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ART. I .- ON RELIGIOUS JOY.

DIFFERENT ages of the church have been marked by a different cast of religious feeling. At some periods, christians have been more active and more joyful in the service of Christ; at other periods they have been led to retire more within themselves, and a gloomier cast of piety has generally prevailed. Every great revival of religion, however, has been an era of light and joy among the followers of Christ, not only increasing the piety of the church, but imparting to it a brighter and more animated aspect. Such was the fact, at the first outpouring of the Spirit in the days of the apostles, at the period of the reformation, and in the days of Edwards and Whitfield; and such, to a considerable extent, is the case at the present time. During the intervals between these periods of light and joy, the piety of the church has worn a less animated and happy aspect. This was particularly the case during the middle ages, when, from the force of peculiar circumstances, the remaining piety of the times assumed a gloomy, ascetic and rigorous character. That character wore off again as true religion revived, and the contemplative piety of the monastery and the cell, gave place to the more active and benevolent spirit of the gospel. In our day, so happily characterized by revivals, and by the various movements of christian benevolence, the people of God are beginning to exhibit a more cheerful cast of piety. In this respect, however, there is room for great improvement, and we are convinced that a purer and more elevated joy will yet diffuse itself through the bosom of the church, as the vital influence of the gospel shall be more and more felt. We have, therefore, thought proper to devote a few pages to this subject, and shall endeavor to show, that the spirit of true religion is, pre-eminently, a joyful Vol. IV.

your King? Is it your wish to see the tokens of his displeasure which in some respects are now manifest, succeeded by a brighter sunshine of peace and prosperity to his cause? Then be at once cheerful and unreserved in your devotedness to that cause. Pray with the confidence of strong hope. Give with a large, generous and joyful heart. Labor for Christ under the promptings of unwearied love for him and for his cause. Let your piety be seen by all to be a perennial fountain of peace and joy to your own soul, under the various appointments of divine providence here. Be happy christians. Exemplify in this and in every respect the genuine spirit of the gospel. Be like your divine master, in the purity, simplicity, and joyfulness, with which you devote yourselves to the service of mankind. Bring more of his serene and happy spirit into your work. Anticipate the felicities of heaven here below. Show that the church on earth and the church in heaven, are one body, in the nature of their joys, as truly as in the kind of obligations and duties which devolve upon them. short, strive to bring more of heaven down to earth, and to elevate the church below nearer to the church above, in the peace and comfort, the humble assurance and holy joy, the love of God and the love of souls, with which your piety shall be distinguished.

ART. II.—THE WORKS OF LORD BACON.

The Works of Lord Bacon. Four vols. Fol. London: 1730.

The connection between philosophy and theology has been felt and acknowledged in all ages. Most christians have deplored the influence of the former upon the latter; but even those who have been loudest in their complaints, and strongest in their expressions of grief on this account, have given often the most melancholy proofs of this very influence. In view of this long and intimate union, however, and of the fact that philosophy may take its complexion from religion, as well as religion from philosophy, it becomes a question of no ordinary interest, whether God did not intend that the one should be perpetually a check upon the other? Did he not design that the strange tendency in philosophic minds to preverseness, pride, and atheism, should be continually restrained by the overawing influence of the proofs of religion every where present? And did he not intend also, that the vagaries of the human mind in religion, the romance and knighterrantry of theology—the tendency to fanaticism, and dogmatism, and mysticism, should be held in check by the influence of common sense, the knowledge of the true laws of mind, and the investigations of science from age to age? The relation of the sciences—the vinculum commune between them, was long ago remarked by Cicero. The mutual influence of modern sciences on each other, and of all on religion, is a much more important

inquiry to a christian.

We have neither the time nor ability to enter into a full investigation of this subject. Nor indeed do we conceive that a detailed inquiry would so effectually answer the end we have proposed to ourselves in our work, as some other mode. To meet the demands of the present state of theological science, and to turn theological inquiries to the best practical account, it is not necessary in our view to proceed into much actual detail. We address ourselves to an age of inquiry. We speak in our pages to those who we believe are qualified, and are disposed, to think for themselves. We contemplate the existence of no barriers to investigation; no fetters to free inquiry; no want of diligence or disposition to follow out any train of thought, which may be suggested for practical It is our province to furnish topics for such inquiries; and the design which we have in view in our labors in the Christian Spectator, will not have been accomplished unless we have laid the foundation for investigation, and for active christian effort, long after our humble labors on earth have closed.

It is under the influence of reflections like these, that we wish to call the attention of our readers to the works of Lord Bacon. Our object will be accomplished if we can briefly exhibit his character; and can state the influence of his writings on science, and the kind of influence which the inductive philosophy is desti-

ned to exert particularly on the science of theology.

"For my name and memory," said Bacon in his will, "I leave them to men's charitable speeches, and to foreign nations, and to the next ages." The reason of a part of this remarkable bequest is to be found in the melancholy fall of this illustrious man, to which we shall have occasion again to advert. In the close of the bequest-the legacy of his name to future times-we discover proofs of the same consciousness of immortality that prompted Milton to compose a work that the world "should not willingly let die." Yet more than two centuries have passed away, and we have as yet no well written biography of this greatest of British philosophers. Till within a year, indeed, we had nothing that deserved to be called a life of Newton. Still it is not a little remarkable, that no one, prompted either by fame or usefulness, has presented to us a biography of such a man as Bacon. the whole range of literature there is not a finer unoccupied field, than would be presented in the attempt to give the public a well written account of the author of the Novum Organum; of the 67

Vol. IV.

state of science at the time he lived, and of his influence on the interests of science, of literature, and of religion. Yet perhaps we shall ever be compelled to regret in regard to him,—a thing by no means uncommon in biography—that of his peculiar habits of life, his changes of opinion, the progress of his discoveries, and their immediate influence on men, we are to know nothing but a few most meager facts which have been rescued from oblivion.

There is another remark which we are here compelled to make respecting the works of Bacon. Few modern scholars, we fear, are acquainted with them—even with the Novum Organum. The study of them requires more time, patience, industry, perhaps conscience, than most men of modern habits are willing to appropriate to them. Bacon is regarded as belonging to a distant age and to long past times, and though his name is in every one's mouth, and his praises in all nations, yet how few are there who could give an intelligent account of his principles of philosophy? How few theologians, we are compelled to ask, have ever looked for a moment at the Novum Organum? Yet we are aware of its difficulty; and we are not disposed to utter the language of complaint against the men of our own times. We are convinced that though our generation should not sit down to the formal perusal and study of this profound work, yet there has gone forth from it an influence which reaches our age, and that we are, though unconsciously, reaping its benefits, as the Nile long shed fertility on the fields of Egypt, while the source of its waters was unknown; and as the rain and light of heaven diffuse. their influence over the earth, while that influence may be unnoticed or forgotten. It has been asked with emphasis, "who now reads the Rambler?" And it is indubitable that this book, which once exerted so mighty an influence on the English language and people has given place, at least in general reading, to works of far inferior merit and interest. The reason seems to be, that its object is well nigh accomplished. It commenced with a standard of morals and language elevated far above the prevailing style of morals and of writing. It has elevated both, and has brought the English language and notions of morality, to its own level. Nor is it wonderful that men should regard with less interest a work which now is seen to have no very extraordinary elevation. It is a component part of English literature having fixed itself in the language, the style, and the morals of the English people, and taken its place as an integral and almost undistinguished part of the national principles of writing and moral-The result is, that while the benefits of the Rambler may be diffusing themselves, unperceived, to almost all the endearments of the fireside, and virtues of the community, the book itself may be

very imperfectly known, and unfrequently perused. Johnson may be almost forgotten, except in praise; but his mighty power is yet sending forth a mild influence over lands and seas, like the gentle movements of the dew and the sunbeam. The same is true of Bacon. He has incorporated himself into all our science. He has imbedded his principles in the very foundation of all our improvements in astronomy, natural philosophy, and chimistry, and to a great extent, of mental science and theology. It is related of Phidias that in constructing the statue of Minerva at Athens, he so wrought his own image into her shield, that it could not be removed without destroying the statue. Thus Johnson has wrought himself into our language and morals:—and Bacon into our science. We have often endeavored to follow out the effect of his labors, by taking our present science and literature, and endeavoring to go back and remove step by step, year by year, and age by age, all that may have resulted from the influence of the "instauration of learning," by Bacon.—No one can be aware of what he owes to that man, who is not able to thread all these mazes, and to trace all the unseen progress of his principles that have thus found their way, though from an unknown benefactor, into English science and literature.

