

MODERN PHYSICISTS AND THE ORIGIN OF MAN.

1. Addresses of Professors Tyndall and Huxley before the **British Association for the Advancement of Science**, 1874.
2. **GENTILISM: Religion Previous to Christianity.** By Rev. Aug. J. Thebaud, S. J., New York: D. and J. Sadlier & Co., 1876.

The hostility of the majority of modern physicists to Christianity shows itself plainly in their theories of the origin of matter and of man. They are professedly indifferent to the bearing of their views upon the statements of Sacred Scripture; and they attempt to rule those statements entirely out of the discussion; but in this they only reveal the more clearly their real animus. For, however diversely the statements of Scripture may be construed on some points, they declare, as all agree, that matter is not eternal nor self-existent, that man has his origin not in any "potency" inherent in matter, but in the creative will of God, and that man has not developed into the possession of intellect and of will, but was endowed with them at the moment of his creation. Around these statements and corroborating them, has gathered, in the course of ages, an accumulation of confirmatory evidence in comparison with which the proofs, that support the most firmly established facts of physical science, are weak. These statements, therefore, are, to say the least, entitled to respectful consideration. They are "in possession," and before a writ of "ouster" can be issued against them and executed, a title superior to theirs must be conclusively shown. In other words, the burden of proof rests upon those who impugn, directly or indirectly, the statements of Scripture. When the hypotheses of physicists declare, or imply, that man was not created, but was evolved from a "protoplasm," by a power inherent in matter; that, by the operation of that same power, the protoplasm was carried through successive stages of development, until it became an anthropoid ape, then a savage man, and at last, after millions of years, an intellectual Celt or Saxon, it is entirely legitimate to reply, "We refuse to accept your theory, because it contradicts divine revelation."

We know very well, that this is decried as dogmatism. Whether it be dogmatism or not, it is a logical answer. There are certain axioms, upon which mathematical science rests. When results are shown to be in accordance with those axioms, they are accepted as determinate conclusions. Suppose a scientific dreamer should adopt a hypothesis, which contradicted those axioms or their con-

sequences, and, when confronted with the contradictions, should reply, "I rule mathematics entirely out of my field of thought; if mathematics comes in the way of my speculations, so much the worse for it," such a scientist would be considered a fit inmate for a mad-house. Yet he would not be a whit more irrational, in his method of arguing, than are many modern physicists in the posture which they assume towards Christianity. For Christianity is a FACT; and a fact of greater moment, than all the physical facts which scientists gather around their speculations about matter, its forces, forms, and modes of existence. Christianity, therefore, cannot be thus unceremoniously thrust out of view. Around Christianity, too, other facts have clustered, which must be considered and duly disposed of, before the way can be opened for even commencing the summary procedure which many, perhaps a majority, of modern scientists advocate.

If these savans were of one mind either as to the facts, which they include within the field of their speculations, or as to what they infer from those facts, their treatment of Christianity would be less obviously irrational, if not more excusable. But they disagree both as to facts and conclusions.

There is another point, which should always be borne in mind in estimating the importance of the theories of physical scientists, viz: that in their investigations, they use the inductive method.

They are shut out, therefore, by the very method which they employ, from reaching certainty in their conclusions. The utmost they can claim is probability. Induction is very well in its place, useful for arranging and classifying ascertained facts. But by induction nothing can really be proved. Induction starts from particulars; the conclusion, consequently, is always broader than the premises upon which it rests.

Besides, the inductive method is applicable only to the relative and finite. It is as absurd, therefore, to attempt by induction to reach conclusions respecting the absolute and infinite, as it would be to expect a stream to rise above its source. Induction starts from a hypothesis, in other words, a guess. It empirically arranges about the hypothesis the results of investigations into physical phenomena, facts, real or suppositious. If the facts agree with the hypothesis, the hypothesis is held to be correct. Yet all those facts may possibly be explained, quite as well, by some other hypothesis entirely different; or, in the lapse of time, other facts may be discovered, which prove the hypothesis untrue.

The history of the physical sciences records many instances of this; many, too, that are quite recent. We mention, as examples, the theory that chemical compounds are formed by the combination of the ultimate particles, called atoms, of elementary sub-

stances; a theory now generally regarded by physicists as untenable, yet still almost universally employed to explain chemical reactions. Again, until quite recently the change in the lungs of the color of the blood was explained by the oxidation of the iron contained in it; and the heat of the body was attributed to the union in the lungs of the oxygen of the inspired air with the carbon of the blood; yet it is now known, that these theories are in fact untrue. Again, previous to the last century the very existence of oxygen was unknown. Yet this is one of the most active, indeed we may say, the most active, and all-pervading of all elementary substances—if there be elementary substances, and if oxygen is one of them—neither of which is at all certain. It enters into the air we breathe; it forms eight-ninths, by weight, of all the water on the face of the globe, or that floats as vapor above it; it forms, no one can tell, what proportion of the globe itself, and it combines with every known substance, one only excepted. Its discovery, it is scarcely too much to say, upset the whole fabric of physical science; it completely revolutionized chemistry, the most venerable of all the physical sciences excepting astronomy; it did the same thing to mineralogy; it totally changed, or rather re-created the theories of combustion, respiration, nutrition, of the growth of plants and animals, of the metamorphosis of tissues, and of every thing that belongs to physiology. Now what has happened may happen again. Scientists now strongly suspect that oxygen is a compound and not an elementary substance, and that there is a good deal still to be learned about it. And, what has been said about oxygen and chemistry, might be said with equal truth about other established (?) facts and theories of the physical (so-called) sciences. Some day—no one knows how soon—they may all be upset by some unlooked for discovery; and the accepted doctrines of “protoplasm” and “continuous development,” may be discarded with as little ceremony, as have those of “monads” and “germ-cells.”

As we have already said, it is impossible to arrive at certainty by the inductive method. Yet physicists seriously propose by this method of argumentation to thrust God out of His own created cosmos; to sweep away all the convictions of men in regard to His personality and His glorious attributes; to deprive man of what gives all its real value to life, the consciousness of immortality; to resolve his intellect and will into the action of molecular particles of matter, and to make of man himself a mere clod of earth. The attempt is as unscientific, as it is impious.

We have no controversy with the inductive method when, it confines itself to the investigation of physical facts; but, when it attempts to obtrude itself into the sphere of philosophy and theol-

ogy, and to thrust its inductions, its theoretical inverted frustra of pyramids, always wider at the top than at the base, into the places occupied by truths, determined long ages ago by philosophy, or made known by divine revelation, we treat it as an intruder. Certain modern scientists, or sciolists, complain of this as presumption; but the presumption is all on their own side.

There is not, cannot be, any real antagonism between the final results of physical science and the defined dogmas of revealed religion; but the meaning of divine revelation as regards the origin of matter and of man is substantially determined, whilst the utterances of the physical sciences have not yet, by any means, been fully and clearly interpreted. Investigators of the material universe have not even found the keys—much less learned how to use them—to unlock the closed doors, which now prevent entrance into many of Nature's apartments; and they are utterly ignorant of what treasures of knowledge may there be stored up. When they shall have observed and studied *all* of Nature's facts, and shall have come to an agreement among themselves, both as to the facts and their relations, it will be time enough for them to invade the sphere of the spiritual and supernatural, and to begin to dogmatize about religion. And when they do this, they must change their method of thought, and adopt that of pure science, i. e., philosophy. And then, too, they will find that there are mysteries which even the profoundest philosophy cannot resolve, and which will ever remain inscrutable, except so far as divine revelation enables man to apprehend them.

