to receive a salary of about \$12,000 a year, and four national superintendents about \$6,000 each. It appears from the newspapers, that only forty-six persons contributed in 1867, and the total was \$750. But meantime the votaries of that Lord Jesus Christ whom he despises, in the conquered South, though 'scattered and peeled' by their enemies, contribute annually some millions of dollars, and are sending their best intellects and hearts to propagate their faith at the antipodes. Let the Positivist judge which system has the conquering vitality!

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- ART. VI.—1. *Memoirs of Service Afloat, during the War between the States.* By Admiral Raphael Semmes. Baltimore: Kelly, Piet & Co. 1868. Pp. 833.
2. *A Lecture delivered by Silas Bent, Esq., before the Missouri Historical Society of St. Louis.* The subject: 'Thermometric Gateways to the Poles.'

When we look abroad upon the face of our beautiful country, and behold it teeming with an abundant and varied flora; the mountains and hill-sides clothed with forests centuries old; our fields rich with abundant harvests, at the proper seasons of the year, and our lawns adorned with a beautiful and variegated shrubbery, and reflect that all this store of wealth and beauty are the results of certain atmospheric phenomena, our curiosity is awakened, and we desire to inquire into the agencies which produce such phenomena. In the beginning of our inquiries

we are exceedingly baffled, for all seems a mere chance-medley, a mere confusion of the elements. When we see the wind blowing hither and thither, changing its direction without apparent cause, now bringing us the stifling air of the desert, and now the refreshing breeze of the mountain; when we look upon the summer shower refreshing the landscape, amid the crashing of the thunder, and the play of the lightning, yet giving renewed vigor to the growing crops; when again the eye wanders over a heated and parched plain, where no rain has fallen for weeks, and where the corn rolls up its leaf, instinctively, that it may present as little surface as possible to the scorching, and blistering sun; and finally when we look forth upon the howling blasts of winter, under which the stout tree-tops are bending, while the angry clouds are discharging upon them their sleet, rain, and snow, all seems to be involved in mystery. Indeed these wonders of nature have been a mystery from the infancy of nations to a comparatively recent period. A century ago, we knew scarcely more about the winds, and the weather, than did the shepherds who watched their flocks on the hills of Galilee, before the coming of the Saviour. Like chemistry, meteorology has received its chief development during our own day and generation. And seamen have been the philosophers, who, more than any other class, have contributed to its development. As commerce has increased, and ships have multiplied upon the ocean, the meteorological secrets of nature have been unlocked. The philosophers of ancient times, whose ships crept cautiously, and timidly, from shore to shore, speculated upon meteorological phenomena in vain. Nothing entitled to bear the name of science in this department of inquiry, but only vague and crude conjectures instead, have been handed down to us, by the ancients. It is true, that no subject escaped the attention of the Greek philosophers, and Aristotle, as far back as three centuries before Christ, wrote a work on meteorology, but there is nothing in it worthy of notice. The great master of metaphysics, he who stands to-day, after the lapse of more than two thousand years, as the head of the schools of the moral sciences, was unable to penetrate even the more simple secrets of nature with reference to

that great meteorological repository, the atmosphere. He was unable to analyze the breath he drew, or tell whence it came, or whither it departed. Here is the definition of a cloud by one of the philosophers who followed close on the footsteps of Aristotle, and who, it may be supposed, availed himself of all the meteorological knowledge of his day. 'Clouds,' says Epicurus, 'may have many causes; they may be condensations of the air, compressions of the winds, conglomerations of atoms of a special kind, or emanations from the earth, and the waters.' But these, as the reader sees, were mere conjectures, and they were reasoned upon in the most fanciful manner. In that day, philosophy preceded facts, instead of facts preceding philosophy, and the consequence was that almost all the natural or physical philosophy of the ancients was, as we have said, little more than a mass of conjectures. Many curious inventions were made by the ancient philosophers without their being able to explain them. For instance, about a century before Christ, Ctesiphus, and Hero, his disciple, invented the pump; but they were unable to explain why the water rose in the tube of the pump, on the drawing up of the piston, except on the principle that nature abhors a vacuum. This was, of course, philosophical enough as far as it went, but they had no idea how it was that nature filled the vacuum; although they had some vague notions of the ponderability of the atmosphere, as well as of its elasticity; for Aristotle tells us, that a bladder when filled with air will weigh more than when it is empty. The piston when drawn up through the tube of the pump, according to these philosophers, produced a vacuum, and as nature abhors a vacuum, the water rushed up after the piston to fill it, but they had no conception that it was the weight of the atmosphere that caused the water to rise; nor do we learn anywhere from their writings, that they knew the limit to which the elevation of the water was confined, to wit, about thirty-three or thirty-four feet, or a foot for every mile in depth of the atmosphere. Indeed Galileo, who is justly regarded as the father of modern physics, could only explain it, when applied to, by saying that nature abhors a vacuum, to the extent of thirty-three, or thirty four feet! Rome,

in her palmiest days, when she was mistress of the entire world, was ignorant of the simple principle, that water, when confined in a tube, will rise to the level of its fountain head or source, as is evidenced by the remains of those gigantic aqueducts that once spanned the valley of the Eternal City. While great advances had been made by the ancients in the exact science of mathematics and its cognates, and nearly the entire field of metaphysics had been explored, with an acumen, and fertility of conception, that continue to astonish us to the present day, they were but children picking up pebbles on the mystic shore of meteorology. They transferred from the metaphysical world, in which they were so fond of speculating, to the physical world, the ideas of affection and hatred; both celestial and terrestrial bodies having, according to their notions, their sympathies and antipathies. Nature filled a vacuum simply because she abhorred it, and every star had its baleful or benign influence. They thought they had sufficiently explained a phenomenon, when, after one fashion or another, they had brought it under the influence of one of these occult agencies. In our day, instead of betaking ourselves to the secret, and gloomy cave of Egeria, or to the dark recesses of the forest, and there questioning these supposed occult powers, we have gone abroad upon the land, and more particularly upon the sea, and interrogated nature. By long and patient observation, we have noted her facts, one by one, and when she has seen us in possession of these, she has reluctantly yielded to us the possession of her secrets. There is no employment more ennobling to man and his intellect, or one which yields him more pure and unalloyed enjoyment, than that of tracing the evidences of design, and adaptation in the visible creation, by which he is surrounded; and to no one is this field so inviting as to the seaman, at least so far as the science of meteorology is concerned. When he finds himself upon the high seas, with nothing for the eye to rest upon, but an illimitable waste of waters, now sleeping with the gentleness of an infant, now raging with the fury of a giant, he is awed and subdued, and brought, as it were, face to face, with his Creator. The relations of earth, sea, and air force them-

selves upon him, whether he will or not, and he becomes a philosopher from necessity. When he finds himself beyond the influence of the land upon the winds, he sees at once that he is in a field peculiarly favorable for studying the general laws of the atmospheric circulation. Here, there are no unduly heated surfaces, no mountain ranges, or other obstructions to the circulation of the atmosphere—nothing, in short, to disturb it in its natural courses. The sea, therefore, is the field for observing the operation of the general laws which govern the movements of the great ærial ocean. Observations on land enable us to discover the exceptions, but from the sea we get the rule. Every valley, every mountain range, and every local district, with its peculiar formation, may be said to have its own system of calms, winds, rains, and droughts. But not so the surface of the broad ocean. Over the sea the agencies which are at work are of a uniform character, and they produce uniform results. As was naturally to have been expected, the greater part of our meteorological information of the present day has come to us from the sea, and seafaring men. All the maritime nations have contributed to the common fund, but foremost among them have been England, Holland, and the United States. From the days of Cook, England has had a valuable corps of explorers, and surveyors, constantly at work. While these old navigators have been hunting for the North-West Passage, and endeavoring to make their way to the poles, they have been as watchful of the heavens above as of the sea below. The names of Cook, Parry, Ross, Beechey, Franklin, Fitzroy, and a host of other gallant spirits of the British navy call up vivid recollections in connection with our science. Holland has contributed a host in Lieutenant Jansen alone. In the United States we have had a number of able, and energetic workers upon the sea, foremost among whom stands Captain Maury, renowned for his *Wind and Current Charts*, and for his *Physical Geography of the Sea*. Among the later contributions to the science are the work of Admiral Semmes, entitled *Memoirs of Service Afloat, during the War between the States*, and a Lecture delivered by Silas Bent, Esq., before the Missouri Geographical Society at St. Louis. Mr. Bent was, in

former years, a seaman, having been a Lieutenant in the U. S. Navy. He accompanied the expedition of Commodore Perry to Japan, and made some valuable observations upon the currents of the China seas. We purpose, in the present article, to make some observations upon the problems discussed by the last two gentlemen above named. Although we have hitherto only spoken of the science of meteorology, we shall not confine our views strictly to this science, but will extend them to some of the more interesting of the oceanic currents. Indeed the latter are so intimately connected with the science which treats of the atmosphere, that it is difficult to separate them. The only difference between the ocean of water, and the ocean of air, is, that the one is a more attenuated fluid than the other. They are both fluids, in a philosophical sense, and subject to the laws of fluids. Perhaps the most beautiful problem connected with the atmosphere is that which treats of its agency in the distribution of rain over the earth. When the seaman has launched his bark upon the great ocean of water, he perceives, at the same time, that he has entered another ocean, which is shoreless, and at the bottom of which he is creeping along on the surface of the earth. This atmospheric ocean is a great reservoir into which the supply of food, designed for living creatures, is cast; or, rather is, itself, the food for these creatures, reduced to its simplest form. The animal grinds down the fibre, and the tissue of the plant, or the nutritious store that has been laid up in its cases, and converts them into the substance of which its organs are composed. The organs and nutritious store which it thus yields up as food to the animal, the plant acquires, namely, from the bountiful atmosphere in which it lives. The atmosphere is also a sewer, into which, with every breath we draw, we cast a quantity of dead animal matter. It is, besides, a laboratory for purification, in which that matter is recompounded, and brought again into healthful, and life-giving conditions. These remarks are commonplace enough, but they are introduced, as the lawyers say, in pleading, as *inducement* to what follows. We have said that the animals and plants are alike fed by the atmosphere, but the difference between the animal and the

plant is, that the former is endowed with locomotion, and can approach, seize, and appropriate its food, while the latter is stationary, and must wait for its food to be brought to it. The atmosphere must, therefore, be the food-carrier for the plant. It must come and go. Plants, like animals, breathe and appropriate certain constituent portions of the atmosphere, and the circumjacent air would soon become unfit for the further use of the plant, if it were not changed. The plant having consumed all the food within its reach, would die of inanition if more were not brought; and so, the atmosphere, after having enveloped the plant, and fed the stalk and leaves by absorption, and deposited its moisture at its root, hurries off for a fresh supply. The atmosphere in motion is wind, and we see, here, one of the reasons why, in the economy of nature, the winds have been ordered to blow. In short, the atmosphere is a great machine for pumping up all the rivers from the sea, and for watering all the corn-fields. It may be likened, in many of its processes, to a steam-engine, and a little thought will suffice to show us, how herculean its labors are. The mean annual fall of rain on the entire surface of the earth is estimated at five feet. To evaporate water enough annually for the ocean to cover the earth, on an average, with five feet of rain; to transport it from one zone to another, and to precipitate it in the right places, at suitable times; and in proper proportions, is one of the offices of the grand atmospheric machine. This water is evaporated principally from the Torrid Zone. Supposing it all to come from thence, we shall have encircling the earth a belt of ocean three thousand miles in breadth, from which this atmosphere evaporates a layer of water, annually, sixteen feet in depth. Now, imagine a lake, three thousand miles broad, and twenty-four thousand miles long, with the water sixteen feet deep, and then imagine a steam-engine capable of emptying this immense lake; and not only capable of emptying it, but of lifting up its waters as high as the clouds, and distributing them all over the earth, and you will have some idea of the yearly business performed by this invisible machinery of the atmosphere. What a powerful machine it must be, in what a wonderful workshop it

must have been constructed, and how skilful must be the Engineer who contrived it! How nicely adjusted must be the size of the boiler, and the quantity of heat applied to it, how strong its cylinder, crank, and shaft, and how numerous the pumps and buckets moving the water to and from the clouds; and how nicely must all the parts of this exquisite and intricate machine be adapted, one to the other, and how smoothly all the joints and sockets must work that it never wears out, nor breaks down, nor fails to do its work, at the right time, and in the right way! This great machine has many servants attending upon it. It not only has to pump up the water as high as the clouds, but it has to send them, as we have said, all over the earth, and then let them down again, not all at once as roaring cataracts destroying everything in their path, but as gentle, life-giving rain, and dew. One of its chief agents is the sun. It is his business to attend to the pumps and buckets. Day and night, night and day, as the earth presents now one part of her surface to him, and now another, he is pumping away, and sending down into the sea his myriad of empty buckets, and hauling them up full again. At his right hand, and at his left, stand the ready and obedient winds, which receive from him his full buckets, and start off with them to the uttermost ends of the earth. We propose to follow these winds for awhile, and to show the reader by what paths they come and go; where it is that the sun loads them with his buckets of water, whither they carry it, and how they dispose of it; why it is that they pour down so much here, and so little there, and why it is that in some places they pour down none at all. We will not stop to inquire what it is that puts the winds in motion, or rather, how it is that they are put in motion, for we have already seen them obeying the orders of the sun. This inquiry alone would occupy the remaining space of our article. It will, however, be sufficient for our present purpose to follow them in their circuits, to show where they 'turn and whirl about,' and what they are doing with the water buckets, the while. There are two, well-developed systems of wind between the tropics—one blowing from the northeast, in the Northern Hemisphere, and the other from

the southeast, in the Southern Hemisphere. These two winds meet each other at or near the equator. The consequence of this meeting is, that they first neutralize each other, producing a belt of equatorial calms, and then must either pass each other, and continue their respective courses, or turn back and go to the point whence they came. We purpose to show that they do not turn back, but cross each other, and proceed from the place of crossing to the poles. This would seem, at first sight, a very difficult problem to solve, for how are we to identify the two winds, so as to be able to say, which is which? If we could seize a particle of the wind, convert it into a carrier-pigeon, and put a tally upon it, so that we might know it from the other carrier-pigeons which it meets on its route, our task would be simple enough. Strange as it may appear, nature has, in fact, done this, to our hand, as the reader will presently see. But before we proceed to show how this has been done, let us see what *à priori* arguments there are to show, first, why the winds should proceed from the equator to the poles at all; and, secondly, why they should cross each other, and each proceed to the pole of the other, instead of turning back, and going to its own pole. A very little reflection will serve to show us why it is absolutely necessary that the winds, which blow from the poles to the equator, should blow back again from the equator to the poles. The northeast and southeast trade winds blowing constantly toward the equator, if there were no outlet for them, would soon draw away from the poles, and pile up at the equator, all the atmosphere of the earth. But the atmosphere being a fluid, and obeying the laws of fluids with regard to density, level, and so forth, this cannot be. But as there is a constant surface-current of air *toward* the equator, within the tropics, how can the air *from* the equator get back to the poles? Manifestly there is but one mode. It must be by means of an upper current. The two trade winds, spoken of, as fast as they meet in the calm belt of the equator, ascend, and either mix and mingle, and, losing their identity, blow back indiscriminately to the poles, or refusing to mix and mingle, preserve their identity, and proceed separately to the poles. It being true, then, that the winds

are under a philosophical necessity of proceeding from the equator to the poles, let us see why it is, that they shall preserve their identity, and each proceed to the pole of the other, instead of turning back, and going again to its own pole. There is a certain quantity of rain-work, if we may so express ourselves, required to be performed, annually, in the two hemispheres, by these winds. If it be true that the rain-work of the Northern Hemisphere could not possibly be performed by the winds of that hemisphere; and, on the other hand, that the rain-work of the Southern Hemisphere could not be performed by the winds of that hemisphere, we establish the necessity for the crossing of these winds at the equator, that each may do the work of the other—the northern wind doing the work of the Southern Hemisphere, and the southern wind, the work of the Northern Hemisphere. That it is true, that neither wind can adequately perform the work of its own hemisphere, will be obvious upon the statement of a few geographical facts. If we examine a globe, we shall find, that in the Northern Hemisphere there is one-third more land than water; while in the Southern Hemisphere there is one-third more water than land. The sun, therefore, with those pumps and buckets of his, which we have been describing, takes up one-third less water in the Northern Hemisphere, than he does in the Southern; the quantity taken up in each hemisphere being in proportion to the extent of evaporating surface. There being more land in the Northern Hemisphere, than in the Southern, there is more rain required in the former than in the latter. This being the case, if that great luminary, the sun, which we have supposed to be so busily at work within the tropics, should command his water-carriers, the north winds, to return to the north, and there pour down their buckets full of water, we should not have rain enough in this hemisphere. On the other hand, if he were to dispatch the south winds, southward, with directions to discharge their waters upon the lands of the Southern Hemisphere, the inhabitants of that hemisphere would be drowned out! This is the *à priori* argument, which results as a necessity, from the unequal distribution of land and water in the two hemispheres. What is the

fact? What story do the rain-gauges in the two hemispheres tell? They tell the story which our theory demands. More water does, in fact, fall upon the Northern Hemisphere, than upon the Southern. Having thus established the necessity for the crossing of the trade-winds at the equator, and proved the fact of their crossing, by that mute but truthful witness, the rain-gauge, let us pursue our inquiries, and see how it is, that nature has tallied the wind, as though it were a carrier-pigeon, causing it to reveal the truth of our proposition, in a still more startling manner. There has been long known to mariners what is called the service-dust, or African-dust, or rain dust; an impalpable powder which has been found on the deck and rigging of ships far out at sea. Admiral Semmes speaks of having seen large quantities of this dust, when cruising in the Sumter. Some of this rain-dust has also fallen periodically at the Cape de Verd Islands, Malta, Genoa, Lyons, and even in the Tyrol. Ehrenberg, a German philosopher, having had his attention called to this dust, subjected some specimens of it, found at the different places above mentioned, to the microscope, and has established, beyond a doubt, that the infusoria, and remains of minute organisms of which it is composed, have their original *habitat* in South America, and not in any of the places in which they were collected. Although this philosopher examined a great many specimens, he found them all to be as homogeneous as if they had been taken from the same pile! And we have pretty conclusive evidence that these impalpable remains of minute organisms come from the valley of the Amazon, in the northern part of Brazil. Humboldt, more than half a century ago, and not dreaming of the results to which his researches would lead, supplied us with the remaining link in our chain of investigation, in his description of the Amazon during the dry season. 'When,' says he, 'under the vertical rays of the never-clouded sun, the carbonized, turfy covering of the soil falls into dust, the indurated soil cracks asunder as from the shock of an earthquake. If, at such times, two opposing currents of air, whose conflict produces a rotary motion, come in contact with the soil, the plain assumes a strange and singular aspect. Like conical shaped clouds, the

points of which descend to the earth, the sand rises through the rarefied air on the electrically charged centre of the whirling current, whose roar resembles that of the loud water-spout dreaded by the experienced mariner. The lowering sky sheds a dim, almost a straw-colored light on the desolate plain. The pools, which the yellow, fading branches of the fan-palm had protected from evaporation, now gradually disappear. As in the icy North the animals become torpid with cold, so here, under the influence of the parching drought, the crocodile and the boa become motionless, and fall asleep deeply buried in the dry mud. Half concealed by the dense clouds of dust, restless with the pain of thirst and hunger, the horses and cattle roam around; the cattle lowing dismally, and the horses stretching out their long necks, and snuffing the wind, if, haply, a moister current may betray the neighborhood of a not wholly dried-up pool.' Humboldt, like Ehrenberg, examined, under his microscope, some specimens of the dust thus described by him, as giving a straw-colored tint to the atmosphere, and, judging from the descriptions given by the two philosophers, the dust of the Cape de Verds, and the dust of the valley of the Amazon, appear to be identical. There is, however, a seeming discrepancy in a portion of their testimony, which we shall have to call in a third witness to reconcile. Humboldt describes the floating specimens seen, and examined by him, as being of a straw color, while Ehrenberg tells us that the little piles examined by him were of a pale brick-dust red. The witness who is to reconcile this discrepancy is our own philosopher, Maury. 'In the search,' says the philosopher, 'for spider lines for the diaphragms of my telescopes, I procured the finest, and best threads from a cocoon of a mud-red color; but the threads of this cocoon, as seen singly through the diaphragm, were of a gold color.' It is quite likely, therefore, that the moats which when seen singly, in the atmosphere, by Humboldt, appeared of a straw or golden color, should, when brought together in a pile, under Ehrenberg's microscope, have assumed a brick-red, or mud-red color. It only remains for us to show, how the rain-dust of the Amazon finds its way to the Cape de Verd Islands, the track of the Sunter,—Malta, Genoa, Lyons, and

the Tyrol,—and when we shall have seen this, we shall have proved our proposition, that the wind has been tallied, and identified by means of the tally. If the reader will take a map, and run his eye along it from the mouth of the Amazon to the Cape de Verd Islands, and the other places named, he will find that they lie nearly in a straight line, and that that line is a diagonal of about northeast and southwest. The region between the Cape de Verds, and the Amazon, is within the tropics, where the northeast trade-wind prevails. As a matter of course, no portion of this rain-dust could pass from the Amazon to the Cape de Verds, *near the surface of the earth*, for the reason that the northeast wind is a head-wind. But we have seen, that as much wind as flows to the equator from the poles, flows back again from the equator to the poles, and that this counterflow is in the form of an upper current. The upper current, from the mouth of the Amazon to the Cape de Verds, is a southwest wind, or a fair wind for our rain-dust. Those little whirlwinds described by Humboldt, as throwing up columns of dust, and giving a lurid aspect to the parched-up valley of the Amazon, come now to the aid of our theory. Tossing high into the upper atmosphere the dust with which their electrical vortices are charged, they deliver it to the southwest wind, and this wind transports it to the Cape de Verds, where in calms, and in opposing ærial currents, it silts down like the snow flake. It is thus that the carrier-pigeon delivers his tally to the seaman, and to the philosopher. This completes the chain of our proof. We have first shown from *à priori* reasoning, that the trade-winds *should* cross at the equator, and then by testimony of the rain-gauge, and the tally described, that they *do* cross. Or, in other words, the argument from final causes, is made good by the operation of physical causes. We thus see the nimble winds lifting up their burthen of water in the South Atlantic, South Pacific, and Indian Oceans, and hurrying off with it, and pouring it down on our Northern Hemisphere, while other winds are scooping up the waters from our North Atlantic Ocean, and Gulf of Mexico, and hurrying off with them in the contrary direction. These swift, and silent messengers, pass and repass

each other, on their respective errands, with the utmost regularity, spilling some of the water from their over-full buckets, by the way, it is true, but without the slightest jostling or confusion. The moment their buckets are emptied, which is seldom the case until they reach the poles to which they are respectively bound, they wheel about, and start back to their cisterns in the sea, to replenish their supply; and thus they continue their ceaseless toil, by day and by night, filling the barn of the husbandman with abundant crops, and painting the lily and the rose.

But by what agency of nature is it, that the two trade-winds, when they meet at the equator, are enabled to preserve their identity, and cross each other, 'without mixing and mingling?' The seaman, in examining the atmosphere, in the two hemispheres, by all the known chemical and mechanical tests, finds no diversity in it, just as Cassius, on weighing the blood of Cæsar, found it weighed no more than the blood of any other man. It is composed of oxygen, and nitrogen, in the same proportions, whether it be examined at the one tropic or the other, or at its crossing place, the equator. It presses the piston of his steam-engine home to the vacuum in the cylinder, with the same pressure of fifteen pounds to the square inch, whether his steamship be ploughing the waters of the Arctic, or the Antarctic Seas. The cocoanut tree of Tahiti, in the far-off Pacific, midway between California and Japan, grows as rapidly upon it, as its congener in Cuba or St. Domingo, in our own Caribbean Sea; and one perceives no difference between the magnolias of the Mississippi, and those of the Amazon. In what respect, then, do these two winds differ? They must differ, or they would not pass each other in their flights, but would intermix, lose their identity, and be as likely to turn back, as to go forward. The agent, whatever it may be, is a subtle, and, at the same time, a peaceful one. It is so subtle as to resist the tests of our most delicate instruments, and yet so powerful as to enable those water-carriers, the winds, to bear forward their burthens to the uttermost ends of the earth, without accident or mistake. The better opinion is, that it is magnetism which is the secret, and subtle agent which accom-

plishes this wonderful result. If a current of magnetism be passed through a wire coiled *against the sun*, or from right to left, it will receive a different polarity, from a similar current passed through one coiled *with the sun*, or from left to right. Now, the atmosphere, in storms, and Admiral Semmes thinks, in moderate breezes also, gyrates in both hemispheres against the sun, as its normal law. But this gyration *against the sun*, in the Northern Hemisphere, is, as we have seen, from right to left, while in the Southern Hemisphere, the gyration against that luminary is from left to right. The gyration of the winds in the two different hemispheres is therefore different. The winds proceeding from the equator to the poles, gyrate around the poles, which has the same effect upon them, as the passing of the two magnetic currents through the two coils of wire has, upon those currents, to wit, it polarizes them—it being a well established fact that the oxygen of the atmosphere is magnetic. It is, in all probability, this polarity of the winds which prevents them from mingling at the equator, and enables each current to proceed on its journey unmolested by the other. The different temperatures, at which the winds meet, may, however, have something to do with preventing them from mingling.

