THE BALANCE, THE STEELYARD AND THE CONCEPT OF FORCE

The primitive philosophy of Animism, "the doctrine that a great part, if not the whole, of the inanimate kingdom, as well as all animated beings, are endowed with reason, intelligence and volition, identical with that of man," still to a degree sticks in mechanics, in the concept of force. Schopenhauer is quoted as saying:

That the essence of forces in inorganic nature is identical with the will in us, every one believes with full certainty and as a demonstrated truth, who seriously considers it.

R. Eisler says:

Force is a concept which gets its content originally from the capacity of the ego in general by means of its will to bring about something, to overcome a resistance, and is then immediately superposed upon the objects of the external world. . . . Since the ego finds limits to its activity in the external world, feels itself hindered by objects, it inevitably interprets the hindrance as the expression and activity of a sort of will-power analogous to itself which things exert against it and by virtue of which they can or do influence other things. . . .

E. Mach says that the concept of force is a survival of fetishism; Kirchhoff, in the famous prefix to his Mechanics, acknowledges the value of the older view in the development of the science, and its usefulness in elementary teaching, but takes for himself this higher ground:

I propose as the problem of mechanics, to describe the motions which occur in nature, and, forsooth, to describe them completely and in the simplest way. I will further add that it should deal only with this, to state what the phenomena are, not to determine their causes.

For him the term force "forms only a means of simplifying the forms of expression, i.e., to express in brief phrases equations which with-