

us — with no worries, no sorrows. After a wandering life, after the hotel with its commonplace rooms and table, what joy to return to "our villa" and to meditate under its evergreen oaks!

The ordinary traveler never can know this repose, because it is to us alone, we scholars of the Institute, that France gives such a shelter. The remembrances of my youth have almost

always been my consolation for the years of struggle that have made up my life. But I do not thank France alone for being so good to us. I wish to bring also to your country my tribute of gratitude. It is to a woman of your great country, to an American, to Miss Sibyl Sanderson, the incomparable interpreter of "Esclarmonde," that I owe the impulse to write that lyric drama.

J. Massenet.

DOES THE BIBLE CONTAIN SCIENTIFIC ERRORS?



THE question may be treated mainly as a philosophical question, in its bearings upon science as well as upon religion. Unhappily, it has become mixed with several side issues, which should be detached

from it, and thrown out of the discussion. As it is to be presented here, it will have nothing to do with the current disputes in different churches, or with the definition of any type of orthodoxy, or even with the formal vindication of Christianity itself. These are important issues in their own time and place. But there is a larger, if not higher, view of the main issue which they involve, and which they may even hide from our sight. All schools of philosophy, as well as all churches and denominations, have a common interest in inquiring whether the Bible can yield us any real knowledge within the domain of the various sciences. Indeed, all men everywhere will become practically concerned in that inquiry, if the oldest and most highly prized book in the world is now to be set aside as a mixture of truth and error, obsolete in science, if not also in morals and religion, and of little further use in the progress of civilization.

The way to the question should be cleared by several distinctions and admissions. Let us first distinguish mere literary imperfections from scientific errors, and frankly admit the existence of the former in the inspired authors. They were not trained rhetoricians, nor even practised writers. They show the greatest variety of culture and of style. The rugged simplicity of the Prophet is in contrast with the refined parallelism of the Psalmist. The Evangelists did not write pure Greek. It has been said, it would be difficult to parse some of the sentences of St. Paul. Many of the Old Testament metaphors seem gross to modern taste, and there are

certain didactic portions of Leviticus which are too natural to be read in public worship. Nevertheless, to reject the teaching of inspired writers on such esthetic grounds would be like denying the mathematics of the "Principia" because Newton wrote bad Latin, or repudiating some medical classic as unfit for the drawing-room. The literary blemishes of Holy Scripture, as seen by fastidious critics, do not touch its revealed content or divine purport, but may even heighten it by the force of contrast.

We may also distinguish and admit certain historiographical defects in the inspired authors. The prophets and evangelists were not versed in the art of historiography, and did not write history philosophically, nor even always chronologically. Their narratives have many little seeming discrepancies as to dates, places, names, and figures. The line of the patriarchs is yet to be traced, amid conflicting chronologies, with historical accuracy. Persons and events do not always appear to synchronize; as when it is stated in the "Book of the Kings" that Ahaziah was forty years old on coming to the throne, and in the "Chronicles" that he was twenty-two years old. The Evangelists Matthew, Mark, and Luke tell the story of the crucifixion of Christ with differing motives and details, which have not yet been fully harmonized. Such things are simply unavoidable in all historical composition. At the present date of antiquarian research, neither the dynasties of the Pharaohs, nor of the Cæsars, nor even of the Popes, have been clearly ascertained. No one can read Bossuet's "Universal History," or even Bancroft's "History of the United States," without losing himself in chronological puzzles. The English historians Clarendon, Neal, and Burnet narrate the execution of Charles I. with substantial agreement, but from the most varied dogmatic points of view. There are obvious misprints in some editions of Hallam's

"Constitutional History," which could not have been in his manuscript. There may be trifling mistakes in some English translations of Neander's "Church History" which are not in the German, as well as grave misconceptions in some of his critics, which are neither in the English nor in the German. In like manner, as to any supposed inaccuracies in the "Chronicles" and the "Gospels," the fair presumption is, that they are not errors of the inspired text, but mere errors of transcription, or errors of translation, or errors of interpretation, or, simply, still unexplained difficulties. It is the business of historical criticism to harmonize standard historians, not to impeach them; and thus far such criticism, as applied to the sacred historians, instead of impugning the scientific accuracy of Holy Scripture, has only confirmed it by unexpected coincidences and ever-growing certitude.

