

A Christian View of Science
MVOPC Adult Sunday School Class, 2022
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Lesson 4: The Death of Science and the Epistemological Crisis of the American University

*“The ancients busied themselves more with metaphysics than with epistemology.
And that it is in modern times that epistemology comes to the foreground
is due to the fact that modern thought is more mature than ancient thought.
The ancients all too often took knowledge for granted. The modern man studies the
possibility of knowledge. It is but natural then that we should expect that it will be
in modern times that the full significance of the life and death struggle between the
theistic and the antitheistic conceptions of epistemology will appear.”*

Cornelius Van Til, *A Survey of Christian Epistemology*, 1969

In the first three classes, we have looked at (1) some of the foundational issues and Biblical texts in formulating a positive, Biblical view of science; (2) the historical failure of the great ancient cultures to initiate a self-sustaining scientific enterprise; (3) the rise of science in the 15th and 16th centuries and the parallels between the Protestant Reformation and the Scientific Revolution. In this final class, we will present a very high level overview of the path that unbelieving thought has taken in the last 500 years, and how this has led to the current epistemological crisis and intellectual bankruptcy of the West. This includes the total undermining of the conceptual foundations of science, so that the intellectual elites in Western culture reject science altogether.

In the parable of the prodigal son, the rebellious son takes his father’s inheritance and goes to a foreign land to squander it in riotous living. When he first arrives in this foreign land, he seems very wealthy, and undoubtedly makes many new friends to whom he appears prosperous and successful. However, the reality is that he has cut himself off from the source of his riches, and so he soon dissipates his father’s inheritance and finds himself living in squalor and wishing he could eat the corn husks of the pigs he now finds as his companions.

During the Protestant Reformation, people in Europe began to take the Bible seriously as the Word of God, and for the first time in history, the Biblical worldview became the basic framework of an entire civilization, leading to science, universal literacy, rationality, limited governments and political freedom, the abolition of slavery, and optimism about the future. But almost immediately, unbelieving thought was at work attacking the Biblical foundations. Just like the prodigal son, unbelievers wanted the fruits of Biblical revelation without the God who revealed it. Now, having rejected the revelation of the God of the Bible, Western civilization is finding that it can not autonomously sustain the cultural achievements of the West apart from the Source of those achievements, and as the first quarter of the 21st century draws to a close, the West has clearly begun to exhaust its intellectual and cultural capital. “We hold these truths to be self-evident . . .”, the words of the Deist, Thomas Jefferson, are no longer compelling to a civilization that has given up hope in the possibility of truth. Only a return to the revelation of the self-attesting God of Scripture can save the West from sinking into a new Dark Age.

I. The Greek Experiment

No ancient culture made more astounding intellectual achievements than the ancient Greeks, because no ancient culture was so committed to the authority and sufficiency of human reason. The Greek experiment in rationality led to developments in logic, mathematics, philosophy, art, and architecture that continue to influence down to our present day. But by the time Euclid wrote is *Elements*, over 300 years before the birth of Christ, Greek rationality had run its course and Greek thought had degenerated into unlimited skepticism. The reason is that *autonomous human reason cannot provide its own justification*. The Greek experiment in rationality, for all its

brilliance, remained a historical flash in the pan because the Greeks could ultimately not justify their confidence in human reason.

II. Martin Luther and the Protestant Reformation

Martin Luther said, “Unless I can be convinced by Scripture *and plain reason . . .*” The Church of Rome taught (and teaches) that the intellect is fundamentally unaffected by the fall. While it is nice of God to reveal himself to us, even if he didn’t, we could still learn a lot about Him through autonomous human reason. The Reformers taught that *human reason is not sufficient*. Even if my eyes are working perfectly, I can’t see anything without light. Luther, Calvin, and the other Reformers recognized that *the eyes of human reason are ultimately futile apart from the light of revelation*, and following the Protestant Reformation, Western civilization became a uniquely rational culture. It was the Reformation’s faith in reason as *derivative*, not original authority, that produced the modern West.

III: Rene Descartes

Rene Descartes (1596-1650) was an influential French philosopher and mathematician. He undertook to establish human knowledge on an absolutely certain foundation, one that cannot be doubted. Of course, he says, we’re all Christians here, and we believe in God’s revelation, but there are some people who are not Christians, and who do not believe in God’s revelation. Those people will not be convinced of our claims to knowledge unless we can establish it on a certain foundation. His goal is to establish a foundation for all knowledge to make it as certain as the knowledge of mathematics.

