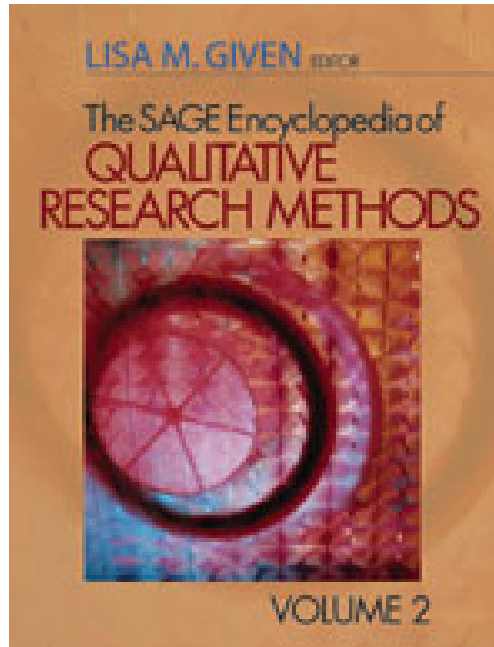


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A paradigm is a set of assumptions and perceptual orientations shared by members of a research community. Paradigms determine how members of research communities view both the phenomena their particular community studies and the research methods that should be employed to study those phenomena.

The paradigm construct was initially developed to make sense of phenomena in the physical sciences. During the last quarter of the 20th century, however, social scientists appropriated the construct to account for the growing interest in and acceptance of qualitative research methods in a number of social science fields that previously had defined research in quantitative (and often in experimental-design) terms. More recently the meaning of the term has expanded, and the term has become part of popular culture. This entry reviews the history and evolution of the paradigm construct and concludes with a look at the concept of research purposes as an alternative.

Paradigms in the Physical Sciences

The paradigm construct was initially developed and popularized by physical science historian Thomas Kuhn in his book, *The Structure of Scientific Revolutions*. Kuhn employed the construct to make sense of a phenomenon that he and other historians had noticed when they studied the process of conceptual change within the physical sciences: Fundamental changes in thinking within a scientific discipline—the shift from Newton's to Einstein's version of physics, for instance—did not occur incrementally and were not merely modifications that resulted from what Kuhn called *normal science*, that is, day-to-day scientific experimentation and other procedures associated with what traditionally has been called *the scientific method*. Rather, they reflected radical shifts in perspective—or, in Kuhn's words, *paradigm revolutions*—that were triggered by problems that could not be resolved either by the field's standard operating research procedures or by its established ways of thinking.

Kuhn compared paradigm revolutions to the holistic shifts in perspective demonstrated by gestalt psychologists when they used pictures that people could see in two quite different ways, for example, as a bird and an antelope. Kuhn quickly added a caveat to this comparison, however: Although most people can learn to shift their points of view and see the gestalt psychologists' picture in one way at one moment and in the next moment, as something quite different (they can learn to see both a bird and an antelope in the picture alluded to above, for example, though of course not simultaneously), scientists who have been socialized to accept a particular paradigmatic perspective assume that what they see is reality rather than merely a perspective of reality. Consequently, according to Kuhn, when a new paradigm becomes accepted by members of a scientific community, that community will have rejected older ways of thinking and doing research and embraced new research methods, fundamentally different perceptions of the physical phenomena that members of the

field studied, and radically different views of the field itself.

Kuhn's Construct in the Social Sciences

In the 1970s, qualitative research methods began gaining a foothold in certain social science fields that previously had defined research almost exclusively in quantitative terms. For some 20th-century qualitative researchers such as Matthew Miles and Michael Huberman, the growing acceptance of qualitative methods represented nothing more than the addition of new and somewhat unique research techniques to social scientists' methodological arsenal. For others such as Egon Guba and Yvonna Lincoln, however, the growing acceptance of qualitative procedures signaled a revolution that was more-or-less equivalent to the paradigm revolutions Kuhn had discussed in a physical science context.