We should still further distinguish some traditional glosses in the inspired writings. The original autographs, and their first transcripts, have long since been lost; and our existing text of the Hebrew and the Greek must have become corrupt through the negligence or design of copyists and editors. Even the vowel-points, accents, spaces, verses, and chapters, which have been added as aids to the sense, have also proved a source of faults and mistakes, especially in the numeral letters. The book of "Samuel" is made to say that the Lord smote fifty thousand men in a village of less than five thousand inhabitants; and the "Chronicles" seem to state that King Jehoshaphat raised more than a million fighting men out of a district not half as large as Rhode Island. King David is said to have saved more silver coin for the decoration of the temple than could then have been in circulation. The Trinitarian proof-text, "There are three that bear record in heaven," seems to have been interpolated in some late manuscripts for a purpose. It is even alleged that there are spurious claims of authorship in the titles and contents of the sacred books. David, we know, did not write all the Psalms; and we are now told that Moses did not write the Pentateuch, nor Isaiah the whole book of "Isaiah." In short, the entire Bible gives internal evidence, it is claimed, of anonymous fragments compiled by unknown hands. References are made in it to lost documents, such as the books of "Jasher," "Nathan," and "Gad," the "Wars of Jehovah," and the "Visions of Iddo." There are two accounts of the creation, two versions of the commandments, three distinct codes in "Exodus," "Leviticus," and "Deuteronomy," besides any number of parallel, detached, and repeated passages throughout the Scriptures, suggesting to some critics a mere patchwork

of loose chronicles, proverbs, psalms, prophecies, gospels, and epistles.

Certainly all these phenomena have been common enough in secular literature. The Greek and Latin classics, and even standard English authors, are marred with textual corruptions, such as the loss or change of a word or letter, or even part of a letter, sometimes running a single number up into the thousands, and sometimes reversing the meaning of a whole sentence, or turning it into nonsense. The text of Xenophon is full of them. The "Epistles" of Cicero have them by the hundred. The single play of "Hamlet" fills two large octavos of the Variorum edition of Furness. There have also been some curious pseudographs more or less innocent. The antique manuscripts of Chatterton deceived the practised eye of Walpole. Literary critics of the last century eagerly discussed the question whether the poems of Ossian had not been forged by their professed editor James MacPherson. It was long a moot point, Who wrote the letters of Junius? Moreover, we have had fine examples of literary compilation and reproduction without a taint of forgery or plagiarism. Froissart's "Chronicles of Knights, Kings, and Fair Women" were personally collected by him in France, England, Scotland, and Spain, and inscribed upon illuminated parchments, which are still extant. Bishop Percy, the accomplished *rédacteur* of the "Reliques of Ancient English Poetry," not only recovered many manuscript ballads, but by his skilful emendations of them adapted them to modern taste and fancy. The materials of Froissart and Percy were at length wrought, by the masterly pen of Sir Walter Scott, into poems and novels which are read wherever the English tongue is spoken. And if Judge Holmes or Mr. Ignatius Donnelly could prove that Shakspeare did not write Shakspeare, but only recast and arranged the tragedies, histories, and comedies which bear his name, that incomparable book, with all its archaisms, anachronisms, and solecisms, would remain the masterpiece of genius that it is, and men might still quote Shakspeare, as John Randolph used to say, "to prove anything worth proving."

Perhaps also the Bible might be the Bible still in its most essential import, although its long-reputed authorship should now be discredited. It may be conceivable that such a Bible could have survived its own literary errors as a trophy of the most devout scholarship. But if quite conceivable, it is not yet certain, nor very probable. The plain statements of the inspired writers themselves, their apparent indorsement by our Lord and his apostles, and the consistent tradition of three thousand years, still stand opposed to the con-

jectures of learned criticism. And such conjectures are not sustained by all the literary precedents and analogies. The title of a famous author, like Homer or Shakspeare, represents the judgment of his nearest contemporaries and successors, and grows with the lapse of time until it becomes too certain to be easily set aside. Such claims for Moses and Isaiah were not even questioned during more than twenty centuries. It would seem rather late now to overthrow all this external testimony by mere internal criticism of their accepted writings. Any traces of compilation in the sacred books need conflict as little with their received authorship as the like use of documents and fragments in acknowledged works of genius. It is as easy to conceive that Moses could compose or compile the Elohist and Jehovistic records of "Genesis" with their different names of God, as that Shakspeare composed or compiled both "King Lear" and "Richard III.," though the former, quite consistently, has only the pagan names of Jupiter, while the latter is full of the Christian names of our Lord. As yet, there is no more critical demand for two Isaiahs in the Isaian prophecies than for a dozen Homers in the Homeric poems. In fact, the sacred writers are not half as fragmentary and composite as well-known English historians, poets, and philosophers. Nor do marks of editorship always weaken the genuineness and integrity of a standard treatise. The postscript of Joshua at the close of the Pentateuch concerning the death of Moses may have been read by the ancient Hebrew as we now read a biographical note to the works of Bacon. Passing allusions to other books of "Kings" and "Chronicles" may have seemed like the conscientious references of a Hume, a Prescott, or a Motley to well-known official records; and explanatory remarks and parenthetical hints, easily distinguishable by their connection, may have been like helpful annotations upon the text of a Milton or a Butler, with the difference that, in Hebrew manuscripts, they could not be put within brackets or in the margin. Indeed, a competent editor, like Ezra the scribe, might canonize otherwise unknown writers, as a Niebuhr or a Grote could sift crude annals and sanction the most obscure authors, or as some rare genius might detect for us the apocrypha of Shakspeare. Not even such telltale signs as new words, late idioms, or local phrases could wholly discredit a renowned author whose writings have come down to us through all the vicissitudes of language and literature. The several codes of Moses, if framed before the conquest of Canaan, would have been no more ideal than the "Republic" of Plato, and any later Hebraisms or Chaldæ-