The leading facts of Bacon's life are soon told. He was born on the 22d day of January, 1560. At an early age he graduated at Cambridge, and after having traveled for some time on the continent, became a student at law; and was at the usual period admitted to practice. During the reign of Elizabeth, in consequence of having rivals and enemies at court, he was either overlooked, or purposely prevented from obtaining offices of standing and honor. This period of his life was passed chiefly in the practice of the law; in writing some treatises on jurisprudence; and in preparation for the more elevated offices in the government, which he afterwards filled, and the more important advances in the sciences which he was destined ultimately to make. But though he was thus neglected by Elizabeth, and undistinguished by any external and substantial marks of her favor, yet he was often admitted as her counselor, and enjoyed to a considerable degree her confidence. On the accession of James I., Bacon advanced rapidly through various offices in the gift of the crown. Of James he says in a letter to him, that "he had raised and advanced him nine times; thrice in dignity, and six times in office. He was successively counselor extraordinary to his majesty; king's solicitor general; attorney general; counselor of state; lord keeper of the great seal, and lord chancellor. From this last office he was degraded for corruption, after having held it two years, and devoted the remainder of his life to the pursuits of philosophy. During this period of four years, his principal philosophical works were written. He died on the 9th of April, 1636.

There is little pertaining to the early life and actions of this illustrious man, on which we wish to offer any remarks. Indeed, it would be difficult to present to our readers any thing like a just biography of his early years. There are no memorials of those years; no records of his mode of study, and his advances in science; of his changes of views, and his projects of ambition: nothing that will acquaint us with the manner by which his mind was trained to the amazing stature which it afterwards obtained. Nothing could be more interesting or useful, than to follow out the development of such an intellect, and to trace the influence of external causes, and internal principles and emotions, in framing a character whose influence has been already felt in all the departments of science and of morals. But we are doomed to sigh unavailingly over the lamentable defects of the biography of illustrious men. One hint only is recorded which sheds some light on the development of his early powers. It is said of him that at the early age of sixteen years, while at the university, "he fell into the dislike of the philosophy of Aristotle; not for the worthlessness of the author, to whom he would ever ascribe all high attributes, but for the unfruitfulness of the way, being a philosophy only strong for contentions and disputations, but barren of the productions of works for the benefit of the life of man." time when the philosophy of Aristotle was enthroned in the universities of Europe; when his decision was law in all the investigations of philosophy; when for almost two thousand years he had swayed an undisputed scepter over all that part of the world which claimed to be civilized, it was no slight indication of independence of mind even to doubt the infallibility of his decisions. and no unpromising omen of the advance which was afterwards to be made by him in the sciences. Aristotle and Bacon now stand at the head of the two great sects of philosophers that have divided mankind. It was the high honor of the one, that mankind for ages vielded their heads and hearts to his decisions, and bowed to his authority. It was the unrivaled glory of the other, that he displaced him from his proud elevation, and introduced a new method of investigating truth, that has forever broken the scepter which the philosopher of Greece so long swayed over mankind.

It is not our purpose to offer any remarks on the character of Bacon as a lawyer. He was the rival of Coke; and it is not easy to estimate which of the two was the more eminent man in this department of human science. Had Bacon confined his researches to that which seems to have limited the ambition of Coke, it would be a matter of more moment to institute the com-

The admirers of legal attainments might then delight to inquire, which of these two men was entitled to the highest honors of his profession. But the name of Bacon naturally suggests to us far different attainments from those which adorned the bar or the bench. We forget the robes of the lawyer, and the dignity of the ermine. The advocate, the counselor, the chancellor, the titles of nobility are lost in the profound attainments of the man of science, and the restorer of learning. We may just remark, however, that the united testimony of Bacon's contemporaries, award to him the highest attainments as a lawyer, and a full, rich, and flowing eloquence, that placed him deservedly beside the Roman pleader; and that while he was speaking "the only fear was lest he should make an end." Of the correctness of his legal opinions and decisions, as chancellor, we have the highest proof that has ever been furnished in any case. Though he was accused and convicted of receiving bribes; though he confessed the crime, and was sentenced to a heavy penalty; and though some were given pendente lite, and probably with the express intention on the part of those who offered them, to influence his decision in their favor, yet it is recorded to his lasting honor, and it comes to us as a solace, when we think of the fate of this illustrious man, that not one of his decisions was reversed or called in question as unjust.

Bacon was not only a man of profound legal attainments, but was also eminent in the various departments of general literature. With the classic purity and elegance of his Latin style, every man must be struck who has read the Novum Organum. But we feel more interest in remarking, that there is no where to be found a better exhibition of the power of the English Language, than in his prose writings. For manliness, and strength; for purity and occasional elegance of diction; for copious and varied illustrations; for terseness, compactness, and the absence of all expletives, and the use of such words and phrases as leave the thought clear and transparent to the view, we know not where there can be found better models than his Essays. and flowing than Milton; less dense and compact, perhaps, than Butler; less filled with varied imagery, and the creations of fancy, than Taylor; less argumentative and stately, it may be, than Barrow; and less majestic and pompous than Johnson, he had yet in a rare union, what we most admire in all. He has placed on his pages, in wonderful combination, those excellencies of style which have given immortality to so many other And if any one wishes to understand the beauty and force of the English language, we know not how he can better do so, than by becoming familiar with the writings of this illustrious man.

Nor was his excellence in this respect, apparently, a matter of particular study. His mind was full of thought, and he gave utterance to his thoughts in pure and majestic English, that makes us love our language more, and exult in the possession of so noble a medium of conveying the loftiest conceptions and the most

enlarged philosophy to mankind.

But it is not as a lawyer, or a man of literature, that we wish now to contemplate this illustrious man. We wish to look at the influence of his philosophy on that holy cause to which our pages are consecrated. We believe that this influence has gone far, and is destined to go still farther into all the departments of christian theology. We believe it is inevitable that the prevailing philosophy shall exert a wide influence over the theology of our age. We do not doubt that it ought to do so. Not that it is to control the bible, or set aside its decisions; but that it is to hold in check certain vagaries of the human mind, which bigots, and zealots, and theological antiquarians would persuade us are conformed not only to the tradition of the elders, but to the testimony of the scriptures themselves. There is a wonderful charm to many minds in a theological dogma, where it can be pretended that it has been held "time whereof the memory of man runneth not to the contrary." And there is a marvelous shrinking, and expression of abhorrence, when philosophical dogma is summoned to meet dogma, and the rules of a correct philosophy are employed to uncanonize and dethrone these elements of ecclesiastical tyranny. Our remarks then are designed to lead to a just estimate of the influence of the philosophy of Bacon, on the science of Europe; of his religious character; of the applicability of his philosophy to theology; and the effect which would be produced by an unsparing application of those principles to the theology of modern times.

We do not deem it necessary to enter at large into the inquiry about the state of science when Bacon wrote his Novum Organum. There are two great departments of knowledge on which such a mind would act—the one pertaining to the physical sciences, the other embracing the vast department comprehended under the general term of metaphysics. We have given a full statement of the condition of the latter when we say, that this entire department was, till the time of Bacon, under the influence of the philosophy of Aristotle.* He reigned in the schools; he controlled the



[&]quot;"Towards the close of the fifth century, the influence of Aristotle began to prevail over that of Plato, in the christian world. After considerably declining in the sixth century, it again revived; and in another century it had gained such an ascendancy, that Aristotle seems every where to have been triumphant.

systems recorded in the books; he fixed the metes and bounds of inquiry; he swayed a scepter over the entire invisible world, into which man might be disposed to push his investigations. More than all, this philosophy had incorporated itself with all the religious dogmas of Europe, and was imposed on the belief of men with all the sanctions of the most terrific and iron-featured superstition that has ever extended a scepter of night over the world. During centuries of darkness this system had been compacted, and with infinite toil of profound metaphysicians had received its shape,

- " If shape it might be called, that shape had none
- "Distinguishable in member, joint, or limb;
 "Or substance might be called that shadow seemed."

