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"OPPOSITIONS OF SCIENCE FALSELY SO-CALLED."

AND so it seems that even in Paul's day science was a name to conjure with. The aged Apostle had to exhort his "son Timothy" to stand guard over the truth of God that had been committed to him, especially by avoiding "oppositions of science falsely so-called." The danger to faith arose not from real science, but from that baseless and pernicious gnosis, unworthy [R3420 : page 262] the name of science, that was already on the way to its full fruitage in the Gnosticism of Marcion and Valentinus that at a later day so cursed the early Church.

Nor is this juggling with "science" yet over, as a recent experience convinced the writer. The colloquy was with – or rather the "setting down" came from – a product of the "New Thinking." He had been made at Harvard, and had entered upon the study of divinity there, but finding no definite basis for his "divinity," he had given up the ministry as a bad job. A respectful word about the Bible was what precipitated the explosion: "You don't pretend to say that you believe the Bible to be anything but a mass of Jewish myths and legends? In these days no one but a mossback ever thinks of it as a revelation from God! Why, it has been so completely discredited by science in every form and from every point of view, that no self-respecting man of culture can afford to give it even a moment's attention!"

What could one say when dazed by such an outburst? How could one help feeling that science embodied had finished the business, and that it was useless to gainsay its authority? As for reasoning with such a reckless asserter, that was out of the question. He was beyond the reach of reason. For a moment the poor "mossback" felt as one might imagine the old-fashioned tallow candle of seventy-five years ago felt when the great "extinguisher" was brought down upon it. But recovery came in due time, aided by some knowledge of real science gained at the feet of the masters; and the conclusion ultimately

reached shape in Paul's phrase, "oppositions of science falsely so-called." This man was monumentally ignorant of real science. Indeed, he was merely conjuring with a name of the contents of which he knew nothing except at second hand; and even that second-hand knowledge was "science falsely so-called," in other words, pseudo-science.

Has science really discredited the Bible as the Word of God, so that there is nothing left of it on which one can depend? We answer, By no manner of means. The assumption that it has done so is the supreme Satanic lie of this age, originating in the consummate conceit which is the very essence of the zeitgeist, and made use of by the Devil for the overthrow of the religion of Christ. True science has never contradicted the Bible; has never touched it but to confirm. The same God made both the world and the Word, so that there can be no contradiction. It is only false science that has seemed – or been made to appear – in conflict with Christianity.

To make this clear beyond possibility of gainsaying, one needs only to inquire what science is, what constitutes a scientist, what the scientific method is, what the scientific processes are; and then to test by these the claims of the so-called science that has pretentiously arrayed itself against the Bible.

That is the question at bottom, "What is science?" The mischief has come from its having been answered superficially. The jaunty "New Thinking" hesitates to go beneath the surface. That might wear out the soul, if it be only matter in brain form! It will never do to overwork it!

Science has been defined to be "knowledge gained and verified by exact observation and correct thinking, especially such knowledge when methodically formulated and arranged in a rational system," – systematic construction being thus a principal factor in science in the largest sense.

There are properly two distinct scientific methods, the inductive and the deductive. The former is applicable to matters of fact only; the latter to truths or relations of ideas only. The former proceeds from facts to general principles which embrace and group them; the latter from general truths or principles to particulars embraced under them.

Science, as we have to do with it in connection with Christianity, deals with matters of fact, – God, the soul, sin, redemption, all the great essential things found in the Bible and in our religion, are matters of fact. The science that deals with them, in order to be true science, must, therefore, conform to the principles or processes of the inductive method. As it departs from these, or fails to come up to them, it ceases to be science.

What are these principles or processes? There is, first, exact observation, by which one is to learn what the facts in the case really are. The principle of exact observation is all-important at the foundation. Sir William Hamilton sets forth the three laws that govern it: The law of parcimony requires that no fact be assumed that is not a fact; the law of integrity, that all of the essential facts be embraced in the observation; the law of harmony, that if inferences from fact are admitted they must be legitimate deductions from the facts and used in subordination to them.