isms appearing among them since the Babylonian exile need be no more puzzling than Anglicisms or Americanisms among the feudal forms and Norman phrases of a recent edition of Blackstone. If the first and second parts of "Isaiah" are in any sense prophetic, to refer them to different authors at different periods merely because of differences of theme, style, and diction, would be like assigning a double authorship to "Paradise Lost" and "Paradise Regained," or arguing from a modernized version of Chaucer that he could not have written the "Canterbury Tales," or claiming "Childe Harold" as an Elizabethan poem because of its few archaisms and Spenserian stanza. In all Hebrew literature, early, middle, and recent, there is no stumbling-block like that of Lord Tennyson singing in the Yorkshire dialect as well as in the purest English. Sometimes the feats of genius may perplex us even more than the marvels of inspiration. Besides, it should not be forgotten that while the Bible is literature, and very good literature, yet it is not to be treated as uninspired literature, and judged by mere esthetic rules alone, much less classed with the pseudonymous fragments which have become the puzzle and the scandal of critics. More than forty years ago that prince of biblical scholars, Joseph Addison Alexander, thought that such treatment of "Isaiah" had already reached its limit, with the promise of "no further invention, unless it be that of reading the book backward or shuffling its chapters like a pack of cards." The higher criticism may have its duties as well as its rights. Without at all undervaluing any of its assured results, we may still hope, as we watch the brilliant tournament of learning and genius, that the combatants will at length fight their way around the field of conjecture back to the traditional belief from which they started, and which is still the common-sense judgment of mankind. That judgment is, that if there be any evidence at all of inspiration in the sacred writers, such evidence favors their long-established authorship as well as canonicity, and their consequent accuracy, no less than their veracity, as organs of divine revelation.

We are now ready for several conclusions. Neither the literary imperfections, nor the historiographical defects, nor the traditional glosses of Holy Scripture can of themselves, at their worst, impair its scientific integrity or philosophic value, if it have this value. Such mere errata may yet be corrected or explained, and prove in no sense permanent errors, much less essential untruths. They are wholly superficial and transient, not of the abiding essence of the revealed word. They may, indeed, and they often do raise presumptions against the

claim of inspiration in the minds of hostile critics; but they are not the proper pleas of the friendly critics who look for scientific errors in an inspired Bible. Such critics take the dangerous ground that the Bible teaches nothing but religious truth, and may even teach such truth in connection with scientific error. This is dangerous ground, because it is ground lying inside the limits of an accepted revelation; because it involves not so much the mere human form, as the divine content, of that revelation; and because it exhibits that divine content as an amalgam of fact and fiction, truth and error, knowledge and superstition. It is dangerous ground also, because it opens the way for hostile critics to proceed quite logically from scientific errors to religious errors in the Bible, by arguing that if it teaches false astronomy and crude physics, it no less clearly teaches bad ethics and worse theology. And it is dangerous ground in philosophy as well as in religion, since it would deprive her physical no less than her psychical provinces of their chief source of transcendental knowledge, and abandon her whole metaphysical domain to the empiric, the agnostic, and the skeptic. Literary and textual obscurities there may be upon the surface of Holy Writ, like spots upon the sun, or rather like motes in the eye; but scientific errors in its divine purport would be the sun itself extinguished at noon. Such a Bible could not live in this epoch.