Indeed, for Lincoln and Guba—and others who followed their intellectual lead including, but certainly not limited to, Guba's students Patti Lather and Thomas Schwandt and Lincoln's later collaborator Norman Denzin—the growing acceptance of qualitative methods in some social science fields signaled that at least some people within the social sciences were embracing a radically different view of knowledge and knowing (i.e., a different epistemology), as well as a new and different view of reality (i.e., a new ontology). (Lincoln and Guba also talked about a new view of ethics—i.e., a new axiology—but the axiology notion was never as extensively developed or as widely embraced as the epistemological and ontological notions.)

According to the new perspective touted by Lincoln and Guba and others (including qualitative research methods textbook authors such as Michael Quinn Patton), knowledge is constructed, not discovered. Furthermore, because people live and work in different places and consequently construct reality in very different ways, the world consists of multiple realities rather than a single, unitary reality.

It follows, then, that social scientists' task is not to discover what is true—for from this new perspective, there is no single, absolute truth to discover—but to describe, as accurately as possible, how different people in different contexts have constructed reality and what these people take to be true. This means that case study design and qualitative methods are the procedures of choice if one wants to do research that is consistent with the new view of knowledge and reality Lincoln and Guba articulated.

Initially, Lincoln and Guba called their new view of knowledge, reality, and research the *naturalistic paradigm*; later, they renamed it the *constructivist paradigm*. The older, more traditional view was dubbed the *positivist paradigm*.

In time, Lincoln and Guba also added a third paradigm to the list of perspectives that they saw as operative within social science fields. They labeled this third perspective the *critical theory paradigm*. The critical theory

paradigm, as Lincoln and Guba portrayed it, at least, actually was a kind of metaparadigm because it encompassed a number of other paradigms including (but not limited to) the neo-Marxist, feminist, participatory, poststructuralist, and postmodern paradigms.

Incommensurability and the Paradigm Wars

Like Kuhn, Lincoln and Guba assumed that paradigms were incommensurable. One cannot embrace both the positivist and the naturalistic-constructivist paradigm, Lincoln and Guba argued; rather, one must choose sides and embrace only one paradigmatic perspective.

Not surprisingly, the emphasis on choosing sides had a significant impact on the nature of discourse within a number of social science fields, including the field of educational research where Lincoln and Guba's paradigm talk was especially influential. One prominent member of the educational research field, N. L. Gage, coined the term *paradigm wars* to characterize the adversarial character of the methodological debates that were occurring within the field during the final quarter of the 20th century.

In time, open warfare gave way to what Robert Donmoyer has referred to as an era of *big-tent politics*. During this era, a place was made at the research community's table for people with a variety of paradigmatic proclivities and methodological preferences. This acceptance was shown in a number of ways. New journals were established, for instance, and new formats that were compatible with a constructivist view of knowledge were added to the list of possible session formats at research conferences.

The big-tent strategy minimized conflict within the field, but it also promoted balkanization: Like-minded people tended to read each other's work, but they almost never read or conversed with those who saw research—and the world in general—differently than they did.

One unfortunate consequence of this balkanization became evident within the educational research field in recent years when traditionalists finally began to challenge much of the more radical thinking and research procedures associated with the qualitative revolution that had occurred during the final quarter of the 20th century. A committee of traditional researchers set up by the National Research Council (the research arm of the National Academies of Science in the United States) to define what constituted *scientific* (and by implication, fundable) research in education, for instance, either dismissed, misinterpreted, or—as was mostly the case—simply ignored the thinking of all but the most traditional qualitative researchers. Indeed, arguably the most noteworthy part of the bibliography of the committee's report, *Scientific Research in Education*, was what was not included in it. The lack of representation of key bodies of seemingly relevant literature is a testament to the impact of big-tent politics and the balkanization this strategy produced.

Ironically, Kuhn, himself, signaled unequivocally in the second edition of *The Structure of Scientific Revolutions* that he never meant to imply that incommensurability was synonymous with logical incompatibility. It is impossible to view the world from incommensurable perspectives at any given moment, of course, just as it is impossible to see an antelope while one is seeing a bird in one of the gestalt psychologists' purposely ambiguous pictures. But one can shift one's point of view and view the world—and the process of research—from a variety of paradigmatic points of view.