The fact is, modern physicists totally misconceive the real nature of their functions, as investigators of material facts and phenomena. They seem to imagine that it belongs to them, by experiments in their laboratories and dissecting rooms, to work out questions of metaphysics and pure philosophy; and, going still higher, of religion. Just the opposite is the truth. Their mission as physicists is simply to gather and collate facts, which, when handed over to philosophers, become the raw materials which *they* must work up and determine the relations of, and their philosophical significance. Nor can even philosophers accomplish their work, unless they first obtain the key to the problems, with which they have to deal, from divine revelation. The natural world is mute and dumb, or, if heard speaking at all, its words are riddles, except when the existence of God, as the personal, absolute, self-existent, first cause and last end of all things, is taken as the key to understanding these, otherwise, incomprehensible utterances. That done, Nature has no longer a sphynx-like character, but becomes vocal with intelligible and harmonious praises of the wisdom and might and beneficence of the Creator of the heavens and the earth and all that is in them.

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Modern scientists, not unfrequently, unconsciously testify to this. We find such unconscious, unintended testimony cropping out in Prof. Tyndall's writings. Speaking of "states of consciousness," he describes them as "mere symbols of an outside entity, which produces them and determines their order of succession, but the *real nature of which we can never know.*" He then makes the following acknowledgment:

"In fact the whole process of evolution is the manifestation of a power absolutely inscrutable to the intellect of man. As little in our day as in the days of Job, can man by searching find this power out. Considered fundamentally, it is by the operation of an *insoluble mystery* that life is evolved, species differentiated, and mind unfolded from their preponent elements in the immeasurable past."

Again, speaking of his own conception of a "cosmical life," etc., he says:

"All we see around us, and all we feel within us, the phenomena of physical nature as well as those of the human mind, have their *unsearchable* roots in a cosmical life, if I dare apply the term, *an infinitesimal span of which only is offered to the investigation of man.* And even this span is *only knowable in part.* We can trace the development of a nervous system, and correlate with it the parallel phenomena of sensation and thought. We see with undoubting certainty that they go hand in hand. But we try to soar in a vacuum the moment *we seek to comprehend the connection between them.* An *Archimedean fulcrum* is here required, which the human mind can not command, and the effort to solve the problem, to borrow an illustration from an *illustrious friend of mine, is like the effort of a man trying to lift himself by his own waistband.*" * * *

Referring still to the connection between nervous action and the "parallel phenomena of sensation and thought," he affirms:

"*There is no fusion possible between these two classes of facts—no motor energy in the intellect of man to carry it without logical rupture from the one to the other.*"

These utterances taken by themselves, and without regard to the general animus of the majority of modern physicists with whom Prof. Tyndall is in avowed sympathy, might well be construed into an acknowledgement of the imperfections and limitations of the methods employed by physical scientists. Prof. Tyndall makes his admissions in no such spirit. In the face of his own acknowledgment, that the field of physical investigation is hemmed in by metes and bounds, over which the human intellect unaided cannot leap, he yet tells us:

"I prolong the vision backward across the boundary of the experimental evidence, and discern inMatter.....the promise and potency of every form and quality of life;" "the human understandingis itself a result of the play between organism and environment through cosmic ranges of time;" "so too is the feeling of awe, reverence, wonder—and not alone sexual lovebut the love of the beautiful, physical, and moral, in nature, poetry and art;" and "also *that deep-set feeling which, since the earliest dawn of history, and probably for ages prior to all history, incorporated itself in the religions of the world.*"

Can anything be more astounding than this declaration of Prof. Tyndall, in the face of his own previous acknowledgments of the impossibility of arriving at any certain conclusions on these sub-

jects, by the processes of physical investigation, and his still further confession that the mysteries they involve are irresolvable by the human intellect?

This brings us to another point to which we direct attention. We refer to the assumption, which runs through Prof. Tyndall's whole address, (and in this he is a fair type and example of most modern scientists,) that because there *are* problems in the life of man, and the existence and action of matter, and of mind, irresolvable by the human understanding from the stand-point of the merely natural, there is, therefore, no higher stand-point from which, and no higher faculty impartible to man by which these problems can be comprehended. In other words, Prof. Tyndall ignores not only the existence of the supernatural, but all possibility of its existence. In like manner, he ignores the possibility of man by faith comprehending, what is incomprehensible by his natural understanding. But, in this, Prof. Tyndall proves himself an illogical reasoner. For, to use his own simile, the fact, that a man cannot lift himself by his waistband, does not prove that another cannot lift him; and so the fact, that man, in the exercise of his natural understanding, is not able to resolve the problems referred to, does not prove that he cannot comprehend them, when divinely aided and taught.

It might be reasonably supposed that in this theory there was no room for religion. Prof. Tyndall, however, makes room for it, and finds an "immovable basis" for it "in the religious sentiment, in the emotional part of man." Nor should it, he generously declares; be "derided by scientists" who have "escaped" from it "into the high and dry light of the understanding." "To yield this sentiment reasonable satisfaction, is the problem of problems at the present hour."

All this sounds to us like sarcasm, though we know that Prof. Tyndall does not intend it to be so construed. Yet, how he can talk seriously about an "immovable basis of the religious sentiment," when he makes that "sentiment" to be nothing more, than "a result of the play between organism and environment," is more than we are able to comprehend. In this he shuts out the very possibility of God being the object and final end of "religious sentiment," and makes that "sentiment" a purposeless, objectless feeling, a mere delusion, a phantom more unreal than the lakes and mountains and palaces, which fancy shapes out of the clouds painted by the setting sun. To this "sentiment" "reasonable satisfaction" should be "rendered." But this is nothing more than might be said respecting the physical feeling of hunger, or the sentiment of human friendship; both of which have definite objects, while religion has none, that we can discover. Nor has religion a

right to determine for itself what this "reasonable satisfaction" should be. That is a problem whose solution belongs to those who stand entirely outside of "all religions," and above them; who, to repeat Prof. Tyndall's words, "have *escaped* from them into the high and dry light of the understanding." Here is a still further utterance on the same subject:

"Grotesque in relation to scientific culture, as many of the religions of the world have been, and are—dangerous, nay destructive, to the dearest privileges of freemen, as some of them undoubtedly have been, and would, if they could be again—it will be wise to recognize them as the forms of a force, mischievous, if permitted to intrude on the region of knowledge, over which it holds no sway, but capable of being guided by liberal thought to noble issues in the region of emotion, which is its proper sphere."

Mr. Tyndall has felt greatly hurt by what he considers unfair inferences in regard to his posture towards Christianity. He has been called an "Atheist," and he protests that he is not. We do not regard him as an Atheist, using the word to designate one who positively denies the existence of God. Mr. Tyndall neither denies nor affirms it. He simply ignores it. To use St. Paul's language, he does not like to have God in his knowledge. What his ideas are of religion, and of the sphere it may occupy, have already, to some extent, been made apparent, we think, by the quotations already given from his Belfast address. The following however is apropos, and will perhaps help to a still clearer understanding, it not of his ideas, at least of their vagueness and contrariety.