Let it first be observed, that the general distinction between errant Scripture and inerrant Scripture is not made by Scripture itself. As a theory of inspiration, it is modern and extraneous. It has arisen from the supposed need of adjusting an ancient book to the science and culture of our time. Its good motive is not to be questioned; nor can its plausibility be denied. That divine truth should have been offered to us in a setting of human error does not seem at first sight wholly without analogy or precedent. If nature has its flaws and monsters, why may there not be faults and mistakes in Scripture? If the development of science has been mixed with error, why not also the delivery of revelation? There is even a grain of force in such reasoning as applied to any mere textual or literary difficulties yet to be removed or explained. But the moment it is applied to the sacred authors themselves, it breaks down. It was not their theory of their own inspiration. If anything is plain in their writings, it is plain that they claim to be making divine communications under an unerring guidance. Our Saviour, too, sanctioned the claim in his own use of the Hebrew Scriptures, and renewed it for the Christian Scriptures. At length the apostles went forth maintaining it amid the master-

pieces of Greek and Roman literature. When St. Paul, in an assembly of Athenian philosophers, quotes from Aratus and Cleanthes sentiments also quoted by Cicero and Seneca, it is with the polite acknowledgment, "As certain of your own poets have said"; but when he quotes from Moses a sentiment afterward quoted by David, it is with the devout preamble, "As the Holy Ghost saith." Now it is simply impossible to associate such statements with an erroneous communication from God to man in any sphere of truth, physical or spiritual. The only escape from them is to except them from the physical sphere, or limit them to the spiritual sphere. But no such exceptions or limitations can be found. As judged by their own claims, the Scriptures, if inerrant at all, must be accounted inerrant as to their whole revealed content, whatever it be and wherever found, whether in the region of the natural sciences, or in that of ethics and theology.

The Bible also shows that its physical teaching is implicated with its spiritual teaching in the closest logical and practical connections, with no possible discrimination between the one as erroneous and the other as true. The full import only of these connections can be discerned by profound study. Ordinarily we lose sight of them. We are so prone to detach Scripture from Scripture that we often neglect or slight large portions which do not at once strike our fancy or interest. We ask, what is the use of "Genesis," with its dry genealogies; or "Leviticus," with its obsolete ritual; or the Prophets, with their mystical visions. Why read the Old Testament at all, when we have its fulfilment in the New? or why even take much thought of the Epistles, while we have their core in the Gospels? The words of Christ contain the essential truths, and these are so few and simple that they may be read running. All the rest we are ready to discard as mere surplusage. So might some masterpiece of dramatic art seem full of irrelevant scenes and dialogues until its plot has been analyzed and its details tested upon the stage. The devout student of the Bible, intent on searching its full contents, will soon find that the seeming medley is in reality a living organism, with its nearest spiritual truths in logical dependence upon its remotest physical facts, and the one in practical relation to the other. He will see its astronomical revelation of a Creator of the heavens and earth, not only distinguishing the true Jehovah from the mere local and national deities of antiquity, but identifying him with the maker of suns and systems in our own time, and thus disclosing the foundations of revealed in all natural religion, together with the revealed commandments against heathenism, idolatry, and profaneness. He will see the geological

revelation of the six days' works, not merely upholding the narrow Sabbath of the old economy, as commanded from age to age, but projecting the larger Sabbath of the new economy as yet to be realized in the millennial age of peace, and so connecting the whole history of the earth with the history of man. He will see the anthropological revelation of God's lost image in man as at once demanding and sustaining the atonement and the incarnation, together with the whole human half of the decalogue, and the predicted regeneration of both earth and man in the resurrection. Throughout the realm of the sciences he will see the author of Scripture revealing himself as the author of nature, and building the one upon the other. The whole psychical superstructure of religious doctrines and ethical precepts will appear to him reposing upon its physical foundations in the preëxisting constitution of nature and humanity. Remove but one of those foundation-stones, and that superstructure will totter. They stand or fall together. Historically, too, as well as logically, the concession of any scientific errors has led to the downfall of the whole biblical system of doctrine.

It is seldom remarked that both the physical and the spiritual teaching are alike given in a non-scientific form. Often is it said—and said truly enough—that the Bible does not teach astronomy or physics as a science. But neither does it teach theology or ethics as a science. The method and phrase of science are no more, no less, wanting in its physical than in its spiritual revelations. If the latter are presented as a mere crude mass of facts and truths without law or order, so also are the former; and it will be no harder to find the epochs of geology in the first chapter of "Genesis" than the persons of the Trinity in the first chapter of "St. John." If it be granted that the physical truths of Scripture are couched in the popular and phenomenal language of the times when it was written, so also are its spiritual truths veiled in the anthropomorphic and even barbaric imagery common to all rude peoples; and when the Psalmist tells us, "The sun knoweth his going down," he is no worse astronomer than he is theologian when he declares, "He that sitteth in the heavens shall laugh at the kings of the earth." If it be urged that we have left far behind us the contemporary astronomy of the Old Testament, with its spangled canopy of heaven wrought as a marvel of handwork, how shall we defend its contemporary theology, with its man-like deity so often depicted as a monster of anger, jealousy, and cruelty. If we are told that we have outgrown its physics, with their cisterns in the earth and windows in the sky opened and shut by angels, what shall be said for its ethics, so long charged with polygamous

