Classifications of Sociological Paradigms

Subjects: Sociology
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In this entry paper, we propose a brief analysis of the use of the notion of “paradigm” in sciences in general and in social sciences and sociology in particular. A “paradigm” expresses a worldview and/or a unified perspective—at the level of the scientific community—on a given situation. Paradigms represent a collection of beliefs shared by the scientific community or a set of agreements through which social issues should be understood and interpreted.

paradigm sociological paradigm paradigm shift scientific revolution sociological perspectives

From an etymological perspective, the term *paradigm* originates from the Greek word *paradeigma*, which can be translated as “example” or “model” [1].

The concept of the paradigm was developed in the 1960s and 1970s with the publication of Thomas Kuhn’s *The Structure of Scientific Revolutions* [2], a highly influential work in the scientific world that has accumulated over 100,000 citations to date [3].

In a broad sense, Kuhn defined *paradigms* as “universally recognized scientific achievements that, for a time, provide model problems and solutions to a community of practitioners” [2] (p. VIII). In a narrower sense, the concept of “paradigm” refers to a dominant theory and describes a set of practices applied in science—a collection of methods and methodologies used in research [4].

Thus, paradigms are composed of fundamental ideas, methods, languages, and theories accepted by the members of a scientific community, playing a crucial role in the evolution of science [3].

In his book, Kuhn [2] advances the idea that a scientific field progresses through shifts in theory theoretical frameworks rather than through the accumulation of empirical data without theoretical integration. The primary task of researchers, he argues, is to bring existing theories and accepted facts into closer and closer agreement (p. 27). In other words, the progress of a *mature science* occurs through a cyclical process consisting of alternating stages, specifically phases of *normal science* and *scientific revolutions*. Preceding the normal science stage, there is a pre-scientific phase, characterized by the absence of a dominant theory or consensus among the members of a scientific community. During this phase, multiple incomplete and mutually incompatible theories emerge. However, once a particular theory becomes dominant and is widely accepted within a scientific field, the stage of *normal science* is reached. In this so-called *normal science* period, key theories, tools, values, and philosophical assumptions embedded in the disciplinary matrix (or paradigm) remain fixed and stable. This stability enables the cumulative generation of solutions to emerging *puzzle-solving problems* [2], a concept that differs from Popper’s

notion of *problem-solving*, which emphasizes falsifiability [5]. The members of the scientific community unanimously accept the dominant theory or paradigm and operate within its framework [6]. Thus, in the development of a *mature science*, scientific revolutions may occur, during which the disciplinary matrix is challenged due to the emergence of puzzle problems that cannot be resolved within the existing framework or due to *discrepancies,* often referred to in Kuhnian terms as *anomalies*. In such cases, the paradigm enters a phase of continuous revision as scientists attempt to find solutions to the unresolved puzzle problems that disrupted the previous *normal science* phase [7]. These so-called *anomalies*—deviations from the expectations established by a paradigm that governs normal science—arise from empirical studies and have been the foundation of many discoveries in the natural sciences. The identification of such *discrepancies* often serves as the catalyst for a paradigm shift within a particular field of study. In summary, what Kuhn defines as an *anomaly* is an empirical difficulty that highlights discrepancies between observed data and theoretically expected results [8].

Ultimately, following a scientific revolution, the old paradigm may be replaced by a new dominant paradigm. When a paradigm shift occurs, the world of a scientist is qualitatively transformed [and] quantitatively enriched by fundamental novelties of fact or theory [4].

In conclusion, a paradigm can be understood as a universally recognized scientific achievement that, for a time, provides model problems and solutions to a scientific community. Scientists accept a dominant paradigm until significant empirical *discrepancies*—often termed *anomalies* in the Kuhnian framework—begin to challenge its validity, paving the way for a potential paradigm shift. Against this backdrop of emerging *discrepancies*, scientists may begin to question the foundations of the initially accepted paradigm, formulating new theories that challenge the dominant framework. Eventually, one of these new theories gains unanimous acceptance within the scientific community and develops into a new dominant paradigm [9]. However, some *discrepancies* or *paradoxes* may be met with resistance from scientists, who might be reluctant to abandon the established paradigm [10].

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