The transition from meteorology to hydrology is easy—the air and the water both being fluids, as has been said, and governed by the same laws. Heat is the principal agent which puts the atmosphere in motion. It is also the chief agent which gives motion to the waters; and the motion of the waters, though more sluggish, is quite as constant as that of the atmosphere. We do not speak here of the tides, but of the currents. Let us imagine, for a moment, the earth to be at rest upon its axis, and the influence of heat to be withdrawn from it. The waters would at once become dead and stagnant. If now we place the sun in the firmament, and he begins to dart forth his rays upon the equatorial regions of the earth, heating and rarefying the waters, these will begin to move towards the poles; and the moment they begin to move towards the poles, polar currents will begin to move toward the equator. We thus establish a current and a counter-current, and this is the normal

law of currents; for as we said of the atmosphere, so we may say of the water, that whenever a particle flows away from a place, a particle must flow back to it. We have seen how the currents of atmosphere, to and from the poles and the equator, pass and repass each other, without jostling, or confusion. The same is the case with the currents of water. Sometimes an ellipse will be established, and the waters will flow in opposite directions, and in perfect harmony, almost side by side with each other, as pointed out by Admiral Semmes, in his cruises in the Indian and other oceans; and, at others, a series of surface and under-currents will be the machinery resorted to by Nature, to accomplish her purposes. But besides the heat of the sun, there are numerous other agents which contribute to put the waters in motion. Among these may be mentioned, evaporation—produced, it is true, by heat, (but not hitherto considered by us, in this connection,) and by the diurnal motion of the earth from west to east. When speaking of the gigantic labors performed by the atmosphere, in distributing rain over the earth, we showed that the water annually evaporated from the earth's surface would be sufficient to fill a lake twenty-four thousand miles long, three thousand miles wide, and sixteen feet deep. How wonderful the effect of the scooping up of this immense body of water, during the space of a year, upon the equilibrium of the ocean! The effect of the diurnal motion of the earth from west to east, upon the currents, is similar to that which it has upon the winds, as described by us, viz., to give them a westerly direction. A current setting out from the pole, where the influence of the diurnal motion is zero, will acquire more and more of a westerly direction, as it proceeds toward the equator—the earth slipping from under the waters, as it were, from west to east, in a ratio increasing with the cosine of the latitude. As a rule, therefore, southerly currents (in the Northern Hemisphere) flow to the southwest, and northerly currents to the northeast. With these remarks as to currents in general, we shall devote the remainder of our space, in this article, to the consideration of two of the most remarkable currents, in our hemisphere, viz., the Gulf Stream in the Atlantic Ocean, and the Kuro in the North Pacific.

The former has been accurately mapped out, by the U. S. Coast Survey, and the latter by Mr. Bent, the title of whose lecture stands at the head of this article. There is a striking resemblance between these two currents, and they perform, in a great measure, similar functions for the seas through which they flow, and the continents, and islands, on which they impinge. Both of these streams were long known to navigators, before science took any notice of them. Dr. Franklin was among the first to remark upon the Gulf Stream, in connection with science; but the sciences of meteorology and hydrology were both so imperfectly developed in his day, that it is not wonderful that he fell into some errors on the subject. The Doctor's idea was, that it was the trade-winds of the Atlantic which put the Gulf Stream in motion; a cause entirely inadequate to the effect. He supposed that these winds drove the waters of the Atlantic into the Gulf of Mexico, and there heaped them up, producing some such 'head,' as is produced in a mill-dam, whence the flow to a lower level would be easy and natural. But the fact is, that the waters of the Gulf Stream, instead of flowing down hill, flow up hill, the depth of the stream being, for instance, much greater at its exit from the Florida Pass, than off Cape Hatteras. Besides, Admiral Semmes tells us, that much more water flows out of the Gulf of Mexico, by the Florida Pass, than flows into it, by the Yucatan Pass, and the various rivers that disembogue into it. Now, no more water can flow out of this Gulf than flows into it; else the Gulf would soon become dry. But it does not become dry, and hence water must flow into it by some other channel, than those already mentioned. In other words, it is plain, that there must be an under-current running below the Gulf Stream, and in an opposite direction. We know that there is a hyperborean current, setting from Baffin's Bay toward the Banks of Newfoundland. When this current meets the Gulf Stream, off Cape Race, or thereabout, it descends, and becomes the under-current we have described. This theory removes all difficulties, and the theory corresponds entirely with that with which we set out, viz., that for every particle of water that flows away from the equator, a particle must flow toward

it; and if it cannot flow toward it, in an ellipse, it must flow toward it as an under-current. This great stream flows north-east, in obedience to the law noticed a little while back; but all its waters do not proceed to the pole. The current changes its course, more and more to the eastward, as it proceeds toward the north. The reason is obvious. We showed that when a current started from the pole toward the equator, it took a westerly direction, and that this direction increased as the cosine of the latitude, and that, conversely, a current from the equator toward the pole, took an easterly direction, bending more and more toward the east, as it increased its latitude. This is a law resulting from the diurnal motion of the earth on its axis, and it is this law which the Gulf Stream obeys, as one may see by reference to a map. As there is a current from Baffin's Bay, under-running the Gulf Stream, it is seen that the waters of this stream do not touch the bottom of the sea, in any part of their journey toward the northeast, but flow, as it were, over a cushion of cold water. Nor do they touch any part of the American coast. An important result follows from this fencing off of the great body of warm water from the bottom of the sea, and from the land. Water, as compared with land, is a non-conductor of heat. If the Gulf Stream impinged upon the land, in any part of its course along the American coast, the contest would liberate a large proportion of its heat, but this heat has been bottled up (if we may use the expression) for a different purpose, namely, that of mitigating the rigors of the climate of Northern Europe. London, in the latitude of 50° , and Paris still further south, would both be about as cold as St. Petersburg, but for the warmth conveyed to them by the Gulf Stream. Hence the care with which it has been provided, that this stream shall flow over a cushion of water, placed between it and the bottom of the sea, and by the side of a wall of water placed between it and the American coast; and the equal care with which it has been provided that no such wall shall be interposed between it and the English and Irish coasts. Here it impinges upon the land and parts with a large proportion of its heat. The course of the Gulf Stream may be briefly described as follows: Issuing out of the Gulf of Mexico, be-

tween Cape Florida and the Bahama Islands, it runs parallel with the American coast, in a general northeasterly direction, until it reaches the banks of Newfoundland, whence it deflects still more to the eastward, and, crossing the ocean, impinges, as before stated, on the course of Ireland and England. Hence it pursues its course—its current, by this time, having become very sluggish—toward and along the coasts of Spain and Portugal; thence over to the African coast; along this coast down to the Canaries, and Cape de Verds, where it falls into the great equatorial current, that carries it back again to the Gulf of Mexico, whence it issued. It thus describes some such circle or ellipse, as Admiral Semmes found the great Agulhas current to describe, in the Indian Ocean, when he was cruising in that ocean, in the Alabama. But the current which more nearly resembles the Gulf Stream in its origin, temperature, and course, is the Kuro-Siwo, described by Mr. Bent. This is, indeed, the Gulf Stream of the North Pacific. Like the Gulf Stream of the Atlantic, it must have been long known to the trading vessels, before it came under the observation of scientific men; and America has the honor of being the first among the nations, to generalize the facts observed in relation to this stream, and give them to the world in a scientific form. As before remarked, Mr. Bent, the chief hydrographer in Commodore Perry's expedition to Japan, is entitled to the credit of this discovery, for such it may be called. Mr. Bent has himself so well described the circumstances under which he first fell in with this stream, that we prefer to let him give his own account of it. He says:

At the close of the Mexican war in 1848, the U. S. ship Preble, to which I was attached as sailing master or navigator, was ordered from California on special service to China. In crossing the Pacific Ocean, we stopped at the Sandwich Islands, where we found a large number of American whalers assembled for the winter. In conversation with one of the most intelligent of these captains, he told me he was just from a cruise in the Arctic Ocean, and that, in pursuit of whales, he had gone '*several hundred miles to the northward and eastward from Behring's Straits, and three hundred miles beyond the limits of his chart, and with an open sea still before him as far as could be seen in that direction.*' From the Sandwich Islands we kept between the tropics, to avail ourselves of the northeast trade winds, and also to take advantage of the equatorial current, the latter of which we found setting to the westward at the rate of from thirty

to eighty miles per day, and which, spreading from the tropic of Cancer to that of Capricorn, has a width as great as that of the Atlantic Ocean.

I had before crossed this current some eight or ten times at various seasons of the year, and therefore knew from personal observation, that it is as constant in its flow to the westward as that of the equatorial current in the Atlantic.

A few months after our arrival in China, intelligence was received from the Governor General of Java that a number of shipwrecked American seamen were in prison at Nagasaki, in Japan, and the Preble was ordered to proceed there at once, and endeavor to obtain their release.

This was in mid-winter, when the northeast monsoon was at its height, when no vessels but steamers or opium clippers attempted to make passages to the north coast of China.

The almost universal prediction of both Americans and Englishmen at Hong Kong was, that the Preble could not accomplish the voyage at that season of the year, but with genuine pluck the captain always replied that she should do so, or else lay her bones in the bottom of the China Sea. I mention this to show how unknown were the dangers, and how unfrequented the seas were at that time, lying between the southern coast of China and Japan.

As soon as we got out of port we encountered the full force of, not only the monsoon, but also in a measure that of the southerly current which flows constantly down the Formosa channel, and which is so strong that sailing vessels cannot beat to windward against it, but are obliged to run out to the eastward of Formosa, to take advantage of a current setting to the northward from that point.

Contending against the first of these currents, the Preble was ten or twelve days reaching the south end of Formosa, although the distance is only about two hundred and fifty miles. So soon as she doubled the south end of the island, and had got out of this current, which we found running southward at the rate of six miles per hour, in the channel way, the wind freshened into a stiff gale from northeast, compelling us to heave the ship to under storm sails, and preventing our getting any observations for latitude and longitude for three consecutive days. (This being the case, we did not, of course, know where the ship was, only approximately.) The effect of the wind upon a ship lying to in this way, if uninfluenced by ocean currents, would be to drift or drive to per leeward in the direction the wind was blowing, at the rate of about thirty miles per day. At the expiration of three days, therefore, when the storm abated, and land was discovered to the westward, we thought it must be the Bashee Islands, which lie some hundred miles to the southward of Formosa, but on standing to we found it to be the northern end of this latter island, and that we had been actually carried during this time by a current ninety miles to the northward against the wind, or one hundred and eighty miles to the northward of where the ship would have been had there been no current, and near five hundred miles to the north of where she would have been had she continued within the influence of the southerly current of the Formosa channel.

After determining our position on the chart, we stood to the eastward for the Loo Choo Islands, running across and out of this northerly current.

From Loo Choo our course was nearly due north to Nagasaki. In making this passage we found that we again crossed the northerly current, but that there

it was inclining a good deal to the eastward, and we ran out of it as we passed under the land of the Japan Islands. After accomplishing the object of our mission, we ran to the westward from Nagasaki to Shanghai, and thence down the Formosa channel to Hong Kong, carrying with us the strong southerly current before spoken of, although by this time the northeast monsoon had materially abated. In the following summer the Preble was ordered back to California.

The monsoon had then changed, and the wind was from southwest. Yet we found the current still setting in the Formosa channel, and on passing the south end of Formosa we again fell at once into the current setting to the northward, but which we found curved gradually to the eastward with us as we pushed our course on the arc of a great circle in that direction. This course, however, we were obliged to abandon about lat. 35 deg. N., long. 145 deg. E., owing to a malignant epidemic that had broken out in the ship, and which was aggravated by the fogs and mists that overhung the current.

The experience of this cruise confirmed the existence of two powerful currents, which, in a general way, were known to vessels cruising or trading in those seas, and which had been briefly noticed by writers upon the subject, but in what way, if at all, they formed a part of the great oceanic, or interoceanic circulation, was not known, and they consequently formed a bewildering subject to those who had to encounter them; particularly, as it was also known, that only a few miles to the southward of the south end of Formosa, the great equatorial current poured its immense volume into the China Sea, almost *directly at right angles to both of these currents just spoken of!* And this illustration of their constant flow in fixed and opposite directions, regardless of winds or seasons, their great velocity and their juxtaposition, were calculated to make a strong impression upon the mind, and set it to work to find out their origin, and whither they led.

Sailing again for China and Japan in 1853, in the expedition under Commodore Perry, I had fortunately assigned to me such subjects for scientific and professional investigation as enabled me to have such instructions issued to the various vessels of the squadron as would insure their keeping very accurate and full meteorological records.

After our return to the United States, I was detailed to assist Lieut. W. L. Maury to prepare for publication the charts and sailing directions of the survey made by the expedition, and these records were placed in my hands for the purpose of tracing out as far as possible the location, direction and force of the currents in that part of the Pacific and adjacent seas lying within the cruising grounds of the squadron.

The result of this work was the discovery of the fact that these currents formed a part of a great system in the Pacific, identical in all its essential features with that of the equatorial current, Gulf Stream and counter current in the Atlantic, as will be seen by referring to my report on the 'Kuro Siwo,' in the second volume of the Japan expedition report.

To run a brief parallel between the Gulf Stream of the Atlantic, and the Kuro-Siwo of the Pacific, it will be necessary to sketch the general features and course of each.

1. They both spring from the northern edge of the equatorial current, in about 22° of north latitude.
2. They both, at first, start directly north, and then curve gradually toward the east.
3. Both of them are of the same, or very nearly the same, mean temperature.
4. Both run over cushions of cold water, laid for them at the bottom of the sea, and between walls of cold water, on either side of them; thus being enabled to preserve their heat, until reaching the points where it is to be liberated.
5. The Gulf Stream impinges upon, and delivers its heat up, to the coasts and countries of Northern Europe; the Kuro-Siwo waters the shores of Northern Asia, and there liberates its pent-up heat; both, alike, ameliorating those hyperborean climates.
6. And, finally, both return and find their way back again to the point of departure. Mr. Bent thus adds still another instance to the circular, or ellipse, system of Admiral Semmes.

With a few remarks upon the 'thermometric gateways to the poles,' we shall bring this paper to a close. How often it happens that the greatest discoveries are the simplest; so simple, indeed, that everybody wonders that no one had thought of it before. It has been long known—ever since Dr. Franklin was a commissioner of the Colonies, at the British Court, in ante-revolutionary times—that the Gulf Stream, or at least a branch of it, flowed to the Arctic regions, by the way of Spitzbergen; thus pointing out to the explorer the true way to the pole, as unerringly as the wild buffalo of the west points out to the hunter, by its beaten paths, the easiest and best routes through the Rocky Mountains. And yet, strange to say, all the polar navigators, from Parry to Dr. Kane, have ignored this fact, and sought passages to the pole, in vain, far to the westward, by way of Davis's Strait, and Baffin's Bay. Whilst nature has been beckoning to them, and pointing out the true thermal gateway to the pole, they have cast their eyes in a different direction, and wandered about, in *culs de sac*, baffled, and wearied, and driven back by impossible barriers of ice, as often as they have made the attempt. Mr. Bent was

the first to call the attention of the scientific world, to this singular, and fatal mistake of the early explorers, and every one wonders why no one thought of it before. Mr. Bent's theory was first confirmed by a conversation he had with a whaler in the Sandwich Islands, who informed him, that he had passed in his ship to a very high degree of latitude, to the eastward of Spitzbergen, and still found an open sea before him. The testimony of Captain (now Commodore) John Rodgers, of the U. S. North Pacific Exploring Expedition, is to the same effect. This officer penetrated to the mouth of Behring's Strait, in search of Herald Island, reported by a British officer as lying to the northward and westward of that Strait. The island was not found, but Captain Rodgers, in a conversation with Mr. Bent, informed him, that although he found an icy barrier barring his farther progress in that direction—the north-west—yet as far as he proceeded to the northward and eastward, beyond the Strait, he found an open sea, with a gentle current setting to the northward. The facts are meagre, it is true, but as far as they go, they sustain the theory of Mr. Bent. It may not be true, that there is a clear pathway open in this direction to the poles, as Mr. Bent thinks, but from the foregoing data it appears pretty plain, that if there be any approach open to the pole at all, it is in this direction.

ART. VII.—*The Practice in Courts of Justice in England and the United States.* By Conway Robinson. Vol. V. 1868. Richmond: Woodhouse & Parkham; Baltimore: Cushings & Bailey; Philadelphia: T. & J. W. Johnson & Co.

The production of a work like the one whose title we have placed at the head of this article is a credit to the country as great as it is to the profession. To demonstrate that the innumerable decisions of the English Courts and of our several

State Courts may be reduced to a system, and that an established practice may be derived from them is to accomplish a great work. The learned author of the Practice, of which the fifth volume is now presented to the public, has adopted a modest title, which does not at all describe the character or scope of the work. Instead of being a mere book of Practice, indicating the peculiar modes of procedure in certain courts, or in certain actions, it is a complete digest of the law on the matters treated of and as it now exists in England and this country. These volumes bear no resemblance to the books ordinarily known as books of Practice, and can be so called only as embodying all that is necessary to be known in order to conduct a cause from the impetration of the writ to the defences pointed out in this volume,—that is, *to practise the law*. In the sister science of medicine, the knowledge of the human frame, its anatomical structure, its physiology, and its pathology are first studied; then the properties of the various substances contained in the *materia medica* are mastered; and, lastly, the great object of the science is unfolded in the books of practice, that is to say, the proper application of the remedial agents to the diseased condition of the system. In this higher sense alone can these volumes, full of learning, of industrious research, and of careful reflection, be called books of practice.

Law—municipal law—may doubtless be ranked among the experimental sciences. In theory, it is considered a system by which a general rule of action is established, ‘commanding what is right and prohibiting what is wrong,’ indicating therefore, in advance, the rights to which Man, as a member of the social system, is entitled, the duties he is required to perform, the remedies by which those rights may be enforced and the consequences resulting from a breach of those duties. Adapted, as the laws are intended to be, to the condition of man at the time the system is formed, they must of necessity change or be changed, according as society and civilization advance. Such laws as would have been ample to have protected the rights of our rude forefathers in the days of William the Conqueror, when each feudal baron was an autocrat, when the tenures of land were by knight service, or plough service, or *sarjeanty*, or

cornage, and when commerce was utterly unknown, would have been but little adapted to the social system in the days of the Cavaliers and of Cromwell. The laws which were suited to the condition of Englishmen in the reign of the Stuarts, would be as utterly inadequate to the condition of their descendants in this country at the present time, as the education and habits of the Squires of the seventeenth century would be unsuited to the position and duties of the American gentleman of the nineteenth century.

It is manifest, therefore, that the laws of a country are not and cannot be framed after a pattern, but that they grow up as they are required by some public necessity, or demanded by some private interest, that all their parts, instead of being constructed at one time, and with regard to symmetry of proportion or unity of design, are passed from time to time, in order to remedy some supposed evil, or to meet some urgent requirement of the governors or the governed. The laws of a country, then, instead of being constructed, like the dome of St. Peter's, according to a prepared model, perfect in all its proportions, and gaining strength, and beauty, and utility from every timber, are built up, as the pioneer constructs his dwelling,—rude, and narrow, and inadequate at first,—increasing with his increasing wants and his newly-discovered means, so that, by adding one room to another, a required wing here, and a necessary story there, his building changes with his need and gradually becomes equal to his own progress and to the development of society around him. The result will depend on the skill and judgment of the architect. If he be thoughtful, he will adapt his improvements to his wants; if he be judicious, he will not be compelled to be constantly tearing down and building anew; if he have skill and taste, his structure, though erected piecemeal, will give evidence of unity of design. It is in this sense that law must be placed among the experimental sciences. The enactments of the law-making power require to be tested by experience, in order that their nature may be ascertained, and the necessity for change or amendment determined on. If such necessity is found to exist, the success with which the error will be corrected will depend on the skill of the

legislator, his knowledge of the state of the law as it exists, his experience of its application and failure, his ability to adopt the best mode of correcting the evil, his familiarity with the language of the law, his singleness of purpose, his judgment and his forethought. No man can successfully undertake to amend a law already in existence, unless he is familiar with the provisions of the existing law; no man can legislate on a subject requiring the intervention of the legislature, unless he fully understands the deficiency to be supplied, and the evils flowing from the absence of proper legislation. He should have studied the previous enactments on the subject; he should have ascertained from experience or observation the practical working of those enactments, and having thus ascertained that the law, as it stood, was inadequate to effect the objects designed, he should apply himself, with honesty of purpose, to frame the proper substitute. Not only must he have knowledge rendered practical by experience, and an honest desire to remedy the ascertained evil, but he must bring to his work a thorough acquaintance with apt expressions and technical language; he must be a man capable of anticipating, to a certain extent, the working of the new legislation. He requires, therefore, learning, ability, experience, and honesty. Is it strange, then, that, looking to the qualifications required of a legislator, we should, in this country, have such a mass of worthless legislation; that one-half of the sessions of our too busy and too frequent assemblies should be occupied in repealing and in amending the sad work of their immediate predecessors? Men, without knowledge, without learning, without experience, are suddenly elevated to the position of legislators. The honest among them soon fall a prey to the more astute and interested, and the whole legislative body is warped and controlled by a set of stipendiaries, hovering around the halls like birds of prey. The consequence is, either that the new law bears on its face the impress of ignorance, and cannot be made to harmonize with the previous legislation *in pari materia*, or, under the guise of some general amendment, is soon found to have been procured in order to accomplish some private end merely. To deduce from such legislation a system, to bring order out of chaos, to reconcile

conflicting laws, to ascertain, (and that in a number of States,) a general practice, is of itself no easy task. It requires extended learning, unwearied patience, and great industry.

How different the course of legislation in England! Devotion to their ancient laws carries the inhabitants of Great Britain to the other extreme. Reforms, instead of following the example of the too hasty action of our own law-producing country, drag their slow length along from one reign to another. Even in the days of that greatest of princes, Alfred, his reverence for the established laws of his forefathers is seen in his noteworthy preamble to the collection sanctioned by him. 'Hence I, King Alfred,' says this lawgiver, 'gathered them together, and commanded *many of those to be written down which our forefathers observed*—those which I liked—and those which I did not like, by the advice of my Witan, I threw aside. For *I durst not venture* to set down in writing *over many of my own*, since I knew not which among them would please those who should come after us. But those which I met with either of the days of me, my kinsman, or of Offa, King of Mercia, or of Athelbert, who was the first of the English who received baptism—those which appeared to me to be the justest—I have here collected. Then I, Alfred, King of the West Saxons, showed these to all my Witan, and they then said that they were all willing to observe them.' Throw aside he might, by the advice of his National Council, some of the ancient laws of the kingdom, which were unjust, or had grown obsolete, and were no longer suited to his day, but even Alfred 'durst not venture to add many of his own.' Having collected, not decreed, the laws which appeared to him 'the justest,' he carefully submitted the digested code again to his Witanagemote, and adopted those only which were unanimously sanctioned.

Modern enlightenment and modern progress have in no degree weakened the affection of the English for their common law. They cling with fond tenacity to the form, even when the substance has departed. The influence of the feudal system which has gradually disappeared in point of fact from the island, still lingers, in a thousand ways, in their land tenures,

their judicial proceedings, and their legal forms. One of the cleverest of their modern lawyers, in giving his testimony before the Reform Commissioners, said: 'In truth, I consider the varieties of tenures, in the narrow extent in which they exist, as a beauty, and not as a blemish. They illustrate the antiquities, and they confirm the history, of the country. They bring home to our apprehensions ancient manners and customs, which no longer exist, and set before our eyes a faint and interesting picture of feudal relations. All this may be prejudice, but I own I should be sorry to see all these venerable remains sacrificed to a dry and barren uniformity.'

We confess that we too are not without our prejudices; we are prejudiced in favor of the experience and learning of the past, and do not like to see it rudely marred. We do not rejoice at witnessing the beautiful science of pleading swept away by a single act of an unskilled legislature; we are not advocates for unlimited amendments, and for the right to change at discretion from one form of action to another. We have many other prejudices. We are, in fine, prejudiced against the effort of any body of men to place ignorance and inexperience on a par with knowledge and long practice. As such efforts must surely fail, so they only increase the difficulties of litigation, and open up an endless number of new questions for the solution of the courts. And yet we recognize the law as an experimental science, and, therefore, as in every experimental science, we recognize in it a 'tendency towards perfection.' That tendency leads to the improvement and advancement of the science, in precisely the same way as the science of chemistry or astronomy advances. The axiom, that by our imperfections we are perfected, is as applicable to the progress of the law as it is to the progress of all sciences, moral and physical; in other words, by the discovery of the imperfections in any experimental science, we are enabled to direct our attention to the proper mode of remedying them, and thereby of aiding the development of the particular science in its tendency to perfection. In order, then, to learn by what means this tendency may best be aided, we must endeavor to understand clearly its legitimate mode of development.