"I would set forth equally the inexorable advance of man's understanding, and the unquenchable claims of his emotional nature, which the understanding can never satisfy. The world embraces not only a Newton, but a Shakespeare—not only a Boyle, but a Raphael—not only a Kant, but a Beethooven—not only a Darwin, but a Carlyle. Not in each of these, but in all is human nature whole. They are not opposed, but supplementary; not mutually exclusive, but reconcilable. And if, still, the unsatisfied human mind, with the yearning of a pilgrim for his distant home, will turn to the mystery from which it has emerged, seeking so to fashion it, as to give unity to thought and faith, so long as this is done not only without intolerance or bigotry of any kind, but with the enlightened conviction that fixity of conception is unattainable, and that each succeeding age must be held free to fashion the mystery in accordance with its own needs—then, in opposition to all the restrictions of materialism, I would affirm this to be a field for the noblest exercise of what, in contrast with the knowing faculties, may be called the creative faculties of man."

Here, under a rhetorical show of liberality towards religion, everything is really taken away from it. The "knowing faculties" have nothing to do with it! "Fixity of conception is unattainable!" We acknowledge ourselves utterly unable, too, to understand how that which has no intellectual basis, and lies entirely outside of the "knowing faculties" of man, can, by any stretch of generosity, be regarded as a field for the noblest exercise of even our lowest faculties, much less of our "creative faculties."

We pass, with a bare mention, Prof. Tyndall's selection of representatives of religion—Raphael, Shakespeare, Beethoven and *Carlyle*.

We are surprised that he did not finish his inverted climax with Voltaire and Tom Paine. We pass this by, however, and direct attention to another point.

The "creations" of Raphael and Shakespeare live only because of the objective truth, which they embody and express. It is that, and that only, which gives them their force and beauty, their power to command admiration,—their immortality. Without that, they would have passed long ago from the thoughts and memory of men; without that, indeed, they could not have been produced. So, too, it is with Carlyle's "heroes," and his travesties of history. Underneath all their wild and wicked imaginings there is a certain amount of truth, which constitutes the basis on which they rest, and gives them whatever of strength and vitality they have.

But religion, according to Prof. Tyndall, has nothing whatever to rest upon. For the "immovable basis," which he assigns to it, is a sentiment without an object or an end—a mere phantom. The "religious sentiment," then, instead of being one which should have "reasonable satisfaction," should be sternly repressed, stamped out of existence, as a something, which in some unaccountable way has become a part of man's nature, but which perpetually interferes with the free activity of his "knowing faculties," and continually deludes him into holding as realities, what are most unreal illusions.

Analyzing Prof. Tyndall's rhetorical references to religion, as closely as such vague generalities can be, we make the following deductions:

1. Religion is purely a creation of the human imagination.
2. Religion has no objective basis of truth.
3. "Fixity" and certainty of religious belief are unattainable.
4. There are no supernatural truths cognizable by man.
5. Those who discard religion, or in other words, "escape" from it "into the high and dry light of the understanding," are the true philosophers.

It is not at all our purpose to attempt a refutation of the address of Profs. Tyndall and Huxley; but simply to bring out, as plainly as we can, their real posture towards Christianity. There is need that this be done; for, of late, quite an effort has been made to create the impression, that, as regards this, these gentlemen have been greatly misunderstood and misrepresented. We shall have occasion to refer again to Prof. Tyndall; we now turn to Prof. Huxley. His position can be very easily determined from his address at Belfast. He announces:

1. "That we have really no knowledge of external things, and that the only thing which is certain is, that they cannot be like what we imagine them to be; that the only certain knowledge we have of that efficient cause is, that it is in no sense like the picture we present to our consciousness."

2. That "as regards animals, the only view which can be scientifically adopted" is that, "although they are sensitive, and although they are conscious, yet they do act mechanically, and their different states of consciousness, their sensations, their thoughts (if they have any), their volitions (if they have them), are the products and consequences of their mechanical arrangements."

3. "Undoubtedly, I do hold that the view I have taken of the relations between the physical and mental faculties of brutes applies in its fullness and entirety to man; and if it was true that the logical consequences of that belief must land me in all these terrible things (Fatalism, Materialism, Atheism), I should not hesitate in allowing myself so to be landed. I should conceive that if I refused, I should have done the greatest and most abominable violence to everything, which is deepest in my moral nature."

Thus positively and dogmatically Prof. Huxley states his theory and backs it up by the assertion, that it is the only one, which can be scientifically adopted; and yet, in a previous part of his address, he says—referring to consciousness, its origin and its relation to the physical structure of animals and men—"I am afraid that the matter is wholly incapable of demonstrative proof."

The logical consequences, which Prof. Huxley lightly brushes aside, are obvious. They do involve Fatalism and Atheism. They imply, if not a positive denial of God's existence, at least a denial, that any evidences of His existence are to be found in the natural world. They brush entirely away all ideas of a Divine Providence, all-wise, all-powerful, free to will, and to act, in the world which He has created, preserves and rules over. They involve a denial of all certainty of knowledge of external things, and they sweep away entirely the belief of the Christian world in regard to the origin of matter, and of mind, and of evil; they deny in fact the existence of evil, and of moral responsibility. They go further still. They rule out of existence, except as mere delusions, not only all religious truths and theological dogmas, but also the whole system of criminal jurisprudence; and would—if they could be reduced to a practical shape—uproot, from its lowest foundations, the entire structure of society. A prisoner, brought before a criminal court, might consistently plead that he did commit the act charged against him, but that it was simply an act of unconscious cerebration. A murderer might plead that the fatal blow was only the muscular motion of his arm produced by involuntary nervous action. Prof. Huxley's declaration, that he would do "the greatest and most abominable violence" to his "moral nature," if he "refused," from regard for their "logical consequences," to hold the views he enounced, seems to us senseless. For, conceding the possibility of the existence of such a thing as a moral nature in man, it is impossible to conceive what claim or authority it can have, or how violence can be done to it, if man's thoughts and volitions are nothing more than the products and consequences of the mechanical arrangements of the particles of matter, which enter into his body or his brains.

We turn now to Prof. Tyndall's latest publication, "Martineau and Materialism." It is the preface to the forthcoming edition of "Fragments of Science," and is designed to be a refutation of the charge brought against him of irreligion and materialism, and also a counter indictment, for narrow-mindedness and bigotry, of all who maintain the claims of divine revelation upon human credence.

The first thing, that strikes a reader of this beautifully written but sophistical production, is the tone of lofty contempt for all who dare to attach the slightest importance to the statements of Sacred Scripture. "The Mosaic picture of the genetic order of things has been not only altered but inverted by scientific research." "Notwithstanding the deplorable condition to which the picture has been reduced, it is exhibited fresh every week to millions taught to believe it as divine." These are not Prof. Tyndall's words, but he quotes them with full approval. With this is coupled an encomium upon the infidel Anglican "Bishop of Natal," who, "for openly avowing doubts, which, it is said, others discreetly entertain, suffered persecution" for "his public fidelity to scientific truth." Nor is there wanting a seasonable word of advice to sensible Christians, and of rebuke to "ultramontane" Catholics.