It is common now, to speak of the system with contempt. We despise it because it has passed out of view, and we deem it not worth inquiry. We look on it as we do on desert sands which we are not bound to traverse; and on dark and pestilential and frightful abodes, which we are afraid to enter. But they who have looked at the system are the last to hold it in contempt as an effort of profound and subtle argumentation; and the last to wonder that it exerted such an amazing influence on mankind. We have only to remember that it required the best part of a man's life to become acquainted with the dialectics of Aristotle and his commentators; that it was deemed indispensable to education to be master of the philosophy of the schools; that it was linked by a thousand ties to the reigning superstition; that the colossal power of the Roman see, was sustained chiefly by the prevalence of this philosophy; and that to doubt the dogmas of that superstition, and of course the philosophy of Aristotle, subjected a man to the horrors of the inquisition,—and we shall cease to wonder that it so long swayed its scepter over mankind.

The reformation had made an incipient aggression on the authority of the Stagyrite, at the same time that the reformers had defied the thunders of the Vatican. But no mighty genius had

Glosses, raraphrases, summaries, arguments, and dissertations on his works, were composed without end, as if to make darkness visible. Many of theinhabitants of the West learned Arabic, in order to read a translation of them into that language. Men were every where taught to believe in matter, form, and privation, as the origin of all things; that the heavens were self-existent, incorruptible, and unchangeable; and that all the stars were whirled around the earth in solid orbs. Arisotle's works were the great text book of knowledge, and his logic was the only weapon of truth. Christians, Jews, and Mahometans, united in professing assent to the great law-giver of human opinions; not Europo alone, but also Africa and Asia, acknowledged his dominion; and while his Greek originals were studied at Paris, translations were read in Persia and Samarcand."—Brougham's account of Bacon's Novum Organum.

yet arisen who was competent to strike an effectual blow at its colossal power. It was reserved for Bacon to put an end forever to the system, and to introduce a method of inquiry, which was to annihilate the dominion of Aristotle. At the early age of sixteen, as we have seen, he called in question the correctness of this mode of investigation; and his philosophical life was little more than an effort to rescue the world from the protracted tyranny, and to lay the foundations of a nobler method of inquiry.

It will be recollected, that the difference between Aristotle and Bacon, related to the proper mode of investigating truth. The philosophy of the schools dealt in abstractions. It did not look at facts, but at theories; not at visible and tangible realities, but at fancied essences; not at the world as it is, but at an ideal world; not at things which God had formed, but at the creations of a subtle and refined philosophy, which age after age had labored to reduce to consistency and to form. The designs and labors of the schoolmen, we cannot better present than in the words of Bacon.

Surely like as many substances in nature which are solid, and do putrify and corrupt worms; so it is the property of good and sound knowledge to putrify, and dissolve into a number of subtle, unwholesome, and (as I may term them) vermiculate questions which indeed have a kind of quickness, and life of spirit, but no soundness of matter, or goodness of quality. This kind of dogmatic learning did chiefly reign among the school-men, who having sharp and strong wits, and abundance of leisure, and little variety of reading, but their wits being shut up in the cells of a few authors, (chiefly Aristotle their dictator) as their persons were shut up in the cells of monasteries and colleges, and knowing little history either of nature or time, did out of no great quantity of matter and infinite agitation of wit, spin out into those laborious webs of learning which are extant in their books. For the wit and mind of man, if it work upon matter, which is the contemplation of the creatures of God, worketh according to the stuff, and is limited thereby; but If it work upon itself, as the spider worketh his web, then it is endless, and brings forth indeed cobwebs of learning, admirable for the thread and work, but of no substance and profit."—Advancement of Learning, vol. ii. p. 423.

Yet in regard to their talent Bacon renders them the following just acknowledgment.

Notwithstanding, certain it is, that if the school-men, to their great thirst of truth and unwearied travel of wit, had joined variety and universality of reading and contemplation, they had proved excellent lights, to the great advancement of all learning and knowledge; but as they are, they are great undertakers indeed, and fierce with dark seeking. But as in the inquiry of the divine truth, their pride inclined them to leave the oracle of God's word, and to varnish in the mixture of their own inventions; so in the inquisition of nature, they ever left the oracle of God's works, and adored the deceiving and deformed images, which the unequal mirror of their own minds, or a few received authers or principles did represent unto them. Vol. ii. p. 429.

One can scarcely help reflecting here, what an amazing advance the unwearied toils of the schoolmen might have made, had their efforts been directed by some such work as the Novum Organum. Had the profound talent of Duns Scotus been employed on the works of nature, or in investigating the properties of mind in any useful way, it is possible that we might never have heard the names of Bacon, Locke, or Newton, or have heard of them only as carrying the discoveries of science far into the regions that are now untrodden by living men, and clothed to human view in the shades of profound and "ever during darkness."

We do not deem it necessary to dwell on the state of science in Europe when Bacon lived. We have not room to do it. Those who wish for detail on this subject—perhaps the most interesting that the history of mind and opinions furnishes—will find it in the works which have, in modern times, attempted to establish just views of mental and moral science. Reid and Stewart have

presented this in ample detail.

The grand achievement of Bacon was to break the power of this despotism over the mind. To this work no small part of his active life was devoted. In the midst of the toils of office and of law, while seeking for preferement at the feet of his sovereign, (for this was the grand foible of this illustrious man,) and while discharging the duties of a profession which at all times has been deemed enough to occupy the time and energies of the profoundest and most active minds, did this distinguished lawyer lay the foundation of that system on which now rests his fame. He then conceived and digested the plan of his great work on the Advancement of Learning; and he had so looked over the field of human science, so estimated its defects and its wants; and so contemplated the objects at which science should aim, that nothing was needed but a few years of leisure, to establish principles which should ultimately change the entire aspect of human science and opinions.

It is to one of those strange and mysterious events, which we are perpetually called upon to deplore in the history of man, that we owe the accomplishment of this great design. While making these preparations, Bacon was in the enjoyment of offices and preferments that would have satisfied any man of moderate ambition. But he sought a seat near the ear of majesty, and aspired to the highest offices to which a British subject can be elevated. He obtained his wishes; James advanced him to the dignity of lord chancellor, and conferred on him the keeping of the great seal of England. Had his life been spent in the duties of that high office. it is probable that his name would have been known to us, if at all, only in British heraldry, or in the books and records of jurisprudence. But this illustrious man, to use an expression applied by the profligate Horace Walpole to every man, "had his price;" and in two years the chancellor of Great Britain was degraded Vol. IV. 68

from his office; fined to the amount of fifty thousand pounds; sentenced to be imprisoned at the king's pleasure; and forever excluded from holding any office under the British government. Of the justice of this sentence, which, so far as the fine and imprisonment were concerned, was soon remitted—no one ever entertained a doubt. Of the nature of the offense, and the influence which it should have in forming an estimate of his character, we shall have occasion to speak in the course of this article.

After a fall like this, most men would have abandoned every effort; and sunk in hopeless despondency, would have blushed to give publicity to their names even by the most splendid discoveries of science. After such a fall most of the ancients would have put a period to their lives. Cato fell by his own hand, unaccused of the crime that dishonors the name of Bacon; and Cassius sought his own death amid misfortunes that to a sensitive mind would have been less overwhelming, than was this degradation to the chancellor of England. But it was here, that the nobleness, and we hope the religion also, of this illustrious man, triumphed. He gave himself not up to despondency. He laid aside the insignia of office, and sought honors beyond what the courts or cabinets of kings could ever bestow.

After his deposition from office, Bacon lived about five years. The closing years of his life he gave entirely to the pursuits of philosophy, and the perfecting and completing of his great works on science. During this period it does not appear that he ever sighed for the honors which he had once so ardently sought, or that he ever wept over the favors of royalty which he had so ignominiously lost. His great mind sought employment in contemplating the advances which science might make, and in laying the foundation for those astonishing improvements which science in all its departments has since made.