By a general law, society is continually progressing. Although there may be, as we have shown, an occasional retrograde movement in certain parts, at certain periods, or in certain countries, the whole body advances regularly and steadily. 'Human affairs,' to borrow the felicitous language of one of the clearest thinkers of this country, 'must be looked upon as in continuous movement, not wandering in an arbitrary manner here and there, but proceeding in a perfectly definite course. Whatever may be the present state, it is altogether transient. All systems of civil life are therefore ephemeral. Time brings new external conditions; the manner of thought is modified; with thought, action. Institutions of all kinds must hence participate in this fleeting nature.' . . . 'Nations are only transitional forms of humanity.' . . . 'Though they may encounter disaster, their absolute course can never be retrograde; it is always onward, even if tending to dissolution. It is as with the individual, who is equally advancing in infancy, in maturity, in old age. Pascal was more than justified in his assertion, that "the entire succession of men, through the whole course of ages, must be regarded as one man, always living and incessantly learning."¹

It will be found, by a careful study of the history of the past, that no misfortune stops this general progress of nations and of mankind. The most disastrous wars, the heaviest taxation, the most corrupt tribunals, and the absence of all patriotism on the part of the rulers, though they may for a time retard and modify, cannot prevent the influence and ultimate triumph of this inexorable law. If our space would permit, we might illustrate it, by the history of our own country within the last decade.

As society, then, in its onward progress is continually passing through its transition states and advancing towards its ultimate perfection, the law governing its individual members must also be continually changing and adapting itself to the modified condition of the social system. Traced to its true source, *Magna Charta* will be found to have resulted from that

¹ Draper's Intel. Develop., p. 12.

stride of the human understanding, which took place in the thirteenth century in Europe, rather than to the determination of the sturdy barons, who forced King John to yield his assent at Runnymede. The reforms in religious institutions, the ardor and enthusiasm of the mendicant Dominicans and Franciscans, the spread of the scholastic philosophy, to which the human intellect is so much indebted for its vigor and acuteness, the foundation of a native literature, and the consequences of the Crusades, had made themselves felt in every portion of the kingdom, and had prepared the minds of the people for that social development which necessitated the principles announced in the *Great Charter*. The Barons' Wars, as the great struggle with the King was called, only compelled the recognition of those principles by the chief of the kingdom in such a form that they could not be gainsaid.

The wonderful advancement in the administration of justice in the beginning of the seventeenth century in England by the introduction of Lord Bacon's ordinances—'the pole star of equity,'—which reduced the chancery practice to a system, and which are said to have produced 'as great a change in the administration of equity as his *Novum Organum* in physics and experimental philosophy,' was much more the necessary result of the conflict between Lord Coke and Chancellor Ellesmere, than of any wonderful ability in this particular on the part of Lord Verulam.

When the invention of the compass, the discovery of the New World, and the important voyage of Vasco de Gama around the Cape of Good Hope, gave rise to that prodigious maritime development which took place in Western Europe, England first entered on that career of commerce, which gradually made her, in the eighteenth century, the mistress of the seas. Her trade was spread over the whole world; her empire extended from the rising to the setting sun; her manufactures and her money were exchanged for the peculiar products of every country on the face of the earth. It was under these circumstances that the Law Merchant became a necessity, and grew, under the controlling influence of Lord Mansfield, to that proportion which it now presents to the civilized world. Bills

of Exchange, Letters of Credit, the Laws of Shipping, Libels, Affreightment, Insurance, all sprang, as a necessary consequence, from the wants which every day's experience exhibited, and the body of the law in that direction moved towards improvement and perfection *pari passu* with the extension of commerce and the requirements of trade.

Again, just as the spread of intelligence and the multiplied intercourse brought about by the allurements of commerce, modified existing enactments, and introduced an entirely new system of laws adapted to the advancement of society, so the progress of the arts and sciences has, from time to time, entirely revolutionized many branches of the law. With the invention of the steam-engine, and the introduction of steamboats and railroads, act after act has been passed in England and this country, to protect the rights of passengers and consignors, and to define the obligations of such common carriers. A new system has sprung up, and the books are filled with decisions of the appellate tribunals, nicely distinguishing between their obligations to their employees, to passengers, and to the public. The invention and introduction into general use of the telegraph, have greatly modified the doctrines of notice, and have entirely revolutionized the usages of trade. Scarcely a day passes, in which some new invention is not patented in London, or at Washington, and the consequence is, that, besides the establishment of a code of Patent Laws, the application of the general principles of right to the thousands of controversies that have arisen on both sides of the Atlantic, has originated a distinct branch of the law known as the Patent Law.

In this way, the progress and development of the law have marched hand in hand with the progress and development of the arts and sciences. No great discovery can be made in science; no application of that discovery can be made to the arts; no ingenious contrivance can be brought into general use without its modifying and controlling, sooner or later, the laws of the land. And just in proportion as that discovery, or that application, tends to promote the happiness of mankind, does the law, which marches by its side, tend towards its ultimate perfection.

These are some of the general considerations, which operate in all parts of the world in which law prevails, to control its development, and to give direction to the channel in which that development must take place. There are other considerations which are peculiar to different countries, and which depend on the character of their institutions. The rapidity, for instance, with which our own country advanced from infancy to manhood; the large number of emigrants who flocked to our shores, and the immense growth of our cities, induced the legislatures of the various States to encourage building, and gave rise to a system of laws known as the Mechanic's Lien Law. The habits of independence engendered in the minds of the people by our peculiar institutions, have here, more than anywhere else, made every man desirous of being the owner of his homestead, however humble, and in consequence, a species of joint stock company, called Building Associations, having that end in view, are to be found in every village and hamlet throughout the land. These associations, and others of a cognate character have been the subject of appropriate legislation, and of a series of decisions on entirely new questions.

The credit system of the United States, which has been one of the causes of its rapid development and of its many financial disasters, has made fortunes uncertain and wealth precarious. Life assurances have become, in consequence, a protection and an investment—a protection to families against the reverses of trade, and an investment to swell the estate of capitalists. The travelling character of our people, and their fondness for locomotion, have extended these assurances to protection against accidents by land and water. Legislation and decisions have followed in the wake of these associations, and extended treatises have been published on the law governing them.

Without multiplying examples farther, it must be manifest that law follows, in its advancement, the progress of the nations of the earth, modified in its tendencies by the characteristics of the different peoples it governs, and by the institutions peculiar to them; that those characteristics and those institutions in their turn direct the course of legislation into particular channels, and impress themselves upon their laws, and usages, and

decisions. But the whole body of the law moves forward like a great army marching to its point of destination, narrowing its ranks to pass through a defile, widening as it reaches the open country, changing its shape from time to time, gathering recruits on the route, leaving stragglers and incompetents behind, but still marching onward toward its goal, and becoming more and more perfect in its manœuvres, and its exercises, and its capabilities, day by day, as it advances. To marshal such an army, to review the entire body with a practised eye, to understand its military character in every particular, to know in what consists its strength, and wherein its weakness lies, to make the whole move as one intelligent body, requires the skill of a consummate general, and the experience of many a conflict.

A body of law moving along in this way through centuries, constantly changing, but always preserving its identity, modified by the progress of society, advancing with the development of the arts and sciences, adapting itself to the peculiar institutions and prejudices of nations, lopped of some of its members, sometimes by accident and sometimes by design, having others engrafted on it in its progress, requires at different periods in its march to be carefully reviewed and described by a well-qualified observer, in order that a correct idea may be obtained and preserved of all its features and peculiarities.

To any one, who will take the time and labor necessary to follow the author of the *Practice* through any one of the volumes of his valuable work, it will be apparent that he is such an observer; that he is, in fact, one of the masters of the science of the law; that he is able to contemplate it as a whole; to toss it up before him as a ball, and see it in all its roundness and all its parts at once, and, at the same time, that he is perfectly familiar with the details of its various branches, and delights to illustrate it by reference to the civil law and to continental jurisprudence.

‘There is not,’ says Sir James Mackintosh, ‘in my opinion, in the whole compass of human affairs, so noble a spectacle as that which is displayed in the progress of jurisprudence; when we may contemplate the cautious and unwearied exertions of

a succession of wise men through a long course of ages, withdrawing every case as it arises from the dangerous power of discretion, and subjecting it to inflexible rules; extending the dominion of justice and reason, and gradually contracting, within the narrowest possible limits, the dominion of brutal force and of arbitrary will.'

In the volume before us, the author has so skilfully divided and subdivided the various defences which may be made to a personal action, that the division itself is suggestive of the best mode of presenting the proper pleas. We look upon the admirable headings and titlings under which the various subjects are treated, as one of the best features of this excellent work. Under each heading, the law is traced down to the present day in England and this country, and the better opinion on each question laid down. Even a cursory examination will satisfy the lawyer of the immense labor necessarily bestowed on the composition of the work. Literally, thousands of decisions have been carefully examined, conflicting opinions studied, and often reconciled, and the most careful analysis presented of leading cases. The industry and research of the author are obvious on every page, and it is manifest, that he has not been content to take the assertion of his predecessors without examination. An example or two of the manner of the author will suffice to show his care, his legal acumen, his varied learning, and his critical analysis.

On page 345, of vol. 1, will be found, under the title, 'How equity by acting on the person may restrain proceedings in another state,' the following

OPINION IN LORD CLARENDON'S TIME:

In 1665, there was a bill before the English Court of Chancery, on which an injunction was granted to stay proceedings, at Leghorn, in a case in which the plaintiff's goods had been there taken. On a motion to dissolve the injunction, it was insisted that it was a new, and Lord Clarendon thought it might be a dangerous case, to stay proceedings there. He advised with the judges, and afterwards declared that they were of opinion the injunction ought to be dissolved.—*Love, &c, vs. Baker, &c.*: Nelson, 103-4; 1 Ch. Cas. 67; 2 Freem. 125-Eden, in his treatise on the law of injunction, states that the accounts of this determination are various.—Ch. 7, p. 102, of Am. ed. But the variance is easily explained. The judges were of opinion that an injunction doth not lie to stop

a suit at Leghorn, or any other foreign parts.—*Freem*. But the *bar* were of another opinion; as the injunction was not to the foreign court, but to the party who was the King's subject.—1 Ch. Cas. 67; Nelson, 104. The word which in 1 Ch. Cas. —, is *bar*, is in Nelson printed *barons*.

The lawyer will appreciate the skill with which these apparently contradictory reports of the same case are reconciled. Take an example of curious and varied research:

Much interest has been shown in the history of the laws as to usury. In New York, one judge (*Savage, C. J.*) observes, that it was tolerated by the law of Moses, and allowed to be taken by the Jews from the Gentiles, (Deut., XXIII, 20,) and, therefore, could not have been immoral in itself.—2 Cow., 765. In opinions delivered by others, (Chancellors Kent and Walworth,) the curious reader may find references to the laws of China, (Staunt. Law of China, 158,) the institutes of the Emperor Akber, a descendant of Tamerlane, (1 Gladwin's Ayeen Akbery, 471,) and the present law of the Hindoos, (1 Strange's Hindoo Law, 297,) as well as to the law of Moses, and the laws of Athens, and of Rome.—16 John., 376; 7 Wend., 593. Mr. Beames, in a note to book 7, Ch. 16, at p. 185, of his translation of Glanville, mentions that 'the ancient Romans punished usury with more severity than they did theft,' referring to Cato de Re Rustica, Procam., &c., &c.—Vol. 5, p. 452, et sub.

On page 576, of the same volume, is the following admirable illustration drawn from the civil law:

There is a very important difference between cases where a contract may be rescinded on account of fraud, and those in which it may be rescinded, on the ground that there is a difference in substance between the thing bargained for and that obtained.—*Gomperty vs. Bartlett*, 2 El. and Bl., 849, 75 Eng. C. L. *Gaurey, &c., vs. Womersley*, 4 El. and Bl., 133, 82 Eng. C. L. *Ship's case* De J. and S., 544. It is enough to show that there was a fraudulent representation as to *any part* of that which induced the party to enter into the contract which he seeks to rescind; but where there has been an innocent misrepresentation or misapprehension, it does not authorize a rescission, unless it is such as to show that there is a complete difference in substance between what was supposed to be, and what was taken, so as to constitute a failure of consideration.—Blackburn J., in *Kennedy vs. Panama, &c., Mail Co.*, Law Rep., 2 Q. B., 587.

The principle is well illustrated in the civil law, as stated in the digest, liber. 18, tit. 4, *De Contrahenda Emptione, leges* 9, 10, 11. There—after laying down the general rule that, where the parties are not at one as to the subject of the contract, there is no agreement, and that this applies where the parties have misapprehended each other as to the *corpus*, as where an absent slave was sold, and the buyer thought he was buying Pamphilus, and the vendor thought he was selling Stichus—and pronouncing the judgment that in such a case there was no bargain, because there was *error in corpore*, the framer of the digest wrote the point thus: '*Inde quaeritur, si in ipso corpore non erretur, sed in substantia error sit, ut, puta, si acetum pro vino veniat, aes pro auro, vel plumbum pro argento, vel*

quid aliud argento simile, an emptio et venditio sit; and the answer given by the great jurists quoted are to the effect, that if there be misapprehension as to the substance of the thing, there is no contract; but if it be only a difference in some quality or accident, even though the misapprehension may have been the actuating motive to the purchaser, yet the contract remains binding. Paulus says: '*Si æs pro auro veneat, non valet, aliter atque si aurum quidam fuerit deterius autem quam emptor existimaret: tunc enim emptio valet.*' Ulpianus, in the eleventh law, puts an example as to the sale of a slave, very similar to that of the unsound horse, in *Street vs. Blay*, 2 Barn., and Adolph., 486, 22 Eng C. L. And the principle of the common law is the same as that of the civil law. The difficulty in every case is to determine, whether the mistake or misapprehension is as to the substance of the whole consideration, going as it were to the root of the matter, or only to some point, even though a material point, an error as to which does not affect the substance of the whole consideration.—Blackburn, J. in *Kennedy vs. Panama, &c.*, Mail Co. Law Rep., 2 Q. B., 587-8.

It will thus be seen that these volumes are, as we have already said, far from being mere books of Practice, but that they contain the origin and growth of the different legal principles now in force, and their present practical application, together with the gradual changes which have resulted in the latest decisions. For every proposition announced the authority is added, and a complete digest is thus far presented of all that is valuable and practical in reference to the 'time and place of a transaction,' 'the right of action,' the 'declaration and the subsequent Pleadings.'

Justice Story, in discoursing on the condition of the law in this country, many years ago, observed: 'The mass of the law is accumulating with an almost incredible rapidity, and with the accumulation the labor of students, as well as professors, is seriously augmented. It is impossible not to look without some discouragement upon the ponderous volumes which the next half century will add to the groaning shelves of our jurists. The habits of generalization, which will be acquired and perfected by the liberal studies which I have ventured to recommend, will do something to avert the fearful calamity which threatens us, of being buried alive, not in the catacombs, but in the labyrinths of the Law.'

Could that eminent jurist have survived until the end of the half century of which he spoke, and witnessed the publication of the work of Mr. Conway Robinson, he would have been among the first to have rejoiced at the skill, surpassing that of

Ariadne, with which our author has furnished a magic thread to guide students and professors safely out of the dreaded labyrinth.

The first of Mr. Robinson's series of volumes was published in 1854, and the last has just been issued from the press. The work thus far is, therefore, the result of twenty years of hard labor, allowing a reasonable time for the production of the first volume; longer, indeed, when it is remembered that these volumes are founded on an earlier work, well known to, and highly esteemed by, the bar of Virginia. The next volume is promised in the current year. Subsequent volumes will be needed to furnish us with the law and the practice, after the issues are made up, the mode of trial, the laws regulating evidence, the verdict, the judgment, appeals, &c., &c.,—a lifetime of labor yet before the erudite author. We earnestly hope that Mr. Robinson's valuable life may be spared until he shall have fully completed his great work. When completed, we are satisfied that it will have a place in the library of every lawyer, and form the *vade mecum* of every *nisi prius* judge.

Not many years ago, no book could take its position in the front ranks, unless it had first received the stamp of European approval. Now, however, that this country has produced in general literature such names as Prescott, and Hawthorne, and Longfellow, and that we can boast in the law of such writers as Wheaton, and Kent, and Story; now that the bench has been adorned by such eminent judges as Marshall, and Taney, and the bar rendered illustrious by the ability and learning of such lawyers as Pinkney, and Binney, and Martin, and Webster, it is no longer necessary to postpone our opinions until we have had the sanction of foreign judgments. But, if the sanction of the highest authority in England were necessary to entitle Mr. Robinson to his proper position among the writers on jurisprudence, it is not wanting. His work is already well known to the most distinguished jurists of England. In reference to the volumes preceding the present, one, who for many years adorned the Queen's Bench has, with that degree of candor which can only accompany acknowledged learning and true greatness of mind, used this language, 'I have taken these volumes on

Circuit, and derived considerable assistance from them, and on several occasions have been kept from mistakes by the information and references, which I found readily from the good arrangement of the work, which I consider a very valuable one.'

And the highest authority known to the law of England, has added his testimony to that of his brother: 'Having availed myself,' he writes, 'of a period of comparative leisure, and having gone through the fourth volume of Mr. Robinson's *Practice*, I have the greatest satisfaction of bearing witness to the learning, care, and ability, which this volume, in common with its predecessors, exhibits. The work, which is one of great practical utility, will become a standard work, and will do great honor and credit to its learned author, and will add another item to the debt which the legal profession in this country owes to American jurists, in illustrating the law of the two nations.'

Such words of praise coming from across the broad Atlantic, must be grateful to any author. They are as honorable to the great men from whom they come, as they are flattering to the learned lawyer of whom they are written. If it be the highest meed of praise *laudari a laudatis*, it is surely no less praiseworthy in an English Judge, eminent for his great learning, to confess publicly that he 'on several occasions has been kept from mistakes' on circuit, by the production of an American writer, and in another, still more distinguished by his position, to declare his belief that that production would become a 'standard work,' and would increase the debt of the legal profession of England to the jurists of this country.

- ART. VIII.—1. *Campaigns of the Army of the Potomac.*
By William Swinton. New York: C. B. Richardson. 1866.
2. *The Twelve Decisive Battles of the War.* By William Swinton. New York: Dick & Fitzgerald. 1867.
3. *Notes on the Rebel Invasion of Maryland and Pennsylvania and the Battle of Gettysburg.* By M. Jacobs. Philadelphia: Lippincott & Co. 1864.
4. *The Rebellion Record.* By Frank Moore. New York: D. Van Nostrand. 1864.
5. *Report of the Joint Committee on the Conduct of the War, at the Second Session, 38th Congress.* Washington. 1865.
6. *Address of Hon. Edward Everett at the consecration of the National Cemetery at Gettysburg.* Boston: Little, Brown & Co. 1864.
7. *Southern History of the War.* By Edward A. Pollard. New York: C. B. Richardson. 1865.
8. *Lee and his Lieutenants.* By Edward A. Pollard. New York: E. B. Treat & Co. 1867.
9. *The Great Rebellion.* By J. T. Headley. Hartford: American Publishing Company. 1866.

The campaign of 1863 in the east, though marked by less activity and fewer great battles than either the preceding or the succeeding one, has been looked upon as by no means inferior to either of them in interest and importance. Indeed, there is no portion of the history of the late war about which more has been written and spoken, than about Chancellorsville and Gettysburg. These two mighty conflicts seem to be invested with an unusual share of that dramatic interest which hangs around the events of the late struggle. We remember well the intense anxiety which filled both sections of the country, when the two armies plunged into the depths of the Wilderness, as if to hide their mortal combat from the view of men; with what breathless suspense the result was waited

for, as, day after day, the mysterious forest resounded with the roar of the contest; what disappointment filled the North when, finally, the largest and best equipped force yet put in the field had been thrown back over the Rappahannock, shattered and broken; what mingled joy and sorrow pervaded the South when the magnificent skill and audacity of her great chieftain had again brought victory, but, in doing so, had paid as the price, Stonewall Jackson. Other circumstances contribute to the interest of Gettysburg. It marks the period of the most formidable irruption made by Southern arms into Northern territory. In weight of artillery, and number of men actually engaged, it probably exceeded any battle of the war. On its issue hung, perhaps, the fate, for the time, of one or more of the large Northern cities. The very date of its occurrence, on the eve of the 4th of July, has added to the impression it has made. It has seemed to many, the turning point of a contest, of which the remainder was but a tremendous death-struggle. No wonder, then, that it has been a favorite theme of the orators, and poets, and historians, of at least one-half the country.

But notwithstanding the interest that centred on Gettysburg, the general conception of the aims, character, and results, of this campaign, is, we think, far from correct. Of course, the contemporary accounts are marked with that distortion of facts, which is the natural consequence of excited passions; but even in the numerous historical estimates which, since the war, have been made of its chief events, we have found no lucid and temperate account of the plans and purposes of the principal actors in the drama, or of the facts themselves which marked its progress. The books placed at the head of this article, are but a few of the many which have furnished pictures of this important period, colored by every shade of passion, prejudice, and ignorance. It is not our purpose to review them in detail, but rather to correct some of their errors by a simple statement of facts.

In the first place, but small reference has been had to the facts of the case, and the condition of the combatants, in the motives usually ascribed to the Confederate leader in the

initiation of this conflict. Thus, this invasion is commonly set forth as the great effort on the part of the Confederacy, to transfer permanently the seat of war in the east from Southern to Northern territory. It is considered not as an 'irruption,' but as a deliberate attempt, by the subjugation and the holding of one or more Northern States, to conquer a peace on Northern soil. It is held up as an example of the fatal change of policy on the part of the South, from 'defensive' to 'offensive' warfare. Thus Mr. Swinton, the fairest and ablest of the Northern historians, says: 'The plan of operations devised by Gen. Lee, was far from the character of a roving expedition. This was invasion, pure and simple, an audacious enterprise, designed to transfer the seat of war from Virginia to the North country, to pass the Susquehannah, to capture Washington, Baltimore, and Philadelphia; in a word, to conquer a peace on the soil of the loyal States.' And again, 'thus was baulked and brought to naught, the scheme of Confederate invasion, an invasion undertaken by an army powerful in numbers, and in the prestige of victory, and aiming at the boldest quarry—the conquest of peace on the soil of the loyal States. . . . It was an error in its inception, for it was an enterprise that overstepped the limits of that fitting theory of military policy that generally governed the Confederate war-councils, and committed Lee to all the perils and losses of an invasion without any adequate recompense, and even without any well determined military object.' The idea of Mr. Everett is not far different, and he makes the additional mistake of throwing the responsibility of this campaign, on the Confederate Government, and not on Gen. Lee.

Contrast with these, the clear and simple statement of Gen. Lee himself, in his report: 'The position occupied by the enemy,' says he, 'opposite Fredericksburg, being one in which he could not be attacked to advantage, it was determined to draw him from it. The execution of this purpose embraced the relief of the Shenandoah Valley from the troops that had occupied the lower part of it during the winter and spring, and, if practicable, the transfer of the scene of hostilities north of the Potomac. It was thought that the corresponding

movements, on the part of the enemy, to which those contemplated by us would probably give rise, might offer a fair opportunity to strike a blow at the army commanded by General Hooker, and that, in any event, that army would be compelled to leave Virginia, and possibly to draw to its support, troops designed to operate against other parts of the country. In this way, it was supposed, that the enemy's plan of campaign for the summer, would be broken up, and part of the season of active operations be consumed in the formation of new combinations, and the preparations that they would require. In addition to these advantages, it was hoped that valuable results might be attained by military success.¹

The position of affairs in Virginia, in May, 1863, was as follows:—Gen. Hooker had opened the Spring Campaign with nearly 130,000 men, well armed and equipped. At the head of this splendid force, he attempted to turn the position of Gen. Lee, who held the line of the south bank of the Rappahannock with between 50,000 and 60,000 men, and either throw him back toward Richmond, or defeat him in the open field, if he ventured to give battle. This plan was not only baffled, but at Chancellorsville the Federal army was defeated, and forced to recross the Rappahannock, with the loss of more than 17,000 men, besides the disabling of three-fourths of its cavalry. The Confederate loss was about 12,000. Each army returned to its old lines, and rested for several weeks after this fierce conflict. The Federal army had met with a severe reverse, but was still formidable. Gen. Hooker had still 100,000 effective men, and of these, 30,000 were in fine condition; for Gen. Hooker had so managed as not to bring them into battle. His strength was diminished somewhat, during the month of May, by the expiration of the term of service of a number of regiments. On the other hand, Gen. Lee brought up Longstreet from Suffolk with two divisions, and, by calling in the conscripts and furloughed men, found himself, about the last of May, at the head of 55,000 infantry, and from 5,000 to 6,000 cavalry,—in all about 61,000 men.¹ The Confederate army occupied the

¹ The total effective force under Gen. Lee in May, 1863, is reported in the *Historical Magazine*, August, 1867, as taken from the captured papers of the C. S. War Department, at 68,352. This (if correct) included all the troops within the

fortified lines they had held during the winter. The position of the Union army was strongly entrenched, within a few miles of their base of supply, and was, indeed, admirably adapted for either offence or defence.