His method is the method of *using doubt to eliminate doubt*: he will doubt and question every knowledge claim until he comes to a claim that he finds it impossible to doubt, and this will be the starting point for absolute certainty in all fields of knowledge. He notes that he has sense experience, but that sometimes he dreams, and in his dreams he experiences sense perceptions that he can mistake for reality. So how does he know that his waking sense experiences are not also an illusion?

“But I have convinced myself that there is absolutely nothing in the world, no sky, no earth, no minds, no bodies. Does it now follow that I too do not exist? No. If I convinced myself of something [or thought anything at all] then I certainly existed. But there is a deceiver of supreme power and cunning who is deliberately and constantly deceiving me. In that case I too undoubtedly exist, if he is deceiving me; and let him deceive me as much as he can, he will never bring it about that I am nothing so long as I think that I am something. So, after considering everything very thoroughly, I must finally conclude that the proposition, I am, I exist, is necessarily true whenever it is put forward by me or conceived in my mind.”
– *Meditations on First Philosophy*

This is Descartes’ famous *Cogito, ergo sum*: I think, therefore I am. Descartes finds that he can doubt almost everything, but the one thing that he cannot doubt that he is the one who is doubting. *Descartes posits his own consciousness as the ultimate foundation for certain, undoubtable knowledge.*

But Descartes has a problem: his conclusion is contained in his premise.

IV: David Hume

David Hume (1711-1776) is a Scottish philosopher, economist, atheist, and empiricist. But he is a very strict and consistent empiricist. He recognizes that science, as well as everyday experience, is built on induction: the process or generalizing from particular instances to all cases of the same kind. The inductive process relies on the belief that the future will be like the past: we expect that uniformity can be found within the diversity of circumstances, e.g., dropping a stone repeatedly. Hume wants to learn the foundation of this inference.

“*That the sun will not rise to-morrow* is no less intelligible a proposition, and implies no more contradiction, than the affirmation, *that it will rise*. . . . It may, therefore, be a subject worthy of curiosity, to enquire what is the nature of that evidence, which assures us of any real existence and matter of fact, beyond the present testimony of our senses, or the records of our memory.” – *An Enquiry Concerning Human Understanding*

He notes that there is no *logical* relation between cause and effect: a stone can *logically* just as well fall up. He concludes that *there is no rational justification for our process of induction*. This is his famous Inductive Problem. Hume is *not* saying that induction doesn’t work or doesn’t lead to truth. He’s saying that there’s no rational foundation for it.

Scientists are tempted to appeal to experience: we believe in induction because it has always worked in the past. But this is another begging of the question: we can’t use induction to justify the process of induction.

“The inductive principle is equally incapable of being proved by an appeal to experience. All arguments which on the basis of experience argue as to the future, or the unexperienced parts of the past or present, assume the inductive principle. Hence we can never use experience to prove the inductive principle without begging the question.” – Bertrand Russell, *The Problems of Philosophy*

IV: Immanuel Kant

Immanuel Kant (1724 – 1804) was awakened from his dogmatic slumber by the Inductive Problem of David Hume. He wants to solve this problem, and to synthesize rationalism and empiricism. Kant’s Copernican Revolution was his Transcendental Idealism.

“Everything intuited in space or in time, hence all objects of an experience possible for us, are nothing but appearances, i.e., mere representations, which, as they are represented, as extended beings or series of alterations, have outside our thoughts no existence grounded in itself. This doctrine I call transcendental idealism. The realist, in the transcendental signification, makes these modifications of our sensibility into things subsisting in themselves, and hence makes mere representations into things in themselves.” – *Critique of Pure Reason*

The way in which we experience reality is not that our knowledge conforms to objects, but rather that objects conform to the way that we know. Space, time and cause and effect are not properties of reality external to us, but categories of our thinking imposed upon reality.

Kant extends Descartes’ epistemological skepticism to the metaphysical realm. While Descartes says that my mind is the source of *certainty* in experience, Kant says that *my mind is the source of experience itself*.

