

Truth Dwells in the Deeps (The Science of Leo Strauss)

The concerns of modern science¹ and those of political philosophy may on the surface appear displaced; parallel pursuits (of truth, of reason) that never quite seem to cross paths, like Newton's fated atoms moving in perfectly straight lines throughout eternity (or till gravity gets its way.) Consider the following hypothesis: while modern science pursues what might be called the governing (or mastery) of *nature* through instrumental reason (the enlightenment project), with its resulting technological feats (and dangers) of modern scientific engineering, political philosophy pursues the theory and practice of governing *man*. How best to govern man begs the question: what is justice? Whatever the sense of the word (fairness, reasonableness, law), justice implies politics. And if one denies justice *divine* right one alternative would be *natural* right; for the political philosopher Leo Strauss (who may in fact do just that), the question of natural right (or justice) is the *political* question. Yet, to comprehend natural right would necessarily be to comprehend nature (for how is one to discover *natural* right without discovering nature) and nature is the concern of modern science (at least as commonly understood.) While avoiding jumping to conclusions, science may be an altogether different matter: what are Strauss' views on modern science? What is modern science' views on Strauss? And is modern science in agreement or conflict with the classical views espoused by Strauss?

It is worth noting that in the early part of the twentieth century, about the time Strauss was attending the lectures of Heidegger, a revolution was occurring in the natural sciences, specifically in theoretical physics. Einstein's theories of general and special relativity, as well as the quantum physics of Heisenberg and Schrödinger were leaving science in limbo and calling into question the certainties of Newtonian mechanics. The resulting scientific understanding of

¹ Modern science, also know as natural or physical science begins with the philosophies of Bacon and Descartes, as well as the science of Copernicus, Galileo, Kepler, Newton; includes the later developments of Einstein and relativity theory; and culminates in the quantum physics of Heisenberg, Schrödinger, and Bohr.

nature was undergoing a profound transformation: could it be that Strauss was entirely unaware of the scientific upheaval going on around him? Is it possible that Strauss rejects a Newtonian conception of nature (itself the product of the enlightenment) in the name of a political philosophy that modern science itself makes obsolete? Whatever the case, it is worth pondering the thoughts of the great twentieth century theoretical physicists (and contemporaries of Strauss) concerning such questions; even more, it is worth pondering Strauss' own views on the matter.

Natural Right and History

Strauss wastes no time stating the case:

Natural right in its classic form is connected with a teleological view of the universe.

All natural beings have a natural end, a natural destiny, which determines what kind of operation is good for them. In the case of man, reason is required for discerning these operations: reason determines what is by nature right with ultimate regard to man's natural end. The teleological view of the universe, of which the teleological view of man forms a part, would seem to have been destroyed by modern natural science. (1950, p. 8)

No less than Einstein himself would seem to agree: "one can have the clearest and most complete knowledge of what *is*, and yet not be able to deduct from that what should be the *goal* of our human aspirations" (1929, p. 106).

Strauss points out that this modern predicament has resulted in a "typically modern" dualistic worldview consisting of a *nonteleological* natural science and a *teleological* science of man (1950, p. 8). He then drops the bomb: "the fundamental dilemma, in whose grip we are, is caused by the victory of modern natural science" (1950, p. 8). Acknowledging this, Strauss informs us that *Natural Right and History* does not deal with this problem: it is confined to the

social sciences which rejects natural right in the name of 1) historicism and 2) the fact/value distinction. Why this sudden accusation and shift away from the natural sciences? Whatever, allusions to natural science surface, particularly in relation to Aristotle:

Aristotle did not conceive of the world state because he was absolutely certain that science is essentially theoretical and that the liberation of technology from moral and political control would lead to disastrous consequences: the fusion of science and the arts together with the unlimited or uncontrolled progress of technology has made universal and perpetual tyranny a serious possibility. (1950, p. 23)

It is interesting to contrast this view with that of Heisenberg's: "it is certainly no accident that the beginnings of modern science were associated with a turning away from Aristotle and a reversion to Plato" (1971, p. 34). Aristotle, as an empiricist, would favor immediate experience over the abstractions of modern science. Immediate experience teaches us that light bodies move more slowly than heavy ones; Galileo maintained, on the contrary, that in a vacuum all bodies fall with equal speed, and that their fall could be correctly described by natural law. Immediate experience teaches us that the earth is at rest and the sun goes around it; thus Ptolemy's (and Aristotle's) earth centered universe appeared to be correct. Copernicus, by theorizing the sun to be the center of the planetary motions, refuted immediate experience with mathematics.

Heisenberg sees in this a move away from Aristotle *towards* Plato:

I think that modern physics has definitely decided for Plato. For the smallest units of matter are, in fact, not physical objects in the ordinary sense of the word, they are forms, structures or, in Plato's sense, Ideas, which can be unambiguously spoken of only in the language of mathematics. (1974a, p.51)

Heisenberg, like Plato, recognized the limits of science in relation to politics: “if harmony in society rests on a common interpretation of (justice) then the language of poetry may be more important than the language of science” (1974a, p. 54).

Returning to Strauss: *Natural Right and History* attempts to account for the independent value standard necessary for the justification *not of science, but philosophy*: the *idea* of natural right (a value standard discoverable in nature.) Strauss claims that the origin of the idea of natural right begins not with the *scientific* discovery of political things, but from their “natural” understanding: “natural right had to be discovered, and there was political life prior to that discovery” (1950, p. 81). To have knowledge of natural right is to have knowledge of nature; where there is no philosophy, there is no knowledge of nature. While myth is in accord with philosophy in this regard, it precedes not from nature, but from the gods. It is philosophy that rejects the divine for the natural, and discovers nature, and perhaps by consequence natural right. In this sense, *science not philosophy* appears less opposed to religion. Heisenberg on Kepler: “mathematical laws, so we read in Kepler, are the visible expression of the divine will. Thus the new way of thinking assuredly had nothing to do with any turn away from religion” (1971, p. 40).