There was no possibility of attacking Hooker in his position. He was strongly fortified; he was but a few miles from the Potomac, by means of which he obtained supplies; and he had undisputed control of that river. But two alternatives were then left to the Confederate leader. One was to remain in the position then occupied, and await the renewal of operations on the part of his antagonist. The other was, by a bold manœuvre, to force him from his vantage ground, to keep him occupied in covering Washington and the Northern cities, and to strike a blow whenever opportunity occurred. The first plan promised nothing. It was merely to wait until the Federal army, unmo- lested, repaired its losses, and with increased numbers turned his position and forced him to fall back or give battle in the open field to a greatly superior force. It required but little mathematics to show how soon the policy of retreat would lead to the abandonment of all the strongholds and magazines of the Confederacy. The case was different with the other plan. By a movement northward, the Federal army would be forced from its stronghold on the Rappahannock, and compelled to give battle elsewhere, or to hug the defences of Washington. If the latter were the case, a further movement into the Northern States would necessarily draw this army entirely away from these fortified lines, and force it to manœuvre for the protection of Baltimore and Philadelphia. These move- ments would most probably offer opportunities for striking damaging blows, without risking a general engagement. At least, Virginia would be relieved, for the time, from the tread of hostile armies, and a considerable portion of her people freed from a foreign yoke; abundant supplies would be obtained in place of the scant rations, which had been dealt out for months past; the year's campaign against Richmond

limits of Gen. Lee's command, and thus embraced those in South-Western Virginia, as well as those left before Richmond, and in the country south of the James River. The above numbers represent all the force concentrated for his movement northward, and is derived from the records of the army of Northern Virginia.

completely disarranged; and the Confederate army in position to give battle when and where it might seem expedient. The great Captain who had heretofore controlled, with such consummate skill, the destinies of war in Virginia, did not hesitate as to the plan to be pursued. But, at the same time, he had no chimerical notions about permanently establishing himself with 60,000 men, in the midst of populous States, surrounded by armies double his own in strength, and two hundred miles from his base. He was prepared to take advantage of all the opportunities, which fortune, or the blunders of his adversary, might put in his power; but, to use his own words, 'It was not intended to fight a general battle so far from our base, unless attacked by the enemy.' The conquest, or permanent occupation of Pennsylvania, was a dream of the newspapers, and of enthusiastic gentlemen whose military zeal vastly exceeded their knowledge. No one was more sensible than Gen. Lee of the immense inequality of resources between the two contending parties. No one more anxious than he to husband the men and means placed at his command. Superior skill and strategy alone could enable him to cope with his opponent. He moved northward that he might play the great game under better conditions. Had the battle of Gettysburg never occurred, or had he carried the Federal position there, he would still, when the season for active operations was over, have had to return to some point within reach of his base of supplies.

'Another singular misstatement, made by Mr. Swinton, is, that Gen. Lee, in entering upon this campaign, 'expressly promised his corps commanders, that he would not assume the practical offensive, but force his antagonist to attack him.' That such was the general line of policy he had already marked out, we have already shown, but that he made any *promises* on the subject, either to corps commanders, or to any one else, is something entirely at variance with his own character, and with the full confidence always reposed in him by the Government, the people, and the army of the South.

The plan of campaign having been determined upon, the Confederate leader proceeded, with his usual energy, to put it

into execution. By the first of June, all his preparations were made. The losses of Chancellorsville had been repaired; his deficient armament had been greatly improved by means of the captures there made; the troops had been clothed; and the *morale* of the army was of the highest order.

The infantry had been organized into three corps, under Longstreet, Ewell, and A. P. Hill, and each of these corps contained three divisions. The whole cavalry of the army was under command of Stuart. Three brigades, viz: those of Fitz Lee, Hampton, and W. H. F. Lee, were concentrated at Culpepper Court House. Jones's brigade was brought over from the Valley, Robinson's from North Carolina, and added to these, the brigade of Jenkins was ordered to move down the Valley toward Winchester, and the small brigade under Imboden was sent to make demonstrations on the line of the Baltimore and Ohio Railroad near Romney. The artillery of the army still moved with the different corps with which it was intended to act, but was all placed under the command of Gen. Pendleton.

On the 3d of June, McLaws's division of Longstreet's corps, left Fredericksburg for Culpepper Court House, and Hood's division, of the same corps, was ordered to the same place. On the next day, Ewell marched in the same direction, leaving A. P. Hill to occupy the lines at Fredericksburg. By the 8th, these two corps, and the cavalry, were concentrated at Culpepper.

While these movements were going on, General Hooker, who had derived from the Richmond papers, and other sources, some intimations as to the contemplated movement on the 6th of June, threw General Sedgewick, with the Sixth Corps, across the river below Fredericksburg, to make a reconnoissance. So strong was the show of force made by Hill, that the Federal commander was deceived by it, and remained in ignorance of what was going on. Having become aware, however, of the massing of the Confederate cavalry at Culpepper, he determined to send against them his whole cavalry force of six or seven thousand men, and three thousand infantry under Pleasanton. This force crossed the Rappahannock early on the ninth, and

attacked Stuart. Coming suddenly upon one of Stuart's brigades, they took a few prisoners, and gained a temporary advantage; after which a fierce contest ensued, continuing till late in the afternoon, when Pleasanton was finally driven over the river with heavy loss. In this affair, the Federals captured two hundred prisoners, and one battle-flag. The Confederates captured four hundred prisoners, three pieces of artillery, and several battle-flags. This fight revealed to General Hooker, the presence of Ewell at Culpepper, and the fact that Stuart was on the point of moving northward. In consequence of this information, he began, on the 11th and 12th, to move a part of his army cautiously northward, to interpose it between Lee and the Capital; and as he became aware of the further progress of the Confederate army, he broke up altogether from Fredericksburg, and by June 15th had concentrated the greater part of his force at Fairfax Station, in front of Alexandria and Washington. He anticipated that Gen. Lee would move as he had done the year before against Pope, and directed the movements of his own army accordingly.

Meantime General Lee continued to push northward. On the 10th, the day after the cavalry fight, Ewell's corps was sent forward to cross the Blue Ridge by way of Front Royal, and clear out the hostile forces at Winchester, and other points in the lower valley. Ewell, after crossing the Shenandoah, detached Rodes's division to dislodge the enemy at Berryville, and then interpose himself between Winchester and the Potomac, while with Early's and Johnson's divisions he pressed on directly to Winchester, which was then held by Gen. Milroy with five or six thousand infantry. Jenkins and Imboden were already in position to prevent reinforcements reaching Milroy. Ewell reached Winchester on the 14th. The Union troops occupied, to the north of the town, a range of heights strongly fortified. Early's division was sent by a long detour completely around the town, to attack this position from a northwest direction, where alone it seemed pregnable. Late in the evening, Gen. Early got into position, when he attacked and quickly carried the outer defences of the enemy, and captured six pieces of artillery. Night coming on, he lay upon his arms. Mean-

while Johnson was sent by a detour to the east of the town, to occupy the Martinsburg road, and thus intercept Milroy's line of retreat. During the night, the Federal commander cut down his guns and attempted a precipitate retreat to Harper's Ferry. A small part of his command had passed, when Johnson, who had been delayed in getting into position, arrived about daylight at the Martinsburg road, and at once attacked the passing column, soon routing it, and capturing a large number of prisoners. Milroy, with a small party of fugitives, reached Harper's Ferry. While Early had been moving around Winchester, on the 14th, Rodes, having passed through Berryville on the 13th, compelling the force there to retire, pushed on to Martinsburg. He dispersed the force there, taking seven hundred prisoners. The total results of these operations of Ewell were 4,000 prisoners, twenty-nine pieces of artillery, two hundred and seventy wagons and ambulances, and four hundred horses,—all captured with small loss,—and the valley cleared of the enemy. The remnant of his forces retired to Maryland Heights. The campaign had thus opened auspiciously, and this heightened the already lofty anticipations of the South.

Gen. Hooker remained in entire ignorance of the movement of Ewell's corps against Winchester, until it was invested. His attention seemed solely directed to the preventing of Lee from turning his right flank, as he had done that of the Federal army in 1862, so that he could not dash down upon Washington. Hence, when informed at Dumfries, on the 14th, by President Lincoln, of the presence of Ewell at Winchester, he continued his march to Fairfax Station, which was reached next day. On this day, the 15th of June, the Federal rear-guard, having disappeared from his front at Fredericksburg, A. P. Hill, with his three divisions—Anderson's, Heth's, and Pender's—left his position there in accordance with his instructions, and marched toward Culpepper. Hooker's abandonment of the line of the Rappahannock, and close adherence to the Potomac, deprived the Confederate commander of any favorable opportunity for attack, while his movements covered the approaches to Washington. To draw the Federal army farther from its base, as

well as to cover Hill's march from Fredericksburg, Longstreet's corps, consisting of Hood's, Pickett's, and McLaws's divisions, was on this same day, the 15th, moved from Culpepper, along the eastern base of the Blue Ridge, until it occupied Ashby's and Snicker's Gaps, which are on the two main roads leading from the lower valley to Alexandria. The cavalry under Stuart was thrown out to cover Longstreet's front. When Hill had reached Culpepper, he was ordered to continue his march by the route which Ewell had followed into the valley.

While these movements were being effected, Gen. Hooker, and the Federal Commander-in-Chief, Gen. Halleck, at Washington, continued in the most painful ignorance and uncertainty as to the position and purposes of Gen. Lee. His rapid movements were all concealed behind a cloud of cavalry, and, by frequent demonstrations in different directions, he held them in constant suspense and doubt as to his real point of attack. On the 16th, the Washington authorities became alarmed for the safety of Harper's Ferry, and Hooker was urged to push forward through Loudon to the relief of that place. Dispositions were made for this purpose, but, on the 17th, the reports proving unfounded, the movement was suspended. On this day, however, the Federal cavalry was sent toward Winchester and Harper's Ferry, to make a reconnoissance, and develop the strength and position of the Confederates; and some of the infantry corps slowly followed. pontoons were ordered to the mouth of the Monocacy. Pleasanton first came up with two brigades of Stuart's cavalry at Aldie, whither they had been sent to observe the movements of Hooker. This force held Pleasanton in check during the day, and then joined Stuart's main force at Middleburg. Next day the fight was renewed, and continued with stubbornness all day; but, finally, Gen. Gregg, who commanded the Federal cavalry, was forced to retire; Pleasanton rested the greater part of his forces next day at Aldie, and on the 20th, made preparations for further advance. On the 31st, he moved forward with his whole cavalry force, which now embraced, in addition to his former force, General Stahl's division of 6,100 sabres, who had been picketing, all winter, from Occoquan to Goose Creek, and whom Mosby, with

his hundred guerrillas, had kept in such a state of alarm that the planks over the chain bridge at Washington were, for a long time, taken up nightly. This body of cavalry, some 15,000 in all, was supported by Banes' division of infantry. Stuart was attacked, and after a stubborn fight, was forced back through Upperville to Ashby's Gap. He lost two pieces of artillery and some sixty prisoners; but he captured several hundred of the enemy, and retained possession of the pass, and thus prevented Pleasanton from observing the movements of the Confederate infantry on the western side of the mountain. The Federal cavalry suffered so severely in this engagement, that Gen. Pleasanton returned next day to Aldie to rest and recruit.

General Lee had, so far, completely veiled his movements and designs from the foe. Even on the 17th of June, General Hooker telegraphed to General Halleck: 'Has it ever suggested itself to you, that this cavalry raid may be a cover to Lee's reinforcing Bragg, or moving troops to the West?' And all the information that General Pleasanton brought back after the fight of the 21st, was the vague report of some negroes, as to the marching of Confederate infantry towards Maryland. But the Confederate commander, anticipating that it would require demonstrations still further to the northward, to draw the Federal army away from the defences of the Capital, (which he had no intention with his inferior force, of attacking in front,) had already pushed forward his advance. Rodes had moved on the 15th, the day after he entered Martinsburg, (and the day of the dispersion of Milroy's force at Winchester,) to Williamsport, and sent Jenkins's brigade of cavalry which had been placed under his orders, to Hagerstown, Jenkins went on to Chambersburg, and returned on the 20th, while Rodes waited for the remainder of the corps. This was being moved up,—Johnson crossing and camping at Sharpsburg on the 18th, and Early crossing and going to Boonsboro' on the 22d.

As Hooker still showed no disposition either to cross the Potomac, or to advance and deliver battle, Lee prepared to move into Maryland with his whole army. Stuart was ordered

to remain to guard the passes of the mountains, to observe the enemy's movements, and to harass and impede him as much as possible, should he attempt to cross the Potomac. When this should be effected, however, he was to cross over too, and place himself on the right of the Confederate army, to cover its movements, and keep its commander informed as to those of the enemy. Ewell's corps was ordered into Pennsylvania; Johnson's and Rodes's divisions were sent towards Chambersburg, while Early was directed to cross the South Mountain toward the Susquehannah, in order to keep Hooker on the east side of the mountain, when he should cross into Maryland, and thus prevent his throwing his army upon the Confederate line of communication through Hagerstown and Williamsport. On the 24th, General Ewell, with Rodes's and Johnson's divisions, had reached Chambersburg, and Early was at Greenwood. On this day, Hill and Longstreet crossed the Potomac at Shepherdstown and Williamsport, and moved towards Hagerstown.

It was now, for the first time, that General Hooker seems to have had any reliable information as to Lee's movements. Learning the position of affairs on the 24th, he prepared to cross the Potomac, and on the morning of the 25th sent over Stahl's cavalry, followed by General Reynolds, with the First, Third, and Eleventh Corps, at Edward's Ferry. On the next day, he crossed over with the Twelfth, Fifth, Second, and Sixth Corps, the cavalry bringing up the rear. Stahl's cavalry was then thrown forward toward Gettysburg, to scour the country, and the Twelfth Corps was advanced toward the passes in the South Mountain leading to Hagerstown, the remainder of the army being concentrated near Frederick. There were 12,000 men at Maryland Heights under General French, and it was proposed that these, having evacuated that post, should unite with the Twelfth Corps, and, crossing the mountain, cut Lee's communications. General Halleck, however, refused to approve this evacuation, and General Hooker in consequence resigned the command of the Army of the Potomac on the 29th. On the morning of the 28th General Meade relieved him, and permission was given to this officer to use French's command as he saw fit.

The Northern historians seem to think, as did Gen. Hooker himself, that a great opportunity was lost by this failure to plant two corps of the Army of the Potomac, upon the Confederate line of communications. But the facts hardly seem to warrant this conclusion. For, on the 25th and 26th, Hill's and Longstreet's corps were moving from Hagerstown to Chambersburg, and had a part of General Hooker's army been pushed forward to Hagerstown, it would most probably have been crushed by bringing down on itself more than two-thirds of the Confederate forces.

On the 27th, the day of Hooker's resignation, Lee, with the corps of Longstreet and Hill, reached Chambersburg. Ewell, with two divisions, reached Carlisle, and Early, having passed through Gettysburg the day before, occupied York. On the 28th, the Confederate army remained quiet. In consequence of an unfortunate circumstance, General Lee was not aware that the Federal army had crossed the Potomac. For Stuart, whom he had ordered to join him in that event, had not been heard from, and the small cavalry force he had with him, was occupied, a part under Jenkins, in Ewell's front toward Harrisburg, and the remainder, under Imboden, (after breaking up the Baltimore and Ohio Railroad, and the Chesapeake and Ohio Canal,) in scouring the country to the west of his line of march. Stuart had pushed down to Fairfax C. H., and finding that the enemy was crossing the river, he crossed below, at Seneca, on the 29th, with the intention of moving around him, and joining General Lee. The advance of the Federal army northward prevented his doing this until the day of the battle of Gettysburg. By this mistake, the Confederate commander was left without the veil behind which he was accustomed to conceal his movements, and without the means of determining the position and purposes of the enemy.

Supposing, therefore, that Hooker had not yet crossed into Maryland, he was preparing to move toward Harrisburg, when he received information, on the night of the 28th, from a scout, that the Federal army was over the river, and that the head of its column had already reached the South Mountain, and thus endangered his communications. This move-

ment necessitated a change of plan for the time, and the change was made with promptness. He ordered the concentration of his army on the eastern side of the mountain, so as to be in position to threaten the Federal line of communications, as well as Baltimore, if his adversary should move to the western side. Hill and Longstreet moved, on the 29th, toward Gettysburg, from Chambersburg, and Ewell was directed to march from Carlisle to the same place. These marches were conducted slowly, the position of the enemy being unknown. General Lee was unable to realize, in the absence of any information from Stuart, that the Federal army was so near him.

Meantime, Gen. Meade, who now commanded the Army of the Potomac, was moving northward in order to cover Baltimore, and to prevent Lee from crossing the Susquehanna. He had assumed command on the morning of the 28th, and spent that day in learning the strength and position of his troops. The infantry of the Federal army consisted at that time of seven corps, the First, (Reynolds's,) Second, (Hancock's,) Third, (Sickles's,) Fifth, (Sykes's,) Sixth, (Sedgwick's,) Eleventh, (Howard's,) Twelfth, (Slocum's.) The cavalry, of three divisions—Gregg's, Buford's, and Kilpatrick's, (late Stahl's,) all under Gen. Pleasanton. The artillery consisted of three hundred field pieces, besides some heavier guns. Total strength, according to General Meade, from 95,000 to 100,000 men. The Confederate army had been diminished some one or two thousand by its casualties at Winchester and Upperville, and by the guards necessarily left to keep open Lee's communications, and now consisted of a total force of nearly 60,000 men and one hundred and twenty-five pieces of artillery. On the 29th, the Federal army moved, and on that night rested, the left at Emmettsburg, and the right at New Windsor. On the next day, the right was advanced to Manchester, but the left, consisting of the First, Eleventh, and Third Corps, under the command of Reynolds, remained stationary. Buford's cavalry occupied Gettysburg, and having reported on the 30th the presence of A. P. Hill on the Cashtown road, Reynolds was ordered to move up to Gettysburg, to hold him in check, and give time for the concentration of the army along the line of

Pipe Creek, which General Meade had selected as the position in which he would receive the shock of battle, if General Lee were disposed to attack.

Thus a great battle was about to be fought, which was to surprise no one so much as the two principal actors in it. Gen. Lee, as already stated, had no design of fighting a general battle. Far from his base, greatly inferior in numbers and artillery, knowing that he could not fill up his ranks if disaster should occur, his purpose contemplated only the occupation for a time of Federal territory in order to relieve Virginia, and such strategic movements as would employ the Union forces in the east in covering their principal cities, or would afford him opportunities of striking blows at detached or unguarded points. He was unaware of the vicinity of the enemy. His latest information was that they held Frederick, and threatened to move in the direction of Hagerstown, and his present concentration of his army at Gettysburg was to check-mate this movement and retain them east of the mountain. This concentration was so admirably ordered that Ewell from Carlisle, Early from York, and Hill from Chambersburg, all reached Gettysburg within a few hours of each other on July 1st. General Meade, on the other hand, instead of carrying out Hooker's plan of moving through Boonsboro' Pass to the western side of the mountain, had pushed his army northward, in order to force Lee from the Susquehannah, and with the intention of not declining battle if his antagonist would attack. So when he found that Ewell had turned back, and before he knew that his own advance was already seriously engaged at Gettysburg, he issued the following order from Taneytown, July 1st: 'From information received, the Commanding General is satisfied that the object of the movement of the army in this direction has been accomplished, viz: the relief of Harrisburg and the prevention of the enemy's intended invasion of Pennsylvania beyond the Susquehannah. It is no longer his intention to assume the offensive until the enemy's movements or position shall render such an operation certain of success. If the enemy assume the offensive, and attack, it is his intention, after holding them in check sufficiently long to withdraw the

trains and other impediments, to withdraw the army from its present position, and form line of battle with the left resting in the neighborhood of Middleburg, and the right at Manchester, the general direction being that of Pipe Creek.'

But the great conflict had already begun. Hill, moving down the Cashtown road, first met Buford's cavalry, which he drove leisurely before him to within a short distance of the town. Reynolds, with the First Corps, was already marching through Gettysburg, and he hurried forward his advance division to Seminary Ridge, to support the cavalry. He fell just as he was getting his troops into position, and the Federal army thus lost one of its bravest and most efficient officers. The movement was carried on, however, by Doubleday, and resulted in a success at first, the Federal troops charging and capturing General Archer and a part of his brigade. Hill soon brought the entire divisions of Pender and Heth, amounting to 12,000 or 14,000 men, into action, and pressed back the Union line. Other forces were added before long to both sides. Howard, with the Eleventh Federal Corps, arrived by mid-day, and took position on the night of the 1st. Howard took command, and now had about 20,000 infantry. Ewell, who was moving from Carlisle, hearing the guns, pushed on, and a little after mid-day reached the vicinity of the field from the north, with Rodes's division, and Early soon followed. These divisions increased the Confederate force to from 22,000 to 24,000 men. Rodes attacked the flank of the enemy's line, and was soon furiously engaged. Hill was pressing the front in a stubborn contest, and the Federal lines were already wavering, when Early reached the field, and by a splendid charge, gave the *coup de grâce* to the Eleventh Corps. It was routed, and the whole Union line gave way and was driven in confusion and with immense loss through and beyond the town. General Howard had taken the precaution to leave one of his divisions in reserve upon the crest of Cemetery Hill, and on this nucleus he rallied his broken troops, and made once more a considerable show of force. This was sufficient to put an end to the contest for that day. Though Early advised an attack on the heights, Ewell and Hill thought it better to wait. Johnson's

and Anderson's divisions, one-third of each of their corps, were not up, the position of the enemy appeared formidable, they knew not what Federal troops besides those they had already met, might be in reserve on the heights, and the great success of the day had not been achieved without severe losses. Hence they determined to rest satisfied with having utterly defeated two corps of the Union army, and captured 5,000 prisoners and several pieces of artillery. It is easy to see, in the light of subsequent events, that a great opportunity was thus lost; but with the facts before them, their action was perhaps not unreasonable. General Lee had ordered Hill to continue to push the enemy, but, upon reaching the field late in the evening, and finding that Hill had ceased pursuit, and had withdrawn his troops, he concluded, on account of the lateness of the hour, to defer any further movement till morning.

Meanwhile, General Meade, after he had issued the order given above, in reference to concentrating on Pipe Creek, was informed of the Confederate attack at Gettysburg, and of the fall of Reynolds, when he sent General Hancock forward to take command of the field, and report as to the practicability of making Gettysburg the battle-ground. Hancock arrived after the fight, and having placed the troops in position, and examined the ground, reported favorably, and advised General Meade to concentrate his whole army there. Indeed, no other course was possible after the events of the day, unless he was willing to yield the palm of victory without further effort. Sickles and Slocum arrived about dark on the field, and were placed in position, and Meade hastened up the remainder of his army during the night, and on the morning of the second.

Whatever were General Lee's previous designs, he now found himself in the presence of the whole Federal army, and actually engaged with it. It was hardly possible to decline the gage of battle. To have retreated without fighting, would have been to throw all the moral results of victory on the side of the enemy. Nor was it an easy matter to retreat from the immediate presence of a superior army, or to maintain himself in a hostile country after having done so. On the other hand, the Army of Northern Virginia was in splendid condition, the

partial combat of the first day had resulted in the demolition of nearly one-fourth of the opposing force, and was a favorable omen of final triumph, and the results hanging upon a decided victory were greater than ever before. The North and its great cities would be open to him, the Federal successes in the West would be neutralized, and consternation and dismay would paralyze the Government. He decided to deliver battle.

During the evening and night, General Lee made use of all the means at his command, (Stuart had not yet rejoined him with the cavalry,) to determine the strength and position of the enemy. The position of Gettysburg, at this day, hardly needs description. It consists of a high, commanding ridge, running from the rear of the town in a southerly direction, and terminating in an abrupt hill, known as Round Top. A cemetery on this ridge, near the town, has given name to the location. At the town, the ridge turns to the east, nearly at right angles to its former course, and afforded in Cap Hill a fine resting point for the Federal right. The Twelfth Corps was posted there, then the First and the Eleventh behind the town. To the left of these, the Fifth, then the Second and Third. The Sixth did not arrive until late next day. These dispositions were made by General Meade as his troops came up during the night of the first, and morning of the second, of July. The Confederate commander brought up during the night Johnson's division, and placed it on the extreme left of Ewell's corps, confronting Slocum; Ewell extended through the town and joined Hill, Anderson continued Hill's line to the right, while beyond him was placed Longstreet, with the divisions of McLaws and Hood. Stuart was ordered up from Carlisle with the cavalry, to the left.

More than half the day passed before General Lee's dispositions were all made. During the forenoon nothing of importance transpired. There was an artillery fight between Johnson on the left, and the forces opposed to him, and it seems that General Meade contemplated an attack on the Confederate lines in that quarter, but was deterred by the adverse opinions of Generals Warren and Slocum. On the Confederate right, however, Longstreet was preparing to attack. Here the Fed-

eral lines had been thrown forward, some half or three-quarters of a mile in advance of the Cemetery ridge, and ran along a less elevated ridge in front of the main one. The Third Corps—General Sickles—held this position. This constituted at the time the Federal left, and here Longstreet, supported by part of Hill's corps, attacked with vigor. The struggle was severe, but though Sickles was supported by Hancock on his right, and by Sykes, with the Fifth Corps, on his left, he was finally routed and driven with great loss from the field. Sykes, after a fierce contest, succeeded in holding on to Round Top, and General Meade, by hurrying up the Sixth Corps, and portions of the First and Twelfth, reformed his line along the crest of the main ridge, and at that point stayed Longstreet's progress. But the whole left of the Federal army had been forced with heavy loss from its position, and the Confederates now held the ground. While this was going on along Longstreet's line, Ewell, on the other wing, was preparing to strike the force in his front. But the attack was made too late to prevent Slocum from sending reinforcements to Sickles, and though a spirited fight was kept up till dark, and Johnson carried a part of the enemy's works, and Early forced back the lines on Cemetery Hill, yet from the divisions not acting in concert, no important advantage was obtained.