The principles of the inductive philosophy, which Bacon reduced to a system, if he did not originate, are easily told and easily understood. To us therefore at the present day, it is not very easy to understand why the establishment of such a system should have given to him a celebrity which surpasses all that had before been regarded as great among men. To understand it, it would be necessary to go back to the early periods of science, to watch its slow advances, to look at the mistakes which have been made in all the eras of philosophy. At every step, we should pause and wonder, that the obvious principles of the inductive method should not sooner have presented themselves to men. At almost every step we should see philosophy approaching the very principles of the Novum Organum; we should see men half disposed to leave the trammels of theories, and to go forth in the manliness of just phi-

losophic inquiry to look at nature as she is; and at every step we should be amazed that men drew back from these obvious paths of inquiry, and retreated into the dark shades and bewildering paths of abstract speculation. This tendency of the human mind to frame theories, rather than to look at facts, to forsake the obvious and plain paths of inquiry for vain and delusive vagaries, we regard both in the scientific, and theological world, as one of the most remarkable and melancholy perversities of the human intellect, any where presented in the history of the race.

There are but two ways of attempting to understand the works of nature, or of ascertaining the relations and properties of things. One is for the philosopher to sit down in his grove or closet, and attempt to frame in his own mind what nature ought to be; the other to become the interpreter of nature, and to tell the world The one attempts, on the basis of a few facts imperfectly ascertained, isolated in their character, and little understood in their connections, to frame a theory that shall account for all the facts in the world, and to construct a bed of Procrustes to reduce all the theories and facts to the same dimensions: the other approaches the works of creation as the Son of God directed his disciples to come to him, with the spirit of little children, and humbly to sit down at his feet. The former course was the most difficult, the least obvious, and was capable of being made to amaze and confound the intellects of men. It would give the longest and most profound employment to the intellect; would most effectually separate philosophers from other men, and introduce what men of philosophic temperament have commonly sought —the honors of caste;—an elevation above the millions of humbler mortals beneath their feet. This strange obliquity of the human mind we are compelled to trace, country after country, and age after age, in the history of science. It constituted alike the teaching of Aristotle, of Pythagoras, of Plato. The only man in antiquity who seems in any measure to have been free from it.was Socrates; and even his instructions referred almost solely to We are often led to wonder at the little advances which made in antiquity. We go to Egypt the parent of civilization, of learning, and even of art. What has ever been found there, in relation to the sciences, that would entitle her to the very lowest place now in our schools? When we admire the monuments of her power; when we look upon her pyramids, or enter them; or when we wander among the broken columns of Thebes, and are impressed with the proofs of her vast physical power, we are instinctively prompted to pause and ask, where are the monuments of her science? What advances did she ever make in the knowledge of that which could ultimately contribute to the spread

of true knowledge among mankind? Of what use was it to the world to construct her pyramids, her obelisks, her sphynxes, or her labyrinths? The playthings of kings, fit monuments of children or fit tombs of mortals who could seek immortality in them, while the great mass of intellect beneath them groveled in the most revolting idolatry, and only lived to accomplish what we now do

much better by the help of the ox or the steam engine.

We are not less struck with the absence of the plainest principles of science even in Greece and Rome. We do not undervalue classic learning, or wish to banish it from the schools. cannot but be struck with the almost total want in the classic remains of antiquity, of any very valuable explanation of even What a conception far, far bethe more common phenomena. beyond the loftiest thoughts of antiquity, is presented by the simplest truths of modern astronomy? Though this science among the Chaldeans, the Persians, and the Greeks, was that to which most attention had been paid, and on which they would probably have rested their highest claims to celebrity, yet to what did it amount? To a few theories involved, unintelligible, and undemonstrated, about the possible order in the movements of the heavenly bodies; to the formation, with infinite toil and childish care, of pictures of the heavens—arranging the stars into constellations, and giving them outlines, having a fanciful resemblance to some object among animals or reptiles. What was more obvious in the healing art, than to approach the human frame and examine it by dissection? Yet this was never done. What more plain than to collect facts in regard to diseases, and arrange them by patient induction, and from the science of physiology, and the recorded facts, to attempt to cure men? Yet the ancient practice of medicine under Galen and in the entire ancient world, was simply to prevent disease, and not to cure it. By rules of hygiene, and systems of dietetics, they sought to parry and ward off the attack, and were strangers to the art of restoration. One of the most obvious and amazing instances of the want of science in antiquity, related to the simplest laws of hydrostatics. The aqueducts of Jerusalem. of Rome, and of Gaul-of all ancient cities and towns, are probably among the most striking monuments on earth, of an entire ignorance of the most simple laws of science, among people so refined and intelligent as they are acknowledged to have been. amazing has it appeared that one of the simplest laws of hydrostatics should have been unknown to them, that their admirers have sought in vain for some reasons of pride or state, to account for such vast expenditures in supplying their cities with water.

The ancients knew nothing of the present system of arithmetic. The science of numbers among them was exceedingly complica-



ted, and never carried beyond what to us are its simplest elements. They knew nothing of Algebra, and of course nothing of the stupendous calculations to which it has given rise, and nothing of the easy and extended advances which it could give to geometry. They had not learned to simplify profound and laborious calculations by the aid of logarithms, and were utter strangers to fluxions. They had not attained to any just mode of the mensuration of the earth; a matter of so great moment to astronomy, navigation, and commerce. They had not been made acquainted with the mariner's compass; and their navigation was confined to narrow streams, or to the vicinity of the main land. The laws of gravitation were to them unknown; and of course all the science and all the useful arts now dependent on those laws. Nothing can be more complicated or unsatisfactory, than the cycles and epicycles of ancient astronomy, and though in all this, as well as in the labors of Aristotle, we discern proofs of profound talent and indefatigable toil, yet we find also convincing proofs, that we are contemplating there, what Bacon insists should be called the infancy, and not the antiquity of the world.

We are struck with the same thing in the mechanic arts. The application of water, for example, to turn a mill—a thing so obvious to us,—is not known to have been accomplished in Greece, and was not attempted at Rome till near the age of Augustus. The propulsion of the saw by any other power than by the hand, was a novelty in England so late as the sixteenth century. Nothing like the pump—an instrument so obvious to us, was known to any of

the ancient nations.*

These observations might be extended to almost any length. But it is sufficient here to ask of any student of the ancient classics, or any admirer of the ancient philosophy, what valuable fact, or just philosophic theory has he ever found in all the ponderous tomes that have traveled down to us from Greece, and Rome? For what single just theory is he indebted to all the master spirits of the ancient world? We have often been amazed at the slow advances which science made. With all that we admire in the acuteness of their intellect, the richness and splendor of their diction, the profoundness of their moral sayings, the grandeur of their military achievements, and the unrivaled beauty of their specimens of art, we have still seen that there was some mighty spell over all their attempts at science, there was some spirit of darkness that blasted all their efforts, and withered their energies, and completely stayed their advances in the march to those high attainments which

[&]quot;Webster's Lecture before the Mechanics' Institution.

now so dignify and ennoble man. We know no reason for this but the dominion which a love of theory had gained in all the nations of antiquity. We see there the first movements of that despotism which was destined to reign over Europe for many centuries, and to bury at last in one common grave just mental philosophy, large and liberal views, national freedom, and refinement, as well as to stay all advances in science and the arts.

