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Lewin, Kurt

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Kurt Lewin (pronounced "Loo-win") was born in Mogilno, Poland, on September 9, 1890, and died in Newton, Massachusetts, on February 12, 1947 (Hilgard 1987). Originally headed for a career in medicine, he turned to psychology and took his PhD from the University of Berlin in 1916, with a dissertation on associative learning supervised by Carl Stumpf. Stumpf had also been the mentor of Wolfgang Kohler and Kurt Koffka, and Lewin soon joined them in the emerging school known as Gestalt psychology. Lewin rose to the rank of Professor at Berlin and succeeded Stumpf as director of the Psychological Institute there. A refugee from Hitler's Europe, Lewin held positions at Cornell and Iowa before landing at MIT, where he became director of the interdisciplinary Research Center for Group Dynamics (RCGD; Lewin 1945) and pursued both basic and applied research on interpersonal and organizational behavior Following Lewin's death, the Center moved to the University of Michigan, where it remains active to this day as part of the Institute for Social Research.

In America, Lewin identified primarily as a social psychologist and his prominent students included Leon Festinger (famous for his research on social comparison and cognitive dissonance), Roger Barker (a pioneering environmental psychologist), Bluma Zeigarnik (she of the Zeigarnik effect), and Morton Deutsch (a leader in the study of conflict resolution). However, his distinctive approach, known as field theory, offers a framework for integrating personality and social psychology – fields which, in the United States at least, are often viewed as separate if not antagonistic (Lewin 1935, 1939/1951, 1951; for reviews, see Burnes and Cooke 2013; Deutsch 1968; Stivers and Wheelan 1986).

Classical Newtonian physics described physical phenomena in terms of forces exerted by particles acting on each other by means of collision, attraction, or repulsion. But field theory asserts that these forces exist even when there are no particles present in the field. It is the distribution of forces in the field that makes particles behave as they do, not the action of particles on each other. By analogy, Lewin argued that social phenomena depend on the totality of forces acting within the field in which behavior takes place. This view was consistent with Lewin's earlier commitment to Gestalt psychology and Koffka's (1935) dictum that the whole is greater than the sum of its parts (though apparently Koffka himself preferred "other" to "greater" as the correct translation).

The primary construct in Lewin's theory is the field, or "life space" (LSp), which Lewin defined as the totality of the person (P) and the environment (E), which act in an interdependent manner to determine the individual's behavior (B).

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Although people have needs, purposes, and goals, these are not sufficient to determine their behavior; nor are the opportunities, pressures, and constraints of the situation. Rather, the person and the situation stand in an interdependent relationship with each other, and together they determine the behavior that transpires within the life space. The person and the environment exist in an equilibrium, and whenever this is disrupted – e.g., by a need which has not been met or a goal that has not been achieved – a state of tension arises which must be resolved. For example, in Zeigarnik's (1927) famous effect, people remember uncompleted or unsuccessful tasks better than those they have successfully completed. The individual's past is important but only as one link in a chain of causal events: the true determinant of behavior is the configuration of the field at the time the behavior occurs. And the important features of the environment are the *psychological*, rather than the physical features, as these are perceived by the individual at the time.

What applies to the person and the situation also applied to groups: groups are not based on the similarity or proximity of individuals, but rather on their interdependence and the degree of cohesiveness in the field binding the individual members together. Again, the whole is not the same as the sum of its parts; and the field (group), not the particles (individuals), makes a group, rather than a collection.

Some of the distinctive features of Lewin's theory, and his method of research, are illustrated in a classic study of aggression as a function of leadership atmosphere (Lewin et al. 1939). Groups of boys, equated as closely as possible on various characteristics, were assigned to complete a number of tasks under the aegis of an adult who exercised either an authoritarian, democratic, or laissez-faire leadership style. A panel of observers rated the boys' behavior, and the general finding was that the authoritarian style of leadership led to higher levels of aggression, both within the group and against members of an outgroup, compared to the democratic style, with the laissez-faire style falling in between.

As stated, both the method and the results look like standard experimental social psychology; but, as summarized by Jones (1985), the study illustrates the distinctive features of Lewin's approach to research: (1) a complex independent variable defined in psychological, not physical, terms; (2) systematic checks to insure that the manipulation was successful; (3) an attempt to keep what was essentially a laboratory situation as natural as possible (including keeping the boys ignorant of the fact that they were subjects in an experiment); (4) detailed records of behavior made by unobtrusive observers, translated from various media (including stenographic notes and movie film) into quantitative dependent variables; (5) flexibility in defining the independent variables as the study proceeded (thereby, admittedly, compromising experimental rigor); (6) a focus on interpersonal processes, as opposed to the mere outcomes of social interaction; and (7) follow-up interviews to gauge the subjects' perceptions of the situation, and their awareness of their own behavior.