patriarchs and pro-slavery apostles? If we are warned against a few devout scientists who are endeavoring to harmonize their geology with the Mosaic cosmogony, is there to be no warning for this scandal of great churches and denominations at the present moment adjusting their metaphysics to the Pauline divinity? In short, there is not an objection to the non-scientific character of the physical teaching which will not recoil with greater force against the spiritual teaching. Whoever, for this reason alone, affirms scientific errors in the biblical astronomy and physics must be prepared to admit them also in the biblical theology and ethics.

Nor can it be said that the physical teaching is any more reconcilable with popular fallacies than the spiritual teaching. It has been maintained that the divine author of the Scriptures accommodated them to the scientific errors of their own times for the sake of the moral and religious truths to be conveyed. There was no need to correct the false astronomy of the ancient Jews, so long as the phenomenal sunrise and sunset were still true for them and for their age. It was only important to give them true ideas of God and duty, and to leave them to their unaided reason in other matters of mere science and culture. Our Lord himself is supposed to have thus connived at the story of Jonah, the belief in demoniacal possessions, and even the tradition of the Mosaic authorship of the Pentateuch. He did not come to teach natural history, or medical psychology, or the higher criticism. It was enough for his purpose that he could make the entombment in the whale's belly prefigure his own resurrection, prove his Messiahship by seeming to cast out devils, and enforce his teachings with the great name of Moses. But the risk of such reasoning is that it might prove too much. It might soon bring down the maxim, "False in one thing, false in everything else," upon the head of any teacher who only once should deceive his disciples and teach them to deceive others. In the examples given, it would leave the most momentous truths resting through all coming time upon a basis of prejudice, superstition, and falsehood. Moreover, it could be applied logically, as it has been applied actually, to doctrines the most essential; and in the end would reduce Christianity to mere natural religion as adapted to Judaism. It is a matter of history that the so-called theory of accommodation has thus run its course in the schools of criticism. Be it observed, however, that the theory itself is not here in dispute, for the purpose of this argument. You may adopt it, if you like; and treat the history of Jonah as a mere nightmare vision with a good moral, the demoniacs as cases of lunacy and delirium, and the literary claim

of Moses as an old Jewish legend. But in that case you must be ready to find pious frauds and innocent fables throughout the Bible, and can no longer hold it to be false only in science and not also in religion and morals. If it were once true for its own time, it would soon cease to be true for our time.

Here it should be noticed that both the physical and the spiritual teaching alike have a permanent and universal import, as well as local and temporary reference. Usually this is admitted as to the biblical theology, despite its antique and rude imagery. We have read the Old Testament forward into the New and the New Testament backward into the Old, until the God of justice in the one seems consistent with the God of mercy in the other, and all anthropomorphism disappears in a divine ideal of infinite purity and love. But as to the physical sciences, it is sometimes held that the prophets and apostles were so dominated by their environment that they not only shared the scientific errors around them, but may even have expressed those errors in their inspired writings as freely as they have exposed their own frailties and idiosyncrasies. Otherwise, it is said, no revelation could have been received by them or made through them to their own age and country, or indeed to any other age and country. There is a show of truth in such statements. Certainly it would be very absurd to treat the sacred writers as mere amanuenses without thought or individuality; and quite impossible to take them out of their proper setting in the unscientific ages when they lived, and from among the uncultured peoples whom they taught. It is not even necessary to suppose their own personal knowledge greater than that of their contemporaries, outside of the divine communications. But neither is it necessary to suppose them acquainted with the entire purport of those communications. They may have spoken better than they knew. They may not have been fully conscious of their messages, as applicable in other eras and stages of culture. Even in pagan literature the great poets, sages, and philosophers, though writing solely for their own time, have unconsciously written for all after time. So Homer sang in ancient Greece; and the ages have been listening ever since. So Euclid, two thousand years ago, sketched lines and angles which to-day save the sailor from shipwreck, and regulate the commerce of nations. So Plato reasoned in the academy, with little thought beyond his own disciples; and the world's philosophy is still sitting at his feet. No more marvelous would it be had David discerned a divine glory in the heavens which astronomy now illustrates, or Moses perceived a divine order of creation which geology is confirming. Inspiration may