So from this point of view the science may be vitiated by ignoring facts, misrepresenting or misinterpreting facts, adding alleged facts to or substituting them for the real facts, using the facts as mere points of departure in wild speculation. Alfred Wallace's recent fascinating book, on the question whether there are other inhabited worlds, is an example in point. The book is a book in which, in consequence of the absence of actual and universal observation, assumptions and speculations are made to take the place of facts. Possibly there is more reason for concluding that there are no other worlds that are possibly habitable, than for concluding that the man in the moon is made of green cheese.

The use of the second principle, that of correct scientific interpretation, must follow the observation, in order that the scientific investigator may know precisely what the observed facts mean. Before they can be wrought into science, the individual facts must be understood, in themselves and in their relations to one another and to their causes. Hence, the three laws that govern the process of interpretation. The first requires that the investigator shall determine the exact content of each of the facts; the second that he shall properly generalize and classify his facts and ascertain the laws governing them; the third that he shall trace back the facts and laws to the appropriate and adequate causes that account for and explain them. Causation is thus the fundamental principle that makes science possible, and to which all true science must conform itself.

So from this point of view science may be wholly vitiated by a superficial knowledge of the facts, by [R3420 : page 263] false generalizations from them, by irrational and unwarranted explanations of them, or by failure to make proper application of the principle of causation in dealing with them. Of this order are the defects that destroy the scientific quality of the thinking of such men as John Stuart Mill, Charles Darwin and Herbert Spencer. It is vain to talk to them of facts. They are able to laugh at facts as a ghost would at a musket.

The first two principles of induction lead up to the third, the principle of scientific construction, which must be conducted with a view to the grasping, grouping and presentation of the facts in their entirety, by proper coordination and correlation, and making the thought system match the natural system to which it attempts to give expression. Science in the highest sense is something far beyond incoherent facts or bits and scraps, however accurately observed and interpreted, beyond classes and strings of generalizations, however logical they may be made; it consists of facts and generalizations and causes, and all the rest, wrought into a rational system, and so constituting a connected and constructed thought-system that

expresses and matches some region of reality, in the soul, in nature or elsewhere. In order to reach such science, all the great facts, as observed and interpreted, with all the laws and principles, must be taken into the system, none added and none omitted; these must be set forth in their logical relations of succession and interdependence; and the system so constructed must be shown to agree with the natural system which it represents.

So at this point science may become false by the narrowness that fails to take in all the range of facts involved, and thus leaves it incomplete; or by the incoherency that shows itself incapable of grouping facts into unity, and thus results in merely a disjointed mass; or by reason of a weak or lawless imagination that cannot grasp the whole range of facts in rational scientific system, thereby falling below science in its highest and broadest sense.

Such knowledge, resulting from exact observations, correct interpretation and scientific construction, and such alone, is science in any strict and proper sense. It is whole diameters removed from opinion, guesswork, imagination, speculation, assumption, assertion and all the other easy going processes.

The scientist is one who, in his observations, investigations, conclusions and constructions, conforms to these principles of scientific method. He is one who seeks, obtains and verifies knowledge in any department by these processes, which alone are properly called scientific. His special task may, of course, require him to devote himself chiefly to the investigation and verification of facts; or he may give himself to applying the inductive method to facts; or he may be employed chiefly in combining all his established facts and reasoned conclusions in any department of knowledge into a scientific system that shall embody and set forth a whole region of reality in its **[R3421 : page 263]** unity and totality. But whatever may be the particular department to which his attention is given, his work

therein must be done conformably to the principles of scientific method that have just been outlined.

In the region of physical science, from which the main objections to the veracity of the Bible have been brought, the exact scientist is the man who reduces his scientific conclusions to mathematical formulae, thereby taking them entirely out of the range of the speculation and conjecture to which so much of the popular so-called science is devoted. It is the portion of the field of physical science that has been reduced to this form of mathematical thought that constitutes the settled and permanent science, – the other so-called science of this region being in state of constant flux.

Against all comers the Christian may safely make the claim that no true science, no knowledge that can stand these rational, scientific tests, has ever been shown to be in conflict with the revelations of God's Word. It is only science falsely so-called that has ever been made to appear to discredit the Word of God, – Positivism, Darwinism, Spencerism, *et id omne genus*.