To be sure, Kuhn did indicate that physical scientists who have been socialized to accept a particular paradigm are not inclined to employ different paradigmatic perspectives to view either the physical world or their work. In the second edition of his book, however, Kuhn clarified that this description of what normally happens (and what may be highly functional) in physical science disciplines is not inevitable. It certainly is not a prescription for what ought to happen in all fields.

The Paradigm Concept Redefined

A number of scholars, in fact, have argued that certain social science fields actually require that multiple paradigms be operative in the field at any given time (though not, necessarily, in a single study). Their argument is that the problems and phenomena focused on in certain fields are so complex that they can be addressed adequately only if they are viewed and researched from a variety of paradigmatic perspectives.

Gage (who developed the paradigm-wars notion mentioned above) and Lee Shulman, for instance, both have articulated variations of the above argument in discussing what is required to study and ultimately understand the phenomenon of teaching. Of course, both scholars also redefined the paradigm concept in the process of articulating their positions. Gage, for instance, suggested that the term *paradigm* is nothing more than a synonym for models, patterns, and schemata, while Shulman viewed different paradigms simply as the different programs of research in which different researchers are engaged. Shulman, in fact, explicitly acknowledged that he was using a “weaker” meaning of paradigm than Kuhn (and, of course, also Lincoln and Guba) employed.

There is at least one other significant difference between Shulman and Gage's weaker definition of *paradigm*, on the one hand, and Kuhn's definition, on the other: Although Kuhn seems to suggest that different paradigms are likely to conflict, Shulman and Gage's weaker conception assumes that different paradigms will be complementary. Shulman, for instance, compared the findings emerging from studies generated from different research paradigms to different pieces of a puzzle; the assumption is that the pieces provided by different paradigms will easily fit together and that, once this is done, a coherent picture of the phenomenon will emerge.

Assuming a priori that different paradigms will produce complementary findings ultimately is rooted in a naïve faith in the power of empirical data. This faith in empiricism ignores the facts (a) that the meaning of empirical data is shaped by the a priori language that researchers employ to frame their research questions and studies, (b) that different researchers often frame their work in radically different ways, and (c) that these different frames can reflect quite different and even at times contradictory purposes.

One consequence of assuming that researchers' findings will always be complementary is that researchers who make this assumption can easily overlook honest to goodness incommensurability. Gage, for instance, argued that there is no conflict between the quantitative, experimental paradigm he embraced and the paradigm that qualitative researchers adhere to because qualitative research can be employed to identify intervening variables in the cause-and-effect generalizations that he and his colleagues were attempting to generate. Although it is certainly the case that qualitative procedures can play this role, Gage's belief in the complementary nature of paradigms led him to overlook—or at least cavalierly discount—the fact that many qualitative researchers disavowed the search for cause–effect generalizations and in some cases the entire notion of causation in the social world.

Thus, those who employ the weaker definition of paradigm exhibit a problem that is, in essence, the opposite of the problem exhibited by those who assume that incommensurability is a synonym for logical incompatibility. Although the latter group of scholars tends to overestimate the significance and implications of paradigm differences (and as a consequence encourages balkanization within research communities), those who assume a priori that the knowledge generated from different paradigms will be complementary ignore—or at least obscure—the fact that there may, indeed, be fundamental differences within research communities.

Paradigm Proliferation

In recent years, at least two noteworthy movements have occurred with respect to the paradigm construct. The first movement involved the proliferation of paradigms within the social sciences. As noted, Lincoln and Guba initially identified two paradigms and later added a third. The third paradigm, however, was actually a metaparadigm that supposedly encompassed a variety of different paradigms.

This proliferation of paradigms expanded even further when a number of scholars began equating the paradigm notion with ethnicity and the life experiences of different social groups. Certain African American scholars such as John Stanfield and Cynthia Dillard, for example, began to write about a unique Afro-centric epistemology that was a product of the unique African–American experience.

