

7-1-1932

The Shifting Sands of Science

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Recommended Citation

Engelder, Th. (1932) "The Shifting Sands of Science," *Concordia Theological Monthly*. Vol. 3 , Article 66.
Available at: <https://scholar.csl.edu/ctm/vol3/iss1/66>

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Concordia Theological Monthly

VOL. III

JULY, 1932

No. 7

The Shifting Sands of Science.

Men are calling upon the Christian Church with increasing insistence that it adjust its teachings to the findings of science. The *Western Christian Advocate* of December 22, 1927, declared: "New discoveries have necessitated new statements of our faith. Our views of the Bible, our ideas as to God's relationship to the world, have got to be reconstructed. . . . The heterodoxies of one day have become the orthodoxies of the next." W. K. Wright, in *A Student's Philosophy of Religion*, demands that he, the student, draw no conclusions in conflict with the dicta of present-day mental and physical science. Chester Forrester Dunham, in *Christianity in a World of Science*, insists that "Christianity must make a scientific adjustment if it is to live in harmony with the new age." A writer in the *Lutheran* of November 24, 1927, asks that "instead of combating science, religion should welcome, and make use of, its discoveries. . . . We must therefore by all means keep the gates of theological interpretation open to the future." Emil Brunner finds that "the victory of biological evolutionism . . . could not but shake trust in Biblical authority to its foundations and break down completely the Biblical world-view." And so "we have to chisel off" very much from the Bible. "It is like chiseling off the incrustations of the past from an old inscription to make it legible." (*The Word and the World*, pp. 98. 102.) Dr. Harry Elmer Barnes of Smith College, presents this thesis: "This newer view of God must be formulated in the light of contemporary astrophysics, which completely repudiates the theological and cosmological outlook of the Holy Scripture." (Secular and religious press reports of December, 1928.)

Before we go on, the point at issue should be clarified. When the Church is asked to accept the findings of science, reference is had not so much to the established facts of science as to the decrees of *speculative* science. Theology has no quarrel with facts. Nor have the facts which have come to light through the progress of science any bearing whatever on any doctrine of the Bible. When Madame

Curie discovered radium, that had some effect on medical science, but none at all on theology. In what way have the wonders of radio modified the doctrines of sin and grace? Theology is not in conflict with the facts of science. It is not *pure* science which finds mistakes in the Bible, but *speculative* science. (That is, of course, a self-contradictory term, but the idea expressed by it is current on the other side.) Theology is not in conflict with the established facts of science, but with certain conclusions falsely deduced from these facts by the philosophizing scientist. Theology has no fault to find with the cataloguing of the geological strata and the enumeration of the fossils there embedded, but it repudiates the doctrine of evolution which the speculative geologist spins therefrom. It is not science which objects to the miracles of the Bible;—for there happens to be no science which is equipped to deal with miracles,—but the objection is raised by the alleged scientific consciousness, by the “modern mind,” which claims—we cannot see by what right of reason or logic—that, because science has brought to light many new facts and can explain them on the basis of the law of cause and effect, no miracles could have occurred. Dr. H. E. Fosdick accurately describes these thought processes: “The typical twentieth-century man feels that miracles are *a priori* improbable. Something radically transforming happened to the minds of men when Newton first set down in a demonstrable formula the law of gravitation. That formula eliminated chance and irregularity from a wide area of human experience. . . . When, therefore, our modern friend faces in the Bible a story which seems to involve a ruptured law of nature, his first and very strong impression is that the story is antecedently improbable.” (*The Modern Use of the Bible*, p. 142.) Dr. R. Jelke, Lutheran theologian of Heidelberg, puts it thus: “It is the business of the dogmatician to show how the statements [of the Bible] concerning the person of Christ must be formulated in order to pass muster with the modern scientific consciousness.” (*Die Grunddogmen des Christentums*, p. 85.) We are asked to square our theology, not with the facts of science, but with the dogmas of the modern critical philosophy, which *assumes* that it has the support of science and calmly assumes the name of science.

