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THE RÔLE OF HYPOTHESIS IN ECONOMIC THEORY¹

By Professor GRIFFITH C. EVANS

RICE INSTITUTE

THE distinction between a natural and a theoretical science lies essentially in the presence or absence of a free spirit of making hypotheses and definitions. In a natural science facts are recognized and systematized, with a purpose purely descriptive, but as the same field of knowledge is investigated in theoretical fashion, definitions become constructive rather than denotive, and hypotheses are introduced and tried out, in order to see what sort of results may be deduced from them. If the chains of deductive reasoning are complicated the science is driven to employ a characteristic method for their simplification. The mathematical method is at this point a requirement for progress.

¹ Delivered at a joint session of the Econometric Society and of Section K of the American Association for the Advancement of Science, January 1, 1932.

Mathematics itself is not always completely theoretical. In geometry, we still reason from "general" geometric figures, much in the manner described by Kant, and are content with that kind of reasoning until we encounter contradictions which force us to make a further analysis. Even when we know that a complete analysis is possible, and the nature of the system completely definable by more or less logical postulates and definitions, we are sometimes inclined, as mathematicians, to turn that analysis over to the logicians, and forget it.

The question naturally arises as to the degree to which we may speak of a theoretical economics, and the extent to which we may call it mathematical.

In the first place, we notice constructive definitions. We do not usually give such a definition of a concept like capitalism, contenting ourselves with denot-

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