IV: Logical Positivism

The Vienna Circle was formed in 1928 as a collaborative effort of prominent scientists, mathematicians, philosophers & economists. Members included Rudolf Carnap, Hans Hahn, Moritz Schlick & Kurt Gödel. It was influential on Bertrand Russell and A. J. Ayer. The Vienna Circle became famous for its promulgation of Logical Positivism: A statement is *meaningful* only if it can in principle be verified by either *empirical investigation* or *logical analysis* of the words and grammar.

“You can’t know anything you can’t measure.”

This is an explicit attempt to remove God from the limits of *intelligible conversation*. But it also removes, ethics, history, etc., from the realm of intelligibility: i.e., *it is an attack on transcendence per se*.

In philosophy, Logical Positivism only lasted about 3-4 years, but it has remained with science ever since: in textbooks and classrooms, both explicitly and assumed. But why was Logical Positivism such a short-lived movement in philosophy? Because of the worst fate that can happen to a philosophical system: *self-referential incoherence*. The criterion of Logical Positivism refutes itself, and you don't need years of research and an advanced degree to see the fallacy.

At this point in intellectual history, science and philosophy parted ways, permanently. Science remained firmly committed to the philosophically utterly discredited Logical Positivism, while philosophy continued on its destructive downward spiral into Postmodernism, which is by far the dominant ideology of the Western academic establishment.

IV: The Science Wars

C. P. Snow: The Two Cultures (1959)

C. P. Snow was a physicist, novelist, and Baron. "By training I was a scientist, by vocation I was a writer." He was living and working with both scientists and writers.

"For constantly I felt I was moving among two groups – comparable in intelligence, identical in race, not grossly different in social origin, earning about the same incomes, who had almost ceased to communicate at all, who in intellectual, moral and psychological climate had so little in common that instead of going from Burlington House or South Kensington to Chelsea, one might have crossed an ocean."

"I believe the intellectual life of the whole of western society is increasingly being split into two polar groups."

The divide between science and the humanities is characterized by hostility, dislike, but most of all lack of understanding. Although scientists are surprisingly ignorant of literature, history, etc., literary scholars are utterly ignorant of science.

"I now believe that if I had asked an even simpler question -- such as, What do you mean by mass, or acceleration, which is the scientific equivalent of saying, Can you read? -- not more than one in ten of the highly educated would have felt that I was speaking the same language. So the great edifice of modern physics goes up, and the majority of the cleverest people in the western world have about as much insight into it as their neolithic ancestors would have had."

It is only getting worse:

". . . the separation between the scientists and non-scientists is much less bridgeable among the young than it was even thirty years ago. Thirty years ago the cultures had long ceased to speak to each other: but at least they managed a kind of frozen smile across the gulf. Now the politeness has gone, and they just make faces."

It went downhill from there.

Eugene Wigner: The Unreasonable Effectiveness of Mathematics in the Natural Sciences

Eugene Wigner was one of the premier theoretical physicists of the 20th century, winning the Nobel Prize in 1963. He also made important contributions to pure mathematics. In 1960 he published an influential paper pointing out that mathematical concepts applied in physics often have far more applicability than when they were originally developed.

“It is difficult to avoid the impression that a miracle confronts us here, quite comparable in its striking nature to the miracle that the human mind can string a thousand arguments together without getting itself into contradictions, or to the two miracles of laws of nature and of the human mind's capacity to divine them.”

“. . . the enormous usefulness of mathematics in the natural sciences is something bordering on the mysterious and that there is no rational explanation for it.”

Thomas Kuhn: The Structure of Scientific Revolutions (1962)

Thomas Kuhn was a physicist turned historian of science. He fundamentally changed how we think about scientific knowledge. The traditional conception of science is a cumulative buildup out of individual discoveries and inventions.

Kuhn claims that all science takes place in the context of a paradigm: set of assumptions, values, beliefs about the world that determine how science can operate (rules) as well as what kinds of problems and solutions are acceptable.

Observations and experiments cannot uniquely determine a body of scientific belief. An apparently arbitrary element consisting of personal and historical accident is always operative.