"The liberal and enlightened portion of Christendom must, I take it, differentiate itself more and more, in word and act, from the fanatical, foolish and more sacerdotal portion. Enlightened Roman Catholics are more specially bound to take action here; for the travesty of heaven and earth is grosser, and the attempt to impose it on the world is more serious, in their community than elsewhere..... Their spiritual guides live so exclusively in the pre-scientific past, that even the really strong intellects among them are reduced to atrophy as regards scientific truth. Eyes they have, and see not; ears they have, and hear not; for both eyes and ears are taken possession of by the sights and sounds of another age. In relation to science, the ultramontane brain, through lack of exercise, is virtually the undeveloped brain of the child. And thus it is, that as children in scientific knowledge, but potent wielders of spiritual power among the ignorant, they bring the blush of shame to the cheeks of the more intelligent among themselves."

Along with this is an utterance in regard to education, by which those Catholics may profit, who delude themselves with the notion that their children may safely receive from skeptics or non-Catholics instruction in the physical sciences.

"Such is the force of early education, when maintained and perpetuated by the habits of subsequent life; such the ground of peril in allowing the schools of a nation to fall into ultramontane hands. Let any able Catholic student, fairly educated, and not yet cramped by sacerdotalism, get a real scientific grasp of the magnitude and organization of this universe;.....let him bring the thoughts and conceptions which thus enter his mind face to face with the notions of the genesis and rule of things which pervade the writings of the princes of his Church, and he will see and feel what drivellers even men of strenuous intellect may become, through exclusively dwelling and dealing with theological chimeras."

Prof. Tyndall reiterates his declaration that he does not utterly repudiate religion; but his idea of religion is a mere vague feeling of wonder and awe in the presence of impenetrable mysteries, not

a whit more rational, than the feelings of a savage on first seeing a locomotive.

"Breaking contact with the hampering details of earth, this feeling associates man with a power, which gives fullness and tone to his existence, but which he can neither analyze nor comprehend;"....."but when I attempt to give the power which I see manifested in the universe an objective form, personal or otherwise, it slips away from me, declining all intelligent manipulation. I dare not, save poetically, use the pronoun 'he' regarding it; I dare not call it a 'mind;' I refuse to call it even a 'cause.' Its mystery overshadows me; but it remains a mystery, while the objective frames which my neighbors try to make it fit, simply distort and desecrate it."

This "mystery" he reiterates is entirely unknowable; it exists, but it is inscrutable; it stands entirely outside the sphere of human thought; it has no medium or means of revealing itself to the human intellect, no attributes, no reason or purpose, no end; respecting it man cannot "profess to *know*" anything; all he can claim is "I *feel*."

It is unnecessary to point out the fallacy of these utterances. Because no microscope or telescope can make this power visible, because no scalpel can dissect it, nor any inductions of physical science demonstrate it, Prof. Tyndall rules it out of the sphere of thought, and concludes that it cannot be known. The conclusion does not follow from the premises; it is a pure assumption, which logic does not require the Christian to disprove. The burden of proof rests upon Prof. Tyndall; the responsibility of which, however, he does not make the slightest attempt to meet. He contents himself with saying that he knows nothing about it. He declares that he is not a materialist; but the reason he gives is one which has no force. "Were not man's origin implicated," he says, "we should accept without a murmur the derivation of animal and vegetable life from what we call inorganic nature. The conclusion of pure intellect points this way."

Professor Tyndall is not a materialist in the popular, ordinary acceptation of the word; not because he allows room in his theory for the action of the divine will, but because his conception of matter differs from that which commonly prevails. Tracing the growth of a human being in the womb from the ovum to the babe "appearing in due time a living miracle with all its organs and all their implications," he holds, that all that the human being is and can become—its mind and will, its thoughts and volitions—"comes from an egg" which he "holds to be matter," and only matter, "as much as the seed of a fern or of an oak;" and he recognizes no power outside the matter of the fern seed, and the acorn, and the egg, and antecedent to them, in virtue of which they become respectively the fern, the oak, and the self-conscious, intelligent human being. "Matter," he says, "I define as that mysterious thing by which all this is accomplished. At the question 'how did matter come to

have this power?" he abruptly stops, with the declaration, "on this I never ventured an opinion."

But just here is one of the evasions, of which modern physicists are constantly guilty. They have no right thus to stop short. When they deny, or ignore, the existence of God and His creative will, and undertake to explain the existence and action of matter, of the mind and the will; when they scout and scorn the statements of divine revelation; when they deny the very possibility of a divine revelation having been made, and scoff at the men, who believe in it, as "drivellers," they cannot dismiss the question with the reply: "On that we never ventured an opinion." It meets them as a challenge which they cannot evade, except at the alternative of being classed with braggarts, who scoff at their antagonists at a distance, but fly from the field of battle, when the issue is made up and the onset sounded. If God is not the Creator of matter, however you define it, the Author and Bestower of all its potencies and powers, the First Cause of all its motions and operations, of every form it assumes throughout the universe, how comes matter to exist at all, and how comes it to have any "powers or potencies?" Until physical scientists are prepared to answer these questions, they are bound to confine themselves simply to the facts, to which their empirical processes are applicable, and to leave untouched, as outside their field of investigation, the questions of origin and creation, of human consciousness, and of human responsibility, which they boast they will "wrest" from theology. Their confessions that these questions are "inscrutable" by their processes, and "unthinkable" according to their manner of thought, only prove that they have forgotten the maxim: "*Ne sutor ultra crepidam.*"

As enforcing and still farther illustrating what we have said, we here quote from a letter of Parke Godwin's, in reply to an adverse criticism of his views by Mr. Yeomans, editor of the *Popular Science Monthly*:

There are "two capital distinctions which it is always important to keep in view, when estimating the scientific validity of a doctrine. The first is that many questions determinable by science are not yet determined by it; and until they are so determined, are to be regarded only as conjectural opinions, more or less pertinent or impertinent..... They are suppositions to which the mind resorts to help it in the reduction of certain appearances of Nature to a general law; and, as such, they may be simple, ingenious, and even beautiful; but thus far they are no more than suppositions not proved, and therefore not entitled to the authority of scientific truth.

"You are probably too familiar with the history of scientific effort—which, like the history of many other kinds of intellectual effort, is a history of human error—not to know, that while hypothesis is an indispensable part of good method, it is also the part most liable to error. The records of astronomical, of geological, of physical, of chemical, and of biological research, are strewn with the *debris* of abandoned systems, all of which once had their vogue, but none of which now survive, and many of which are hardly remembered. Recall, for a moment, the Ptolemaic cycles and epicycles; recall Kepler's nineteen different hypotheses, invented and discarded before he

found the true orbital motion of Mars; recall in geology Werner and Hutton, and the Plutonians and the Neptunians, superseded by the Uniformitarians and the Catastrophists, and now giving way to the Evolutionists; recall in physics the many imponderable fluids, including Lamarck's resonant fluid, that were held as real as the rocks only a few years ago; recall in chemistry, not to mention the alchemists and phlogiston, a dozen different modes of accounting for molecular action; recall in biology the animists and the vitalists, the devotees of plastic forces, of archei, of organizing ideas, and of central monads, all of them now deemed purely gratuitous assumptions, that explained nothing, though put forth as science.