at least be supposed to equal genius. Moreover, the claim of inspiration being allowed, the sacred authors at once appear as organs of another and higher intelligence than their own. Avowedly, they often speak of divine mysteries which they knew only in part, and sometimes of a distant past or future which they neither had seen nor could see. Moses, in his vision of the creation, during six days may not have reviewed the whole physical development of the globe. Isaiah, in his vision of redemption, may not have foreseen beyond his own foreground, the whole moral career of mankind. Yet behind the words of both Moses and Isaiah was an Omniscience embracing the entire course of nature and of history. No violence would be done to their personality by supposing them the mouthpiece of such Omniscience. As voiced by its greatest teachers, science itself acquires an ever-widening vision of which they had not dreamed. Nor need any mystical sense be claimed for the sacred text in order to give it so large scope and fullness. It is not the mere learned exegete or visionary saint who is now reading between the lines of prophets and apostles. It is the strict scientist who is returning from every conflict with the phenomenal language of the Bible, to interpret that language, as he has learned to interpret the phenomena themselves, in a richer sense and with a wider application. That the heavens declare the glory of God, has become only more true since a Newton and a Herschel have illuminated them with suns and planets. That heaven and earth were made in six days, is none the less true because a Dana and a Guyot have been retracing those days of Jehovah as long cosmogonic eras. That man was created in the image of God, might still be true, even though devout biologists should yet prove him to be but the full flower of the planetary life as well as the highest ideal of the Creator. Only the young and crude sciences, wrangling among themselves, are at seeming variance with Scripture. The older, more complete sciences are already in growing accord with it. Hence it is that the revealed Jehovah still reigns in the astronomical heavens instead of having been left far behind us as an Israelitish Jupiter in the skies of Mount Zion. For this reason "Genesis" is still repeating the story of the earth instead of becoming the forgotten myth of some Hebrew Hesiod; and for this reason Jesus himself is no mere Jewish Socrates of the schools. In a word, it is because the Bible, though non-scientific, is not anti-scientific, that it is as true for our time as it was true for its own time, and is likely to remain true for all time to come.

We come next to the more positive argument that the physical teaching, like the spiritual, has been adapted both in kind and degree to our

wants and capacities. It may be objected to the foregoing views that after all, as a matter of fact, we get our theology from Scripture, and our natural sciences from nature, and that a mere absence of scientific errors from Scripture does not prove the presence of any scientific verities. This is true, and yet not true. As to theology, it is true that when considered as a metaphysical science of God and divine things its material is mainly to be found in the Bible; but it is not true that as an empirical science of religions it may not find material outside of the Bible in the religious history of mankind. As to the physical sciences, it is true that they are derived mainly from nature as bodies of empirical knowledge; but it is not true that they can find no metaphysical ground and material in the biblical revelations concerning physical facts. On the contrary, a thorough investigation will show that, as we ascend the scale of the sciences from the simple to the complex, the revealed material increases with our increasing moral needs and decreasing mental equipment. In astronomy, on its metaphysical side, we shall find at least some revealed matter, such as a Creator of the heavens whose immensity, eternity, omnipotence, immutability, and glory they declare; in geology, a little more revealed matter, such as the divine order of the material creation, the divine wisdom and goodness which it illustrates, with some moral crises which mark its history; in anthropology, yet more revealed matter, such as the creation of man in the divine image, his vicegerent dominion over nature, his primitive innocence, together with some glimpses of his early history, the origin of races, languages, and arts, and their adjustment in a scheme of universal providence. And so on, through the higher mental and social sciences, we shall meet an ever-growing volume of revealed facts and truths, until we reach the topmost science of theology, where the revealed material becomes transcendent in kind and infinite in extent. Could we here pursue such inquiries, it might be shown that this apportionment of so large an amount of spiritual teaching with relatively so small an amount of physical teaching is not only in strict accordance with the preëxisting constitution of the human intellect, but is itself a proof of the divine wisdom which has presided over the whole revelation.

It only remains now to add that the physical teaching in its own place and for its own purpose is quite as important and valuable as the spiritual teaching. In proving this, there is no need to belittle the great religious themes of Scripture, or to deny a religious aim and purport even in its physical revelations. Such facts as the origin of the heavens, the formation of the earth, and the constitution of man have a

physical side, which has been, indeed, revealed to us in connection with religious truth. Nevertheless, they are, at least, separable in thought for special study under their scientific aspects and in their scientific connections. As a matter of fact, they are thus treated by physicists and by some divines. Without foisting into the Bible any occult meaning, or forcing it out of its due sphere of influence, we may investigate its correlations with astronomy, geology, anthropology, and other sciences, considered as subsidiary and complementary to divine revelation; and the field of such correlations will widen the farther we investigate them. Moreover, true as it may be that religion is the chief topic of revelation, yet it is still true that it touches other great interests of humanity, and serves other high purposes. Although never designed to teach the arts and sciences, it has in fact always promoted them in every stage of their progress. While the furtherance of science, the perfection of philosophy, and the growth of civilization cannot be ranked as its chief ends and issues, yet they may at least be classed as its incidental fruits and trophies. In this guarded sense we shall find that the physical portion of revelation, small though it seem to be, is of the greatest benefit to science, philosophy, and general culture.