The Christian theologian refuses to do so. His chief reason—which shall not be enlarged upon at the present time—is that the Bible is the sole source of theology. He forfeits his standing as a theologian if he refuses to abide by the order of God: “If any man speak, let him speak as the oracles of God,” 1 Pet. 4, 11. Nowhere has God given a supplementary order: Let him speak also as the oracles of Darwin. (And that applies not only to science falsely so called, but also to pure science. We are not asked by God to support our preaching with scientific truths. We ask our hearers to

accept every statement of the Bible because it is the oracle of God. How to harmonize certain teachings of the Bible with scientific truths which seem to contradict them is no concern of ours.)

Another reason—and that, too, shall at the present time receive only brief consideration—why the theologian must refuse to keep his theology abreast with science, that is, in harmony with science, is that he cannot keep abreast with science. That is to say, it is beyond the power of mortal man to acquire a thorough knowledge of *all* the branches of science, moral, mental, and physical science. He would have to do so if the demand we are discussing obligated him. He is certainly not going to take into the pulpit, which deals with the eternal welfare of immortal souls, matters of which he knows only from hearsay. He will want to assure himself that science really teaches it. But then he would have to have nine lives. It takes at least one lifetime to master geology, a second to master psychology, and so on. And so the theologian can take his choice—he will either have to preach things of which he has no certain knowledge, or he will have to resign from the ministry until he has mastered all other branches of learning.—And how unfair the whole thing is! A mathematician is not required to study zoology in order to prepare himself for the study of mathematics. He may know very little about the number and kind of tape-worms infesting the human body; but that does not estop him from mastering trigonometry. What earthly connection is there between tape-worms and trigonometry? And what have the laws of nature to do with sin and grace?

And what will happen when the theologian has reconstructed the faith of the Church according to the findings of the science of the third decade of the twentieth century? This; before the fourth decade has fairly dawned upon the world, he will have to cast his reconstructed theology overboard because a new set of findings are clamoring for incorporation into theology. And this is the third consideration to which we would at present direct particular attention. He that builds his theology on science is building on shifting sands. "Science" is too unstable to be received among the eternal verities. It is an axiomatic statement: the science of to-day is the fable of to-morrow. Take, for instance, the science of psychology. It is particularly psychology which to-day claims mastery in theology. We hear Pastor Stricker, president of the Lutheran Society in Germany, declare: "The statement of Scripture concerning man and sin must be rethought, grasped, and comprehended in the light of the present findings of psychology." We hear Freud quoted as an authority in the pulpits. What did Professor Barnes say? "Sin is scientifically indefinable and unknowable. Hence sin goes into the limbo of ancient superstitions, such as witchcraft and sacrifice." And that

on the basis of modern psychology. Now, how much of the present science of psychology is true? We have not mastered this particular science. But what do the masters themselves tell us about it? Henshaw Ward asked them, and in *Builders of Delusion*, "a Tour among Our Best Minds," published by the Bobbs-Merrill Company (1931), he gives us their answer. The book is made up of two parts: "Part One: The Bubbles they build with. Part Two: Some of the Castles they build." We submit some excerpts from chapter XV: Psychology: "Wilhelm Max Wundt, the man who formulated modern psychology as a science, was a philosopher. . . . He was a man of great vigor and enthusiasm, who inspired many able students in the Leipzig laboratory that he founded in 1879. During my youth he was sending them forth to the universities as teachers of the latest and greatest science. It was the psychology of Wundt that William James absorbed and that he taught so brilliantly at Harvard in the 'eighties. Largely because of his work the *Century Dictionary* could say in 1889: 'Psychology has recently taken the position of a universally acknowledged science.' . . . Undergraduates in the 'nineties took it for granted that psychology was the noblest mode of science and was going to reveal more wisdom than any other college subject. I can't recall that any suspicion of weakness in psychology crossed my mind till I was more than forty years old. . . .

"But E. L. Thorndike, who graduated from Harvard in 1896 and was then a disciple of James, soon began to suspect that James's system was founded on wrong principles. In 1899 he began to teach genetic psychology at Teachers' College, was made professor of educational psychology in 1901, and in 1903 began to make a series of books which convinced the academic world that the basis of James's teaching was unstable. He experimented with hungry cats and observed how they learned to unlatch a door that admitted them to food. His conclusion was that the intelligence shown by animals is merely the result of many random movements, one of which happens to give a pleasurable result, is therefore impressed on the nervous system, and is therefore made likely to be repeated. All that had been called intelligence and learning Thorndike reduced to a series of chances. The movements that lead to pleasure are wholly automatic — 'reflex actions.' This theory of reflex action has permeated all psychology in America for the past twenty-five years and has made the name of Thorndike famous. A student of his told me admiringly in 1918, 'Thorndike's torch has lighted the road we must take, lighted it farther than we can travel in fifty years.' That optimism is a fair sample of the continuous hope that modern psychology has inspired during the past half-century and that has been constantly disappointed. Robert Mearns Yerkes, the most famous of the American investigators of animal psychology, who has for years