....."Indeed, nothing is more easy than to make theories; but the difficulty is to get them adopted into Nature as the satisfactory reason of her processes. But, until they are so adopted, they are nothing more than the scaffolding of science—by no means the completed structure. Now, have the Darwinian and the Spencerian hypotheses been so adopted? Can we say that any questions on which such cautious observers and life-long students as Darwin, Owen, Huxley, Wallace and Agassiz still debate, are settled questions?..... With what propriety then can a merely provisional conclusion be erected into an assured standpoint, whence to assail traditionary beliefs as if they were old wives' fables?

"More than that, a theory may be far more advanced than any of those; may be able to account satisfactorily for all the phenomena within its reach, as the Ptolemaic theory of the sidereal appearances did, even to the prediction of eclipses, or as the emanation theory of Dr. Young, and yet turn out altogether baseless. Nature is a prodigious quantity and a prodigious force; with all her outward uniformities, she is often more cunning than the Sphinx; and, like Emerson's Brahma, she may declare to her students:

"They know not well the subtle ways
I keep, and piss and turn again."

"We have looked into her face a little, measured some of her ellipses and angles, weighed her gases and dusts, and unveiled certain forces far and near—all of which are glorious things to have done, and some of them seemingly miraculous: but we are still only in her outer courts. Humboldt's 'Cosmos,' written thirty years ago, is said to be already an antiquated book; and Comte, who died but lately.....could hardly pass a college examination in the sciences he was supposed to have classified forever. Let us not be too confident, then, that our little systems of natural law will not, like other systems of thought spoken of by Tennyson, 'have their day.'

"The other distinction I had in my mind.....was that, while there are some problems accessible to scientific methods, there are others that are not; and that any proffered scientific solution of the latter, either negative or affirmative, is most likely an imposition. What I meant was that science, according to its own confessions, that is, according to the teachings of its most accredited organs, pretends to no other function than to the ascertainment of the actual phenomena of Nature, and of their constant relations. The sphere of the finite and the relative, i. e., of existence, not of essence, and of existence in its mutual and manifested dependencies in time and space, circumscribes and exhausts its jurisdiction..... Does science assert for itself higher and broader pretensions? Does it propose to penetrate the supernatural or metaphysical realms?..... Does it intend to apply its instruments to the measurement of the infinite, and its crucibles to the decomposition of the absolute?

"You, as a man of excellent sense, will promptly answer, No! But then, I ask, is thought, whose exaptations are so restless and irrepressible, to be forever shut up to the phenomenal and relative? Is it to be forever stifled under a bushel measure, or tied by the legs with a surveyor's chain?..... In other words, I contend—and here I hit upon the prime fallacy of many *soi disant* scientists—that science has no right to erect *what it does contain into a negation of everything which it does not contain*. Still less has it a right to decide questions out of its confessed province, because it cannot reach them by its peculiar methods, or subject them to its peculiar tests."

It is not necessary, therefore, for the Christian philosopher to

follow skeptical physicists, step by step, in their investigation, and point out, one by one, the mistakes in their experiments. From the standpoint of physical science and by the inductive method, it is as wild for them to undertake to comprehend the supernatural and the infinite, as it was for the Titans of heathen mythology to attempt to climb into Heaven by piling Pelion upon Ossa. No chain which physicists can forge, nor sounding line which they can twist, will suffice to measure the heights or fathom the depths of Infinitude. Moreover, when they pass beyond the field of investigation of the phenomena of nature, and turn their thoughts to their first origin and cause, they must perforce leave behind them their scalpels and microscopes, their chemical reagents, and weights, and measures, and, with them, their inductive method; and they must build their ratiocinations upon premises, which presuppose and necessitate assent to what most of them deny.

They can no more escape from this, than the mathematician can escape from the axioms of mathematics. For the relative and the finite require the absolute and the infinite as a necessity for their own existence.

Thus nature, vast and powerful as she is, declares her own limitation and dependence, and consequently the existence of a Divine Creator. Nor does nature's own harmony allow a doubt, but that, when her utterances are more truthfully interpreted in detail, they will all be found entirely to accord with this general testimony. No fact of the material world, when its limitations and relations come to be fully understood, will fail to fit into its proper place in the Cosmos of the Universe; nor will its voice be at all discordant in the grand anthem of praise, which goes up unceasingly from the heavens and the earth, in honor of Him who created them.

Yet, though this is so, it is the duty of Christian controversialists to enter the provinces over which skeptical scientists usurp dominion, to point out their mistakes, and thus re-conquer, for truth and for God, the territories in which these scientists claim supremacy.

In this work Father Thebaud has engaged, in the book the title of which we have placed at the head of this article. It evinces extensive and laborious research and close thought; and is a valuable addition to modern Christian apologetic literature. It is fully up with the times.

The latest results of archæological, ethnological, philological and historical study are carefully analyzed and digested, and made to pour a flood of light upon the actual condition of man in the earliest times, as regards civilization and religion. The treatment of the subject, throughout, is vigorous and scholarly; adverse theories and objections are candidly and fairly stated and confuted; authorities are numerous cited. The work is philosophical, rather than polem-

ical, and will be read, with profit and pleasure, alike by those who wish to acquaint themselves with the subject merely as a matter of archæological interest, and by Catholics and Protestants who desire to study it in its relation to Christianity.

It was our purpose, at the outset, to give a very full synopsis of the book; but this is not possible in the space yet left us. The most that we shall attempt to do is to state some few points in the first part of the argument. The work is mainly devoted to the proof and elucidation of two propositions, either of which, when established, entirely upsets the Darwinian and Spencerian theories of the origin of man. These propositions are:

First, that man was not evolved from a lower form of existence into that of humanity.

Second, that man's original condition was not that of a brutal savage, from which, by a long process of self-evolution and without divine assistance, he has been developed into what he now is; but that his original condition was that of an intellectual, civilized being.

The first of these propositions Father Thebaud touches upon only incidentally, and only in the introductory chapter of his work, devoting himself in the body of it to the proof and elucidation of the second proposition. The establishment of this, however, compels the admission of the other. For if man's condition at the earliest period of which we have any evidence of his existence, was not that of a savage, but one high up in the scale of knowledge and intellectual power, morality and religion, from which he subsequently descended rather than ascended, the fact shows a fatal gap in the chain of inferences on which the evolution theory depends. For one of the links of this chain—and one without which continuity is impossible—is that man started *as MAN* in the lowest condition of savage life, but one remove from the brute. That assumption disproved, the whole theory falls to the ground.