Modern science, as embodied in August Comte, is said to have blotted a personal God out of existence. There is nothing new in that. "The fool" of the Psalmist did as much long ages ago. It is written in Psalm 14:1, "The fool hath said in his heart, there is no God." As one has remarked, it is evident that no one but a fool would have said it; that is, a man afflicted with mental weakness and moral obliquity. Even "the fool" says it to himself, as it were, or in his heart; it is not the conclusion of reason, but an expression of a wish. He is anxious to get rid of God, in order that he may freely exploit his folly.

Modern science, under the lead of Comte, has taken the same method of sweeping God out of existence; only he claims to have done it by the scientific method. But how did he do it? Where is the science of it? It is simply assumption and assertion with which he lays the basis. "There is nothing in the universe of which we can have scientific knowledge except bare, dead facts. There is no spirit, finite

or infinite, no cause, no God." Now this so-called science violates every principle of induction, ignoring all the chief facts of the universe, and those that are best known. How do I at all know material things, forces, science, etc.? It is only as I am a mind, acting in thought, that I am able to find and interpret any thought in the material universe. It is only as I am a will, acting with power, that I am able to find and investigate any of the forces of the universe with which science deals. This presentation of the case by Comte, by which such stimulus has been given to modern loose thinking, has not a particle of science in it.

In the name of science, Charles Darwin, under the inspiration of Comte, has swept God and religion out of existence in these later times. How much of science is there in his system, so far as it antagonizes the teachings of the Bible? Take a single passage from one of the earlier editions of his "Descent of Man," a passage that sums up his argument from the beginning of that belauded and epoch-making work:

"The early progenitors of man were, no doubt, covered with hair, both sexes having beards. Their ears were pointed and capable of movement, and their bodies were provided with a tail....The foot...was prehensile [R3421 : page 264] and our progenitors, no doubt, were arboreal in their habits, frequenting some warm, forest-clad land....At an earlier period the progenitors of man must have been aquatic in their habits."

Although, because of its absurdity having been exposed, this paragraph was dropped or modified in a later edition of the same work, the "scientific" presentation of the book, of which this is an accurate summary, was not changed.

When men laud this as "advanced science," we have to say that it is simply a double "no doubt" and a "must have been," resting on a hypothesis which is conceivable, but has not a fact to support it. There is no science about it, and, indeed, no basis for science. We protest,

in the name of sound thinking, against the almighty must-be-ity with which the system is constructed; and we do it for the same reason that we protest against the equally potent must-be-ity and per-se-ity of the speculative philosophers and theologians. This is sham science, not true science. A system built up in that way violates every principle of the inductive scientific method. It is absurd to claim that the teaching of the Bible, that God created man in his own image, is to be set aside for such baseless speculation masquerading in the garb of science. It may be well to remember that even Professor Huxley, who was so much of an agnostic regarding religion that he invented the name agnostic to express his negative creed, always protested against the fundamental principles of Darwinism. It is now being generally admitted, especially in Germany, that Darwinism is dead. Notwithstanding the false science the Bible still lives.

Following up the same trend of thought, the late Herbert Spencer constructed his vast system for the unification of all knowledge, pushing God out of sight. The postulates of Mr. Spencer, in reaching his conclusion that evolution is the universal science, contain all the basal errors of agnosticism, positivism, sensationalism, with Spencerism added. Neither science nor common sense will permit of the acceptance of his conclusions. There is no exact science about it. The men of breadth and depth, who are masters of the scientific process, and who push out their investigations into the regions beyond, are the authorities in science; and almost to a man they have opposed the scientific pretensions of Spencerian evolution. Louis Agassiz, Joseph Henry, Sir John William Dawson and Arnold Guyot, in this country, pronounced the doctrine of evolution unscientific and false. Exact science on the other side of the waters has protested with equal weight of authority against confounding evolution with science. Mivart, the most accomplished naturalist in Great Britain, pronounced it a "puerile hypothesis;" Lionel Beale, the authority in biology, rejects it entirely, declaring that "correlation, its assumed principle, is the 'abracadabra' of mechanical biology."

