

**NATURAL LAW IN
SCIENCE AND
PHILOSOPHY**

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Natural Law in Science and Philosophy by Emile Boutroux & Fred Rothwell

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EMILE BOUTROUX & FRED ROTHWELL

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IN
SCIENCE AND PHILOSOPHY

By
EMILE BOUTROUX
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Authorized Translation by
FRED ROTHWELL



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PREFACE BY THE AUTHOR

MORE than twenty years have elapsed since these lessons were delivered at the Sorbonne. In the interval, science has advanced with giant strides ; and there can be no doubt but that I should have to examine many a scientifico-philosophical theory of which this work makes no mention, were I now to recommence the course I then gave. All the same, I do not think that the problem raised in my classes during the session 1892-3 has been solved or that it has ceased to elicit the keenest interest. Our object is to discover whether the idea of natural law is the same for the scientist as it is for the philosopher.

Science proposes to explain things scientifically. And, in these days more especially, the concept of scientific explanation has received precise definition. It comprises neither the knowledge of the intrinsic nature of things, nor that of their origin or value.

TO VINDICATE
ANATOMY

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It implies the possibility of extracting, from the given reality, sensibly constant rapports, and it declares that such a rapport is explained, when it has been possible to reduce it to some other rapport already known and recognized as permanent and general. Science is reduction. Mathematics is its ideal, its form *par excellence*, for it is in mathematics that assimilation, identification, is most perfectly realized. The universe, scientifically explained, would be a certain formula, one and eternal, regarded as the equivalent of the entire diversity and movement of things.

The philosopher asks himself whether natural law as assumed by science, wholly coincides with law as really existing in nature ; whether science and reality are so alike that science may be regarded as exhausting everything intelligible and true that the real contains.

The theory upheld in the present work is that no absolute coincidence exists between the laws of nature as science assumes them to be, and the laws of nature as they really are. The former may be compared to laws proclaimed by a legislator and im-

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posed *a priori* upon reality. The latter are harmonies towards which we ascertain that the actions of different beings really tend. The former are abstract rapports, the elements of which are themselves rapports; the latter are concrete rapports, the terms of which are real subjects, true beings.

Now, the doctrine here set forth consists in regarding scientific intelligibility as the most objective form, but not as the sole type, of intelligibility. Science acquires that perfection which characterizes it, by setting aside, sending about their business, as Plato would say (*ἐὰν χαίρειν*), individuals, natural beings. The philosophy with which our doctrine is connected admits that between individuals themselves, between concrete realities as such, there may be found relations which, though they cannot be reduced to mathematical relations, nevertheless exhibit a certain order which satisfies the intelligence. There exist intelligible relations other than those of reducibility and identity: it is the purpose of philosophy to reveal and define such relations. In Plato, for instance, we have the commonalty, or mutual participation

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(κοινωνία); in Aristotle, finality; in Descartes, evident connexion; in Leibnitz, harmony; and in Hegel, rational synthesis. Thus, philosophy both widens and renders flexible—without destroying—the concept of intelligibility.

The present doctrine regards as both contingent and intelligible those relations between beings that it discovers in the relations between relations; it sees in the mechanically necessary rapports implied by science, an abstraction, that consists in isolating the relations from their living subjects, and looking upon them as self-sufficient. In the reality of things, the rigid, eternal, mathematical order, which science considers from its own point of view, serves to obscure an order that is invisible, supple and untrammelled, and therefore all the more beautiful:

ἁρμονίη ἀφανῆς φανερῆς κρείττων (Heraclitus).

EMILE BOUTROUX.

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