Night closed on the contending armies, and though General Lee's success had not been so marked as on the preceding day, it had, nevertheless, been great. One wing of the Federal army had been driven from its position with very heavy loss; his own troops were now in position to assault the main, and last position of the enemy, which, if carried, must bring ruin on the foe, and his own losses, though severe, had not affected the *morale* of the troops. General Meade stated that the Federal losses footed up on this night 20,000 men. Those of the Confederates did not exceed from 10,000 to 12,000. There was every indication of the ultimate success of the latter, notwithstanding the strength of position, and superiority of numbers, and artillery against them. The strongest evidence in corroboration of this statement is the fact, that the Federal commander on this night held a council of war, at which the

question of retreat was seriously discussed. Several members of the council voted for retreat, and General Butterfield testified that General Meade himself expressed decided dissatisfaction when the majority voted in favor of remaining, and risking another day of battle.

General Lee made little or no change in the disposition of his troops for the morrow's fight. Pickett's division, of Longstreet's corps, arrived during the night, thus giving him 4,000 troops that had not heretofore been engaged, and these he determined to make the centre and mass of the column of attack on his right. The Confederate line was necessarily long, a fact that rendered it difficult to obtain a simultaneous attack from the whole army on the enemy's position. A failure to secure this close co-operation on the 2d had prevented Lee's gaining the victory which seemed within his grasp. He made earnest efforts to prevent a recurrence of this on the next day, but, as it proved, with only partial success. As the enemy held Round Top, which afforded a position of great strength for their flank, the point selected for attack by Longstreet was a part of the ridge between Round Top and Cemetery Hill, which constituted the left centre of Meade's line, and was held by Hancock. At the same time, Ewell was directed to push the advantage gained by Johnson on the Federal right flank. Heth's division and two brigades under Wilcox, of Hill's corps, were directed to support Longstreet, and the remainder was to occupy the enemy in their front.

The battle opened on Ewell's line early in the day. The part of Slocum's corps which had been sent to assist Sickles and Sykes the evening before, returned in the night and attacked Johnson in the works he had captured soon in the morning. A fierce contest raged here for several hours. Johnson repulsed the attack upon him, but was unable to make any headway against the enemy. He made two attacks upon their position, but was driven back. While this fight was going on, and it continued till mid-day, all was quiet along the remainder of the line. Longstreet had not yet perfected his dispositions for assault, and the artillery was being massed on Seminary Ridge. It was a beautiful, bright July day, and as

the firing gradually ceased on Johnson's front, all became still. It was hard to realize, as one looked out upon that little valley and town lying so quietly in the sunlight, that this was but the calm before the death-dealing storm, in which a last libation of blood was about to be poured out in a conflict unparalleled in the New World, which would consecrate this obscure spot to undying fame.

Between one and two o'clock all was ready. One hundred and fifteen guns covered Seminary Ridge. Pickett was in position. The order was given, and the artillery opened fire upon the opposite crest. Here General Meade's position being confined, he could bring but seventy or eighty guns into line at once to reply, but having more than two hundred pieces in reserve, as fast as those on the front were disabled, or exhausted of ammunition, they were replaced by others. The fire quickly opened along both lines, at first in regular and measured tread, like the roll of thunder, then gradually deepening and thickening until it became the angry roar of the present hurricane. No interval could be distinguished between the discharges; it was one perpetual, deepening roar. The smoky air seemed alive with bursting projectiles; the earth trembled under the shock.

For nearly two hours this conflict of artillery continued. Then the Federal fire slackened, and General Lee ordered the infantry to attack. Pickett held the middle, his division in double lines, and advanced in splendid order. On his left, was Pettigrew commanding Heth's division; on his right was Wilcox with two brigades. A mile of open valley and slope was to be crossed before reaching the enemy's lines. Steadily and grandly did these Virginians cross the valley of death. Their supports gave way on the right and left. Heth's division wavered and broke under the terrible fire ere they had reached the foot of the slope. So, too, the right was exposed by the failure of the brigades there to keep up. Yet Pickett went on, through the shelling, through the canister, in spite of the oblique fire from right and left, now concentrated on him, through the musketry, up to the enemy's works and over them. The Federal line was broken, the guns captured, and the troops

holding them put to flight. Had his supports, right and left, promptly seconded him, this day would have added another to the list of the disasters of the Army of the Potomac. But Hancock exerted himself with great courage and skill, to stay the proceedings of defeat. The troops on both sides were hurled upon Pickett's flanks, others were brought to fill up the gap in his front. Then a short but terrible struggle, in which all his brigade commanders, and nearly all his regimental commanders, went down, and Pickett, leaving more than half his division dead, wounded, or prisoners, was driven back to the Confederate lines. The brigades on his right moved up, after his repulse, to attack, but did not reach the works before they were forced to retire. Generals Lee and Longstreet met the shattered troops, and by their personal efforts, soon re-formed them. An English officer present thus speaks of them: 'If Longstreet's behavior was admirable, that of General Lee was perfectly sublime. He was engaged in rallying and encouraging the broken troops, and was riding about a little in front of the wood, quite alone—his staff being engaged in a similar manner further to the rear. His face, which is always placid and cheerful, did not show signs of the slightest disappointment, care, or annoyance, and he was addressing to every soldier he met, a few words of encouragement, such as, "All this will come out right in the end; we will talk it over afterwards, but meanwhile all good men must rally. We want all good and true men just now, &c., &c." He spoke to all the wounded men that passed him, and the slightly wounded he exhorted "to bind up their hurts and take up a musket" in this emergency. Very few failed to answer his appeal, and I saw many badly wounded men take off their hats and cheer him.'

Though General Meade had thus successfully repulsed the attack on his lines, he had suffered too much in this day's battle, as well as those of the preceding days, to follow up his advantage. He made a feeble effort in the evening to throw forward his left, to attack in turn, but the movement was not pressed, and at night he occupied the lines he had held all day.

The Confederate army suffered severely in the third day's battle, and after Pickett's failure, General Lee determined not

to risk another assault upon the Federal position. This decision, together with the difficulty of supplying his army in presence of a superior force, from a hostile territory, and the reduction of his ammunition, determined him to retreat. He remained at Gettysburg, however, during the 4th, after having drawn back his left from the east of the town, and placed it in position on the prolongation of Seminary Ridge. Here he took up a position to receive attack, if it should be made, while arranging the withdrawal of his trains, and of his wounded, to the Potomac. On the night of the 4th, he began his movement, and reached Hagerstown on the 6th and 7th.

During the 4th, General Meade showed no disposition to disturb his antagonist. Indeed the Federal army was not in condition to do anything. The losses of the three days amounted to nearly 24,000 men. Those of the Confederates did not exceed 18,000 or 20,000. But while the Federal official reports give their losses at 24,000 killed, wounded, and prisoners, that army was so much demoralized and scattered by the three days' conflict, that the corps commanders, at a council of war held by General Meade on the night of the 4th, reported that the strength of the army then was less than 52,000 men. One of the questions before the council was, whether or not the *Federal army should retreat*, and General Biney testifies that *it was decided to remain only twenty-four hours longer, that more definite information might be obtained in regard to Lee's movements*. Yet Gettysburg has been placed prominently, by Swinton, among his so-called 'decisive battles of the war!' And the Rev. Dr. Jacobs, a Gettysburg professor, whose knowledge of mathematics, if it bear any proportion to the capacity displayed in his little book for falsification, must render him an ornament to that science, thinks this battle the Confederate Waterloo!

On the morning of the 5th, however, General Lee's retreat was discovered, and a show of pursuit made by sending the Sixth Corps (Sedgewick's,) after him. The main body of the army moved toward Frederick, and the troops just mentioned only followed as far as Fairfield, when they returned and joined the remainder of the army.

General Lee having reached Hagerstown, and finding the river too full to cross, took up a position, covering the Potomac from Williamsport to Falling Waters. The Federal army having marched slowly from Frederick, appeared in his front on the 12th. During this day and the next, he waited their attack, and then, the river having become fordable, and a bridge being ready, he crossed into Virginia. In this movement he lost only two disabled guns, and a few prisoners picked up in a dash at his rear guard, on the morning of the 14th, in which affair General Pettigrew fell. On the 12th, General Meade submitted the question of attack to a council of war, and although General French, with 8,000 men, besides large bodies of new troops, had come up, the council almost unanimously decided against it; showing in a conclusive manner the condition of his army.

The Confederate army, after its passage of the Potomac, moved back to Bunker's Hill, where it rested for some days, and then in consequence of the movements of General Meade, who crossed at Berlin, and was marching along the eastern side of the Blue Ridge, it returned by way of Front Royal to the line of the Rappahannock. This retreat was uneventful, save that an effort was made by throwing a strong force through Manassas Gap, to cut off a part of the Confederate army, which attempt was entirely unsuccessful.

The campaign was now virtually over. Both armies lay for some months quietly on the Rappahannock. Later in the summer, General Lee detached Longstreet with one-third of his army, for the purpose of re-inforcing Bragg. General Meade also sent off some troops. In October, when the Federal commander, his army once more filled up by the return of the troops sent away, was about to move forward, General Lee anticipated him, and by a flank movement, forced him back to Centreville and the vicinity of Washington. The Confederate forces were too inferior, in the absence of Longstreet, to admit of a general battle unless under very favorable circumstances. So, after tearing up the railroad, General Lee returned. The last movement of the year was the crossing of the Rapidan, early in December, by Meade, with the intention of attacking

the Confederate flank, but after the troops were disposed, and orders issued for this purpose, the Federal commander concluded to withdraw without risking battle. At this time the Federal army numbered from 60,000 to 70,000; the Confederate army from 30,000 to 33,000.

Such is the outline of the campaign of Gettysburg. The design with which it was undertaken has not been more often misconceived, than have the results that flowed from it been over-stated. We have seen the circumstances which led to its inception; how it became necessary for General Lee, in the early summer, to make a forward movement, or permit his adversary, with strengthened forces and the knowledge derived from two failures, to throw himself once more on either flank, and imitate the campaign actually carried out in the preceding year; how the constantly increasing disparity of force between the combatants rendered inactivity dangerous; how the success of Chancellorsville was to be improved only by an aggressive campaign; with what strategy Hooker was disengaged, first from the Rappahannock, and then from the Potomac; with what purpose the Confederate army was pushed into the very heart of Pennsylvania; how, from the absence of his cavalry, the Confederate leader found himself unexpectedly in the presence of the Union army, and determined to give battle; how the repulse on the third day at Gettysburg neutralized the successes of the first two days, and rendered a withdrawal into Virginia necessary; how the Federal army suffered too severely to follow up its advantage, and was content to guard the Rappahannock while General Lee detached one-third of his force to stay the tide of misfortune in the West. The results of the campaign were indecisive. Probably no one of Mr. Swinton's 'decisive battles' is less entitled to this appellation than Gettysburg. The exaggerated ideas in regard to its effects, are doubtless due to the consternation and alarm excited by the march of Lee into Pennsylvania. This gave rise to excessive apprehensions in the North, and excessive expectations in the South. Those who one day thought that Philadelphia, New York, and even Boston, were within the invader's grasp, easily imagined on the next, that the repulse at Gettysburg was a

crushing blow to the fortunes of the Confederacy. The fact is, that neither was true. The failure at Gettysburg inflicted severe loss on the Southern army, cut short Lee's summer campaign in Pennsylvania, and relieved the North of its fears for the safety of the great cities. On the other hand, the balance of gain rested with the Confederates. The damage inflicted on the Union army paralyzed it for the remainder of the year, enabled Lee to hold in security, with but a part of his force, the line of the Rapidan, and prevented the contemplated movement against Richmond. The march northward relieved Virginia of the presence of hostile troops while the harvest was being gathered, lifted the yoke for a time from her people, and replenished the scanty Confederate commissariat. The relative strength and condition of the two armies on the 1st of August was not widely different from what it had been on the 1st of June, but the campaign against Richmond, which Hooker was preparing to inaugurate when the movement began, was no longer possible. If Lee had remained stationary on the Rappahannock, equal advantages could not have been secured. Besides the difficulties growing out of inaction, and the meagre and precarious condition of his supplies, a forward movement of the Federals would have turned his position, and forced him to give battle in the open field, or fall back on some inner line. Even had Chancellorsville been repeated, the situation of affairs, after another repulse of Hooker, would have been much as it actually was after Lee's return to the Rappahannock, while in the meantime a large portion of the most productive part of Virginia would have remained in the enemy's hands, who would have been free to prosecute, without interruption, his plans elsewhere.

But though the results of Gettysburg were thus indecisive, it might have been far otherwise. Had General Lee succeeded in his bold dash against the Federal army, and driven it with the loss of its immense artillery from Seminary Ridge, the advantage thus gained would have been most important to the Confederacy. It would have opened Pennsylvania to him for the time, would possibly have given him Baltimore, would have caused the recall of General Grant, and the abandonment of

the successful Union campaign in the Southwest, and might possibly, though not probably, have strengthened the peace party in the North, sufficiently to have seriously embarrassed the Lincoln Administration. It was the prospect of these gains that reconciled General Lee to delivering battle when he found it imminent; these were the prizes which trembled in the balance for three days, and which would have been his, had he at any time during that period been able to secure a combined and simultaneous attack on the Federal position.

On the contrary, had Gettysburg been the Waterloo of the Rev. Dr. Jacobs, General Meade, at the head of a victorious army, his losses more than repaired by the troops about Washington, and by the new lines coming in, with full command of the sea and the rivers, with an abundance of supplies and material at hand, would have crushed or pushed aside the remains of the Confederate army which the South had no power to recruit, and penetrating to the heart of Virginia, have ended the war by the capture of the Southern capital.

But the fates had not so decreed. The mighty contest which the Army of Northern Virginia had maintained for three years with insufficient men and means, against the power of the North, was to have another and a closing scene of unsurpassed grandeur. Both parties were to rest after the exhausting struggle of Gettysburg, and then to join in the final conflict. The great man whose talents and ability had so far borne up the Confederacy in the east, was to give a still loftier manifestation of his genius, and in the tremendous campaign of 1864-5, to leave to the world an example of military skill which, all things considered, is unsurpassed in the annals of war.

- ART. IX.—1. *Familiar Lectures on Scientific Subjects.* By Sir John F. W. Herschel, Bart., K. H.; M. A.; D. C. L.; F. R. S. I.; &c., &c. Lecture II. The Sun. New York: George Routledge & Sons. 1869.
2. *Popular Astronomy.* By François Arago, Perpetual Secretary of the Academy of Sciences. In two volumes. 1858.

Of all the physical sciences—and a glorious sisterhood they are—astronomy is, beyond question, the most ennobling and sublime; expanding the mind, and filling the imagination, with grand conceptions of the infinite power, and wisdom, and goodness, and glory of God. It is, then, most worthy of the consideration and study of beings made in the image of the great Architect of the universe.

We all think too much of the houses we live in. These, whether mean or magnificent, occupy our thoughts and feelings far too much. The astronomer is, indeed, the only person who never errs in this respect; for he, however poor and penniless, lives in a house which can never be sufficiently admired; in the house, namely, that God himself has built and beautified. In other words, he lives in this ‘our Father’s house’ of the universe, in which there are truly ‘many mansions’; mansions whose foundations underlie all worlds, and whose pinnacles glitter in all the stars of heaven. The magnificent mansions of this house—the admiration of men, and of angels, and of gods—are the abodes of the blessed, from the ever-blessed God himself down to the poorest of his children.

But does not every man, as well as the astronomer, live in this house? By no means. On the contrary, most men merely *exist* in this great temple of the universe, pretty much as stocks, or stones, or stars, or stumps, exist therein, with little sense of its infinite magnificence or beauty, or of the infinite greatness and glory of its divine Author. They *exist*; they do not *live*. If, indeed, with mind, heart, soul, and imagination, they were

only alive to the unutterable wonders of the world around us, they would learn to walk humbly before their God, instead of strutting, as many now do, and spreading the peacock magnificence of their pride, for the astonishment of the poor earthworms at their feet. Shall we, then, like the devout astronomer, whom Josephus calls 'the son of God', live and worship in His house; or shall we, like the inferior animals, merely gaze, with unmeaning vacant stare, on 'this majestic fabric of the world'? Shall we, like the dumb creatures around us, be satisfied to browse upon the earth; or shall we, like veritable 'sons of God', enter into 'our Father's house', and there feast on the food of angels? The latter is, no doubt, our hope, as it is our high destiny. But if we would really enter into the august temple of the universe, or house of God; the only vestibule for us to gain admission at, is the sun of our system, or, as the poet calls it, 'our chief star.' For it is only from a knowledge of this fixed star, or sun, and his attendant worlds, that we can rise to a rational contemplation of the other fixed stars and systems of infinite space. Our solar system is, then, the antechamber to the universe.

Our present subject embraces, not the laws, nor the mechanism, of the material universe, but only a few of its great and astounding facts. One of these is the sun. The sun, though but a spark of the divine Omnipotence, is of a magnitude and glory far too great to be grasped by our minds, or realized by our imaginations. Two elements are necessary to determine the magnitude of the sun, namely, his apparent diameter, and his real distance from the earth. His apparent diameter is easily measured. But what is his distance from the earth? Until this question be answered, it will be impossible to determine the size of the sun. As the sun and moon appear to be of nearly the same size; so, if we omit the element of distance, we should conclude, as many of the ancients did, that they are really equal, or nearly equal, in point of magnitude. But this were an immense error. If, indeed, the sun were as near to us as the moon, his disc would be 170,000 times as great as that of the moon; which would show his magnitude to be equal to 70 millions of moons. If, on the contrary, he were removed to

the distance of some of the stars of the sixth or eighth magnitude, he would appear as diminutive as they do; or if removed to the distance of some of the brightest stars, he would become wholly invisible to the naked eye. It is, then, his distance, which makes him appear as small as the moon; though he is, in reality, 70,000,000 times as great as that luminary. It is, on the other hand, his nearness, or proximity to us, which makes him, though intrinsically smaller than many of the fixed stars, shine with a splendor 20,000 millions of times as great as the most brilliant of them all, or Sirius himself.

What, then, is the distance of the sun from our planet? And what, judging from his apparent diameter at that distance, must be his real size? Little knowledge had the ancients respecting the distance or the size of the sun. Aristarchus, a celebrated Greek astronomer, first endeavored to determine the relative distances of the sun and moon from the earth. His calculations led him to conclude, that the sun's distance is nineteen times as great as that of the moon. Instead of nineteen times, however, it is, as we now know, nearly four hundred times the distance of the moon from the earth.

Ptolemy and his contemporaries, and after him Copernicus and Tycho Brahé, (as late as the seventeenth century,) supposed that the distance of the sun is equal to only 1,200 semi-diameters of the earth; whereas, in reality, it is about 24,000 such semi-diameters, or units of measure. Kepler nearly tripled this distance, making it 3,500 semi-diameters of the earth, but his opinion was not supported by demonstrative reasoning. Riccioli arbitrarily doubled the distance assigned by Kepler, while Hevelius increased it by one-half only.

Edmund Halley, as late as 1716, insists that the sun's parallax must be less than 15''; for, if it were not, 'the moon would be larger than Mercury'; a result, or fact, inconsistent with 'the harmony of the universe.' His fancy, guided by 'the harmony of the universe', finally settled on 12'' 5 as the parallax of the sun; which makes the solar distance 16,500 semi-diameters of the earth; or a little more than two-thirds of its actual value.

But with Edmund Halley, the great friend and disciple of Newton, the age of calculations based on insufficient data, or

of crude conjecture, passed away. Astronomers left their closets, and, laying aside all the little, contracted, discordant notions, which they had too fondly labelled, 'the harmony of the universe'; they went forth to study that awful harmony as it is exhibited in the great world of God, not as it is seen and distorted in the little world of man. Hence, feeling their own ignorance and becoming as little children, they were prepared, according to 'the Master of Wisdom', to enter into 'the kingdom of man, which is founded in the sciences.' If, indeed, we may not make bold to say, that they were prepared to enter into the outer 'kingdom of heaven' itself, which is founded in astronomy.

'The voyage of Richer', says M. Arago, 'led to less hypothetical conclusions.' That is to say, the voyage of Richer out of himself, with a view to observe the great world of God, led to a new era in the science of the sun. For, comparing his observations with others simultaneously made in Europe by Picard and Rømer, he concluded that the solar parallax is $9'' 5$; which implies a distance from the earth equal to 21,712 terrestrial semi-diameters; the nearest approximation to the true distance till then made by man. Others, following the example of Richer, travelled out of themselves, and put themselves, by careful observations, in communication with the mind of God as embodied in his works. Cassini, Rømer, Sédileau, Flamsteed, Maraldi, Pound, Bradley, Lacaille, and others, all erected their batteries of observation, and laid siege to the sun's parallax. But no one ever came as near to its true value, or to the actual distance of the sun thence resulting, as did Richer, till the year 1761, when the transit of Venus across the sun's disc occurred. 'The observations made of this phenomenon,' says Arago, 'at the Cape of Good Hope, in Lapland, and at Tobolsk, in Siberia, gave $9''$ as the angle subtended by the earth's radius seen from the sun at mean distance'; or, in other words, as the sun's parallax. Thus it was, that the transit of Venus across the sun's disc, in 1761, helped the astronomer to a little closer approximation to his distance from the earth, than was made by Richer himself.

Then followed the transit of 1769. All the nations of the earth were, at once, on the *qui vive*, resolved to find the sun's parallax, and calculate his distance from the earth. The Abbé Chappe of the Academy of Sciences went to California, where, having executed the observations which formed the object of his voyage, he died in the service of science. Cook, and the astronomer Green, repaired to Otaheite in the Southern Ocean; while Dymond and Wales took up their station in North America, near Hudson's Bay. Call went to Madras, in the Peninsula of India, to observe the phenomenon. The Academy of St. Petersburg sent astronomers, for the same purpose, to various parts of Russian Lapland. Father Hell, the German astronomer, went, in the name of the King of Denmark, to observe the transit at Wardhus; and Planmann, the Swede, observed it at Kanjaneburg, in Finland.

The observations made at any two distant stations, sufficed to determine the parallax of the sun; and by comparing the results deduced from various pairs of observations, their agreement verified the accuracy of the method employed. The following results were obtained by the various combinations:

Otaheite and Wardhus.....	8". 71
Otaheite and Kola.....	8". 55
Otaheite and Kanjaneburg.....	8". 39
Otaheite and Hudson's Bay.....	8". 50
Otaheite and Paris.....	8". 78
California and Wardhus.....	8". 62
California and Kola.....	8". 39

From observations made at the north of the equator, compared with those made at Otaheite, the solar parallax was found to amount to 8". 59; which differs very little from its value as deduced by Lalande. Encke, by a still more thorough investigation, found the solar parallax to be 8". 58; differing from the result obtained by Lalande only the one hundredth part of a second. Having ascertained the parallax of the sun, or the angle which the radius of the earth, seen perpendicularly, would subtend at the sun, it is easy to demonstrate that his distance from our planet is 95,023,000 of miles. The

difficulty of the problem is not at all enhanced, as most men are apt to imagine, by the circumstance, that the distance in question is so immense. For, if a sufficient number of its parts be known, it is just as easy to determine the side of a large triangle as of a small one; whether it reach from the earth to the moon, from the earth to the sun, or only from the observer to some inaccessible object on the earth's surface.

The law of gravity which, under God, is the source of all the order and harmony of the material universe, is, at the same time, the cause of innumerable perturbations in the motions of the heavenly bodies. The sun, for example, produces various perturbations in the motions of the moon. These perturbations depend, it is evident, on the distance of the sun from the earth; for his force, as every one knows, varies inversely as the square of the distance at which he acts. Hence, if his distance were increased, these perturbations would be diminished, and *vice versa*. Laplace, availing himself of this connection between the distance of the disturbing force and its effects, deduced the distance of the sun from the perturbations it is observed to produce in the motions of the moon. By this method, so different from the one above noticed, he found the solar parallax to be $8''.61$; which is, within two hundredths of a second, the same as that deduced from the transit of Venus. How wonderful the agreement! And how conclusive the proof it affords in favor of the theory, or law, of universal gravitation! But, above all, how sublime the act of ratiocination, by which the sun's distance is deduced from his effects on the moon's motion! Sublime, however, as this act was, it is eclipsed by that of Leverier and Adams, each of whom, by reasoning from the perturbations in the motion of Uranus, detected the existence of the unseen planet Neptune, and pointed to his place in the heavens; a discovery at once confirmed by more telescopes than one.

