

Philipp Lenard, Excerpt from *German Physics* (1936/37)

Abstract

Philipp Eduard Anton von Lenard (1862–1947) was an accomplished and brilliant physicist. He won the Nobel Prize for Physics in 1905 after making new discoveries about cathode rays, which corrected existing theories about their properties. Lenard was also an antisemite and ardent nationalist who believed that science could only be studied—and true discoveries made—by members of a national group. He was one of the leading physicists behind the “German Physics” movement of the 1930s, a group of scholars who supported National Socialism and sought to make the study of science in Germany the exclusive preserve of Aryans. Specifically, he argued that “the German” possessed precisely the right spirit of inquiry to observe the world around him without being unduly influenced by preconceived personal notions. Conversely, he believed that Jews lacked this capability, because they did not belong to a national body, and therefore lacked a creative and national spirit.

Lenard was an advocate of balancing both the natural sciences and what he called the “spiritual sciences,” which he outlined in the introduction to his *Deutsche Physik* (German Physics). This was a belief that life did not merely exist in a material sense. Rather, science should concern itself just as much with the spiritual world as with materiality, because, he argued, all organisms exist in connection to both spheres. The natural laws—and the spiritual science that could reveal their truths—were universal, and existed in perpetuity, independent of humanity or its understanding of the world. The true nature of the world was, to Lenard, all-encompassing and required both observational and spiritual examination to be understood.

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Natural Science and the Spiritual Sciences

Originally, physics meant—and essentially continues to mean even today, especially in our conception—natural science in general. This is the part of human knowledge; the other part consists of the spiritual sciences.

Natural science—physical—deals with the totality of nature, or the world, as far as it is perceptible to us. Its subject is everything that exists that is observable. And this is a great deal, for it reaches to the farthest celestial bodies. Obviously, however, it is not everything, not the entire world. There is, as our innermost being teaches us, a portion of the world that is inaccessible to our senses.

We call the portion of the world that is accessible to our senses the material or substantial world; the other part, of which our inner being gives us information but whose existence is also apprehended by our senses when we observe organisms, we call the spiritual world. Our subject, therefore, is the material world and everything that happens in it; the spiritual sciences, on the other hand, deal with matters of the spirit. Among these spiritual sciences are history, theology, so-called philosophy, jurisprudence.

The work of the investigator of nature who furthers the natural sciences is very different from that of the man who deals with the spiritual sciences. The investigator of nature relies entirely on his senses; he uses them to gather daily ever more extensive and new information about the material world. Thus he generally focuses his observations on the inanimate part of the material world, since that part is most easily confirmed and still confirms for him the simple uniformities of the processes of the entire material world. The animate part is strikingly different from the inanimate; it is marked by processes of a highly

intricate character, and it is this difference, accessible to sensory perception, which indicates to the senses the existence of an extra-material world. Obviously it is the same “spiritual world” of whose operations we are informed by our own inner being. The animate part of the material world is influenced by the “spiritual world,” which is not noticeably the case with the inanimate part. Animate organisms exhibit phenomena in which the spiritual world and the material world work together. Life consists precisely in this cooperation; we designate matter which has spirit (soul) as “living.”

In the case of the spiritual sciences, the basic data do not come to the investigator from the outside, through the portal of his senses, but from within, from his own spirit. The representative of the spiritual sciences is mainly concerned with animate, inspirited nature, and he uses his senses essentially only for commerce with other matter-bound spirits, mostly with other human beings.

The endeavor of the spiritual sciences should produce a new cognition wrested from the spiritual world. Nevertheless, in reality such new knowledge reaches us only seldom, and it does not come from the professional representatives of the spiritual sciences. The great founders of religions, of whom barely one appears every thousand years on earth, are the bearers of such knowledge. Also true artists thinkers, poets in words and music, and true statesmen, of whom perhaps one may be given to us every hundred years. The spiritual scientists at the universities should, at least, administer this knowledge, but not in such a manner that the knowledge at hand or that which can be reclaimed from the past is eruditely tossed back and forth, with the result that the best of this knowledge remains mostly unnoticed. Rather it should be exchanged in a manner that feeds and nourishes the spirit of the people and thus truly educates the people. This obviously has been entirely lacking during long periods of history, in consequence of the profound decline of the German spirit. One did not understand how to provide the German spirit with a nourishment suitable to it because not even spiritual scientists were sufficiently conscious of the most fundamental differentiations in the spiritual world—namely, that every organism has its own special spirit (that portion of the total spirit world which its body is able to hold on to) and that the greatest differences among spirits are based on groups varying in physical structure according to their inherited physical constitution

[...]

The Truth-Value of the Investigation of Nature

The conceptions and laws derived from the observation of natural processes, which are adapted to them and constantly tested against them and which are the main results of the investigation of nature, are cognitions of realities, of things and structures which exist, independently of us and of our thinking and existed long before us. These findings have a truth-value. The true is that which, in our own spirit, corresponds to the reality which is independent of the arbitrariness of our spirit. The true is not that which is “verified” here or there, but that which must always verify itself because it is derived from a wholly interconnecting reality.

The perception of a total interconnectedness in nature is one of the most distinguished achievements of the investigation of nature. The progress of natural science has shown with increasing clarity and comprehensiveness that all processes of the observable world are closely tied to other processes in that world; every discovered natural law is seen to be linked to a number of other laws in such a way that they mutually support each other and none could be valid without the others. ...

[...]

The Limits of Understanding

Some of the laws which transmit to us the understanding of nature have been shown to be valid only within definite limits. This means that their applicability is dependent on the fulfillment of certain

conditions. The progress of knowledge, therefore, has frequently shown what is valid outside of these limits and has thereby discovered even more general laws which encompass the narrower concepts. In this way we can also expect further progress.

The complete comprehension of any given natural process must be regarded as impossible. Because of the interconnectedness of nature, such comprehension would involve understanding the totality of the infinite world—from which we, in the true sense of the word, must remain forever infinitely removed, if for no other reason than because of the finiteness of our body to which our cognitive spirit is bound. We know from experience that we are not capable of understanding everything at once, and even the successive comprehension of an infinite number of things of limited extent would take an infinitely long time. This accounts for the fact that beyond every uncovered mystery of nature we find an even greater mystery.

[...]

Materialism: A Delusion

The peculiar tendency to recognize only matter and not spirit must be mentioned here since it is an outgrowth of natural science. The great achievements of natural science in understanding hitherto insufficiently known portions of the totality of the world have led to an arrogant dismissal of what is incomprehensible. The greatest investigators never shared this attitude; they were always aware of the limits of understanding; even if they crossed old borders, they immediately saw new borders ahead before which they had to come to a halt. But the lesser spirits, for whom the great ones had already blazed a trail and made their work easy, adopted an insolent omniscient attitude. Such was the case after Newton and again after Darwin.

In recent times, the successes of technology have produced a special form of arrogant delusion with respect to matter. The actualization of practical possibilities opened up by a greater comprehension of nature gave rise to the notion of the “mastery” of nature. “Man has slowly become the master of nature.” Such utterances on the part of spiritually impoverished “grand technicians” acquired a great influence because of the impressive display their new techniques and inventions made possible. And that influence has been even strengthened by the all-corrupting foreign spirit permeating physics and mathematics. In the face of this development, the spiritual sciences—increasingly estranged from the comprehension of nature and not cultivated in a truly German manner—have utterly failed.

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