We might also extend these remarks to other nations, and we should find the same fondness for theory extending itself, and spreading a baleful influence over all the efforts of science and of It is customary to acknowledge with gratitude our obligations to Arabia for some of the most important advances in science, particularly in the science of chimistry. It is not our wish to lessen this feeling of gratitude. But we cannot withhold the expression of our regret, that the principles of the philosophy of induction were unknown to the Arabians. Even in that land, so remote for a long time from the influence of the Aristotelian philosophy, we discern traces of the same unhappy tendency first to construct a theory, and then examine nature to establish it. The Arabian assumed that all metals might be transmuted into gold. He framed a theory that all metallic substances could be traced to a single basis, and that the purest metals could be produced from the least valuable. Nature was subjected to the torture, to establish this theory; and the discoveries which were actually made, were the result of accident, and made not because they were sought, but because in the endless investigations which were set on foot, it was impossible that they should entirely escape notice. It was assumed that there was somewhere an elixir of life, a universal preventive of disease, and prolonger of life. To discover this, was the object of the toil of centuries. It of course failed; but in the vain and Quixotic effort, many important facts could not but force themselves on the attention of mankind. What would not half the talent and skill expended in these vain and fruitless pursuits, have produced under a happier and wiser system of philosophy? It is needless for us to dwell on the unhappy influence of the philosophy of Aristotle, during the middle ages. There never has been so long and unbroken a spell over the energies of mankind. as during that dismal period. The hu:nan mind has no where else exhibited so remarkable a perversity; nor is there any where to be found so sad a commentary on the influence of a false philosophy. Age after age was employed in compacting and digesting the dark and terrible system. As it came from the hand of Aristotle, it had much to command admiration. It was to appearance a harmless system. Had it remained in Greece it would not probably have greatly fettered the minds of men, or retarded

the progress of science. The truth is, that the philosophy of Plato, and Aristotle, and Pythagoras, did not much affect the common mind. It was understood to be adapted only to the grove and the Lyceum. The great mass of mind was to be unaffected by it; and we do not know that the majority of the Greek population was influenced at all, by all the labors of those illustrious But during the rise of the papal dominion in Europe, it became indispensable that some system of philosophy should be at the control of the priesthood, that would extend and prolong the shades of darkness as far as the scepter of the papal power could be made to extend. Some scheme was necessary that should repress investigation, that should convince mankind that all wisdom, as well as power, was located near the Vatican; and that should effectually fetter and bind the human faculties, and stay for ages the advance of thought. The grand thing needed, to give ascendancy and stability to the papacy, was some system that should treat inquiry as constructive heresy, and brand novelty of opinion as dangerous to the purity and power of the church. Had this been left to the invention of the friends of the rising spiritual tyranny, we believe that there was not cunning or talent enough among all the adored and canonized fathers of the church, to have devised any effectual scheme. But the work was made ready to their hands, long before even the coming of Christ. The scheme had been framed by one of the profoundest minds that ever approached the topics of human inquiry. Nothing more was wanting effectually to confirm the aspirations of the papacy, to repress inquiry; to chain the mind down to ignorance; to prepare it for all the legends, and fooleries of the monastic life, and to fit it to receive all the claims of the papal power, than to give such a direction to the philosophy of the Stagyrite, as to adapt it to the common mind, and bestow on it all the tremendous sanctions of religion. was done. Its reign was secured, and when we see what it was expected to accomplish by it, we cease to wonder that it should call forth the profound talents of such men as Duns Scotus, and even the devoted piety of Thomas Aguinas. When these shades were stretched over the church; when it was understood that this withering philosophy was to attend the dogmas of the papal see, we cease to wonder at its long and gloomy reign. It was sustained by the mightiest talents then on earth; it was urged forward by all the learning that lingered in the monastic cells; by all the achievements of the papal arms; by all the mighty power of religious principle when misdirected; by the energies of a dark and dismal superstition; and finally, by all the terrors of the inquisition, and the flames of persecution. Every engine of cruelty in the Spanish dungeons, tended to confirm the reign of Aristotle;

and every flame kindled in the valleys of Switzerland, was designed to confirm and prolong the dark and gloomy domination. It became necessary to fetter and bind all the faculties of the soul. Scientific investigations would, at any period, have overthrown the power of the papacy. Large and liberal indulgence given to the cultivation of any single faculty of the mind, would have ultimately set the mind wholly free. The improvement of any single department of science or learning, would have emancipated the human powers, and stayed the desolating reign of the papal supremacy among men. You cannot give enlargement to one of the faculties of the mind, without affecting all. You cannot emancipate man in one department of learning, without ultimately sending a healing and redeeming influence over all that gives rise to inquiry, or that ennobles and purifies man. Hence we see how difficult and slow was the progress of the reformation. On any effort to emancipate the mind in any department, there rested this superincumbent mass consolidated for ages. Wherever there was in any department, however obscure, a disposition to inquire, or to doubt, it was the certain precursor of the thunders of the Vatican, and of the terrors of the inquisition. Every nook and corner of the Roman dominion was searched as with the hundred eyes of Argos; every change of opinion, or advance in science, called to the spot the concentrated vigilance and power of the whole Roman see. Roger Bacon early made advances in science, and was one of the first who acted on the principles of the inductive philosophy, but his improvements died with himself, and for centuries his was a solitary name connected with philosophy, in the whole compass of the Roman domination. Jerome of Prague, and Huss, and Wickliffe, dared to think for themselves, and to doubt the infallibility of the prevalent opinions; and the flames of persecution terminated the lives of two of them, and indignity was offered to the bones and the works of the other. Galileo constructed a telescope, exposed to the eye of man the absurdities of the prevailing philosophy, and laid the foundation for the modern discoveries in astronomy; and he was rewarded with a place in the dungeons of the inquisition. With so keen an eye did the Roman see discern, that the slightest advance in science would tend to destroy its far spread domination, and liberate man from the ignoble and slavish chain. And we may here remark, that the distinguishing features of the papal see in modern times, though varied, are not essentially changed. It is still true, that the philosophy of Aristotle holds as real a sway over the Romish church as ever; and it is true, that it looks with as real a jealousy as ever on the advances which men are disposed to make, and on freedom of opinion, as it did on the opinions of Wickliffe, or of Galileo.

The reformation under Luther broke this mighty power. It was necessary that some tremendous shock should be given to the Roman see, and set the human mind at liberty, and it was done. God raised up men formed for those times, men evidently adapted to make vast changes, and originate stupendous revolutions among The papal power once broken; the project of confining all learning to the cells of the monastery being for ever put to an end by the discovery of printing; the terrors of the inquisition, and the anathemas of the triple crown being ineffectual to prove the telescope to be false; and the superincumbent load of superstition, and crimes, in the papal dominion being beyond human endurance, the reformation by one mighty effort threw off the incumbent mass, and man walked forth dignified with the privilege withheld for centuries, of thinking for himself. The great truth went forth, never more to be recalled, that man was to be at liberty to frame his own opinions, and that the last successful effort had been made effectually to fetter and paralyze the human powers.

It is interesting to the friends of science, to trace the slow advances which were made toward the great truths which now ennoble science. We have already adverted to the labors of Roger Bacon, and the discovery of the telescope by Galileo. We may now remark, that many of the maxims of the inductive philosophy were acted on before they were collected and arranged by Bacon. Thus in the year 1596, John Kepler published his peculiar views on the Harmonies and Analogies of Nature. This was a book constructed wholly on the prevalent system of philosophy, in which he attempts to solve what he calls "the cosmographical mystery of the admirable proportion of the planetary orbits;" and by means of the six regular geometrical solids he endeavors to assign a reason why there are six planets, and why the dimensions of their orbits, and the time of their periodical revolutions, were such as Copernicus found them. Perhaps not even in the trifling, but more laborious toils of the schoolmen, could there be found a more melancholy illustration of the prevalent philosophy. copy of this work was presented by its author to Tycho Brahe, who had been too long versed in the realities of close observation to attach any value to such wild theories. He advised his young friend, "first to lay a solid foundation for his views by actual observation, and then by ascending from these, to strive to reach the causes of things."* On this principle Brahe had long acted, and by the aid of it had reached a distinguished elevation in the philosophical On this principle Kepler appears afterwards to have

Vol. IV.

^{*} Brewster's Life of Newton, p. 120.

acted, and under the guidance of the Baconian philosophy thus compressed into a single paragraph, he abandoned his visionary inquiries. and laid the foundation of that distinguished character for philosophic inquiry, which he subsequently obtained. Philosophers were beginning gradually to abandon the long established maxims of the They began to discover the inutility and barrenness of Incidentally, and at intervals, they expressed their speculations. some great sentiment, which if followed out would have freed them from the domination of the prevailing systems. that under the advancing prevalence of the new principles of inquiry, the universe began, to their view, to assume a new aspect: discoveries in science had already characterized the sixteenth century, far more in number and importance than had marked the whole reign of the philosophy of Aristotle, and the way was manifestly opening for some still more splendid advances in science.