The sun's distance once found, it is easy to determine his size. The earth, whose diameter is nearly 8,000 miles long, is an immense globe. But it is, nevertheless, utterly insignificant by the side of the sun; whose diameter is 888,000 miles in length, or more than 100 times that of the earth. But as their

volumes are to each other as the cubes of their diameters, it follows that it would take nearly 1,400,000 globes as large as the earth to make one as great as the sun. The following illustration will, perhaps, help our minds to some poor conception of its wonderful magnitude. The moon is, in round numbers, 240,000 miles from the earth, around which it revolves in a nearly circular orbit. Now, if the sun were a hollow globe, with its centre at the centre of the earth, its surface would extend, in all directions, more than 200,000 miles beyond the orbit of the moon. Hence the moon would revolve within the body of the sun,—a little more than half way from its centre to its surface. Such is the stupendous mass which, by its attraction, binds all the planets to his bosom, and keeps them within the region of light, and life, and joy.

From the beginning of the world down to the year 1609 of our era, it was the almost universal opinion, that the brightness of the sun's disc is uniform. But the year 1609 is forever memorable in the history of astronomy, as that in which the telescope was invented, and turned toward the heavens. Among the many wonders it soon revealed, were the huge spots on the body of the sun. Galileo, the first astronomer to use the telescope, speaks with astonishment of the rapidity with which the solar spots spring into existence, change their forms, and disappear. Some spots appear and disappear very rapidly, while others last for weeks and even months. No spot could be seen at the distance of the sun, unless it were large enough to cover an area of 166,000 square miles. Hence, every visible spot must be larger than 166,000 square miles. Mayer observed one spot, whose area was 1,500,000,000 of square miles, or thirty times the surface of the earth.

Solar Science is the creation of the last two centuries. The ancients knew nothing about the sun, except what is seen by the naked eye, and known to all men. They wasted their energies in vain speculations, or fruitless conjectures, respecting such questions as these: 'Is the sun a *pure* fire, or a *gross* fire? Is it a *self-maintaining* fire, or a fire *continually fed from without*? Is it an *eternal* fire, or a *fire liable to be extinguished*?' But after the telescope was invented, and the sun's

spots were seen, men began to ask practical questions respecting the physical constitution of that great luminary. They instituted the inquiries—what are its spots? How are they produced, and what do they teach? These questions gave rise, at first, to hypotheses merely, or conjectures. But all these, in time, were followed by solid discoveries, by new and wonderful facts.

When the sun's spots, for example, were seen to rise on its eastern limit, pass along an equatorial zone, or belt, some sixty degrees in width, and, finally, disappear at its western limit; this suggested the idea of the revolution of the sun on its own axis. This wonderful fact was established in 1611; only two years after the invention of the telescope. By repeated observations and calculations, it was found, that the sun makes one revolution in 25 days, 7 hours, and 48 minutes; each point of his vast equator revolving at the rate of more than 100,000 miles per day. How grand, how wonderful, this new fact, which, until within the last two centuries and a half, had never entered into the imagination of man!

But what are those spots on the sun's disc? What, for example, is that intensely black, irregularly-shaped patch, edged with a broad penumbral fringe, which moves, from east to west, along the brightness of the general surface of the sun? Is it, as La Hire supposed, an opaque body floating in the fluid mass of the sun? No. Is it, then, according to the notion of Fontenelle, an opening in the gaseous envelope of the sun, through which his dark, solid nucleus, or body, is seen? No. Shall we conclude, then, with the celebrated English astronomer, Gascoigne, that a large number of almost transparent bodies revolve around the sun in circles of different diameters, and that when two or more of these bodies get in the same line between the eye and the sun, they intercept its light, and produce a spot on its surface? By no means. So wild a supposition, is hardly worthy of so great an astronomer. Is this spot, then, as Derham suggested, the effect of a volcanic eruption? If so, why did it appear only the other day, for the first time, and why will it so soon disappear, never more to be seen? Are the craters of volcanoes, so evanescent in their existence, or so changeable

in their sizes and forms? Surely not. Finally, is this great spot, as Maupertius said, a vast collection of scum floating in the incandescent fluid of the sun's surface, which will soon be consumed by the fierceness of his fire? This hypothesis, has, like all the preceding ones, been refuted by the discovery or consideration of facts.

What, then, we repeat, are these dark spots on the sun? Have we nothing, on this subject, but the vague explanations above mentioned, which appear like dark spots on the body of the science of astronomy? The theorists, by whom the above explanations were broached, did not pay attention to all the facts presented by the surface of the sun. They only asked themselves, for example, why and how do black spots appear on the surface of the sun? They did not consider the *faculæ*, or white spots, on the sun's disc; though its motley surface is made up of transcendently white, as well as of black, spots. These white spots, if they had been sufficiently considered, would have revealed the emptiness of the above hypotheses, or suppositions. When all the details of the phenomena of the sun's surface were taken into account, including, especially, its white spots, a better era in solar science began to dawn. More complete, and more satisfactory, views, began to appear, and form themselves like white spots on the science of astronomy.

Alexander Wilson, a Scotch astronomer, took the lead in this more comprehensive and profound study of the sun's surface. In 1774, he proved, by the aid of incontestible observations, that the spots are excavations, in the bottom of which are situated their black nuclei. Hence, he regarded the sun as composed of two substances quite different from each other. The interior mass of the sun, said he, is a solid and opaque body; which mass is covered with a slight stratum of an inflamed substance, from which it derives its illuminating and heating properties. An elastic fluid is elaborated in the obscure mass of the sun, ascends through the luminous matter, and, removing it aside in every direction, allows us to see a portion of the obscure globe within. The slopes of the excavations constitute the penumbra, or fringe, to the darker portions of the spot. But this ingenious explanation, only accounts for the appearance

of the black spots. It no sooner took hold of the white spots, or *faculae*, than its insufficiency was perceived. If, for example, this were the true explanation, then the excavation, or the penumbra, ought to become darker and darker, as it approaches the interior mass of the sun. On the contrary, the penumbra, or fringe, is brighter near the nucleus than anywhere else.

Embarrassed by this, and by other difficulties, the author declared, that he was sometimes driven to 'harbor the idea, that the illuminating solar envelope resembled in consistency a dense fog.' In spite of his theory, he acknowledged, with great candor, 'that he knew absolutely nothing respecting the nature of the *faculae*, or white spots of the sun.' This confession of ignorance, this abnegation of self, was the first great step toward a true knowledge of the physical constitution of the sun. So true is the saying of Lord Bacon, that the kingdom of man, which is founded in the sciences, can be entered no otherwise than as we enter into the kingdom of heaven; that is, by becoming as little children. Of all the obstacles to the progress of knowledge, by far the greatest is the accursed conceit of knowledge; men remaining blind to the great facts of science, just because they fall so fondly in love with their own fancies.

The researches of Wilson, were followed by those of Bode, and Michell, and Shroeter, and Herschel. 'When any agitation whatever,' says Bode, the astronomer of Berlin, 'occasions a rent in the luminous atmosphere (of the sun), we perceive the solid nucleus of the body, which always appears very obscure relatively to the bright light which surrounds it, but more or less sombre, according as the portion thus discovered is a vast sea (in the sun), a narrow valley, or a continuous and sandy plain.' This view was published in 1776. In 1783, Michell said: 'The excessive and universal brightness of the sun's surface arises probably from an atmosphere which is luminous in all its parts, and endued also with a certain degree of transparency.' Shroeter, in 1789, published a work, in which he says: 'It cannot be doubted that the sun has an atmosphere in which operates strong condensations, which appear to us like dark clouds.'

Descending along the stream of time, we arrive at the memoir published by Sir William Herschel, in 1795, in which the great astronomer expresses the conviction, that the substance by means of which the sun shines, cannot be any other than a liquid—than an elastic fluid. ‘Without that’, says he, the cavities of the spots, and the undulations of the mottled surface, would be soon filled up.’ Is the substance, then, to which the sun owes his effulgence analagous to our clouds, and does it float in the transparent atmosphere of the body? Such is, according to Arago, the inference resulting from the opinion of Sir William Herschel.

But, however plausible the opinion of Herschel, it rested in conjecture merely, and not on established fact. The great fact, that we do not see the body of the sun, but only its external gaseous envelope, or photosphere, still remained to be established. The proof of this fact is one of the brilliant achievements of our own time; it is of such a nature as to be quite satisfactory to the minds of astronomers. We shall, then, state this proof, or evidence, in the fewest and plainest possible words.

There are two kinds of light: *ordinary light*, and *polarized light*. A ray of ordinary light enjoys the same properties on all the parts of the contour. It is otherwise with respect to polarized light. The different sides of its rays have different properties. These discordancies manifest themselves in a multitude of phenomena, by means of which we may easily distinguish polarized from ordinary light. ‘The polariscope’, says Arago, ‘furnishes a very simple process, and one of very palpable evidence, for distinguishing natural light from polarized light.’

‘Polarized light’, he says again, ‘has enriched science with various processes of investigation, of which astronomers have not failed to take advantage.’ Astronomers have, indeed, taken advantage of one of these ‘various processes of investigation’ to detect and demonstrate the nature of the substance, which, at the distance of 95,000,000 of miles, shines upon our planet, and symbolizes the omnipresence of the Father of Lights. It would be out of place, in this paper, to go into the

tedious details of the process, by which the astronomer demonstrates the great fact in question. Suffice it to say, in general terms, that armed with the polariscope, he looks into the light of the sun, and sees that, according to a law of nature, it must proceed, not from a solid or fluid body, but from a gaseous substance. 'This experiment', says Arago, 'removes from the domain of simple hypothesis what we have said respecting the gaseous nature of the solar photosphere.' It is thus established, at last, that the inflamed substance which traces out the contour of the sun in the heavens, is gaseous.

The dark spots of the sun, as they are called, are made to appear so by contrast only. If, for example, you take an argand lamp, and hold it between the eye and the sun, its light will be seen projected on the sun in a dark spot. Thus, however bright the argand lamp, it looks like a dark spot on the sun's surface; because that surface is so much brighter than itself. In like manner, the dark spots of the sun, though insufferably bright to the eye, appear dark, or even black, from their contrast with the adjacent portions of the sun's surface. Or, in other words, their brightness is eclipsed, and turned into apparent darkness, by the transcendent and overpowering brightness of the surrounding surface of the sun. The simple truth is, then, that all the parts of the sun's surface are exceedingly bright; but some are so much brighter than others, as to make the less luminous portions appear dark by contrast.

'Another stride in advance', says a recent English Review, 'has to be recorded in Solar Physics—perhaps at this moment the most progressive department in science. Though much more detailed knowledge probably remains to be reached by prolonged observation, we may say broadly that the spectroscope has now revealed the nature of solar prominences—the red flames of eclipses—just as two years ago the same beautiful method solved the sun-spot problem, and not long before settled the vexed question of the nebulae. Solar science belongs especially to our time.'

Three English Astronomers—Mr. De la Rue, Mr. Balfour Stewart, and Loewy—having made diligent solar observations gave a more satisfactory account of the spots, or cavities, in the

sun's surface, than any that had been previously advanced. 'Their theory', says the Review just quoted, 'was based on the incontestable fact, that while the bright photosphere envelops the sun, the photosphere itself is in its turn surrounded by an absorbent atmosphere; and they hold that a spot [or cavity] is produced by a down-rush of this atmosphere into the region of the photosphere. Partly by displacing, and partly by obscuring the photosphere, the whirlwind of atmosphere, according to this view, darkens the cavity of the spot. Much evidence was accumulated in favor of the English theory, but it was not conclusively established until the year 1860, when Mr. Lockyer applied to the investigation the same method of spectrum analysis, which enabled Mr. Huggins a short time before to ascertain the constitution of the nebulae.'

The sun, then, wears more coats than one. Besides the two just mentioned, he wears, under his glorious outer garment of the photosphere, a vestment of very different material. That is to say, 'an opaque atmosphere', which, in spite of the popular opinion that wraps his body in flames of fire, keeps him cool and comfortable.

Let us, in conclusion, briefly glance at the progress of ideas respecting the sun. Anaximander, born 610 years B. C., supposed that the sun was 'a chariot filled with fire, which escapes through a circular aperture.' Anaxagoras, the teacher of Pericles, born 500 years B. C., regarded the sun, if we may believe Plutarch, 'as an inflamed stone', or, according to Diogenes Laertius, 'as a hot iron.' Zeno, the founder of the great sect of the Stoics, believed the sun to be 'a fire larger than the earth.' And Lucretius, the brilliant poetizer of the atomic cosmogony, or the material philosophy of Epicurus, regarded the sun, moon, and stars, as no larger than they appear to man. Hence, as sun and moon have the same apparent size to us, they are equal in their real dimensions. The fact is, however, that as the sun is more than 400 times farther from us than is the moon; so his real diameter is more than 400 times greater than that of the moon. Hence, as we have seen, it would take no less than 70,000,000 of moons to make one globe as large as the sun. If, indeed, we should follow Lucre-

tius, we should regard the moon as little, if any, larger than a pewter plate; though, in fact, her disc is 2,160 miles from side to side. The philosopher, then, saw as a child, and he spoke as a child. But now all such childish notions have passed away; and the great facts of astronomy stand in their places. The great facts of astronomy! One of these is, that the sun, instead of being 'a chariot filled with fire', which blazes through a round hole in one of its sides, is a globe of light, and power, and beauty, 1,400,000 times as great as the earth.

What shall we say of the sun then? Was it merely made to illuminate the earth? Or is it, on the contrary, the seat of inhabitants, many times more glorious than we poor wrangling bipeds of the earth? 'If I was asked', says M. Arago, 'is the sun inhabited, I should reply, that I knew nothing about the matter. But if any one ask me, if the sun *can* be inhabited' 'I do not hesitate to reply in the affirmative. The existence in the sun of a central obscure nucleus, enveloped in an opaque atmosphere, far beyond which the luminous atmosphere exists, is by no means opposed, in effect, to such a conception. Herschel thought that the sun is inhabited.' Such has been the progress of astronomy. The sun, once regarded by the illustrious Greek, Anaxagoras, as 'an inflamed stone', or 'a hot iron', is now known to be a world nearly one-and-a-half millions of times larger than the earth, and is believed, by the greatest of astronomers, to be inhabited by rational and immortal beings.

There is, in relation to this last opinion, a curious anecdote, which, says M. Arago, is 'worthy of figuring in the history of science.' He borrows it from an article on astronomy, which was written by Sir David Brewster, and which appeared in the *Edinburgh Encyclopædia*. The story is this: Dr. Elliot maintained, as early as 1787, that the sun might be inhabited. When the Doctor was brought before the Old Bailey, for having occasioned the death of Miss Boydell, his friends, Dr. Simmons among others, defended him on the ground that he was mad, and produced the writings, in which he advocated the above opinion, as proof of his insanity. In about eight years afterward, however, the same opinion was promulgated,

as his own, by Sir William Herschel. The grand 'conception of the madman', is, at the present day, 'generally adopted', as M. Arago truly asserts. Can we believe, indeed, that the sun, with all its wonderful capacities, was merely made for our little world? We barely suggest, we do not mean to discuss, the profoundly interesting question with respect to 'The Plurality of Worlds;' a question which has called forth an elaborate work from the elegant pen of Fontenelle, and which, only a few years ago, was warmly debated by men of science in Great Britain. The conceit of those who fancy, that the great and 'all-beholding sun', as well as the other stars, were made for man alone, is thus happily hit off by Pope:

Proud man exclaims, 'See all things for my use!'
 'See man for mine', replies a pampered goose.
 And just as short of reason he must fall,
 Who thinks all made for one, not one for all!

The goose is, we think, at least, as near right as the man; for there is certainly as great a disproportion between man and the universe, as there is between goose and man.

We have, indeed, long entertained the impression that the sun is a great electro-magnetic machine, which generates the heat and the light so abundantly enjoyed by the planets of our system. Having entertained this impression for more than twenty years, we have watched every development of science which could possibly have any bearing on the subject. Is it not wonderful indeed that, at the distance of 95,000,000 of miles from the sun, we should be able to see what takes place on its surface. Yet we do see this; and it was only the other day, that one of the most wonderful, and, at the same time, one of the most significant, facts, ever vouchsafed to mortal vision, was distinctly seen in the sun. 'There occurred on the 1st of September, 1859', says Sir John Herschel, 'an appearance in the sun which may be considered an epoch, if not in the sun's history, at least in our knowledge of it. On that day great spots were exhibited; and two observers, far apart and unknown to each other, were viewing them with powerful telescopes; when suddenly, at the same moment of time, both saw a strikingly brilliant appearance, like a cloud of light far brighter than the general surface of the sun, break out in the immediate neighborhood of one of the spots, and sweep across

and *beside* it. It occupied about five minutes in its passage, and in that time travelled over a space on the sun's surface, which could not be estimated at less than 35,000 miles.' Now, was not this a wonderful phenomenon in itself? Only think of a spot which, in order to be seen at all, must have covered nearly two hundred thousand square miles, flying across the sun with the speed of 7,000 miles per minute! But, however wonderful in itself, this great fact is still more so in its apparent effects, as described by those who witnessed them, as well as by Sir John Herschel.

'A magnetic storm', says Herschel, 'was in progress at the time. From the 28th of August to the 4th of September, many indications showed the earth to have been in a perfect convulsion of electro-magnetism. When one of the observers I have mentioned had registered his observations, he bethought himself of sending to Kew, where there are self-registering magnetic instruments at work, recording by photography at every instant of the twenty-four hours the positions of three magnetic needles differently arranged. On examining the record for that day, it was found that at that very moment of time (as if the influence had arrived with the light,) all three had made a strongly-marked jerk from their former positions. By degrees, accounts began to pour in of great auroras seen on the nights of those days; not only in these latitudes, but at Rome, in the West Indies, or the tropics within 18° of the equator, (where they hardly ever appear,) nay, what is still more striking, in South America and Australia; where, at Melbourne, on the night of the 2d of September, the greatest aurora ever seen there made its appearance. These auroras were accompanied with unusually great electro-magnetic disturbances in every part of the world. In many places the telegraph wires struck work. They had too many private messages of their own to convey. At Washington and Philadelphia, in America, the telegraph signal-men received severe electric shocks. At a station in Norway, the telegraphic apparatus was set fire to; and at Boston, in North America, a flame of fire followed the pen of Burns's electric telegraph, which, as my hearers perhaps know, writes down the message upon chemically-prepared paper.'

ALCYONÉ.*

'Nay—leave me not: ' she cried; and her bared arms,
From which the saffron robe fell flowing back
As from snow-white Naxos,—tightened close
Their clasp about her husband.

— 'I am yet

So new a dweller in thy palace walls,
That still I crave a sense of welcome nigh,
To banish strangeness; and I only feel
My title to thy home's sweet sovereignties,
While thou art by, with thine assuring love
To prove it good. Oft-times I deem myself,
Albeit unqueenly-wise, an alien, when
I cannot turn to thee with questioning looks,
Appealing looks that read their answer writ
Clear and large-lettered on thine open brow.
'Tis only then I seem to miss the breath
That atmosphered my childhood,—only then
Do I remember that not one of all
The tender playmates of my native Isle,—
My rock-bound Strongylé,—not one dear face
Is here to smile me back the fond, old time—
Not one familiar voice that can recall
My happy, happy by-gone! If thou rid'st
But to the chase, I droop till thy return.
My maidens fail to cheer me, though they bring
Cithern and lute: for all the pent-up past,
For which thy crowding presence leaves no verge,—
Beats strong against my heart, as beats the surf
Against my father's brazen battlements.
Yet at the note that heralds thy return,
All memories lapse away;—and then I miss
No love beside, Beloved, having thine.'

* Ceyx, King of a province in Thessaly, was drowned, on his way to consult the oracle of Apollo at Claros. His wife, Alcyone, having premonition, in a dream, of his fate, and finding his dead body on the sands, in her despair, threw herself into the sea. Whereupon, the gods, to reward their mutual love, changed them into halcyons.

'To me, thy moaning, my Alcyoné,
Is sad as taboring of Cyprian doves,
When from her flowery Isle, their goddess strays.
Love's sweet exaggeration overstates
Thy case and makes it piteous so:—Behold—'
And freeing from her clasp his fondling arm,
King Ceyx pointed to the land-locked bay,
Where rocked his waiting vessel.

'Not more smooth
Thy molten mirror than yon crystal sea!
Confess thy fears' forecastings, little one,—
Have, like a goad behind thy pleadings, pricked
Keener than love doth,—hurrying on thy speech,
And filling it with honied artifice!
Well!—let the bee snatch at the Hyblan lure,
And yet escape it!'—then he, stooping, sealed
With fast-shut kiss, the rosy-answering mouth.

'Yet be content: Dismiss thy pale alarms,
Nor listen to thy pillow's scared unrest,
That drones of danger. When thou art alone
Among the courtiers, steel thy spirit, my queen,
With self-assertion of thy dignities
Of holy wifehood,—sure that in my heart,
Thy royal realm,—love busies all the hours,
Building a palace fit to be thy home.

'Yon sea-bird will up-bear me on swift wings,
To sacred Claros: there, my doubts all solved
Before the oracle,—my vexing quests
Forever quieted,—how will I fly
Back to thine arms!—and love, still gathering strength,
And over-topping every obstacle,
Shall break upon thy breast, and ripple up
In creamy kisses, stranded on thy lips!

'What!—suppliant still with those sad-lidded eyes,
Whose heaven is cloud-wracked as the misty top
Of blue Olympus?—Know, the immortal gods
Claim loyal service, and I dare not put
This human love, this all-sufficing love,
Before their worship, lest with jealous brows,
They frown upon our earthly blissfulness,
And seek to blight it. Wherefore, let me go;
And heap thou offerings on Apollo's shrine,
What time I voyage: for thy wafting prayers
Will speed me surelier than the kindest wind
Let loose by Zephyrus.

With rapid prow
 Turned toward the blessed Isle, the proud, young king
 Waved to his weeping bride a fond farewell ;—
 Gloating the while, on the delicious tears,
 The breathless throbs and palpitating doubts,
 Wherewith Alcyoné's so wifely love
 Had wrapped itself withal. To him they shown
 Like zoneless, wind-waft garments, careless flung
 Above the beauty of the orbéd curves,
 And ivory-white, lithe limbs, whose statured grace
 They heightened—not concealed.

Days passed amain,
 Yet brought small respite to the soul distraught
 With fateful prescience and consuming dread.
 The girdle that with broidered needlework,
 She wrought against his coming, listlessly
 Dropt from her fingers ; and the lyre he loved,
 Lay tuneless at her side, as eve by eve,—
 Her eyes all dazed through travelling o'er and o'er,
 The golden path he went athwart the main,—
 She waited for his coming.

Lying thus,
 Among her cushions, with her pallid face
 Turned seaward, that the first white glint of sail
 Might greet her vision,—ere she was aware,
 She slept, and sleeping, dreamed.

Above her bent
 The mist-crowned Thetis,—her fair forehead touched
 With more than mortal pity ; and there came
 A voice as sad as whispering Orcads hid
 In piney forests :

—' Thou shalt watch in vain,
 O, sorrowing one !—for nevermore the sail
 That bore thy husband hence away, shall come
 From out the purple west, where low he lies
 Couched in soft-smiling Aphrodité's caves.'

Up-starting from her dream, Alcyoné
 Uttered a cry of wo ; and summoning
 Her household damsels, straightway to the beach
 That stretched away beneath the whitening moon,
 Hasted ;—her hair unfileted, her feet
 Unsandaled, and her girdleless vesture flung
 Free to the night-wind.

Up and down the shore
 She wandered, wailing,—reaching forth vain arms
 To woo him from the inexorable sea.

'O, my beloved!—come to me once more!
 O, come again—again! All hope, all peace,
 All sweetness that can soothe a hungry soul—
 All ravishments mine eyes can ever see—
 All harmonies mine ears can ever hear—
 All breath—all being, do I hold through thee.
 Give back to me thyself—thyself,—or else
 I perish—perish! Weakling comforters!
 Why babble ye of other solace left?
 —As if this drear, wide, barren world could hold
 For me, one joy beside!—Commend yon spray
 To lips that shrivel with a deadly thirst,
 And think to quench their craving!—O, my lord!
 Better to me than all the gods in heaven,
 Dearer to me than all the souls on earth—
 Who hast transformed my being, till I live
 Only in loving thee,—behold! I die—
 I die without thee!'

Moaning thus she strayed,
 Her damsels following, weeping at the dole
 They found no words to soften,—till she reached
 A headland, at whose base the waters chafed
 With ceaseless frettings. Gazing from its height,
 Her quickened vision marked one single blot
 Of darkness on the silvery line of beach;
 And turning to her maidens, her wild eyes
 Dilate with terror, pointing thitherward,
 She dumbly questioned.

Ere they could reply,
 Or follow, down the rocky ledge she sped
 With delicate feet that left the wounding flints
 Besprent with crimson.

As she gained the strand,
 And neared the darkening speck,—upon the breeze
 Came wafted upward to the listeners' ears,
 A shriek of such unutterable bale
 As chilled their souls with horror; for they knew
 Alcyoné had found her husband—dead!
 And drifted shoreward like an ocean-weed.