Of course, not all members of a particular ethnic group have the same sets of experiences. Gender, for exam-

ple, undoubtedly influences life experience at least as much as ethnicity, so consequently, once researchers equate the notion of paradigm with the notion of life experience, it would seem as if researchers cannot merely talk about, say, a Latino paradigm; they must also talk about a Latina paradigm. But all Latinas are not the same. There are rich Latinas, middle-class Latinas, and poor Latinas. And of course, there are gay Latinos, lesbian Latinas, and undoubtedly, even transgender Latinos. All of these factors contribute to a person's life experiences and consequently all have been associated with unique ways of knowing and, by implication, distinct paradigms.

Indeed, since all individuals' life experiences are at least to some degree idiosyncratic, the logical end point of equating the paradigm notion with life experience would seem to be that people will all, sooner or later, be seen as operating out of their own unique paradigms. And to the extent that assumptions about incommensurability and logical incompatibility are still operative when this happens, people will, in effect, have embraced a radical form of solipsism and have created a much more extreme version of balkanization than was ever operative in the past.

The Paradigm Construct in Popular Culture

Although the proliferation of paradigms was occurring in the academy, a somewhat related movement was playing itself out beyond the academy's doors: Popular culture began appropriating the paradigm notion.

The business world, for instance, discovered the construct. In an April 1999 article by Hal Espen in *The New York Times*, for example, a Levi Strauss executive is quoted as saying that the public's growing preference for loose rather than tight-fitting blue jeans was not a fad; rather it was, in his words, a paradigm shift. In an October 2007 article in the same newspaper, Mark Bittman talked about the old paradigm of macaroni and spaghetti being replaced by a new pasta paradigm.

Politicians, too, have begun to talk about the need for a new paradigm. One U.S. Senator, for example, talked in a public television documentary about the need for a paradigm shift in the way the country thought of workforce development. The senator suggested that, in the past, workforce development was seen as the responsibility of one level of government; with the new perspective—or, to use the senator's language, the new paradigm—workforce development would be a shared responsibility of a federal, state, and local partnership.

In the process of employing the paradigm notion, popular culture has put its own spin on Kuhn's construct. When used in politics and business, for instance, the term tends to serve a marketing or public relations function: The term can add heft and gravity to the most mundane matters, for a new paradigm does, indeed, seem to have far more significance than a new perspective. Furthermore, in a modernist culture that uncritically

assumes that progress is good, talk of a new paradigm can suggest—in lieu of thoughtful arguments and convincing evidence—that new ideas and/or new ways of doing business are not only radically different from older ideas and procedures, but also that they are significantly better.

Given the term's public relations cachet, it is hardly surprising that popular culture has embraced the paradigm notion. It seems likely that this cachet also is behind at least some of the paradigm proliferation that has occurred within the academy in recent years.

An Emerging Alternative to Paradigm Talk

In part because of the proliferation of paradigms, both within the academy and in popular culture, some scholars have suggested that the paradigm construct has lost its meaning and is no longer useful for making sense of social scientists' different research orientations. One alternative that has been proposed was inspired by Jurgen Habermas's writings about the role of interest and purpose in human understanding.

The author of a classification scheme of qualitative research approaches that is based on researchers' differing, overarching purposes argues that purpose-talk has a number of advantages over the paradigm-talk that has been employed in the past. He argues, for example, that talk of differing purposes does not assume a priori that different research orientations are so incommensurable that researchers guided by one purpose cannot understand and learn from the work of those guided by a radically different purpose. He also notes that purpose talk opens the door for mixing orientations when appropriate. After all, in some situations, a person can legitimately attempt to accomplish a number of quite different purposes. Policymaking (and, consequently, policy research) for example, often requires finding ways to accommodate and balance even antithetical points of view.

It is not clear, at this point, whether purpose-talk will replace talk of different, incommensurable paradigms. What is clear, however, is that a number of quite different meanings have become associated with the paradigm construct, so those who read or hear the term need to attend to the particular way a particular author or speaker is using Kuhn's construct.

- paradigms
- incommensurability
- The Antelope
- physical sciences
- qualitative methods

- axiology
- qualitative research

RobertDonmoyer

See also

[Axiology](#)

[Constructivism](#)

[Critical Theory](#)

[Epistemology](#)

[Naturalistic Inquiry](#)

[Ontology](#)

[Positivism](#)

Further Readings

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