There is, first of all, its apologetical or evidential value, to which a passing glance should be given. Civilization is interested in the defense of Christianity; and whatever makes a divine revelation valuable, either in philosophy or in religion, becomes enhanced by the proof of its harmony with human science. When the chief authorities in any science are found favoring such harmony; when its established truths already illustrate it, and its hypotheses can be hopefully adjusted toward it; and when all the sciences are seen taking this general direction according to their different stages of advancement—we gain new evidence of revelation, the highest perhaps that can be afforded. It is science itself becoming an unwitting, and sometimes an unwilling, witness at the bar of Omniscience. It is evidence which is strictly scientific in its logical quality and force, since it is derived from the facts of nature as agreeing with the truths of Scripture. In this age of the arts and sciences it is as timely as the evidence yielded in the age of miracles and prophecies. It meets the modern scientist seeking wisdom, as that evidence met the ancient Jew requiring a sign. It even explains miracles and fulfils prophecies, and thus crowns and completes all former evidences. Without it, indeed, they would themselves fall worthless to the ground. As no miracle could ever prove a falsehood, and no prophecy could perpetuate nonsense, so no amount of miraculous and prophetic evidence accumu-

lated in past ages could uphold a Bible containing scientific errors in the face of modern science. Herein lies the peril of the hour. The timid or rash apoletes who are spiking their guns on the outer bulwarks of scientific evidence, and fleeing into the citadel of orthodoxy to repair its walls, may yet find themselves in conflict with enemies whom they had thought to admit as friends within the ramparts. Schleiermacher long since forewarned us of that "bombardment of derision, amid which they will be ceremoniously interred in their own fortifications." Not by weak concessions to science in this day of abounding science is the Bible to be vindicated. Only by strengthening and insisting upon its scientific proofs can it retain its power, either at the center of Christian civilization or in the logical crusade of the missionary among heathen religions and philosophies.

But the direct value of revelation, not only as scientifically attested, but as itself a source of scientific verity, lies more within the present inquiry. As such value is largely metaphysical, it may not be readily appreciated by the unthinking reader, who terms anything metaphysical which he does not choose to understand; or by the superficial thinker, who scorns all metaphysics but his own; or even by the special scientist, who abjures metaphysics for the sake of some little fragment of empirical knowledge. But to the profound inquirer, even though he eschew the scholastic metaphysics, it is becoming every day clearer that all physics at length run out into metaphysics, and that every physical science at bottom rests upon some hidden metaphysical basis, underneath the facts or phenomena with which it deals, down in a recondite region of realities and causes which divine revelation alone can disclose. The Bible, indeed, does not teach the empirical part of any such science, its body of phenomena and laws; but it does teach its metaphysical complement, the divine ideas expressed in those phenomena, and the divine causes of those laws. In astronomy it does not teach celestial physics, the figures, motions, and orbits of planets, suns, and stars throughout infinite space and time; but it does teach that divine immensity, eternity, and omnipotence of which the whole celestial system is but a phenomenal manifestation, and without which it would be an infinite anomaly. In geology it does not teach terrestrial chemistry, the birth and growth of the earth, through all its eras and phases, with all its strata, floras, and faunas; but it does teach that divine power, wisdom, and goodness which are the source, method, and issue of the whole terrestrial development, and without which it would be at once causeless and aimless. In anthropology it does not teach the human organism, with its

laws of heredity and environment, and the evolution of races, languages, and arts; but it does teach those divine ideals through which man has been passing from the image of an ape to the image of God, and without which he would be a mere failure and paradox. And in the higher mental and social sciences, while it does not teach any psychical processes and laws, it does teach all needed spiritual truth and knowledge. As yet, indeed, these subtle connections between the rational and revealed material of each science have not come clearly into general view; much less have they been logically ascertained and formulated. Nevertheless, the large-minded leaders in all the sciences are at least seeking some more rational ground for them than sheer ignorance or clear absurdity; and not a few of them are finding it practically by studying the works of God together with his Word.