experimented with chimpanzees and gorillas, has always felt that Thorndike's conclusion was too simple. Professors Koehler and Spearman have challenged the conclusion as applied to man and have made the foundation of Thorndike's educational psychology look unstable. In 1929 D. K. Adams published a monograph in which he affirmed that Thorndike's observations were inadequate and his interpretations false. In the same year the president of the American Psychological Association, K. S. Lashley, declared in his presidential address that the reflex-action theory must be rejected. Down goes the fame of Thorndike.

"William McDougall rejoices in the downfall: 'Thorndike's conclusions, which for a whole generation have been the main foundation of the *sarban* (the "S-R bond," *i. e.*, the stimulus-response bond) theory, are thus finally exposed as fallacious. The theory that man is a machine is left without a single leg to stand upon, it remains floating upon a cloud of metaphysical prejudice.' McDougall is an Englishman, a writer on social psychology, who was called to a professorship at Harvard in 1920. He made for himself so great a reputation that, when Duke University was bidding renowned men to its staff at large salaries, it invited him to lend his luster to the department of psychology. He has always been a determined exposé of the fallacies of psychology. 'Wundt's physiology of the nervous system,' he says, 'was a tissue of unacceptable hypotheses.' . . . In 1925 L. P. Jacks described the futility of McDougall's reasoning about 'world science': 'The "world science," which would enable us even to state world problems, does not exist. We fear Dr. McDougall has only added one more to the 22,000 solutions.' In the same year R. G. Tugwell printed an even more unpleasant description of the mental workings of minds of the McDougall type: 'They have never done better than to sound plausible, have lacked insight, have merely made structures of logic that failed utterly to fit the facts, have bathed fact in a bath of mysticism.' . . .

"You may get an idea of the ghastly nature of the conflict among psychologists if you think of what John Broadus Watson did. For twelve years he was director of the psychological laboratory at Johns Hopkins, he had been president of the American Psychological Association, and he was proclaimed on the jacket of his *Behaviorism* 'America's most distinguished scientist in the field of psychological research.' . . . He jeeringly announced that most psychology is built out of 'an odorless, formless, and colorless gas.' He derided psychologists for trying to deal with consciousness, which he considered a gaseous assumption. . . . There is no evidence, he said in his declaration of war, that we have a mind which can reason: 'What the psychologists have hitherto called thought is, in short, nothing but talking to ourselves. The muscular habits learned in overt speech

are responsible for internal speech (thought).’ Watson claimed for his Behaviorism the unspeakable power of changing personality: ‘Some day we shall have hospitals devoted to helping us change our personality, because we can change our personality as easily as we can change the shape of our nose. Behaviorism ought to make men and women eager to rearrange their own lives. . . . I am trying to dangle a stimulus in front of you, a verbal stimulus, which, if acted upon, will gradually change this universe. For the universe will change if you bring up your children in behavioristic freedom.’ . . . In 1930 McDougall described the wide sway of Watson — and it does not seem likely that he would wish to exaggerate the power of a rival —: ‘His teaching has spread across the continent like a prairie fire before which nothing can stand. . . . A Southern teacher recently complained to me that wherever he goes he finds Behaviorism rampant in the schools and that, because he cannot accept it, he finds himself regarded by his colleagues as hopelessly out of date.’ . . . Yet Behaviorism has probably almost ceased to be a force. Enemies are now descending upon it from every side. Its chance of survival for five years is poor. . . . McDougall’s condemnation of Watson is as strong as he knows how to make it in parliamentary language: ‘Watson is by vocation an expert advertiser. In any other profession the man who made similar claims would be generally recognized as a charlatan. His book may mark an epoch in the intellectual history of America, but it is to be hoped that the epoch will be remembered as the low-water mark of critical judgment in America. To sweep aside all the immense mass of evidence of the instructive basis of human nature . . . is a degree of childish presumption that could not flourish for a moment in any other country than America.’ . . .