At this auspicious period Bacon rose. The world had manifestly worked itself into a form adapted to the molding of some such mighty mind. Some comprehensive genius was demanded by the circumstances of the age, that could look at once at all the departments of science, ascertain and record all that had been done, and that was still defective; point out the errors that had pervaded all the investigations of past generations, expose the causes of the slow progress of science, of its repeated defeats, its little utility, and point out the true paths of philosophic research. Some single mind of vast native powers and attainments, was needed to collect the incipient, though scattered maxims of the true philosophy, and present them in an embodied form; that should trace their real influence in the hands of Friar Bacon, of Galileo, of Tycho Brahe, and of Kepler; and that should show in what way the same principles might be applied to all the departments of human investigation. Such a man was Bacon. Nor was there ever a human being so well fitted to occupy this ground as he. He seems to have been fitted by a wise providence, to stand at the base of the towering and superincumbent system, which had so long held in ignoble bondage all the human powers, and to hasten its decline; and to frame a scheme that should be adapted to all future times, and to set up land-marks along the paths of all the departments Nor do we know that there have ever been put forth more vast and comprehensive views, than those which characterized this illustrious man. The principles of his philosophy are simple, even to the comprehension of a child; and yet vast enough to meet all the investigations of the modern astronomy, to direct all the inquiries of the natural philosopher and chimist, and to give law to all the investigations of mind.

The two great departments of Bacon's work were designed to

state what are the proper objects of science, its advances, and its defects; and to submit the outlines of a new method of philosoph-The first of these he accomplished in his treatise on ic inquiry. the Advancement of Learning; the latter in the Novum Organum. The first of these, we regard as presenting even now, by far the best view to be found, of the various objects of human pursuit. With a comprehensiveness of mind, which shows that he had looked at all the inquiries of the illustrious men of other times, at their successes, and their failures, at the true compass of the field of inquiry, and at its actual results, he states what are the proper objects of human pursuit; what advances had been made; and what remained yet to be accomplished. It is lamentable, in looking at this work, to see how little had been accomplished by the toils of so many centuries, and no survey could more completely have shown the necessity of some new mode of investiga-Men had speculated and framed visionary theories age after age, and yet scarcely a truth in the science of astronomy had been established; and few of the facts of the universe had been subjected to the test of the inductive philosophy. Men had been so bewildered in the pursuit of substantial forms, and real essences. they had been so tossed in vortices, and had listened so anxiously to the imagined music of the spheres; they had so loved the great maxim of the Aristotelian philosophy, that the way to investigate truth is to frame a theory, and construct a syllogism; that science, even down to the time of Bacon, was a vast chaos, and the entire field was to be re-surveyed, and subjected to a better and different

This test he proposed in the Novum Organum. Never was there a more comprehensive maxim, or one more fitted to revolutionize all the prevalent systems of philosophy—though to us perfectly simple and obvious—than the first sentence of this wonderful work. Never was there an announcement more fitted to arrest the thoughts of a philosophic mind, or to produce a pause in all the inquiries that the world was then making, than when he proclaimed, "Homo, naturæ minister et interpres, tantum facit et intelligit, quantum de naturæ ordine, re vel mente observaverit; nec amplius scit, aut potest." It is not our purpose to attempt an analysis of this vast and comprehensive work. It is perhaps of all works, except Butler's Analogy, least capable of abridgment. Our regret is that it is so little known and so little understood by theologians. Its great principles are better understood in all other departments of inquiry than in theology. We were about to add that divinity is almost the only science on which it has not cast a flood of light. shall have occasion hereafter to call the attention of our readers to what we conceive would be the effect of an unsparing application

of its principles to theology. Our object in this article will be accomplished, if we can direct the attention of our readers to this

great work.

The great principle of the Baconian or inductive philosophy, we have already stated in the advice given by Tycho Brahe to Kepler. It consists in a careful and patient examination of facts, or the phenomena of the universe, and deriving from the observation of those facts the principles of a just philosophy, or the laws by which the natural universe is governed. It supposes that God acts on the same principles in the same circumstances, in all places and at all times; and that when we have carefully examined one phenomenon, and have ascertained its cause, we are qualified and authorized to apply the same explanation to all similar facts in the universe. Till then, we are not qualified to frame a theory. Till then, a theory would be visionary, useless, wild, and probably erroneous. On this simple precept the whole of the Baconian philosophy rests, and the wonder to us is, that so much time was necessary in the history of philosophy to bring it out, and that the talents of such a man as Bacon were demanded to establish it on an imperishable foundation. Yet it was long before the world saw its value; and to the mistakes and errors of mankind in regard to this single principle, we are indebted for that stupendous production of the human mind—the Novum Organum.

It was sufficient honor for one man to have laid the foundation of the inductive philosophy; in other words, to have taught the race in what way to approach the works of God with the hope of success. This was the honor reserved for Bacon. Hence we are not to expect that he himself would make great advances in experimental philosophy. His discoveries were few, and many of his experiments incomplete. Yet it is amazing that he subjected so many objects to the test of experiment—that with so incomplete and clumsy an apparatus as could be possessed in his time, he attempted an examination of so many phenomena, and even with so much

success.

From the time, however, of the publication of the Novum Organum, the progress of the sciences is well known. As if by the wand of magic, Bacon laid open for correct human investigation all the departments of the material and mental worlds. Galileo had already pointed the telescope to the heavens; and by a single glance had exposed to contempt all the cycles and conjectures of the ancient astronomy. Bacon taught mankind how to look at the stupendous facts which the telescope laid open to view; how to classify and arrange the amazing phenomena which now burst upon the eyes of mankind; how to subject nature to the torture, and how to penetrate into all elements, look at all worlds, and how to listen to the



universal voice which the heavens and the earth, the air, the ocean, and the land, were ready with a harmony more grateful than the feeble music of the spheres, to pour on the human ear in relation to science. Europe was prepared to follow her illustrious guide. Centuries had been opening the way for the Novum Organum; and it was impossible but that the boundaries of human science should at once be enlarged, far, far beyond what the world had A mighty engine was brought to bear on the works of creation; and never before had man been armed with like power in questioning the elements of the universe. the rise of such a man as Newton, who has by common consent been placed at the head of the race, as an event which the crisis of the world was just fitted to produce. A peculiar juncture of political affairs has commonly raised up men adapted to their times. Such men as Cæsar and Napoleon, as Hannibal and Scipio, as Leonidas and our own Washington, are formed often by great crises in the history of the world. The frame of things makes their existence indispensable; and calls out talent, prowess, and patriotism, which, but for such events, would have slumbered unknown.

Newton we regard as indebted to the state of things formed by Wickliffe and Luther; by Galileo, Kepler, Brahe; by John of Salisbury, Roger Bacon, Ludovicus Vives; by Gilbert, who had investigated the laws of magnetic attraction; by Copernicus who had revived the ancient Pythagorean doctrine of astronomy; by Francis Bacon; and by the prevalence of just principles of philosophy in Europe, for the station which he occupies in fame as at the head of mankind. The development of some such mind, we consider as inevitable in the progress of events, as the formation of the character of Napoleon, fitted to control the whirlwind and direct the storm of revolution in France. And while we wish to concede all honor to his immortal name, we cannot but remark that under other auspices, Aristotle, or even John Duns Scotus, might have filled the space which Newton's name now fills; and that most certainly some La Place, or Herschell, would have opened the eyes of mankind on the modern astonishing theories of the heavens. In less than half a century from the publication of the Novum Organum, Newton had developed the laws of light, strictly on the principles of the inductive philosophy; had invented the science of fluxions; had discovered and demonstrated the grand principles of the modern astronomy; and by one transcendent effort of intellect, had opened to human view the sublimest scenes which had ever appeared to mortal eyes; and while he told us of the amazing distances and magnitudes of the heavenly bodies, seemed almost to annihilate their distances, and made man feel for the first time that he was an inhabitant of the universe, and