The late Professor Virchow, "the foremost chemist on the globe," a man, in the phrase of *The London Times*, "opposed to every species of orthodoxy, and altogether innocent of faith," affirmed that "Since its announcement, all real scientific knowledge has proceeded in the opposite direction;" and styles the circles of materialistic evolutionists, "bubble companies." Prof. Tait declared that evolutionists are "not in the slightest degree entitled to rank as physicists," i.e, they are excluded from the ranks of exact science. Lord Kelvin, by his investigations in mathematical physics, has taken away from the evolutionist the ages upon ages absolutely essential to the maintenance of his hypothesis. These are the characteristic views of the scientific authorities abroad, the men who have a right to say something on this subject.

When we turn from scientific authorities to facts, we find that Mr. Spencer violates all the principles of the inductive method. His scheme has no solid basis of carefully observed facts. It does not correctly interpret the facts it adduces. He constantly applies the *a priori* or deductive method to such facts as he may select as suited to his purpose. As a so-called scientific system it is not the product of the consistent logical embodiment of the results of observation and rational explanation of facts. In other words, it is not *science*. The late DuBois Reymond showed that there are at least seven chasms impassable to the evolutionist. Not to enumerate these, it is enough to say that not a fact has ever been observed in all the universe in favor of the essential postulates of evolution – spontaneous generation and transmutation of species.

Why, then, do men accept such things as science? Perhaps it is because they are overwhelmed, as Malcolm Guthrie has suggested, by the immensity of the system, making one feel as if in the presence of omnipotence. Or is it because they are dazed and made incapable of thinking by the dreamy use of grand words, by means of which many of the essential statements are so presented that even ordinarily accurate thinkers are sometimes surprised into the acceptance of what

they do not understand? One has characterized Mr. Spencer's definition of the law of evolution as his most pompous and sublime employment of such language:

"Evolution is a change from an indefinite, incoherent homogeneity, to a definite, coherent heterogeneity, through continuous differentiations and integrations."

This, as one has translated it into simple English, reads:

"Evolution is a change from a no howish, untalkaboutable all-likeness to a some-howish and in-general-talkaboutable not-all-likeness, by continuous something-elsifications and stick-togetherations."

Now such words as *differentiation* and *integration* have in mathematical science distinct and precise meanings, which are impossible in this definition.

To one who knows the origin of the evolutionary scheme, and has tested its scientific pretensions by the principles of induction, it seems incredible that men of sense should feel compelled, for no better reason than that, to give up the plain teaching of the Bible, that it is a revelation from God, and substitute for that the view that it is a natural evolution. It is science falsely so-called, again, that has been made to discredit the Bible.

The same thing might be shown to be true of the claims that the sciences of geology, astronomy, etc., all through the range of physical sciences have discredited the Bible. It is only as the so called scientists [R3422 : page 265] have contradicted the fundamental principles of inductive science that these sciences have been made even to seem to be in conflict with the Bible.

The writer well recalls the impression made upon him just after he had entered upon the work of the ministry, by the geologist Lyell's

book on "The Antiquity of Man," a book which in the name of science was full as possible of violations of scientific principles. Fortunately, he had the privilege of taking it to his old teacher and friend, Arnold Guyot, who let the light shine in upon the dark places, showing how utterly unscientific were the claims based upon the imperfectly observed and investigated facts and causes connected with the delta of the Mississippi and with the recession of Niagara Falls.

One typical case will show the quality of much of the science involved in such matters. About 1854 some excavators brought up some burnt brick and pottery from the depth of sixty and seventy-two feet, in the valley of the Nile. Assuming that they were found where they were made, and that the alluvium had been deposited upon them at the rate at which the Nile now makes its deposit, and that this was the only cause at work, it was calculated mathematically that the relics must be from 12,000 to 60,000 years old. One causal element omitted was the weight of the brickbats, in connection with the fact (also causal) that all the region is a vast quagmire during the inundation which covers it with water for a large part of the year. Sir Robert Stephenson afterwards found in the Delta, near Damietta, at a far greater depth, a brick bearing the stamp of Mohammed Ali (1808). Some one said satirically that the main question in the first case should have been, not "How long will it take for the Nile to deposit sixty or seventy-two feet of alluvium?" but "How long will it take a brick to sink seventy-two feet in a quagmire?" And we are expected to believe that this kind of science has discredited the Bible teaching concerning the comparatively modern date of the creation of man and the origin of the human race! It is science falsely so-called.