“What counts far more among the psychologists than attacks on Behaviorism is the new psychologies that spring up every little while to attract attention by their novelty and their splendid claims. Two years after Watson issued his epoch-marking lectures, Dr. Louis Berman published a little book, *The Religion Called Behaviorism*, which expounded the Gestalt Psychology. Berman imagines the case of a successful surgeon who became morose and confided to his wife that he wanted to commit suicide,” shows how the specialist, the neurologist, the psychiatrist, and the Behaviorist would attempt to cure the patient, and “then explains his own way of solving the case: ‘The Gestalt theory provides an answer. . . . As larger and larger units are seen to take on more and more meaning in the light of Gestaltist formulations, the universe itself, the largest unit and whole of all, must itself be considered the greatest Gestalt the mind of man can bear. The best advice the consulting Gestaltist could offer to my imagined patient might be *to configurate with the universe.*’ The

italics are Dr. Berman's. He does not explain what the words mean, and I cannot guess. But Gestalt Psychology is becoming a new science that is doing its part to choke out Behaviorism.

"Some of the sociologists in Germany have lost faith in all the physiological psychologies and are constructing the kind they need in their work — the *Geisteswissenschaftliche* Psychology. Before 1935 there will probably be some other revolutionary psychology emerging from that fertile land of thought, where every ten-year-old ism dies and becomes a fertilizer for a crop of new science. 'The new analytic psychology,' used by Margaret Naumburg for her kindergarten method, may grow into a great creative force." . . .

The French *savant* Jules-Bois of the Sorbonne, the champion of the "*superconscious* mind" declared in 1928: "Freud and his followers floundered in the pedantic labyrinth of the Oedipus complex and the *subconscious* wish." "Two years ago Dr. R. J. Berry, dean of the Faculty of Medicine in the University of Melbourne, gave his estimate of psychoanalysis in *Current History*: On the very insecure foundation of a half-truth Freud has built a veritable Woolworth Tower of untruth. . . . Freudianism is but another example of the many devastating doctrines of mind. These have their brief and fleeting moment in the limelight and die a speedy death. . . . Take the case of Granville Stanley Hall, president of Clark University. Twenty years ago he was so renowned a psychologist that all other scholars in America bowed to him and would have been able to agree pretty closely that his books on adolescence and youth should be published as accredited science. Yet when he died, seven years ago, his work was appraised, even in the sympathetic obituary notices, as merely clever and unfounded theorizings. . . .

"You can feel how likely it is that Bernard De Voto's estimate of psychology is the one that will soon be generally held by educated people: 'It seems to me that no other subject is to-day so dominated by uncontrolled enthusiasm, fanaticism, ignorant and absurd pretension, and downright charlatanism. . . . Psychology is the contemporary phase of the medieval mind.' If you think a mere literary man's judgment in such a matter is not significant, couple it with the verdict of one of the world's most famous and most careful physiologists, J. S. Haldane: 'Psychology as a branch of science is still on about the same level as chemistry was in the days of the alchemists.'" — Pity the poor theologian who must rethink the statements of the Bible concerning man and sin every single decade of his ministry! He will have little time left for theology.

And he will fare no better when he attempts to rectify his theology with philosophy proper. They tell us that philosophy is the queen of all sciences, assembling the findings of all other sciences and passing authoritative judgment on them; that the best minds of the world