bound by indissoluble ties to distant worlds. It would be easy to extend our remarks to the improvements in chimistry and the kindred sciences. Perhaps in no way would the benefit of the inductive philosophy appear more striking than on a comparison of the labors of Sir Humphry Davy, with the toils of the alchimists of the dark ages. With the simple, and to us very obvious, principles on which Davy proceeded in the construction of the safety lamp, it is now impossible to conjecture what the Arabian chimists would have produced. We can scarcely help pausing to contemplate what a different destiny might have awaited mankind, if those principles had been understood by the Mussulman. The followers of the impostor might then have been put in possession of the amazing mechanical powers and chimical processes, which now distinguish and adorn christian lands. Science would have returned perhaps to its native Egypt; have spread over Arabia; have traveled eastward to Persia, to Hindoostan, to China. The magnetic needle might have pointed the ships of Islam to the distant western world, and established the religion of the prophet here. - Our streams might have been navigated, and our lands filled by the Mussulman; and the Tigris, and the Euphrates, and the Ganges, perhaps might have been the first to open their bosoms to bear the vessel navigated by steam. God designed doubtless, that these sciences should start up, and receive their form and consummation on christian soils: and we love to trace the wonderful means by which he has directed man in science and the mechanic arts, as he has in religion: thus shewing that the worlds of nature and of grace are under his control. Our limits forbid our following out the bearing of the principles of the inductive philosophy on the arts and sciences. To our mind there is nothing more interesting than to observe the amazing changes which the inductive method has made in the opinions, the philosophy, and the arts of mankind, and in the ultimate effect which we believe those principles will have in sending the gospel around the globe. Hand in hand with the christian religion, we believe that those arts and scientific results will yet encompass the world. Already we trace their influence in enlarging and liberalizing all the usual modes of thinking among men; in lessening the distances between nations; in rendering it easy to cross seas, and plains; in forming neighborhoods of what were remote districts; in producing sympathy and a rapid interchange of feeling, between the distant parts of republics and remote kingdoms; and in forming facilities for carrying the gospel around the globe. That these improvements have been made on christian ground, we regard as proof at once of the large and liberal influence of true christianity, and at the same time as evidence, that it is the intention of God that this religion should encompass the world.

do not adduce this as a proof that the christian religion is true; but we cannot but regard it as one of the vast array of circumstances that God has placed every where around the christian scheme, evincing that it is under his benignant care; that all those great advances which tend to exalt and adorn human nature, tend also to the spread of the christian system; and that such is the economy of things that no great advance can be made in true science which shall not contribute to strengthen and confirm the evidences of revelation; no facility of communication be opened among mankind—no process of breaking down existing barriers, and annihilating prejudices, and of cementing man and man, of binding nations in one universal brotherhood, which shall not contribute to the spread of the christian scheme; and no spread of christianity in its purity, which shall not also convey to benighted men letters, science, mechanic arts, We discern here, we think, evidence, that the scheme has the temporal approbation of God; and in the staid and motionless formality of China, in the corruption of Hindoostan, in the wretchedness of pagan islanders, and Africans, and in the dark features and bloody hands which are every where seen under the reign of Islam, we think we discern the frown of God on the schemes of religion which thus fetter and bind down the faculties of man, and which never have been, and never can be, connected with true science and the mechanic arts.

But one other topic remains, pertaining to the character of Bacon. We refer to his moral and religious character—unhappily the most difficult part of our inquiry. That dark shade which passed over his name, toward the close of his life, which hurled him degraded from the office he had so long and so earnestly sought, which led Pope to characterize him as the

"Wisest, greatest, meanest of mankind,"

has rendered it almost impossible to estimate his moral and religious character. To this sad period of Bacon's life, his character, so far as we know, except as a man fond of display, and ambitious, was beyond reproach. In the offices which he held, and in his private deportment, he was never suspected of a want of integrity. Hume declares that he was not only the ornament of his age and nation, but also "beloved for the courteousness and humanity of his behavior." It is natural for us to seek some palliation for Bacon's great offense; and happily there were circumstances, which while they by no means justify his crime, yet serve in some measure to modify its character, and render it much less base and ignominious than such an offense would be deemed in our times.

The parliament which was assembled by James in 1621, entered immediately into an investigation of the existing abuses of the nation.

Unhappily they found in this, their favorite employment, an ample field of labor. Abuses had crept into the government under James, which this vain monarch either would not believe could exist under his wise administration, or which he was unwilling to correct. The necessity of the case, however, compelled him to yield to a determined and inflexible house of commons. That house, he already saw, was disposed to apply an unsparing hand to all the abuses of the government, and even to most of the royal prerogatives. The necessity of the case compelled him to express his royal gratification with their labors, and to encourage them in their work. "I assure you," said he, "had I before heard these things complained of, I would have done the office of a just king, and out of parliament have punished them, as severely, and peradventure more, than you now intend to do."

Encouraged in this manner, and resolved to strike an effectual blow, they commenced their investigations respecting the character and deeds of the Lord Chancellor. Unhappily, here also they found an ample field for the work of reform. The result is well known. Charges of extensive bribery were brought against him. It was alledged that he had received money and other presents, to the amount of many thousand pounds, while causes in chancery were depending on his decision. As to these charges Bacon made a general acknowledgment of guilt. With this confession the parliament was wholly unsatisfied. Determined to humble the greatest man of their time, they demanded an explicit confession in detail of each act of corruption. Power they knew was in their A weak, vain, and silly, though learned monarch, trembled before them. They had commenced a process which could terminate only in the fall of the reigning sovereign; and they resolved that the highest man in the realm should feel the weight of their power. Bacon made them an ingenuous, frank, full, and most mortifying confession of guilt, and bowed himself before the representatives of the people. He acknowledged his guilt in twenty-eight articles, specified the amount he had received, detailed as far as was then practicable, the circumstances, and left himself at the mercy of an indignant parliament. "For extenuation," says he, "I will use none concerning the matters themselves; only it may please your lordships, out of your nobleness, to cast your eyes of compassion upon my person and estate. I was never noted for an avaricious man; and the apostle saith that covetousness is the root of all evil. I hope also that your lordships do the rather find me in a state of grace; for that in all these particulars, there are few or none that are not almost two years old; whereas those that are in the habit of corruption do commonly wax worse; so that it hath pleased God to prepare me by precedent degrees of amendment to my present penitency; and for my estate, it is so mean and poor, as my care is now chiefly to satisfy my debts." Being asked by a committee of the house of lords, whether this was his true and real confession, he used the following noble and touching language, "My lords, it is my act, my hand, my heart; I beseech your lordships to be merciful to a broken reed." The sentence for the crime we have already recorded.

We have no wish to justify these deeply humiliating and disgraceful crimes. We know not an instance in all history where we could weep over human weakness, as over the fall of this great man. It is one of the thousands of instances that every where meet us of human depravity—but if it fixes us in grief, and appals the soul, it shows us man scarcely "less than archangel ruined," and arrests our thoughts not like the obscuration of a planet, or the withdrawal of the beams of a twinkling star, but with the deep melancholy which is shed over created things, when the sun

"In dim eclipse disastrous twilight sheds O'er half the nations, and with fear of change Perplexes monarchs."

The only way in which this offense can be in any manner palliated, is by a detail of the acknowledged circumstances of the case. 1. Bacon was distinguished for want of economy during his whole life. It is clear, as he says, that he was not "an avaricious man." but his great error was a love of office and honor; his great foible a fondness for display. This fondness had involved him in debts which he was unable to pay. 2. The affairs of his domestic economy, it appears, he entrusted to servants, who were regardless of expense, and probably unconcerned about the dignity, virtue, or solvency of their master. One article of the charge against him was, that "the lord chancellor hath given way to great exactions by his servants." To this he replies, "I confess it was a great fault of neglect in me, that I looked no better to my servants." 3. It is indisputable that Bacon was not enriched by these bribes. 4. It is more than probable, that Bacon only followed a custom which until that time had been regarded as no violation of the oath of the lord chancellor. Hume affirms that "it had been usual for former chancellors to take presents." If this was the case, it lessens greatly the enormity of the crime. It also casts much light on the character of the parliament which was thus resolved to make him a victim. 5. It is said that the presents which Bacon received did in no instance influence his decisions. It was never alledged, even by parliament, that he had given an unjust or erroneous sentence. None of his decisions were ever reversed; and it is affirmed that he "had given just decrees against those very persons from whom Vol. IV. 70

