

The Elements of Social Scientific Thinking, 11th Edition

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Chapter 2: The Elements of Science

THE MANY ROLES OF THEORY

Science rests its claim to authority upon its firm basis in observable evidence about something called “reality.” We have occasionally described science as, simply, reality testing. Because everyone thinks he or she knows what reality is, science acquires a fundamental appeal. Yet the necessary partner of realism in science is that wholly imaginary phenomenon, **theory**. Without the many roles that theory plays, there would be no science (and, some would argue, there would be no understandable “reality,” either).

Just as language arises out of the experience of coming to grips with human needs, so too does theory arise from tasks that people face. The hardest task is to explain what is really going on out

there. Volumes have been written about what theory is and is not. For our purposes, a theory is a set of related propositions that suggest why events occur in the manner that they do.

The propositions that make up theories are of the same form as hypotheses: they consist of concepts and the linkages or relationships between them. Theories are built up as hypotheses are tested and new relationships emerge.

Theory abounds in the most ordinary transactions of life. There are theories of everything from the payoff of slot machines to the inner meaning of Dilbert cartoons. The grandest theories of all are religious and philosophical, embracing huge orders of questions about the origin of the physical universe, the history of the species, the purposes of life, and the norms of behavior that lead to virtue and, possibly, happiness. To the faithful, such theories are made true by a belief in supernatural phenomena. These kinds of theories are presented as if they were embedded in the larger cosmos of our existence, awaiting our arrival at understanding.

Social science, by contrast, generally operates from a different perspective on theory. The most conventional posture of a social scientist is one of pragmatism: a theory is only as good as its present and potential uses in generating hypotheses and explaining observations. The point of any science is to develop a set of theories to explain the events within their range of observation.

It is tempting, but misleading, to conceive of theory as something rock-like and immobile behind the whiz and blur of daily experience. Rather, theory is a sometimes ingenious creation of human beings in their quest for understanding. People create theories in proportion to needs, and the theories they create can be either functional or dysfunctional to those needs. A theory could contain a complete system of categories and generalizations but still be useless. If, for example, one were to categorize the world in terms of tall things and short things and characterize all the relationships between them, a theory would have been born, but it would be one of dubious utility—not false, but useless.