They saw her rush with wringing hands outstretched,
 To fling herself upon him—but between
 The dead and living, swept a reflux wave,
 That on its bosom bore the lifeless form
 Back to the gulphing sea; and bending low,
 The awe-struck gazers on the scarped cliff,
 Caught the breeze-borne words:

—‘ To thee I come,
Beloved ! Since thou mayst not come to me !
Reach forth thine arms upon the bitter foam,
And let me spring to meet thee—thus—’

They caught
A gleam of fluttering garments—a dull plash—
The sullen gurgle of recoiling waves—
The clamorous screaming of a startled gull
That flapped its wings above them,—but no more,
For all their wanderings through the windless night—
For all their desolate wailings,—nevermore
The wistful face of sad Alcyoné.

When wintry storms were spent, and gentle airs
Soothed with caressing hand the furrowed surge,
Within *Ægean seas*,—the voyager,
Watching the halcyon with his brooding mate.
Nested upon the waters tranquilly
As midst Thessalian myrtles,—said :

—‘ Behold
Alcyoné and Ceyx !—We shall have
Fair weather for our sailing.’

ART. X.—NOTICES OF BOOKS.

1.—ESSAYS PHILOSOPHICAL AND THEOLOGICAL. By James Martineau. Vol. II. Boston: William V. Spencer. 1868. For sale by Cushings & Bailey, Baltimore.

We heartily commend this volume to all who have a taste for philosophical reading or for philosophy. We have certainly found it a delightful production. It consists of nine essays or reviews, called forth by as many separate works, and one discourse on the study of philosophy, having the following titles: Whewell's Morality; Whewell's Systematic Morality; Morell's History of Modern Philosophy; Oersted's Soul in Nature; Kingsley's Phæton; Sir William Hamilton's Philosophy; Kingsley's Alexandria and her Schools; Theory of Reasoning; Plato: his Physics and Metaphysics; and A Plea for Philosophy.

Every real student of philosophy is, indeed, already familiar with the works above-named. The more familiar he is with them, however, the more he will enjoy the criticisms of Mr. Martineau, whether he always concurs with the critic or otherwise. The freshness and piquancy of his style; the justness and moderation of his views; and withal the very original and striking way in which he occasionally puts things; are truly admirable. As all the essays of the volume are philosophical, it would have been better, perhaps, if the author had departed from the chronological order in the arrangement of his miscellanies, and put the last of all first; that is, if he had introduced his series of philosophical disquisitions with his 'Plea for Philosophy.'

To begin our notice with the Plea, he says: 'There are persons with whom it is a traditional habit to disbelieve all mental or moral science. Others, in the zeal of a new conversion, see in the metaphysician only the lingering ghost of an age found dead upon the shore of time; and assure us that when the pious care of M. Comte has scattered sand

enough upon the corpse, the spectre will vanish by the Stygian way.' Such, indeed, are the adherents of the *Philosophie Positive*; a philosophy as one-sided and narrow in its doctrines, as it is arrogant and dogmatical in its spirit. Either because they lack the patience to study, or the capacity to comprehend, the science of mind, these blatant worshippers of the golden calf of materialism,—denying all other gods beside,—abhor and denounce all metaphysics as utterly unworthy of the age of light introduced by themselves. During the dark ages of the past, the study of metaphysics was, perhaps, pardonable in such benighted souls as Plato, Aristotle, Augustine, Aquinas, Bacon, Descartes, Liebnitz, Blaise Pascal, Newton, Locke, and Butler, but since the world has been illuminated by the writings of M. Auguste Comte, John Stuart Mill, H. Thomas Buckle, Miss Martineau, and the Westminster Review, nothing could be more disgraceful than is such an exploded science in such incorrigible blockheads as Sir William Hamilton, Cousin, Coleridge, Guizot, Whately, Mansel, and, in short, the whole bead-roll of mighty names in the modern dunciad of mental philosophy. If, indeed, any system of philosophy deserves the scorn, derision, and contempt of mankind, it is surely that which heeps scorn, derision, and contempt on all systems except itself, to say nothing of the war it wages against the eternal Father of Lights himself.

If anything could be more astonishing than the vulgar assumption of this new philosophy, it is the palpable absurdity which, to every eye except to that of a *Positivist*, is indelibly stamped on its very forehead. This absurdity is happily hit off by Mr. Martineau. 'We are constantly told,' says he, 'by those who imagine the new organon to have superseded the old, that false metaphysics are the sure parents of false science. But they forget that *no-metaphysics* are sure to be *false*. For what are they? Their negative name is a delusive mask; and no man can reason on these matters at all, no man can even rail at metaphysics without a metaphysic hypothesis (of his own) at least; and the only question is, whether he will reverently seek it by wide and patient

toil, and, consciously possessed of it, call it by its name, or whether he will pick it up among the accidents of another quest, and have it about him without knowing what it is.'

Dr. Whewell's *Elements of Morality and Polity*, which forms the subject of the first Essay before us, deserved notice only as the production of so learned and so celebrated an author. More than twenty years ago, we gave, in the *Democratic Review*, our estimate of the work in question; and we are happy to find our opinion of it confirmed by Mr. Martineau. That the most celebrated Professor of Moral Philosophy in the University of Cambridge, and a *professed* disciple of Butler, should have produced such a work, such a heterogeneous compound of the odds and ends of all systems, without the least apparent attempt to reduce the chaos to order, or to adjust the conflicting claims of its various elements, has always struck us as one of the curiosities, not to say monstrosities, of literature. This work illustrates at least one thing, namely, the deplorable condition of moral science in England.

The *Systematic Morality* of Dr. Whewell is, in the main, a reply to Mr. Martineau's strictures on his former work, the *Elements of Morality and Polity*. This reply called forth the second Essay of the series before us, in which it is shown, that as Dr. Whewell had the most imperfect notion of the elements of morality, so he had no conception whatever of systematic morality. Mr. Martineau, however, scarcely does justice to the semi-chaotic darkness, perplexity, and confusion, to which Dr. Whewell has reduced the science of morality. Mr. Martineau, as appears from his reviews of Dr. Whewell's works, is deeply and painfully sensible of the disgraceful neglect into which the study of philosophy has fallen in England. This feeling, indeed, crops out in all his Essays; especially in his review of that delightful work, Morell's *History of Modern Philosophy*.

'This is,' says he, 'a very seasonable book. It gives information which every one, having any pretensions to a liberal culture, desired to possess, yet was puzzled to obtain. It discusses questions of metaphysics, which, even within the

thick covering of the English cranium, are beginning to turn over from their sleep.' 'We never,' he continues, 'despaired of philosophy in England. Low as its condition has long been, and dependent as we mainly are upon our old literature of this kind for what reputation we still enjoy among the schools of Europe, we yet believe that neither our national character, nor our social state, is unfitted to ripen the fruits of reflective science.' True,—very true. But then is not adversity necessary to ripen such fruits, and bring them to perfection? The low condition of philosophy in England has, it is certain, been most remarkable during the period of her greatest material prosperity, and her most devout worship of Mammon; and the fruits of her 'reflective science' have grown best, and flourished most luxuriantly, in the tempestuous times of her great political trials and civil wars. May not adversity, then, be found necessary to renew the age of her Cudworths, her Clarkes, her Lockes, and her Butlers? Or, in other words, to develope, in spite of all her practical tastes and tendencies, a glorious race of thinkers to deal with the great problems respecting the nature and destiny of man, and the glory of God.

We might easily expand this 'book notice' into a long article. So delightful, indeed, are the books reviewed by Mr. Martineau, and so delightful are his reviews of them, that we reluctantly take leave of his fascinating pages. Oersted's *Soul in Nature* is, in spite of its erroneous philosophy, one of the most charming works noticed by our author. Warm, and genial, and generous, however, as are his commendations of the *Soul in Nature*, Mr. Martineau, by no means, spares the unsound principles of Oersted's Philosophy. On the contrary, he lays the axe to the very root of Oersted's mechanical view of the universe, and vindicates, with admirable precision and power, the true doctrine of God, and man, and nature. The following eloquent passage, for example, is in our author's happiest style, and might easily be expanded into a profound and beautiful commentary on the constitution of the universe of mind and matter. 'In cutting down the pre-

tensions of physical theory,' says Mr. Martineau, 'to the rank of hypothesis, we do no more than take it at its word. For what does its first law of motion affirm, but an hypothetical proposition, namely, that *if* a body unoccupied by a will, be acted on by a force, it cannot, when set in motion, change the direction or velocity of its course, without the application of another foreign force? What, as Oersted himself observes, is the so-called "*inertia* of matter but the absence of will from body destitute of soul?" The primary axiom, therefore, and definitions, on which the august structure of the celestial mechanics is raised, do not pretend to be more than conditionally true: should will be absent, then they hold; should will be present, the case does not arise for their application. When the doctrine of central forces is said to account for the motion of a planet, all that is meant is accordingly this: "If no will be there, such is the way in which the phenomena come to pass,"—which we readily grant, but which is not to debar us from thinking that a will *is* there, or to slip from representative modesty to positive usurpation.'

Without following our author any further, we shall simply conclude, as we begun, with a cordial recommendation of his delightful volume to all who, in this practical money-loving and money-getting age, have the least taste or capacity for philosophy. Often, as we have read this volume, have we been reminded of the words of the greatest of poets:

'How charming is divine philosophy!
'Not harsh and crabbed, *as dull fools suppose,*
'But musical as is Apollo's lute,
'And a perpetual feast of nectared sweets,
'Where no crude surfeit reigns.'

2 — EXCELSIOR; OR ESSAYS ON POLITENESS, EDUCATION, AND MEANS OF ATTAINING SUCCESS IN LIFE. Baltimore: Kelly, Piet & Co. Pp. 290.

This handsome little volume consists of two parts; the first for 'young gentlemen,' and the second for 'young ladies.' The part for young gentlemen, forming about one half the volume, was written by Professor T. E. Howard, A. M.; and the remaining half for young ladies, by a lady (R. V. R.)

We heartily commend the first part of this little volume to Young America; especially Chapter IV., which treats of

'good manners,' 'manliness,' 'table etiquette,' etc., etc.; and Chapter V, which discusses the all-important subject of 'conversation.' Not that we mean to intimate, for a moment, that Young America is at all deficient in good manners, or in the art of edifying and agreeable conversation, but only that, notwithstanding the politeness, and polish, and courtesy for which he is so famous, there may still possibly be some little room for improvement.

Let our young ladies also, by all means, read the second part of the volume before us; especially Chapters VIII and IX, on the subject of 'mental training,' and Chapter X, on 'physical training.' No part of education is, indeed, more sadly neglected in this country, than the physical training of women. Can nothing be done to remedy the evil; for an evil it most assuredly is, and a tremendous one too, which, if not arrested, must sooner or later tell on the character of the American people.

'The exercises of physical training schools,' says our authoress, 'established in some cities, are exceedingly beautiful; they must be seen to be appreciated. Every limb, joint and muscle is exercised, and made strong and supple. The evolutions are performed simultaneously by all, to music, and under the guidance of a drill-master. . . . They are far more efficient in producing elegance of form and carriage, and grace of motion, than dancing schools can ever be; and, as regards improvement of health, there can be no comparison.' Why, then, should they not be tried in Baltimore?

3.—RURAL POEMS. By William Barnes. Boston: Roberts Brothers, 1869.

An exceedingly attractive little volume this to the eye. The fine, smooth, glossy, tinted paper, the exquisite typography, the great number and variety of poetical gems, with appropriate illustrations, and the elegant binding, all conspire to make this, both inside and outside, a charming little work for young people. A taste for such a work—for such *Rural Poems*—speaks well for the rising generation of Boston; that is, provided it be genuine and general.

- 4.—JOHN M. COSTELLO; OR THE BEAUTY OF VIRTUE, EXEMPLIFIED IN AN AMERICAN YOUTH. Baltimore: John Murphy & Co. 1869.

The character of this little book is well and fully expressed in its title. To say that it was published by John Murphy & Co., is to say that, in mechanical execution and taste, it is exactly what it should be. The style of the work, too, is in keeping with its external form, as well as with the character it describes. 'This Little Memoir' is, in handsome and appropriate terms, dedicated to 'His Grace, the Most Rev. Archbishop of Baltimore.'

- 5.—DR. JACOB. By M. Betham Edwards. Boston: Roberts Brothers. 1869.

We looked into this volume with the impression somehow made upon our minds, perhaps by the name of the writer, M. Betham Edwards, that it was from the hand of a man. The earlier part of the story helped to keep up the illusion. So discriminating were the characterizations; so nicely hit off were certain feminine foibles; and such freedom was there from the peccadillos which so often mar women's pages—no needless expletives, no excess of ornament, no wearisome details, but, on the contrary, a style at once natural, terse, and *clean*, (as a recent critic terms it); that we did not dream it might be the production of a woman. As we proceeded, however, our original impression began to fade away; and, finally, the frequency of such quotations as *Carpe diem—Per varios casus, &c. &c.*, drew from us the involuntary whisper, 'Ah! she betrays herself—the little Latin, like murder, will out!'

There is a singular incongruity about the book. The first half, as we have intimated, is more than ordinarily well written. The scene is almost wholly laid in Frankfort, and gives fine scope to the writer's power in delineating, what has become the fashion of late,—German domestic life,—English Continental Society,—and scores of pretty scenes in and about Goethe's old home:—all of which are done with a Tenniers-like accuracy. Each character is well stamped, and, unlike Dickens,' without the invariable label.

But about the middle of the book, a curious change is apparent ; a change so marked, that one is disposed to question whether the characters have not been drawn by one hand, and the plot by another. From the very first chapter, considerable trouble is taken to prepare the reader for a becoming *denouement* ; his curiosity is dallied with and provokingly appetized, and yet, when at last the end is reached, lo !—there is no *denouement* at all ; or, at best, one so unsatisfactory that the tantalized reader feels quite taken in.

We are prepared to find Dr. Jacob carrying himself *en grand seigneur* to the end ; and would have been mollified, in a measure, had he turned out a magnificent scoundrel ; but when he drivels down into a contemptible weakling, we lose patience, and own ourselves unfairly dealt with. *Fraulein Fink* is excellent in her way, and altogether the raciest character in the book. Miss Edwards would do well, we venture to suggest, if she would get some strong and more daring hand to outline the plot of her next novel : with the warp rightly drawn, she is fully equal to the supply of the embroidering woof.

6.—LITTLE WOMEN ; OR MEG, JO, BETH AND AMY. By Louisa M. Alcott, illustrated by Mary Alcott. Boston : Roberts Brothers. 1868.

This is a book for girls, and is a simple, natural picture of home life. The natural and high-toned, though faulty, characters of the girls, who have scarcely attained to the dignity of heroines, will make this little book about 'little women' welcome in many a home. It is, it seems to us, an unmistakable sign of returning health in the taste of the juvenile American, that simple stories like this are in such demand. Let the blessed charge go on ; there is still room for improvement.

But why 'the inevitable soldier,' or scraps of the late war, in a book about 'little women?' If it had only been about *little men*, then, indeed, might an abundant supply of appropriate characters have been found among the heroes of the late war.

7.—MADAME DE BEAUPRE. By Mrs. C. Jenkins, author of 'A Psyche of To-Day,' 'Who Breaks Pays,' &c. &c. New York: Leyboldt & Holdt. 1869. Pp. 278.

One seldom sees the nationality of the author so completely sunk in that of the characters depicted as in this little *duo-decimo*. *Madame de Beaupré* is a charming little story of life in a provincial French town, as seen by the eye of a French woman, and pervaded by that peculiar French sentiment, which is so unmistakable, and, at the same time, so very difficult to define. The characters are well delineated, especially those who are allowed to speak for themselves; but so numerous are they, that they impede, rather than facilitate, the progress of the story. Why has the author thrown them out in such profusion? Was it merely to display her powers of description, or to enjoy the exercise of her power of creation?

The dress of the little volume is pretty—the paper, the type, and the binding, are all attractive.

8.—THE IDEAL IN ART. By H. Taine. Translated by J. Durand. New York: Leyboldt & Holdt. 1869. Pp. 186.

This little volume, every word of which we have read with much interest, consists of the substance of two lectures, delivered during the past year to the students of the *Ecole des Beaux Arts*, in Paris, by M. Taine, Professor of the History of Art in that institution. It is designed to carry out and complete the theory, which the author had set forth in his *Philosophy of Art*; a work which should be read in connection with the present volume. It would, perhaps, be a little difficult for the general reader to obtain, from this volume alone, any very clear view of the author's idea of Art, or of his *Ideal in Art*. 'The whole of art,' says he, (p. 156) 'lies in two words, *concentration in manifestation*;' a statement, or definition, which we construe in the light of the disquisition by Coleridge, (or rather by Schelling,) on the nature of the imagination as the *esemplastic* power of the mind, or the power by which many things are moulded into one. But whether, in this little volume, the general reader should discover the author's ideal of art or not, he will certainly find

many things pleasant to read; that is, provided the principles of art are not wholly foreign from his intellectual tastes and pleasures.

9.—A NEW MANUAL OF THE ELEMENTS OF ASTRONOMY, DESCRIPTIVE AND MATHEMATICAL: COMPRISING THE LATEST DISCOVERIES AND THEORETIC VIEWS. By Henry Kiddle, A. M., Assistant Superintendent of Schools, New York. New York: Ivison, Phinney, Blakeman & Co. 1868. Pp. 286.

We have examined, with considerable care, this 'new manual of the elements of astronomy;' and if we had to teach this science to a class of boys, or girls, we should prefer it, as a text-book, to any volume with which we are acquainted. It seems, indeed, admirably adapted to such a purpose; being nearly always, or in the main, clear, simple, direct, and accurate, in its statements, as well as happy in its illustrations. We have, however, noticed a few things in the volume, which appear unworthy of its general good character, and which should be corrected in future editions of the work. Thus, on page 102, the author says: 'The *volume* of the sun is, as already stated, about 500 times that of all the planets; the *mass* is, however, about 700 times as great. This shows that the mass of the sun is greater than the *average* mass of the planets.' A very strange blunder this, not to say sheer nonsense. The mass of the sun 700 times as great as the mass of all the planets put together; and 'this shows that his mass is greater than the *average* mass of the planets!' The author probably intended to say, what he certainly should have said, that as 'the *volume* of the sun is about 500 times as great as that of all the planets, while its mass, or weight, is 700 times as great as their aggregate mass or weight; it follows that its density is greater than the *average* density of the planets. This statement, or inference, makes sense; and, accordingly, we shall look for it in the next edition of the *New Manual*.

Again, on page 104, it is said: 'The discovery of spots on the solar disc is noticed in history as early as 807 A. D.' Our author has, for this statement, the authority of the celebrated astronomer M. Arago; but, besides coming into conflict with the general opinion of astronomers, M. Arago has,

in this instance, committed a palpable oversight. 'The discovery of the solar spots,' says he, 'completely overthrew one of the fundamental principles of the peripatetic astronomy, viz., the principle of the incorruptibility of the heavens. It appears to me, then, that the reader may be desirous of knowing the first astronomer who established by incontestible observations the existence of these spots. According to an opinion which generally prevails, especially in Italy, this astronomer was Galileo; but I am inclined to think that this is a mistake.' Now, in order to overthrow the prevalent opinion, and to dispute 'the claims of the passionate admirers of the illustrious philosopher of Florence,' M. Arago says: 'Several historians of Charlemagne relate that in the year 807 a large black spot was visible upon the sun during eight consecutive days. It has been supposed that this spot was Mercury, without reflecting that, according to the known movement of that planet, it was utterly impossible it should remain projected on the sun during eight consecutive days.' Now, whether it was Mercury or not, it is certain, that just so long as it was supposed to be Mercury, this belief precluded the possibility of its entering into the imagination that it was, in the proper sense of the word, 'a solar spot.' According to M. Arago, some supposed the spot seen on the sun in 807 was Mercury, and some that it arose from a defect in the eye, or the imagination, of the observer. Astronomers made various suppositions indeed, just because the idea of real spots on the sun had never entered into their conceptions or belief. What, then, in the name of common sense, had such an appearance to do with the question, as to 'the first astronomer who established by incontestible observations the existence of these spots?' Why, it was not even believed to be a spot; much less was it established as such by incontestible observations? The projection of Mercury, or of Venus, on the sun, during a transit of the planet, is no more a solar spot, than is the projection of the moon on the same great luminary in a solar eclipse. The supposition that one saw the shadow of Mercury, or of the moon, or of Venus, on the sun, was cer-

tainly not the discovery of the solar spots, by careful, cautious, and 'incontestible observations.' We agree, then, with Sir John Herschel, that 'one of the earliest applications of the telescope was to turn it on the sun;' and that 'the fruits of this application . . . in the year 1611 . . . was the discovery of black spots on its surface.' Then were the solar spots first seen and recognized *as such* by astronomers; or the great fact first 'established, by incontestible observations,' that these spots adhere to the sun. The historians of Charlemagne, who, in 807, saw something on the sun, without knowing what it was, are not to be named among the first discoverers of the solar spots.

M. Arago endeavors to prove that, contrary to the general opinion of astronomers, spots were discovered on the sun as early as the year 321, and even before the Christian era by the Chinese. But we have examined only the evidence adduced by him for the year 807 to which Mr. Kiddle refers.

'A body,' says Mr. Kiddle, (p. 28) 'when acted on by a single force, moves in a straight line; and will continue to move in the same direction, *and with the same velocity*, until acted upon by some other force.' Now this is not true. For if the 'single force,' which acts on the body, be a constant one, the body will move with a continually accelerated velocity. It is only when a body is acted on by a single *projectile*, or *impulsive*, force, that it moves with a uniform velocity; and, accordingly, the single force should be so characterized in order to make the proposition of the author true. If a writer on astronomy should be accurate any where, it should most assuredly be in defining the laws of motion.

The author says, (p. 33.) 'The velocity of a planet must therefore be variable when it moves in an elliptic orbit, *being greatest at the aphelion, least at the perihelion*,' &c. Now this is exactly the reverse of the truth. The velocity of any planet is greatest at the perihelion, and least at the aphelion. We do not suppose, for a moment, that this blunder was the result of ignorance; for the author evidently knew better, as appears from the preceding paragraph of his book. But,

then, the gross carelessness, which permitted such a blunder to creep into the text of his book, is scarcely pardonable.

From these errors, as well as from some others which might easily be pointed out, it is evident, that the work of Mr. Kiddle needs a careful revision. With such a revision, or correction of its errors, it will form an admirable text-book for schools and academies. One of the most pleasing features of the book, is 'the brief historical sketches of the various discoveries' in astronomy, which 'are given in connection with the facts to which they relate.' Our author truly calls this, 'a most fascinating part of the subject;' and for the very reason that it is so fascinating, it should be as correct as possible. It should certainly consult more guides, or authorities, than one; especially if that one is M. Arago, who is, at times, grievously at fault in his historical sketches of great discoveries.

10.—ANNALS OF RURAL BENGAL. By W. W. Hunter, B. A., M. R. A. S. &c., of the Bengal Civil Service. New York: Leypoldt & Holdt. 1868.

The reticence of eastern peoples is remarkable. The English govern India as best they can; but whether their dominion gives satisfaction to the mass of the people, or what particular acts of government meet with approval, are questions which they have no means of determining. Mr. Hunter attempts in a measure to lift the veil from the sentiments of the masses. His failure is not due to a want of labor and intelligent observation. Something must be done to make the natives less reserved, before the English can be secure of that best pillar of government, the consent of the governed.

Mr. Hunter, however, makes a valuable contribution to our knowledge of the manners, customs, traditions, history, ethnology, and language of the Bengalis. The author possessed rare advantages for investigating questions connected with the aboriginal people and language of Bengal, and for marking their adulteration by foreign elements.

'The population of Lower Bengal, ethnically considered, consists of two elements; first, the Aryan invaders, almost all of whom assumed the rank of Brahmans; and, second, the Aborigines.'

There are indistinct traces of primitive races, which perished in pre-historic times. These the author disposes of, along with the birds of the Lias, and such like, in a rhetorical flourish which, perhaps, is allowable in a man who has done so much dry work.

'In India all three classes of languages meet as upon a common camping ground. Bengal with its dependencies, forms a vast basin into which every variety of speech has been flowing since pre-historic times. There the whole philological series will be found, each stratum lying above its predecessor; from the Isolating languages, that hard primary formation, through the secondary layers of the Compounding class up to the most recent deposits of Inflecting speech, the alluvial Bengali and Hindi,' (p. 167.)

India thus presents the finest field for the study of language. Fortunately, Mr. Hunter's official position placed him in a district where the linguistic problems were less complex than in the central valley of the Ganges. Beerbhoom and Bishenpore lie in the western part of lower Bengal, and mark the confine reached by the successive waves of invasion sweeping down from Northern India. They offer peculiar advantages for investigating the language of the aborigines, and the dialects arising from its amalgamation with those of the invaders. The results of the author's study are that, the vernacular of the aboriginal hill men, called the Santali, is one of the Compounding languages; it contains certain roots expressive of simple ideas in common with Sanskrit, and it is probable, that the Sanskrit and Bengali have borrowed certain words and sounds from the Santali. By far the most interesting conclusion reached is, that the study of the Santali may do for the Compounding languages what the study of Sanskrit has done for the Inflecting. The Santali seems to point to the northeast of the Himalayas as the starting point of the Indian aborigines; but there seems to be no sufficient material to warrant the conjectural importance given to the Santali as the probable key to the languages of East-Central Asia.