he had received the wages of iniquity."* It is further to be remarked, that of the twenty-eight charges of corruption against Bacon, but seven occurred during the existence of the suit. It remains yet to be demonstrated—a thing which he did not acknowledge, and which neither the witnesses in the case, nor the nature of his decisions proved, that even those presents influenced in the least his decisions. The more we contemplate the case of Bacon. the more we are disposed to think that injustice has been done to his character. We believe, in relation to the errors and failings of the men of those times—of such men as Calvin, and Cranmer. and Luther, and Bacon, that men have pronounced sentence with a severity drawn rather from the present views of morals, than from the sober estimate which we ought to make, if thrown into This we think particularly the circumstances of their times. true with regard to the crime of Bacon. While we feel assuredly, that crimes such as those with which he was charged, deserve the abhorrence of mankind, and go to impair and destroy all justice in the administration of laws, we are still inclined to look upon the errors of that age, and in those circumstances, with less severity than we should be disposed to apply in the more enlightened periods of the world. It is not easy to form an estimate of Bacon's religious character. We are favored with so few and imperfect details of his private habits; we have so little that tells us the true biography of the man-his feelings, his usual deportment, his private modes of action; we are let so little into the interior arrangements of his life, that we cannot easily pronounce on his personal character. Charity would lead us to hope, notwithstanding his fondness for preferment, and the great error of his life, that he may have exemplified in his private life, the principles which he has so ably and so constantly inculcated. On the subject of his religious opinions he has left us no room to doubt. There is scarcely to be found in any language or in any writer, so constant a reference to the great religious interests of man, as in the writings of Bacon. There is no where to be found a more profound deference to the authority of the bible. There is perhaps no where more caution displayed, lest the profoundness, variety, compass and originality of investigation, should lead the mind astray, than in his investigations. It was one of his recorded sentiments one of the results of his investigations, which he has expressed without hesitancy or qualification, "that a little philosophy inclineth a man to atheism; but depth in philosophy bringeth men's minds about to religion; for while the mind of man looketh upon second

^{*} Hume.

causes scattered, it may sometimes rest in them and go no further; but when it beholdeth the chain of them confederate and linked together, it must needs fly to Providence and Deity."* His belief he has left us in a well written confession of his faith, embracing the usual articles of the christian religion. His prayers, which are preserved, breathe a spirit of true devotion, in a style and form which are not surpassed by any compositions of that period, in our language. It would be easy to transcribe page after page of his recorded sentiments; and we might trace at every step of his life, his

profound deference for the theology of the bible.

We do not believe that the christian religion depends for its evidence on the suffrage of any one philosopher; or on the bright constellation of names which have expressed their profound regard. for the truths of revelation. Still a christian cannot but look with deep interest on the fact that such men as Bacon, and Boyle, and Newton, bowed their mighty intellects to the authority of revelation: came and brought all the rich and varied treasures of their profound investigation, and laid them at the foot of the cross; and spent their lives increasingly impressed with the belief that the God of nature is also the God of the bible. While we do not claim, that on their authority the scriptures should be accredited as the word of God, we do claim that they should be allowed to rebuke the flippancy of youthful and unfledged infidelity; that they should be permitted to summon men to inquire, before they pronounce; we claim that their authority is sufficient to call on the youthful skeptic to pause, and to suspect that possibly he may be wrong. When mighty minds like those, have left their recorded assent to the truths of the christian scheme, it is not too much to ask of minds of far less power, to sit down and inquire, at least, whether christianity may not have come from God. When Newton, after having surveyed world on world, and measured the heavens, and placed himself for profound inquiry at the head of mankind, sat down in the full maturity of his days, and passed the vigor of his life, and the serene evening of his honored age in the contemplation of the New Testament; when Bacon, after having rescued science from the accumulated darkness and rubbish of two thousand years; after having given lessons to all mankind about the just mode of investigating nature; and after having traversed the circle of the sciences, and gained all that past generations had to teach, and having carried forward the inquiry far into nature, bowed at every step to the authority of the bible; when Hale, learned in the law, not only believed christianity to be true, but

^{*} Essays Civil and Moral.

adorned the christian profession by a most humble life; when Boerhave, perfectly acquainted with the human frame, and skilled in the healing art, sat with the simplicity of a child at the feet of Jesus Christ; when Locke gave the testimony of his powerful mind to the truth of the christian religion; when Davy, first of chimists, came on this subject, to the same results as the analyzer of light, the inventor of fluxions, and the demonstrator of the theory of gravitation; as the author of the Novum Organum; and the writer of the treatise on the Human Understanding; when each science has thus contributed its founder, its ornament and its head, as a witness to the truth of the christian religion, it is not too much to conclude it may be something different from priestcraft and imposture. we turn from these lights of men—these broad stars that spread their beams over all the firmament of science, and seek after the wandering and dim luminaries of infidelity, when we make a sober estimate of what the high priests of unbelief have done for the advancement of science, and the welfare of man, we are struck with the prodigious advance we have made into chilly and tenebrated re-We have passed amid spirits of another order. der in climes as remote almost from science, as from christianity. We should know where we are as readily by their superficial, but pompous pretensions; by dark, but most confident scientific claims; by erroneous, wandering, but most flippant demands in science, as we do by their infuriated and bitter raging against the claims of the christian religion. Who are these men? Volney, Diderot, D'Alembert, Voltaire, Paine; Herhert-the best and greatest of them—Shaftsbury, Tindal, Morgan, Bolingbroke, Gibbon, Hume. What have they ever done for science? What advances have they ever made? So far as we know, not one of them has any pretensions to what gives immortality to the names of Boyle, Locke, Newton, Bacon, Hale. What valuable fact have they ever presented in science? What new principle have they originated, or illustrated? What department of science have they adorned? Not a man of them has ever trod the regions that constituted the glory of England, and of the world—the regions of profound science; of deep and penetrating investigation of the works of nature. In spite of such men, science would still have slumbered in the regions of eternal night; and infidelity, but for christian men, might have swayed a scepter as she desired, over regions of profound and boundless shades of ignorance and crime. We are accustomed to care little for names and authorities in religion. We believe that religion natural and revealed, accords with the constitution and course of nature. We believe that it is sustained by a force and compass of argument that can be adduced for the truth of no science. On the ground of the independent and impregnable proof of revealed religion, we are christians.

there are men who pride themselves on names. There are those whose only reason for an opinion is, that it was held by some illustrious man. None are really so much under the influence of this feeling as the infidel. That Hume was a skeptic; that Gibbon was capable of a sneer; that Paine was a scoffer; that Volney was an atheist, is to them strong as proof of holy writ. Hence they feel that to doubt, is the most exalted state of man; that there is argument enough for mortals in a sneer and a jibe; that scoffing becomes a human being; and that to come to the conclusion that man has no Father and no God, that he dies like kindred worms, is the supremacy of felicity, and the perfection of reason. When such have been the apostles and high priests of unbelief—such the hosts which they have mustered, we feel that apart from all argument in the case, we would rather accord with the sentiments of the great luminaries of mankind in science; and that it is not unworthy of reason and elevated thought to suppose, that true religion may be found where we have found every other valuable blessing for mankind; and that the system, attended every where with science, refinement, and art, and that has shed light on the intellect, and honor on the names of Locke, and Boyle, and Bacon, is the system with which Gop intended to bless men.

ART. III.—ENCOURAGEMENT FOR THE RELIGIOUS EDUCATION OF CHILDREN.

Memoirs and Select Remains of an only Son; by THOMAS DURANT, Poole, Dorset, England.

Dorset, England.

Memoirs of Nathan W. Dickerman, who died at Boston, January 1830, in the eighth year of his age.

Memoirs of John Mooney Mead, who died at East Hartford, April 1831, aged nearly fire years.

The christian, and especially the christian parent, must, we think, contemplate the grounds on which he may justly be encouraged to hope for success, in well directed efforts to bring the young mind under the appropriate influence of christian discipline, with the liveliest interest and the most substantial benefit. To thes grounds of encouragement, it is our wish at this time, to invite the attention of our readers. On this subject, which in one form or another has so often awakened the feelings, engrossed the thoughts, and commanded the pens of powerful writers, we dare not promise to enrich their minds with any new views, or to animate and refresh their hearts with any new motives. But something we may hope to do. A fresh influence we may hope to give to motives, which were long ago welcomed to their hearts, while we again invite their attention to views, which are more or less familiar to all.