In contrast with Strauss, who claims immediate (personal) experience is that which begins to undermine faith in divine laws, Heisenberg claims that refuting immediate experience through theoretical science *leads* to “divine” laws. Theoretical physicist James Jeans (and contemporary of Heisenberg’s) is not so sure:

The essential fact is simply that all the pictures which science now draws of nature, and which alone seem capable of according with observational fact, are mathematical

pictures...they are nothing more than pictures – fictions if you like, if by fiction you mean that science is not yet in contact with ultimate reality (1931, p. 9).

Jeans, sounding oddly like Strauss himself, argues not only is modern science not in touch with divinity, it is not even in touch with reality. And fellow physicist Arthur Eddington apparently agrees: “We have learnt that the exploration of the external world by the methods of physical science leads not to concrete reality, but to a world of symbols” (1929, p. 10). And Niels Bohr contends, “It is wrong to think that the task of science is to find out how nature is. Science concerns only what we can say about nature” (1992, p. 244). This may indicate the disparity of contemporary theoretical physicists concerning their lifework; perhaps Strauss is not so much in disagreement as a participant in the debate.

Paradigms

The historian and philosopher of science Thomas Kuhn may best exemplify everything Strauss opposes. An analysis of Strauss and his views on science would be incomplete without a brief excursion into Kuhn’s theory of paradigms and how they relate to Strauss’ historicist critique: as Kuhn defines it, a paradigm is a set of theories, ideas, abstractions, beliefs that “provide models from which spring particular traditions of scientific research” (1996, p. 10). Examples of paradigms include Aristotelian dynamics, Copernican astronomy, Newtonian optics, and Einstein’s theories of relativity. A paradigm shift is a crisis brought on by conflict between two or more paradigms, in which the “fittest” paradigm survives. There is no synthesis: Kuhn claims that paradigms are incommensurable (incompatible), hence the crisis; the resulting change is comparable to a revolution. Implicit in this argument is the claim that science is an instrument for solving problems. Thus, Kuhn’s evolutionary model of science calls into question

the teleology (purpose) of the scientific enterprise. As Kuhn states, “we may have to relinquish the notion that changes of paradigm carry scientists closer and closer to the truth” (1996, p. 170).

Demonstrating what Strauss refutes (relativism, historicism, liberalism), Kuhn apparently takes the relativist position to its ultimately contradictory end conclusions by viewing science itself as purposeless (with no final end) and historically determined. But Kuhn (and those like Kuhn) are caught in their own web: “historicism asserts that all human thoughts or beliefs are historical, and hence deservedly destined to perish; but historicism itself is a human thought; hence historicism can be of only temporary validity, or it cannot be simply true” (1950, p. 25). Historicists exclude their own *transhistorical* insight from their historical thesis (Kuhn’s theories for example offer the truth about the historical nature of paradigms as such); this is as essentialist, foundationalist, and dogmatic, as any philosophy ever was. It is insightful given Strauss’ reservations on modern science that his critique of historicism (and by consequence Kuhn) serves the interests of science more than might be imagined (by calling into question its historically determined character.)

An Epilogue

As a polemic on what Strauss refers to as the new science of politics, *An Epilogue* also includes many revealing comments concerning modern science as well. For Strauss, as with Aristotle, science and philosophy are identical and can be subdivided into theoretical (mathematics, physics, metaphysics) and practical (ethics, economics, politics) branches. Strauss considers the distinction between science and philosophy to be exclusive to modern science. Holding no illusions, Strauss acknowledges the victory of modern science (or its most successful part: physics) over its classical predecessors: Aristotelian physics, Platonic physics, Epicurean physics, Stoic physics. What is peculiar to modern science is its claim to be metaphysically

neutral: this is what made possible its distinction between science and philosophy; but this is only one form of science or philosophy succeeding another. Modern science claims scientific knowledge as the only genuine concern, and replaces theoretical and practical science with theoretical and applied science: this leaves politics dependent on theoretical science (as a form of scientific psychology.) Classical philosophy viewed politics not from the perspective of theoretical science but of its citizens and made use of their language; modern political science makes use of the extensive technical vocabulary of logicians, not citizens. And whereas classical philosophy concerned practical wisdom, modern science is in the business of prediction.

Heisenberg would disagree with this characterization of modern science (by Strauss as well as logical positivists such as Russell and Whitehead, and pragmatists such as Dewey): “If predictive power were indeed the only criterion for truth, Ptolemy’s astronomy would be no worse than Newton’s” (1974b, p. 36). Ptolemy’s geocentric astronomy, with the aid of a tedious and complex mathematics (and hypothetical planetary motions consisting of differentials and epicycles), was quite accurate in predicting the movements of the planetary bodies. Yet, “Newton’s equations express the paths of the planets much more fully and correctly than Ptolemy’s did; Newton, so to speak, described the plan of nature’s own construction” (1974b, p. 36). Such comments sound closer to the obscure metaphysics found in classical philosophy than the analytic clarity of modern science. Heisenberg goes on to ask, “Where must we seek for truth, in obscurity or in clarity?” He answers with a quote from Bohr (quoting Schiller): “The full mind is alone the clear, and *truth dwells in the deeps*” (1974b, p. 35).

Conclusion

The modern science (and logical positivism) that Strauss critiques is not that of Heisenberg’s (or his contemporaries.) This seems to make of modern science a bit of a straw

man for Strauss. The theoretical physicists of the twentieth century appear to have beaten Strauss to the punch line: modern science as such *no longer exists*.

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