The author gives a very instructive sketch of the early history of English rule in Western Bengal. The political economist will find much to interest him in the devices used for overcoming the social, financial, and supply difficulties, which taxed to its utmost the inadequate government machinery of the time. In fact, India has been a sort of experimental ground for testing the projects of state-craft. These experiments have been conducted in an enlightened and humane spirit, and have contributed to demonstrate the value of the more recent discoveries in political economy. At first, the East India Company merely took charge of the revenue, and was only careful to be strict and exacting in its collection. It had neither the opportunity, nor the appliances, for relieving the people, who were, and had been for years, suffering from misgovernment. The early civil administration is, perhaps, liable to the charge of fickleness in adopting in rapid succession, different plans for relieving the distresses of the governed without giving any of them a sufficiently consistent and continued trial, to test its merits. In spite of this, however, as well as of many instances of cruelty and oppression, the rule of Britain in India has, in the whole, done a great work in the cause of civilization.

Not the least interesting topics treated of in this work are the religions of these peoples, and the great famines which, from the earliest times, have been occurring in India. The religion is a much coarser form of superstition than those brought down the Ganges from the northeast. The chief worship is directed to Siva, the bad spirit; and this, because the good spirit being already well disposed, need not be propitiated. The whole question of famines is elaborately discussed; their cause, their effects, their prevention. Although the famine of 1866 is a recent and terrible calamity, it seems safe to say that, without an unparalleled failure of crops, there is no longer any danger of such a dread scourge. Improved means of intercommunication, and the growth of trade, offer a guarantee against their recurrence.

How much of the character of this singular people can be learned from their conduct during the prevalence of a famine!

In 1866, 'many a rural household starved to death without uttering a complaint or making a sign.' What an age of oppression must it have required to destroy the spirit of a people so effectually, that even the political disaffection springing from empty stomachs should cease to exist! 'Silent feeders' are abundant, and to be seen at any of our hotels; but the story of a silent starver, to an American who whines at the lateness of his dinner, must ever remain a myth. A wealthy man in India, indisposed to charity, would have no occasion for delivering homilies to the clamorous poor on the science of starving with propriety.

A striking proof of the beneficial effects of English rule on the Bengalis, is found in the difference of the effects now produced, and those formerly produced, by ardent spirits. *In vino veritas*. The behaviour of a man when drunk is a very fair test of his grade as a civilized being. Formerly most of the crime in Bengal, was traceable to the use of intoxicating drinks; but now the most violent form the excitement takes, consists in making profound obeisances to every one in the street.

11.—LETTERS OF MADAME DE SEVIGNE TO HER DAUGHTER AND FRIENDS. Boston: Roberts Brothers. 1869.

These celebrated Letters call for no critical notice at our hands. More than thirty years ago, we read them with delight, and still retain the impression they made upon our minds. Dr. Blair, in his *Lectures on Rhetoric and Belles Lettres*, says: 'The Lettres of Madam de Sévigné are now esteemed the most accomplished model of a familiar correspondence. They turn indeed very much upon trifles, the incidents of the day, (just as they should do,) and the news of the town; and they are overloaded with expressions of fondness for her favorite daughter; but withal, they contain such easy and varied narration, and so many strokes of the most lively and beautiful painting, perfectly free from any affectation, that they are justly entitled to high praise.' These are, indeed, precisely the qualities which render the Letters of Madam de Sévigné so perfect a model of familiar correspondence.

12.—THE LETTERS OF LADY MARY WORLLEY MONTAGU. Boston: Roberts Brothers. 1869.

These Letters, says Dr. Blair, 'are not unworthy of being named after those of Madame de Sévigné. They have much of the French ease and vivacity; and retain more the character of agreeable epistolary style, than perhaps any letters which have appeared in the English language.'

13.—A BOOK ABOUT BOYS. By A. R. Hope. Boston: Roberts Brothers. 1869.

This is a readable, racy, and suggestive book. It should, indeed, be read and pondered by every one who has anything to do with boys. The author adopts the advice of Dean Swift, where he says: "Positiveness is a good quality for preachers, and orators, because he that would obtrude his thoughts and reasons upon a multitude will convince others the more he appears to be convinced himself. Accordingly, in my *Book about Dominies*, and in the present *Book about Boys*, I have been positive and egotistical to a degree which I had expected to produce more hostile criticism than has been the result." (Preface, pp. vii and viii.) That is to say, he assumes a positive manner, and speaks in an egotistical, dogmatic way, in order that, by appearing deeply convinced himself, he may carry conviction to the minds of others. His readers will, of course, thank him for the information, and guard themselves against the deception which, as the author tells them, he intends to practice on their credulity.

Again, the author says, (Preface, p. viii,) 'Ignorant and envious people may possibly attempt to depreciate my character for elegance and precision, by asserting that I have repeated myself more than once, have said much the same thing in different places, with the view of distending my pages. I repudiate the insinuation with scorn. The fact is, my experience as a teacher has taught me that what is necessary to convince the mass of mankind of the truth of any particular doctrine, is to keep constantly repeating the enunciation till it becomes familiar, and therefore commends itself to their minds.' Or, in other words, the author gravely tells his readers, that he means to drive home conviction to their minds, not by his reasons, but by his repetitions! 'An honest confession,' it is said, 'is good

for the soul.' Such honest confessions certainly ought to be for the good of Mr. Hope's readers; who, if they are wise, will not swallow any of his propositions merely because they are asserted with such an 'appearance' of deep conviction, or merely because they are so frequently repeated. On the contrary, they will look at his reasons more than at his repetitions, and despise every appearance of confidence, which is merely put on for effect. His readers, if wise, will not only do this; they will, at the same time, derive both pleasure and profit from his *Book about Boys*.

14.—FORCE AND NATURE. ATTRACTION AND REPULSION: THE RADICAL PRINCIPLES OF ENERGY, DISCUSSED IN THEIR RELATIONS TO PHYSICAL AND MORPHOLOGICAL DEVELOPMENTS. By Charles Frederick Winslow, M. D. Philadelphia: J. B. Lippincott & Co. 1869. Pp. 490.

We have, as yet, read only the introduction to this book; and this has begotten in us a very great desire to read the book itself. But such a work is not to be touched lightly, or judged of hastily. The first part of the title, *Force and Nature*, is suggestive of grand conceptions, and the remaining portion, *Attraction and Repulsion, &c.*, points directly to the most profoundly interesting questions, which, for the last half century, have attracted the attention of physicists and philosophers. We promise ourselves a very great treat in the examination of the author's views of the *Cosmos*. We can, in the meantime, safely say, that it speaks well for him, as a patient, deep, accurate, and comprehensive thinker, that the fundamental principles of his philosophy are not one-sided and exclusive. 'No system,' says he, 'of natural or positive philosophy can reach its legitimate boundaries, comprehend nature entirely, and unfold by successive sequences into its grandest developments, and yet be wholly material and physical. A true and enduring system must embrace both *physics and metaphysics*. A true system must, furthermore, embrace geometry and the algebras—not their mere physical and symbolical terms, but their high, deep, and purely intellectual principles, which, appertaining to psychology and expressing an absolute universality of mind and purpose, lift us freely and positively into studies of the Infinite.' (Introductory, p. 5.) Again, he says on the next page, 'No positive system of philosophy, no

grand generalization of grave facts and of final irreversible inductions in experimental and natural sciences, and in universal thought and numbers, can be, or pretend to be, perfectly unfolded and *yet exclude ethics and metaphysics.*'

- 15.—THE JERUSALEM DELIVERED OF TORQUATO TASSO. Translated into English Spenserian Verse, with the Life of the Author, by J. H. Wiffin. Third American from the Last English Edition. New York: D. Appleton & Company. 1869.

This celebrated classic, with the life of the author, is published at the marvelously cheap price of fifty cents. The life alone is worth more than the price, to say nothing of the great poem which follows.

- 16.—THE CULTURE DEMANDED BY MODERN LIFE; with an Introduction on Mental Discipline and Education by E. L. Youmans. New York: D. Appleton & Co. 1867.

This work, though two years have elapsed since its publication, has been received too late for careful examination, and extended notice, in this issue of THE SOUTHERN REVIEW. Indeed, such a work calls for no other notice than the bare mention of the names of the authors of the various *Addresses* and *Essays* of which it is composed. In this galaxy of names—and a glorious one it is—we find those of Tyndall, Henfrey, Huxley, Paget, Whewell, Faraday, Liebig, De Morgan, Carpenter, Acland, Forbes, Herbert Spencer, Sir John Herschel, Sir Charles Lyell, and others of less note. We need scarcely add, that whatever proceeds from the minds of such men, is worthy of the profound attention and consideration of the friends of human knowledge and human progress.

- 17.—AN ADDRESS TO THE COLORED PEOPLE OF GEORGIA. By Elias Yulee, a member of the bar. Savannah. 1868.

Mr. Yulee's attempt to convince the negroes that the Southern whites are their truest friends, may meet with some success; for the current of events is awakening them to the fact. But pictures of the negro's condition in Africa, and of his improved state in America, proofs of the complicity of Northern men in the importation of negroes to the United States, and of the opposition of Southerners to this importation, and such like, are sentimental views of the subject, likely to make little

impression on the negro or any one else. Gratitude for favors bestowed on one's remote ancestors, is not a very lively feeling in this age. The absolute necessity for amity between employer and employee, is the constraining power, which must adjust the relation of the planter and the freedman. The whole labor system of the South having been demolished, and master and servant being alike ignorant of their new duties and privileges, many misunderstandings and much bad feeling may arise between the representatives of capital and labor; but, in time, matters will adjust themselves to the exigencies of the new situation. That gratitude, which has been called a keen sense of favors to come, is better calculated to influence the sentiments of the negro than any lessons drawn from the past history of his race. Meanwhile Mr. Yulee's pamphlet may do much good by counteracting the influence of interlopers, who, from motives of self-aggrandizement, are interfering to postpone a settled state of affairs.

18.—MINUTES AND REPORTS OF THE EDUCATIONAL ASSOCIATION OF VIRGINIA. Third Annual Session held in Richmond, Va. July 21-24, 1868. Lynchburg: Schaffter & Bryant.

This Association was organized 'to promote the educational interests of the State' of Virginia. Like most movements of this character, it finds a great enemy in the inertia of friends and members. Of course, it develops every summer a certain amount of spasmodic zeal, but the apologetic and incomplete nature of most of the reports, show that it is not a working zeal.

The pamphlet contains the minutes of the session, a list of members, a constitution, the special committees, an address by the President, and six reports of committees.

We cannot commend too highly the whole tone of Dr. Minor's Address on *The Responsibility, Influence, and Dignity of the Teacher's Profession*. Some objections might be made to his ideal of Education. Limited private schools have faults, even the best of them; faults which belong to them. Their tendency is to develop insipidities. Mr. Hooper's *Book about Boys*, compares such schools unfavorably with the larger public schools. There is also in Dr. Minor's r

on the use of free conversation as a means of education, some tinge of the old indisposition to let boys be boys.

The Report of the Committee on the Latin Language and Literature, presented by Prof. Walter Blair, is very suggestive and may be read with profit.

The Report of the Committee on the Greek Language and Literature, presented by Mr. James M. Garnett, is full and carefully prepared. This committee seem to have preserved much of their zeal through the winter frosts, and to have labored very faithfully on the work assigned them. Their Report discloses the fact that the Association deem it inexpedient, at present, to recommend any series of text-books. The reason given for this, is the fear of creating a lobby. Lobbies are bad things; but, if the Association so shapes its course as to avoid this fungus growth, it will never come very close to a good many practical questions in the sphere of its usefulness. To recommend reliable text-books, would seem one of the first of its duties, and yet it cannot be denied, that certain similar organizations in the Northern States, have become mere agencies for advertising books.

Could not something be done to keep up the interest in this Association by debates on educational subjects?

19.—VALEDICTORY ADDRESS TO THE GRADUATING CLASS OF THE SCHOOL OF MEDICINE OF THE UNIVERSITY OF MARYLAND, DELIVERED MARCH 3d, 1869. By S. T. Wallis, Esq. Published by the Faculty. Baltimore: Kelly, Piet & Co.

This Valedictory is, like everything from the pen of Mr. Wallis, an exquisitely polished and beautiful production. The advice is, in the highest sense of the word, practical as well as eminently good; the sentiments are elevated and noble without being at all overstrained or unnatural; the reflections on life and society are appropriate and just; the whole Address, in one word, is precisely such as we should have expected from Mr. Wallis,—a series of glowing truths set forth in fascinating modes of expression.

‘When I speak,’ says he, ‘of professional success and the rewards of professional ability and effort, I do not mean—for I should hold it an insult to your aspirations to present you—only the grosser and more tangible results which take the shape

of popularity and pay. No sensible man despises or pretends to overlook these, of course. The atmosphere of human life, bright as it may be with the rosiest visions, still rests upon the ground.'

Again, he says, 'the love of applause is so perpetual a spur—to speak, perhaps, more appropriately—so pleasing a stimulant, to the noblest natures; it is so mixed up with our highest and purest and most genial impulses, that to discourage it would be like blunting our sense of the good and the beautiful, or blotting out any of those fine, great instincts which are the celestial leaven of humanity. Whether the thirst after a reputation which we shall enjoy in life, or the craving for a name which shall live after us, be the more effectual incentive to the things which make men great, I am not here to discuss. It is a question which the debating-societies have left unsettled, and I suppose, after all, that its solution depends, in a great degree, upon the mental and moral organization of individuals. There is, to almost every one, and there should be, to all, a charm in the visible tributes of public admiration and respect. When, therefore, the world crowds around a man, burning myrrh and frankincense, he naturally enjoys the present swinging of the censers, a good deal more than the prospect of their smoking, ever so devoutly, at his funeral. The honors which come home, like fruits and flowers in season, while taste and appetite are fresh and the senses yet rejoice in fragrance and beauty, are apt to win even the loftiest and greatest from lone dreams of palms and bay trees, which shall be watered in centuries to come. When we think, for instance, of Raphael, in the full splendor of his triumphs and his fame, the friend of Popes, and Cardinals, and Princes, beloved of women, envied and adored by men—the very 'centre of a world's desire'—we feel that we should scarcely marvel if, amid such fascinations, he forgot the beckoning angels of his youth. And yet, when we remember Raphael, dead in the chamber where he painted, with the fresh canvas of the Transfiguration radiant above his bier, and making its mortality immortal, we wonder how any creature, with a soul, could barter the prescience, nay, even the mere dream, of such a glory, for any other thing that life could give.

‘Do not, I pray you, think that I am leading you away to cloud-land. It is one of the sad mistakes of our generation, that to be practical you must descend, and the lower you descend the more practical you become. There is a growing contempt for everything that cannot be measured or counted, and the busy men, whose mission upon earth is to have irons in the fire, have a sort of notion that the world has grown too old and wise to let sentiment be a hindrance to results.’

In the striking parallel, which Mr. Wallis runs between his own profession and that of medicine, we find the following sad reflection: ‘In that (profession) of which I am an humble member there is undoubtedly more of the stimulus which comes from personal collision and triumph. Its contests are dramatic. Its excitements stir the blood. Its successes, sometimes, have the glow and flush of victory in downright strife. It has all that is animating and ennobling in the grapple of mind with mind, the rivalry of skill, experience, and courage, wrestling with courage, experience, and skill. But the triumph dies almost with the struggle, and the reputation of the lawyer who has led his Bar for half a lifetime, is as transitory, nearly, as the echoes of his voice. He contributes little or nothing to the stock of human knowledge. He has given himself to the study and application of a science—if indeed it be a science—which as often deals with artificial principles and dogmas as with great, abiding truths. In grasping at the philosophy of jurisprudence he is fettered, even in this day and generation, by precedents of scholastic absurdity which date back before the Wars of the Roses, and by statutes the very records of which were lost before the Reformation. The scientific aim and effort of his professional life is simply to show that ‘thus it is written.’

This reflection has, doubtless, frequently occurred to the mind, and weighed on the spirit, of the author of the Address before us; for, unless we are greatly mistaken, a man with his tastes, and genius, and generous aspirations, must have found the legal profession, in spite of the eminence he has attained to therein, a sort of imprisonment for life.

We beg the reader will not infer, either from our unqualified eulogy or from our silence, that we are prepared to subscribe to every important opinion or sentiment in the admirable Address of Mr. Wallis.

20.—*HOME PICTURES OF ENGLISH POETS, FOR FIRESIDE AND SCHOOL-ROOM.* New York: D. Appleton & Company. 1869.

A happy idea happily executed, is the little book before us. The design to 'interest the young' in 'our best English Poets, from old Father Chaucer to the short-lived Burns,' is carried out by 'making a story, as well as a lesson', of the life of each of the Poets. The story, or the biographical sketch, is so well and so pleasantly written, that it cannot fail to interest every intelligent young reader, as well as furnish his mind with valuable information respecting the works of the poet. We shall certainly introduce this little volume both to the 'fireside and the school-room.'

21.—*THE LILY OF THE VALLEY; OR, MARGIE AND I; AND OTHER POEMS.* By Amy Gray. Baltimore: Kelly & Piet 1868.

We have just read, for the first time, these 'poems of the affections', as Wordsworth would call them. If we may judge from her writings, there has seldom ever been a more gentle, loving, or unpretending disposition, than that of Amy Gray, in whose heart of hearts these little poems have evidently sung themselves into life, with little consciousness of the external world, or of her own existence. Amy Gray is, indeed, to use a happy phrase of old Chaucer, 'as simple as bird in bower.' No fierce passions, and no spasmodic energies, appear in her poetical effusions. She simply carols out the heart within her, and its pure affections, without once straining after effect, or ever thinking of the effect she is likely to produce. Hence, her song is all in vain, and worse than in vain, except for those who have hearts in unison with her own. The flinty nature will not feel it; but wherever in the heart, either of man or woman, there is an Amy Gray, it will be heard with pleasure.

'The object of the publication of these Poems', we are told in the Preface, 'and in view of which most of them were written, is to aid in the education of destitute little girls of the South, orphaned by the late war.' Now, we are no be-

lievers in poetry, or in any other work of art, which is produced from any motive outside of itself, or the pure love of the art. But it would be unjust to the author to infer, from the above statement, that her poems were composed, not from the pure love of song, but only from a motive of benevolence. Her poems were, as she says, written out and published with a view to 'aid destitute little girls of the South, orphaned by the late war;' but, as is evident, they were not originally composed, or sung in her soul, for any such purpose, however holy and humane. The dedication of her poems, as well as the object for which they were written out and published, shows that Amy Gray carried in her woman's heart, not only 'dear little Julia Jackson', but also 'all the little ones of the South, who have been orphaned by the late war.' This may not be poetry, if you please; it is certainly something infinitely better than poetry. It is the very stuff of which the music of heaven itself is made.

'The author cannot hope', she says, 'for more than a mite, from so small a volume—the production, too, of an unknown writer; but the proceeds, whatever they may be, will be unreservedly appropriated to the object above named. To an intelligent and generous reading public, the author confides this little work, feeling sure that their generosity will secure for it a patronage that its intrinsic merit cannot hope to obtain.'

How modestly these little poems put themselves forth! They remind one of the mountain daisy,—'Wee, modest, crimson-tipped, flower',—and we turn aside the critic's ruthless ploughshare. But even in our most flinty mood as critics, we cannot believe that where there is so much modesty, there is no real merit. These poems are, indeed, entitled to the patronage of the public, on the ground of their intrinsic merit alone. The readers of Shakspeare, and Milton, and Byron, may despise such poems; but the great world we live in, contains material as precious as the readers of Shakspeare, and Milton, and Byron. The 'little ones of the South', for whose benefit these poems were published, are entitled to their poetry as well as their prose; and for these little ones our good Amy Gray has provided a rich repast. We have made the experiment, and found

it so. In everything which has been written about poetry, we are informed that 'the poet is a creator'; and this information is no doubt profoundly true. But, then, it is hardly fair to judge Amy Gray, as if she had set herself up for a poet in this exalted sense of the word, or as a rival of Homer, or Milton, or Shakspeare, or Scott. Yet it will be difficult to find in the productions of these proud 'creators', a more lovely picture of all that is pure, and gentle, and tender, in the love of two 'maidens for each other', than we have in *The Lily of the Valley; or, Margie and I*. The imagination of the poet has its roots in this love; and it blossoms in words like these:

Then touching his charger of gray,
 In a moment he sped away;
 Yet I saw the tender light in his eye,
 Caught a glimpse of the cap that he waved on high;
 And as I heard her low, soft sigh,
 As her gentle heart was stirr'd
 By the last fond, parting word,
 I drew to my bosom our poor, lone bird.

Margie was young and fair;
 And the locks of her silken hair
 Seemed a flood of golden sunlight, shed
 From smiling Heaven on her drooping head;
 While the hue of her beaming eye
 Seemed borrow'd from the sky;
 And the lilies and roses played hide and go seek
 On the pensive brow and the rounded cheek,
 And the quivering lips that essay'd to speak
 Their tremulous good-bye.

The line, 'I drew to my bosom *our poor, lone bird*', seems to us touching and tender. We have, at least two or three times in the course of a long life, seen hair exactly like Margie's; and yet we cannot remember, that we have ever seen it more perfectly or more poetically described, than it is in the last of the above stanzas.

'The Broken Chord' is, it seems to us, the best poem in the volume. To form a just idea of this poem, it is necessary to read the whole of it from beginning to end; to see of whom the family circle was composed, and how they 'used to sing the Evening Hymn'; how, one by one, 'each music-tone was still'd', by death in various forms, till the Evening Hymn could no longer get itself sung in that once happy, but now desolate, household. We shall merely add a few extracts:

Our Charley, 'mid the battle's roar,
 In youth's full flush of pride,
 Fell, in the thickest of the fight,
 Where many a hero died.

The *Cause* has fallen too; but I
 Had rather know that he
 Was sleeping 'mid those *honored dead*,
 Than have him *here* with me.

No banner, floating to the breeze,
 Above his sod may wave;
 Yet not a *Southern heart* but feels
 It is a *patriot's* grave.

* * * * *

Our mother bowed her gentle head
 Beneath the waves of care;
 And now, her blessed, weary feet
 Have reached a home more fair:

And I am glad that she has gone
 Where sorrow is unknown,
 Although she left my shadow'd life
 More desolate and lone.

The little one, with golden locks,
 Born for the sunshine bright,
 Droop'd her young head beneath the shade
 Of Sorrow's chilling night.

'Twas in the autumn of the year,
 When Nature sets on fire
 Her forests with a magic torch,
 In glory to expire.

I felt, as all the autumnal glow
 Charm'd my admiring eye,
 If Nature lives in beauty, oh!
 She does know how to die!

* * * * *

Yes, thus it was that, one by one,
 Each music-tone was still'd:—
 Hush'd are the softest, sweetest notes
 That once our spirits thrill'd.

The servants now are scattered far
 O'er many a distant plain;
 The bell will summon them no more
 To evening prayer again.

Now, when the evening shadows come,
 And Nel begins to weep,
 Old Mammy folds her in her arms
 And hushes her to sleep.

She is a little fragile flower,
 Upon whose drooping head,
 No warmth nor brightness from the Sun
 Of Joy is ever shed.

She hears no brother's gleeful laugh;
 No playmates gay has she;
 No sisters dear to pet and kiss,
 Excepting only *me*.

No mother's kiss, at morn or night,
Is ever to her given ;
And she is yet too small to learn
How bright it is in Heaven.

Though nightly, Mammy softly smooths
The little curly head,
And whispers, ' Blessings on my pet ;
Good angels guard her led.'—

Those dear, rough hands ! how many paths
They have with sweet flowers strown !
And all their noble acts of love,
The world has never known.

How many little feet they've turned,
With such a tender care,
From dangerous ways, to pleasant paths,
With sunshine everywhere !

In after years, when fair young heads
Were tired, and longed for rest,
'Twas those dear hands that pillow'd them
So gently on her breast.

O Mammy ! friend of better days !—
And just as true in sorrow !—
What you are, Mammy dear, to-day,
We know you'll be, to-morrow.

O Mammy ! your dark, wrinkled face
Is dearer far to me,
Than if it was the fairest thing
The eye could ever see.

For it is like a faded page
Of dear old, well-read lore,
Where oft we find a beauty that
We never saw before.

In spite of artistic defects, which a severe critic might point out in the poems before us, they show, that Amy Gray is a poet, and should cultivate the gift that is in her. If she had never written anything beside *The Broken Chord*, she would have proved herself a poet; and, *as such*, worthy of her woman's mission to 'the little ones of the South.'

22.—ESSAYS AND LECTURES; on 1. The Early History of Maryland; 2. Mexico and Mexican Affairs; 3. A Mexican Campaign; 4. Homœopathy; 5. Elements of Hygiene; 6. Health and Happiness. By Richard McSherry, M. D., Professor of Principles and Practice of Medicine, University of Maryland. Baltimore: Kelly, Piet & Company. 1869.

Essays on subjects of such interest as the above, and from the pen of so learned, accomplished, and discriminating a scholar as Dr. McSherry, can hardly fail to be read by others, as they have been read by ourselves, with both profit and pleasure.

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