What is truly distinctive about the leadership-atmosphere study, other than being one of the earliest examples of experimental social psychology, is the explanation given for the results. Another name for field theory is "topological psychology" (Lewin 1936), and Lewin was fond of illustrating his explanations of behavior (individual, group, or organizational) with "topological maps" depicting the life space and the forces acting on and within it. The life space itself was represented as an irregular oval with segments representing various "forces" such as the person's current situation or behavior, his or her goal (e.g., maximizing social status), and the shortest pathway between them; forces pushing for change (in the person's behavior, or in the situation), and those standing in the way of change (i.e., goal-fulfillment). Within the field, changes in the size or shape of one segment, due to forces impinging on it from inside or outside the field, will necessarily entail changes in the size or shape of other segments – a visual metaphor for the interdependence among the elements and the "dynamic equilibrium" within the life space. Accordingly, the leadership-atmosphere paper was illustrated by topographical charts depicting, for example, the tension, demanding release, created by the pressure placed on a child by an autocratic or a democratic leader; the "space of

free movement," or behavioral options available to the child under various forms of leadership, exacerbating or relieving the tension; the similar effects of rigidity or looseness in group structure; and the "style of living," or cultural factors – all leading to release of accumulated tension as aggression (or not).

It may have been his interest in topological analyses of behavior that led to Lewin's appointment at MIT in the first place. Unfortunately, it also appears to have contributed to the decline of interest in field theory. Lewin himself found standard topology too static for his purposes, and he was forced to invent a new version, which he called "hodology," from the Greek *hodos* (path), and referring to the various pathways through the lifespace. But Lewinian topology never caught on. After Lewin's death, very few theorists, even among his students, utilized topology in any form and turned instead to more conventional statistical analyses. And because field theory and topology were so tightly linked, this turn of affairs almost necessarily led to a decline of interest in the field theory itself. Although field theory received extensive coverage in the first two editions of the *Handbook of Social Psychology* (1954, 1968), the chapter was dropped in the third edition (1985).

Even after Lewin's death, however, field theory formed the deep foundation for a number of research programs in social psychology by his students and students-of-students, especially with respect to intrapersonal, interpersonal, intergroup conflict and its resolution, and organizational change. The list of people who worked with Lewin at MIT reads like a "Who's Who" of social psychology from the 1950s into the 1970s. Even if these investigators did not use Lewinian terminology or draw topological maps, these were all characterized by what Deutsch (1992) has characterized as a "Lewinian way of thinking", which:

> emphasized the importance of theory; the value of experimentation for clarifying and testing ideas; the interrelatedness between the person and the environment; the interdependence of cognitive structures and motivation; the importance of understanding the individual in his/her social (group, cultural) context; the usefulness of theory for social practice; and the value of trying to change reality for the development of theory. These emphases are not unique to the Lewinian way of thinking. . .. But Lewin was the one who introduced them to social psychology. (p. 39)

Although it was given considerable attention in the first edition of Hall and Lindzey's (1957) *Theories of Personality*, field theory never really took hold within the psychology of personality; even in social psychology, it has been declared moribund by one of Lewin's own students (Deutsch 1968). Still and all, what Jones (1985, p. 84) called "Lewin's Grand Truism," $B = f(P, E)$, has passed the test of time. Here is how Lewin put it its earliest formulation:

> $\boldsymbol{B = F\,[P,\,E] = F\,[L\,Sp]}$: The psychological environment has to be regarded functionally as a part of one interdependent field, the life space, the other part of which is the person. This fundamental fact is the keynote of the field-theoretical approach. (Lewin 1939/1951, p. 140)

> $\mathbf{B = f\,(P,\,E)}$: The basic statements of a field theory are that (a) behavior has to be derived from a totality of coexisting facts, (b) these coexisting facts have the character of a "dynamic field" in so far as the state of any part of this field depends on every other part of the field. . .. In principle, it is everywhere accepted that behavior (B) is a function of the person (P) and the environment (E). . . and that P and E in this formula are interdependent variables. (Lewin 1940/1951, p. 25)

Lewin has been called the godfather of situationism in social psychology (Ross and Nisbett 1991), perhaps because he abjured psychological explanations in terms of individual differences (Lewin 1951), but the quotations above make it clear that he is more accurately characterized as the proto- or ur-interactionist, believing that features of the person and of the situation combine to determine behavior. It is not the *objective* situation that determines behavior but rather the *subjective* or *psychological* situation – a situation that is very much a construction of the person.