One of the latest agents in this work of discrediting the Bible as the Word of God – of which the utmost possible has been made by the secular press, and, we might add, by the religious press, too – is the so-called science of Assyriology. The case of Professor Delitzsch, with his "Babel and Bible," is still fresh in the minds of all. His utterances were put forth in the name of science, and the Professor

took himself seriously as a scientist. A week after his utterances, he said to a correspondent of the American press:

"From a scientific point of view, I am glad that my lecture made such an impression. I am glad that the teachings of the Church relating to the Old Testament have been given up; among other questions, the theory that the Covenant on Mount Sinai was a personal revelation of God to Moses."

The correspondent cabled that "The Emperor undoubtedly felt that it would never do for the head of the Prussian Church to endorse a scientist who denies the theory of revelation." And the great secular journals flung out as headlines: "The Bible in the Furnace of Science;" "The Bible Fails to Stand the Test of Science;" and the whole world seemed to be turned upside down over this juggling with the terms "science" and "scientific."

The editor of *The Open Court* wrote of it: "The dogmas of Christianity are formulations of the truth as interpreted by our forefathers. Let not Athanasius with his limited knowledge bind the conscience of a Delitzsch!"

And so, in the name of science, Professor Delitzsch becomes infallible! Meanwhile, the poor old Bible is demonstrated to be fallible, and, as made up of myths and legends, it goes up in smoke from the "crucible of science"; and lo, Babylon is wheeled into the place of Jerusalem!

But what about the science of all this? How do the claims of Professor Delitzsch stand the test of the principles that govern scientific observation, interpretation and construction?

Both of the Professor's lectures are taken up, perhaps necessarily, not with the presentation of established facts, but with the dogmatic assertion of what he regards as scientifically established facts. Blank assertion takes the place of science. Four things doubtless lent

abnormal importance to the Professor's pronouncements: the fact that he was confounded with his father, the late Dr. Franz Delitzsch, the great theologian, commentator and Hebraist, a man of quite another order from the son; his connection with the German Emperor; his attractive rhetorical presentation of the commonplaces of Biblical knowledge; and the outrageousness of some of the utterances themselves.

The statement of M. Halevy, the French Orientalist, to whom Assyriologists would probably accord the leading place – the French having unquestionably distanced the Germans in this department, as witness their discovery of the Code of Hammurabi – may be taken as representative. After praising the general character of the lecture, so far as it deals with commonplaces, he is constrained to add:

"Sincerity, nevertheless, compels me to point out certain inapt, inaccurate and redundant statements which disfigure the otherwise beautiful lecture."

And after pointing out some of these things he further remarks:

"The same predisposition to rest content with superficial appearances shows itself in the interpretation which is put upon the figure assumed to represent the chariot of Ezekiel, but it has no points of resemblance with it."

Other archaeological specialists showed the unscientific character of the claim of Delitzsch that the Biblical Sabbath had its origin in Babylon, as also the doctrine that Jehovah is God; these "scientific" conclusions being based upon the merest etymological guess-work.

It is after presenting all this matter, to much of which all the authorities object as baseless or irrelevant, that Professor Delitzsch, speaking from his top-lofty pedestal of science, concludes:

"These are facts which, from the point of view of science, are as immutable as rock, however stubbornly people on both sides of the Atlantic may close their eyes to them."

"Heaven save the science!" one is almost ready to exclaim. Do "facts" and "science" mean anything [R3422 : page 266] in this age to the average exploiter of the latest speculations? And are we to believe that the sane and exalted statements of the Bible are to give way before such pseudo science?

Manifestly Professor Delitzsch has a very slender conception of what is meant by science – extraordinary as are the claims he makes in its name. The time has not yet come for constructing the department of Assyriology, either in itself or in its relations to the Biblical records, into a consistent scientific system. That will require a grasp of approximately all the established facts, and verified, reasoned conclusions, covering the whole region, when the whole region has been investigated. The establishment of the correct hypothesis of the relation of Babel and the Bible, so that it shall become scientific theory, may be realized in the future; but in the meantime while the critics speculate, let it not be forgotten that, in the court of sound logic and reason, the Bible view of the origin of religion by divine revelation to Adam, Noah, Abraham, and the line of Israel, has the presumption in its favor as against all comers.

– *The Bible Student.*

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