have devoted their deepest thought to this branch of learning; that the theologian absolutely must square his theology with philosophy. We ask, Which philosophy, that of yesterday or of to-day or of to-morrow?—Here are a few excerpts from chapter XIII: Philosophy: "In the nineteenth century philosophy was the ultimate form of wisdom and logic and knowledge, as is shown by the definition in the *Century Dictionary*, made about 1888: 'The body of highest truth; the organized sum of science; the science of which all others are branches.' . . . A reviewer in the *London Times' Literary Supplement*, a journal that is always respectful toward philosophers: 'In philosophy, as there is no objective standard, there is really no satisfactory reason why one opinion should be better than another.' . . . R. M. Wenley: 'There is nothing like general acceptance of any philosophy as true.' . . . Herbert Croly: 'For more than one hundred years philosophers have written books on human nature in its social and political manifestations which pretended to the virtue of being scientific. Yet their successors have almost always denied the pretension. The new social science persistently has condemned the formulas of its predecessors as pseudoscience. . . . William James: 'Truth for each man is what that man "troweth" at each moment with the maximum of satisfaction to himself.' . . . There never was a time when philosophers agreed on the interpretation of Plato's thought. They could only agree when Plato had been dead for six centuries that Plotinus was all wrong in his interpretation. They could only agree in the nineteenth century that Schleiermacher was all wrong in his interpretation. . . . Santayana's gorge always rose when he thought of Kant. Here is one of his descriptions of the character of Kant's mind as revealed in his transcendentalism: "It really expresses and sanctions the absoluteness of a barbarous soul, stubborn in its illusions, vulgar in its passions, and cruel in its zeal. It is nothing but a mass of foolish impulses and boasts ending in ignominy.' . . . J. Loewenbery: 'Hegel's *Phenomenology* thus became for me a comedy of errors, a vast playground of human ideas striving to be more than human.' . . . No philosopher's reasoning has ever been verified by a later generation. . . . Paul Weiss: 'There are almost as many species of Pragmatism as there are so-called Pragmatists.' . . . Locke became a kind of pope of philosophy for a time; but after fifty years David Hume helped Berkeley to topple his reasoning to the ground. Now the consensus of judgment about Locke's central thesis is that expressed by J. B. Pratt: 'It is not only false; it is the root of many hopeless vagaries.' . . . In 1930 the most-quoted philosopher in the United States is John Dewey. We read that he 'brushes all the great classical philosophical systems quietly aside.' J. E. Boodin: 'Modern philosophy got on the wrong track at the outset on account of a false psychology. Present philosophy is a whited sepulcher, calcimined with a coating of science

and mathematics; but within are the dead bones of the past, and the ghosts walk abroad.' . . . These modern complaints against philosophy were outdone half a century ago by the indictment of Charles S. Peirce, 'whom James, Royce, Dewey, and leading thinkers of England, France, Germany, and Italy have placed in the forefront of the great seminal minds of recent times': 'The particular series of important fallacies which have desolated philosophy must be closely studied. . . . Not so much by Kant's answer to this question as by the mere asking of it the current philosophy of that time was shattered and destroyed. . . . The fifty or hundred systems of philosophy that have been advanced at different times of the world's history are exceedingly interesting and instructive and yet are quite unsound.' . . . Bertrand Russell: 'Ever since the end of the Middle Ages philosophy has steadily declined in social and political importance. . . . All traditional philosophies have to be discarded, and we have to start afresh with as little respect as possible for the systems of the past.' . . . I wonder why some department of philosophy in a progressive university does not placard in all its recitation-rooms the calm estimate of philosophy that was made by Santayana: 'The whole of British and German philosophy is only literature. In its deepest reaches it simply appeals to what a man says to himself when he surveys his adventures, analyzes his curious ideas, guesses at their origin, and imagines the varied experience which he would like to possess. . . . Not one term, not one conclusion in it has the least scientific value, and it is only when this philosophy is good literature that it is good for anything.' — While we do not care to appropriate the ultraradical statements and the violent language of Santayana, this much is clear: there is no agreement among the philosophers. On this point they are agreed. They are sure that the other schools are wrong. So the theologian will refuse to consider their views until they offer us definite, well-established results.

And that will never be. On the questions at issue between theology and philosophy the philosopher is unable to give a satisfactory answer. He will, if he is a philosopher, confess his ignorance. Sir William Hamilton does so. "There are two sorts of ignorance. We philosophize to escape ignorance, and the consummation of our philosophy is ignorance. We start from the one, we repose in the other. . . . The highest reach of human science is indeed the scientific recognition of human ignorance: '*Qui nescit ignorare, ignorat scire.*' This 'learned ignorance' is the rational conviction by the human mind of its inability to transcend certain limits. It is the knowledge of ourselves, the science of man." (*Modern Philosophy*, by Francis Bowen, p. 97.) In the Bible the infinite wisdom of God speaks, in philosophy the finite, limited wisdom of man. Shall theology bow to philosophy? The theologian who believes that the Bible is the inerrant Word of God will not do it. TH. ENGELDER.