The modern Doctrine of Interactionism (Kihlstrom 2013) was proposed as a resolution to a vigorous debate between traditional personality and social psychologists over which was the more powerful determinant of behavior: traits or situations (Kenrick and Funder 1988; Ross and Nisbett 1991). It was spelled out clearly by Bowers (1973):

> An interactionist... view denies the primacy of either traits or situations in the determination of behavior.... More specifically, interactionism argues that *situations are as much a function of the person as the person's behavior is a function of the situation.* (p. 327, italics original)

In the spirit of Lewin's pseudomathematics, the proper formulation of Lewin's Grand Truism is not $B = f(P, E)$ or $B = f(P + E)$ but rather $B = f(PxE)$: the whole is greater than the sum of its parts.

The modern Doctrine of Interactionism was originally modeled on the interaction term in the analysis of variance, and support for interactionism was claimed by studies showing that it accounted for more variance than did the main effects of either persons or situations (e.g., Endler and Magnusson 1976; Magnusson and Endler 1977). A familiar example is the aptitude-by-treatment interaction promoted by Cronbach (1975). In the "S-R Inventory" technique (e.g., Endler and Hunt 1966), subjects report how likely particular situations (e.g., "You are just starting off on a long automobile trip") would elicit particular responses (e.g., "Get an uneasy feeling") indicative of some generalized trait (e.g., anxiety). When administered to a large group of subjects, summing across situations and response modes provides an estimate of the *main effect of persons* or individual differences in the trait being assessed; summing across subjects and response modes yields an estimate of the *main effect of situations*; and summing across response modes yields the two-way *interaction of the person and the situation*, indicating individual differences in the pattern of response modes across situations. This interaction usually accounts for a plurality of explainable variance in responses (there are also two other two-way interactions, as well as the three-way interaction; these are not relevant in the present context). More recently, statistical interactionism has been revived by "situation-behavior" profiles which take the form of *If Person X is in Situation Y then she/he will engage in Behavior Z* (e.g., Mischel et al. 2002).

But the important question raised by Bowers's formulation, and Lewin's field theory, is different: *How* do persons construct the situations to which they respond? There appear to be four basic mechanisms by which persons influence situations (Buss 1987; Kihlstrom 2013): evocation, in which the mere presence and appearance of the person elicits behavior from other people which alters the situation; selection, in which the person chooses to place himself or herself in one situation as opposed to another; behavioral manipulation, in which the person engages in some overt behavior which changes the objective nature of the situation; and cognitive transformation, in which the person engages in mental operations that change the subjective perception or meaning of the situation. Behavioral manipulation changes the situation for everyone in it; cognitive transformation changes the situation only for the person who performs it – until, of course, that cognitive transformation leads to overt behavioral manipulation, which then changes the situation for everyone. In the final analysis, to paraphrase Atticus Finch in Harper Lee's *To Kill a Mockingbird*, we cannot understand the person's behavior unless we understand how he or she perceives the situation.

Interactionism becomes more complicated, and more thoroughly Lewinian, when we consider Bandura's (1978) *Doctrine of Reciprocal Determinism*, which specified bidirectional causal relations among the elements of *P*, *E*, and *B*. When each of the three Lewinian elements serve as both causes and effects of the other two, things can get complicated very fast, calling for new quantitative methods that can handle bidirectional causality. However, there is no implication that reciprocal causality is simultaneous or that the reciprocal causes are equal in strength. Accordingly, reciprocal determinism can be decomposed into Three Dialectics of Social Interaction (Kihlstrom 2013), in which each pair of the Lewinian elements, *P* and *B*, *E* and *B*, and *P* and *E* reciprocally shape each other as a person's action in a specific situation unfolds over time. An example is the self-fulfilling prophecy, in which a person's expectations lead him or her to behave in such a way as to elicit to behavior from another person which confirms those beliefs (Rosenthal 1963). These dynamics of reciprocal causation characterize the field in which social interaction takes place.

In addition to his Grand Truism, Lewin is famous for Lewin's Maxim that "there is nothing so practical as a good theory" (this is the original formulation, from Lewin 1943, p. 118; for other versions, see McCain 2015). Lewin was, in the words of one admirer, "the compleat social scientist" (Gold 1999). He was not only a founder of social psychology, he was a philosopher of social science, a research psychologist who made important contributions in the fields of motivation, memory, and child development; he wrote on the philosophy of the social sciences; an applied psychologist who worked on problems as diverse as food shortages, industrial productivity, the education of minority children, and advisor on matters of public policy.

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