Father Thebaud discusses his subject not from a biological, but from a historical stand-point. His reasons for this, and also the general plan of his book, are well set forth in the preface. He says:

.....“The historical treatment of the subject ought not to be discarded. It ought, on the contrary, to be more insisted on than ever; for human history cannot contradict natural science, and what it obliges us to accept, has to be accepted. It is true the gentlemen who give to man a really fabulous antiquity, altogether unacceptable to Christians, imagine they can place themselves in a position of safety with respect to the direct testimony of history, by the assertion, that man could have no annals nor monuments, when he was yet unconscious. For, in their opinion, the natural passage of man from the original “protoplasm” to the state of a well-developed “ape” must have required millions of years of complete unconsciousness; and how many ages more must have been necessary for a “Simian anthropoid” to acquire the art of sharpening flint into an arrow, and a stick of hard wood into a club, not to mention the farther, greater progress, supposed by the invention of a covering of

leaves for their nudity? During all this time, of course, the ancestors of man were unconscious. And, finally, the commencement of records, rude at first and of the simplest kind—first proof of real consciousness—supposes another long series of years.....

"This, of course, supposes that the whole system of evolution has been proved without fear of contradiction. This will scarcely be maintained by even the most fervent 'scientists.' And, what is more, we will venture to assert that such a demonstration never will be forthcoming. But we will not insist on this. Our purport is very different—we say: We assert, that if things had taken place as the evolutionists assure us they have, the first records of mankind would be those of rude people just emerging from barbarism. In point of art and culture, in point of ideas and language, chiefly in point of religion, we should find in their social state the most rude elements of a "childish" and "growing" soul; we should be able to trace the steps by which, from the first notions of a coarse religious system, they would have arrived at the point of *inventing God and all His attributes*. This would have been, in the sense of evolutionists a mere subjective theory, perfectly independent of any objective Divine Essence, and having nothing in common with the certain belief that the reason of man can know God, and demonstrate to man His existence. They assert it has been so, and that historical man began everywhere by being a barbarian. Here we join issue with them, and one of the great purports of this volume will be to establish solidly the fact, that man appeared first in a state of civilization, possessed of noble ideas as to his own origin, the Creator, One Supreme God, ruling the universe; etc. We intend to prove historically that he invented none of the great religious and moral truths by the process mentioned above; but that these came to him from heaven. We will endeavor to show the first men everywhere monotheists, generally pure in their morals, dignified in their bearing, and cultivated in their intellect. Should this be well and firmly established, the whole monstrous system of man's evolution falls to the ground. Still more will this be the case if it be proved, besides, that the supposed "continuous progress," which is the mainstay of their theory, is a dream, a non-entity, that, on the contrary, man only progressed in the wrong direction, going from monotheism to pantheism, from this to idolatry, and from this to "individualism" in religion; that this seems to be the law which has governed mankind until the Redeemer came to bring back man to truth, and to found at last a true and strict religious society, not confined to one nation like Judaism, but universal.

"Progress is a fine and catching word, but its greatest admirers are themselves bound to confess that, historically, it has been distinguished by many an overthrow; the edifice in process of construction has often crumbled into ruins, and the savage Goth has spurned with his foot the graciously-moulded Grecian statue, the last and perfect expression of art. No sensible man can admit a continuous progress in history. Yet it is of the nature of evolution to be 'continuous,' since history cannot contradict natural science. If evolution is once interrupted it ceases entirely to be, and must start afresh. But we intend to go much farther than this, and to prove our previous assertion: that nations, after having reached a certain point, always 'progress backward,' and lose gradually the steps in advance they had made. This at least seems to be the historical law for the times anterior to Christianity."

Father Thebaud's idea of the relation of revelation to physical science may be gathered from the following:

..... "We assert that the revealed word of God was not certainly given to teach us science; but not a single phrase of it, rightly understood, can be opposed to true science, and that there is much in it which has anticipated science..... Whatever may have been the individual thoughts of the true prophets of God, whatever else they may have personally attached to the words they uttered, the words themselves had a deep meaning, intended surely by the Divine Revealer to illumine the future discoverers of his laws, and to show them that whatever they might discover He had created."

The discussion of the references in Genesis, in Job, and in the Psalms to the origin of the universe, the creation of light, the formation and condensation of vapor, etc., and to meteorological processes, evinces extensive knowledge and study of natural phenomena, as well as of sacred scripture, on the part of Father Thebaud, and is expressed in language of great beauty and force. The conclusion arrived at is, that "the more science advances, the more the accuracy, even of expression, of these scientific hintings of Holy Scripture, shows that, often at least, the words themselves could not have come but from the lips of God." We commend a careful reading of this part of Father Thebaud's book to those who, like Prof. Proctor, think that the account of creation in Genesis is simply allegorical, written to suit the ideas of men who were in a "puerile" state of mind.

The discussion of the configuration of the earth, designed for one race of men, existing in numerous nationalities, but preserving a unity of sentiments, ideas and of religion, we must pass by, and also the discussion of the process of the disintegration and dispersion of mankind. On this latter point much light has been thrown, through discoveries recently made by the excavation of ancient ruins in Persia, and by the progress of ethnology and comparative philology. The results of these, Father Thebaud has condensed with great skill and clearness of method. The conclusions which he reaches at the close of his introductory chapter, and which the body of his work is designed to prove, he states as follows:

"The end, therefore, God had in view in prescribing to the earth its configuration, and in giving to mankind one progenitor, first in Adam, and then in Noah, was kept in abeyance; and instead of unity, division came to be the great feature of the globe itself and of the human family. The ocean.....intended.....for a universal element of intercommunication, became an impassable abyss over which men cast their shuddering eyes, when they looked out upon its shores. The rivers, and the mountains from which they gushed forth, instead of being highways and public roads, were turned into barriers of division, behind which the timorous and hostile tribes looked askance at each other, and thought only of overreaching their neighbors changed into enemies. That "articulate speech," so celebrated in Homer as the great characteristic of God-like man, and by which he is raised so high above the lower animals, the mind's medium of exchange, the instrument of sweet intercourse, the great bond of unity, whilst remaining in itself one, was split into thousands of idioms, every one unintelligible to those who spoke any one of the rest; and thus reduced every insignificant tribe to the sad condition of looking on all mankind out of their own small community as if it was really deprived of speech, and composed of deaf and dumb animals. Religion, finally, the worship of a common Creator, deprived of authoritative teaching and of a central light, became the greatest source of division, and would of itself have made of earth a real hell, inflamed incessantly by the burning fire of fanatical hatred and war."

These statements Father Thebaud confirms in the body of his work by a complete, thorough digest of the results of archæological studies. The manners, customs, and political condition of the most ancient peoples of Greece, Egypt, India, and Central Asia,

and their religious ideas and practices, are all brought under review, and submitted to the most searching analysis, the result of which fully substantiates the statements made above.

Before entering, however, upon this work, Father Thebaud clears the way for a successful treatment of his main subject, by discussing succinctly a previous question, namely, the supposed primitive barbarism of the human race.

For, as he pertinently says, when it is established that nothing has been really proved by the numerous geological and archæological discoveries, made lately in Western Europe, in opposition to the comparatively modern origin of our species, "then it will be clearly understood that history and tradition have not lost any of their real value, and that we can listen to their voices without fear of being deceived by them."

Father Thebaud discards the consideration of the zoological question with regard to the origin of man; and wisely. For with the diversities and contrarieties of opinion among modern physicists, both as to the facts from which they argue, and the inferences fairly deducible from those facts, and their repeated admissions, that both the phenomena of physical nature and those of the human mind have their "unsearchable roots" in a cosmos of which only "an infinitesimal span is offered to the investigation" of man, and that this infinitesimal span is only "knowable in part," their speculations may be summarily dismissed as having no substantial basis. Besides, geological investigation furnishes negative proof against them.