At the highest point of scientific contact with the Bible appears its value in philosophy considered as the supreme science of knowledge or science of the sciences. Here the full appreciation is not only difficult, but barred by prejudice and distaste. We have become so accustomed, wisely enough, to treat philosophy as a secular pursuit, and have so just a dislike to any crude admixture of religion with science, that we may be in danger of the other extreme of leaving at least one half the philosophic domain under the rule of skepticism and ignorance. Often, because unwilling to mingle sacred speech with scholastic jargon, we may seem to accept theories of knowledge which ignore or exclude revelation, as if there were no such aid to reason. Possibly our agnostic friends, with whom we agree up to a certain point, may sometimes have fancied the fastidious reserve to mean doubt of any philosophy taking religion as well as science within its scope. If this be so, it is time to say, in the frankest English, that while they are building their knowledge upon faith, we are building our faith upon knowledge. It is time to remind them that the little they do know, they know only in part; that the most exact science of which they can boast is filled with crude hypothesis and vague conjecture; that it has been reared through ages of error by a fallible logic; that it depends upon an assumed order of nature which is broken every time they lift a stone from the earth; that it rests ultimately upon universal conceptions which by their own showing are self-contradictory; in a word that, apart from the despised metaphysics and the neglected Bible, it is mixed with credulity and based on absurdity.

It is time also, on our part, to insist that, although we cannot know everything about God, and the soul, and the unseen world, we may

at least know something; that the otherwise Unknowable has been made known to us by an intelligible revelation; that this revealed knowledge has been built up for us within the region of facts, through ages of experience, before science was born; that it not only comes to us with scientific evidence, but itself supports each science, and throughout the sciences yields material without which they would fall, like falling stars, into a chaos and void—in a word, that the inspired Bible is a radiant source of divine knowledge, chiefly within the psychical sciences, but also within the physical, and therefore essential to the completion of philosophy itself as the crowning science of the sciences. Such a philosophy will see no scientific errors flecking that sun of truth, which thus lights up its domain, but only paradoxes to dazzle it, should it too rashly gaze, and mysteries to blind it with tears.

It is more than half a century since this discussion began in the schools of Germany, and less than half that time since it passed into the Church of England. In our own country it seems destined to become popular in its course, as well as academic and ecclesiastical. The daily press already reflects a growing interest in questions of biblical criticism which hitherto have been kept within the province of scholars and divines. Parties are forming, as if some great battle for the truth of Holy Writ were

at hand. Its defenders, it is to be feared, are as yet but poorly equipped and marshaled. Their opponents boast of the highest culture of the time; have the exultant sympathy of the whole unbelieving class; and even claim, however unwarrantably, some orthodox allies. In the first onset, doubtless, they will win a brilliant victory. Then may come a great uprising of the Christian masses, as moved by that Holy Spirit who first inspired his Holy Scripture. Whoever shall stand apart from them in such a crisis will not be shunning a religious question alone. In his place he will be deserting some other related interest of humanity. The thinker will be deserting that which for ages has set the problems of philosophy. The scholar will be deserting that which has built up the universities of Christendom. The artist will be deserting that which has yielded the purest ideals of genius. The man of letters will be deserting that which has molded our English speech and literature. The man of the world will be deserting that which has lent to society refinement, and purity, and grace. The merchant, the lawyer, the doctor will be deserting that which is the ethical basis of their callings. The patriot and the statesman will be deserting that which has given us our freedom and our laws. And the philanthropist will be deserting that which is the very keystone of civilization.

Charles W. Shields.

PLAIN WORDS TO WORKINGMEN.

BY ONE OF THEM.



THE cause of labor is the issue of the hour. What it ought to have, but has not got; what it might be, but is not; and what it may be, if it goes the right way to get there, are questions that fill the newspapers,

occupy platforms and pulpits, and cause not a little headache in monopolistic and society nightcaps. We are in fact being turned inside out like a meal-bag, and scientifically gaged like a barrel of high wines. Without doubt, we shall be a disappointment to some in what we are, and a surprise to most in what we are not, being, after all, much the same as the rest of folks, the difference resting mostly in our boots and pockets. This change in events has come about for two reasons: the world is getting wiser, and we are getting troublesome.

Now that the world is rubbing its eyes to look at us, that fact will do us no small good, if we so far follow it as to take a good look at ourselves, and with our expectations and claims discover and make note of our faults.

SOME OF OUR FAULTS.

WE have made some considerable to-do about what we ought to have. Do we ever stop to think of how much we throw away? We think of our thin slice of beef, our pat of sausage-meat, and our red herring—never too much and sometimes not enough; but how often is it that we scratch our heads over the dimes and dollars we drop in our mugs of beer? We object to a cut in our wages, and have hard words for such employers as, from greed or necessity, reduce a worker's weekly pay; but do we not do the same thing when we