Normal science consists of a strenuous and devoted attempt to force nature into the conceptual boxes supplied by the paradigm through professional education. When normal science can no longer evade anomalies, there is a crisis in the community followed by a revolution. Competition, not experiments or observation, determine the outcome of a revolution (only historical process ever to result in theory choice). The result is a different view of the world. Eventually the old hold-outs (adherents of the old paradigm) die. Textbooks are rewritten to make the history look harmonious.

Science is not cumulative, but a series of completely incompatible paradigms succeeding one another by means of revolution.

Universals (prior commitments/conception of the world) *determine* science.

- Acknowledges importance of universals (presuppositions); science is not a-personal
- Denies connection between the universals and the particulars
- Relativism

Paul Feyerabend: How to Defend Society Against Science (1974)

Feyerabend was asked to contribute an article to a volume on science and religion. He needed the money, so he decided to make his thesis as provocative as possible, and so he wrote a paper claiming that science is a religion.

Feyerabend wants to defend society against all ideologies, including science. Ideologies are like fairytales, that contain many useful things, but also wicked lies. Originally, science was at the forefront of the fight against authoritarianism and superstition. Ideologies can help overthrow “comprehensive systems of thought”. But ideologies can also degenerate into stupid dogmas.

Scientific “facts” are taught at a young age just like religious “facts”.

Everything else is criticized, but not science.

Judgments of scientists are received like judgments of bishops and cardinals in times past.

Science has become as oppressive as the ideologies it once wanted to fight.

Heretics in science suffer the most severe sanctions our tolerant society has to offer. Science inhibits freedom of thought.

Consequences: formal separation between the state and science; education – science should not be given special status except that there are lots of people who believe in it. Scientists will be balanced by magicians, priests and astrologers.

Alan Sokal: A Physicist Experiments With Cultural Studies (1996)

“For some years I've been troubled by an apparent decline in the standards of intellectual rigor in certain precincts of the American academic humanities. But I'm a mere physicist: if I find myself unable to make head or tail of *jouissance* and *différance*, perhaps that just reflects my own inadequacy. So, to test the prevailing intellectual standards, I decided to try a modest (though admittedly uncontrolled) experiment: Would a leading North American journal of cultural studies -- whose editorial collective includes such luminaries as Fredric Jameson and Andrew Ross -- publish an article liberally salted with nonsense if (a) it sounded good and (b) it flattered the editors' ideological preconceptions? The answer, unfortunately, is yes.”

Sokal wrote a parody article entitled “Transgressing the Boundaries: Toward a Transformative Hermeneutics of Quantum Gravity” and submitted to the elite, leftist cultural studies journal “Social Text.” After it was accepted, at the same time in the journal “Lingua Franca” he published another article revealing the hoax. He basically argues that “postmodern science” has profound political implications.

“. . . the dogma imposed by the long post-Enlightenment hegemony over the Western intellectual outlook: that there exists an external world, whose properties are independent of any individual human being and indeed of humanity as a whole; that these properties are encoded in “eternal” physical laws; and that human beings can obtain reliable, albeit imperfect and tentative, knowledge of these laws by hewing to the “objective” procedures and epistemological strictures prescribed by the (so-called) scientific method.”

“physical ‘reality’ . . . is at bottom a social and linguistic construct.”

“Even nonscientist readers might well wonder what in heavens’ name quantum field theory has to do with psychoanalysis.”

“Later in the article I propose that the axiom of equality in mathematical set theory is somehow analogous to the homonymous concept in feminist politics.”

“Nowhere in all of this is there anything resembling a logical sequence of thought; one finds only citations of authority, plays on words, strained analogies, and bald assertions.”

Main Theme: The intellectual foundations of Western culture, and specifically modern science, were systematically destroyed by the secular philosophers *who used autonomous human reason to destroy reason*. Thus *the irrationalism, skepticism, and relativism of contemporary Postmodernism was built on a foundation of rationalism*. Meanwhile, unbelieving scientists remain committed to the equally bankrupt philosophy of Logical Postivism. *Thus, scientific rationalism rests on a foundation of irrationalism*. The unbeliever in his rebellion against his Creator is not able to solve the problem of the One and the Many, and the result is the intellectual bankruptcy of Western culture.

Specific Answer: Christianity is in fact the only intellectual foundation that can make any sense of science. Antichristian thinking can only be fundamentally hostile to science, as evidenced by the current epistemological climate of Western culture. What do you do about Hume’s inductive problem?