"For," says Father Thebaud, "if man had really been evolved from the brute by an indefinitely long process of a succession of specific changes—the product of natural selection—geology would have proved it long ago." "The forms of a great number of extinct species are forever preserved in a fossil state. The specific characteristics of all these formerly organized and living beings are so precise that naturalists introduce them in their classifications." "But you search in vain among them for a single fossil, which shows that it was in an incipient stage with respect to any of its future organs. Not one of the innumerable organisms, which according to the Darwinian theory must have existed 'prior to their ultimately reaching the well-defined characters of species now known to us' has been found among the remains embalmed in the 'universal place of sepulchre for all former beings—the rocks and drift deposits of former ages.' And this is true, not only of the Darwinian 'ancestors' of man, but of all classes of animals, of whatever kind they may be supposed to have been."

The so-called "Stone-period" is one of the points most strenuously insisted upon by the supporters of the theory that man's first condition *as MAN* was that of a brutal savage. The following statement of the facts, most strongly relied upon in connection with this theory, is made by Father Thebaud:

"On both banks of nearly all the rivers of Western Europe, often at a distance from the shores, are seen ranges of hills, running parallel with the streams. If these topographical elevations are looked into closely, deposits of coarse gravel below, and sand above, generally are found, varying in depth, but descending mostly to a depth of

from ten to twenty feet. These strata are always—sometimes as high as one hundred feet, often less—above the actual bed of the river. Over the whole a coating of argillaceous clay is spread. In many localities in England, France, and other European countries, two kinds of heterogeneous substances are found embedded in the gravel, the sand, or even the clay. First, pieces of flint—never anything else—worked, or rather clipped unartistically, in the rough shape of pointed cones, rounded clubs, or flattened spears, arrows, awls, &c., never to be inserted in handles of any kind; and secondly, often together with these, the undoubted remains of huge animals, some of them of extinct species, others of actually existing kinds, but living in countries farther north or south, together with extinct species of plants.

"These deposits are generally met with *on both sides of the rivers, mostly at a distance from them*; and it looks really as if the whole intermediate distance across, in the entire length of the stream, had been originally filled with the same deposits, which must have been swept away to the sea, or into caves often discovered in the neighborhood choke-full of the same objects. When this occurs near the mouth of rivers, the great distance between both ranges of hills, the depth looked down into from the tops of surrounding heights, strikes the beholder with awe, when he knows that such an enormous quantity of material has been swept away by the current and buried at the bottom of the ocean. It is useless to add that the insignificant bed of the actual stream adds to the effect produced on the imagination by the conception of the past. These few words, we think, have placed the difficulty before us in all its strength. We are now in possession of the leading facts. Our limits will not admit of our going into any minuter detail."

The most strenuous upholders of the "primitive barbarism" theory must admit the candor and fairness of this statement. Any explanation which shows, that the facts, it recites, are not inconsistent with the denial of the universal barbarism of mankind, when these stone implements were made and used, will be an equally satisfactory explanation of the "bone-caves" and "lacustrine" remains.

The answer of Father Thebaud is clear, and to our mind entirely conclusive. He analyzes, arranges and discusses the facts, with great ability and much candor; points out clearly their bearings and relations; cites the opinions of the most learned savans respecting them and their collateral facts; shows the absent links in the chain of inferences of the evolution theorists; directs attention to other facts, which are entirely left out of view by these theorists; and supports his own conclusions by arguments from admitted geological, metereological and archæological data. Those, who desire to read a discussion of this subject of a "stone-period," at once lucid, candid and in the interests of Christianity, will find it in Father Thebaud's book.

We will attempt a synopsis of the argument, or rather a statement of its main points. We shall freely employ the language of Father Thebaud, but will not do him the injustice of placing quotation marks to the detached sentences and clauses, which, for the sake of condensation, we interweave with our own:

1. The advocates of the "primitive barbarism" theory assume, without proof, that these newly-found deposits are universal, or, at least, co extensive with the deposits which mark well-determined geological eras. Formerly they made in geological treatises a part of what was correctly called the Drift. And this was in accordance with

the facts. For no great portions of the globe are covered with this now celebrated coating of clay above an underlying of sand and gravel. It is found only along water-courses and is therefore a phenomenon of drift and nothing else. It comes evidently from floods, of the violence of which we now have scarcely any conception. Consequently the assumption that it must have required incalculable periods of time, to first form these deposits and then to excavate the intervening valleys, is entirely gratuitous and without foundation.

The term "drift," therefore, did not suit the "primitive barbarism" theorists. They accordingly invented a new geological era and a new name, terming these deposits the "Quaternary Deposit." The design of this is obvious. The well-known Primary, Secondary and Tertiary strata are nearly co-extensive with the earth itself; and the impression produced by this new term is that, contrary to the truth, the deposits referred to are equally extensive.

2. The remains of immense mammalia—elephants, bears and tigers, etc., the congeners of which in our days look like young cubs compared to those prototypes—astonished the beholder, and gave a stronger idea of the weakness, inferiority and rough life of "primitive-barbarian" man. But simple reason tells us that if the life of our first ancestors (all of them) had been such as is described, mankind would have disappeared long before the extinction of such fearful enemies.

3. The artistic difference between the rough palæolithic flints and the polished stones of the neolithic period exhibits a gap which tells but indifferently in favor of the believers in continuous progress. Either there has been a strange severance of continuity, or the men of the first period were better artists, and not such rough barbarians, as the remains we possess of them seem to attest. The supporters of primitive barbarism acknowledge the existence of this gap, and express the hope that the intervening links necessary to fill it up, may yet be discovered. But perhaps the expected discoveries may bring to light the fact that these men, besides their flint instruments, had others proving a higher intellectual status than has been accorded to them. The upholders, therefore, of the primitive barbarism theory, are in the position of persons who have jumped at conclusions, which the facts as yet known are not sufficient to sustain.

These coarse tools found, do not give the measure of the intellect of that portion of the human race which existed at that time, and in that locality. Many things have been lost, which might have given us a different idea of their intellect. They must have been far superior in intelligence to all those monsters, and they must have had other tools and weapons than any which have been unearthed, to oppose successfully such huge and ferocious enemies. Otherwise they would have perished before these animals became extinct. But the Darwinians themselves maintain that they did not; for if this had happened, according to their theory, we could not have descended, as they contend we have, but of which they can furnish no proof, from these primitive savage men. Thus this hypothesis contradicts itself.

4. In fact, recent discoveries prove that these "primitive" men of Europe not only worked on stone, but also on bone and ivory. We have in their remains not only rude hatchets and adzes, but implements adapted to domestic uses and personal ornaments, and spirited sketches in intaglio, in which the animals then existing are drawn with wonderful precision. And these sketches, some of them highly artistic and beautiful, must have been made in the palæolithic age, not in the neolithic; because, in the latter age, those animals had disappeared. The man of that period, then, in Europe, would not, after all, have been as barbarous as he is commonly represented.

5. Quite recent discoveries in Egypt and adjoining countries prove that they are literally filled with stone implements of the so-called palæolithic and neolithic ages, but all evidently belonging to the true historic period; to all centuries, in fact, from the first Egyptian dynasties to the Ptolemies. They are invariably mixed up, too, with copper, bronze, and even, sometimes, iron implements.

6. There are to-day men to whom the use of iron and bronze instruments is unknown, and but a few centuries ago there were extensive regions exclusively inhab-

ited by men in the lowest condition of savage life, while other regions were occupied by the refined peoples of Europe; and it is indisputable that these different conditions of mankind have existed from the earliest periods of which we have any historic knowledge. The assumption therefore is too violent, too contradictory to well ascertained facts, to merit acceptance, that because man was once in a state of barbarism in Europe, that that was then his condition everywhere, much less his primitive condition.

7. The type of the men whose remains have been found in the so-called quaternary deposit has been determined mainly by the labors of Dr. Pruner-Bey; and his conclusions have received the assent of many of the most eminent anatomists particularly of France. The study of the skeletons, that have been found, shows that the men of this "Stone period" were far superior to their pretended prototype, though much inferior to other races existing at the same time in other parts of the world. They belong plainly to that branch of the human family called Mongoloid by Dr. Pruner-Bey, Quatrefages and Max Müller (much more extensive than the former Mongolian race), called Allophyllon by Dr. Pritchard, Turanian by many other writers, and Hamitic by De Maistre, Lord Arundel, and others. Dr. Pruner-Bey (and many eminent savans have adopted his opinion,) thinks that in the skeletons in his possession he can recognize four principal races, which can be assimilated to four existing races at the present time, namely, the Lapps, the Finns, the Esthonians and the Esquimaux of Behring straits.

This is only a bare statement of some of the points in the argument. There are others, of minor weight of themselves, but important, as giving increased significance to those we have stated; which we are compelled to omit. In enforcing and illustrating these points, Father Thebaud makes copious use of the most recent discoveries and studies in paleontology and archæology, citing numerous authorities, and with great discrimination sifting and collating their statements and conclusions.

We had intended giving an exhibit of Father Thebaud's discussion of the facts brought to light by late archæological and philological investigations, which corroborate the Mosaic account of the dispersion of mankind at the erection of the tower of Babel; but we must omit it. Suffice it to say that he shows, by multitudinous proofs, beyond all possibility of contradiction, as it seems to us, that the statements of Scripture respecting the curse pronounced upon Ham in his descendants, and respecting the tower of Babel and the dispersion of the human race, must be accepted as genuine history. He traces the migrations of the Hamitic or Turanian or Mongoloid races; he shows that whilst the descendants of Shem and Japhet remained for a time in Central Asia, leading a simple but refined life, as is proved by the evidences of their civilization and their religion which have come down to us; that the Hamitic races were the first to migrate; that they rapidly degenerated into a savage condition; and that their descendants have remained generally stationary, or nearly so, until this day. These are not simply unsupported assertions. The sciences of philology, archæology, comparative anatomy, and ancient history, are all laid under contribution; and the results of the study of these subjects by the most eminent savans are freely and discriminatingly employed.

We have only touched upon the topics comprised in the first third or fourth of the book, in what may be called the preliminary discussion. This, of itself, would make an invaluable treatise. It is remarkably free from the mere technicalities of science; and is so well arranged as regards topics, and written in such clear and simple style, that any person of intelligence interested in the subjects which it treats, will read it with pleasure and profit.

In the body of his work Father Thebaud investigates the civilization, the literature and the religions of Central Asia, India, China, Egypt, Greece and Italy. He shows that men, at first, were not barbarians, but highly civilized; that they at first existed in a tribal condition; that monarchies were established afterwards, and that even under those monarchies the tribal condition still, in a great measure, continued; that there still remain evidences of the refinement, simplicity of life, and purity of morals and religion of primeval man; that the first religion was pure monotheism, from which men fell into pantheism, then into the worship of different powers and forms of the natural world, and then into grosser forms of idolatry; and that, with this religious decline, there was a corresponding decline in morality, and also ultimately in civilization. We may mention, as chapters of special interest, those in which the ancient literature of India and Persia are discussed, and that also in which the literature and religion of "Pelagic Greece" and Heroic Greece, and the fundamental religious ideas of the Greek philosophy and of the Grecian and Latin poets, are subjected to a searching analysis.

This part of Father Thebaud's work is worthy of a separate article. We trust that some one, abler and more conversant with the topics treated on, will discuss this portion of the book, at some future time.

Our main object, in criticising the addresses of Professors Tyndall and Huxley, and in cursorily reviewing the introductory chapters of Father Thebaud's "Gentilism," has not been to refute the former nor to attempt to enforce the views of the latter; but, rather to exhibit the striking difference between them in regard to the certainty, and the character of the conclusions arrived at. If a reader of the addresses at Belfast asks himself, "to what end do all this glittering rhetoric and specious argumentation tend?" the only consistent answer, he can give, is, "to no certainty whatever: I know nothing, and cannot know anything, about the questions discussed; they are 'irresolvable,' 'inscrutable,' 'unthinkable,' 'unknowable,' according to the declarations of Professors Tyndall and Huxley." But, if that reader will then turn to Father Thebaud, and will give his book a thoughtful and unprejudiced perusal, he will rise from it with clear, definite knowledge, and rational, well-

grounded conclusions. Nature will be to him no fortuitous concourse of atoms, whose origin is "unknowable;" no mute and dumb sphynx, but a real cosmos, vocal with intelligible and accordant utterances. Even where their meaning may not be fully understood, they will be felt and known by him, who has the gift of faith, to be in perfect consistency with what has been already definitely determined. Man will not then be degraded to the plane of inorganic matter, but will appear, as he is, a being glorious in his endowments, destined to immortality, the head and crown, under God, of all creation; his high hopes and inextinguishable aspirations not illusions, but grounded on reality, and possible of fruition; and Christianity will be, not an accidental form of an emotion which has neither purpose, nor object, nor end, lying entirely outside of the sphere of human reason, but a revelation from God, opening up to man's intellectual vision, cleared and strengthened by faith, a glorious reality, such as "the eye hath not seen, nor the ear heard, neither has it entered into the heart of man," but which God "hath revealed by His Spirit."

GEORGE D. WOLFF.

THE CATHOLIC CHURCH IN AMERICAN HISTORY.

1. PRESIDENT GRANT'S SPEECH AT DESMOINES. Delivered at the Reunion of the Army of the Tennessee, Sept., 29th, 1875.
2. THE ANNUAL MESSAGE of the President of the United States to Congress. 1875.

Catholics have been building churches for the worship of God according to the dictates of their conscience, in which that worship is performed with all reverent solemnity; they have been building asylums for the orphan, the aged, the insane, those whom society has depraved or seeks to ruin; they have been building colleges, seminaries of learning, schools of every grade, making for the education and relief of their people exertions such as none of the sects have ever done; and they have meanwhile been doing their duty as citizens, as promptly and as fully as any of their fellow-citizens.

Suddenly they are arraigned as evil-doers, and a cry, sounded at first by a disappointed bookseller, has been reëchoed till the Chief Magistrate of the Republic departs from his constitutional line of duty to invoke, for their annoyance and molestation, the powers of Congress in a proposed modification of the Constitution of the United States.