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Local Research

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Setting-specific research has a long and honored tradition in the natural sciences. The value of this approach for action research in social psychology is discussed. Key concepts include local variation, seeing the general in the specific, connectedness as the fundamental law of ecology, and the value of field stations for community research.

I am privileged to be here with you this afternoon to share some thoughts on action research. I was introduced to Lewin's writings by Gardner and Lois Murphy, who befriended Lewin when he arrived in the United States. They were tremendously impressed with his boundless enthusiasm and broad-ranging conceptualizations. I will devote much of my talk to connecting two aspects of Lewin's work, which have generally been stored in separate compartments. The first is psychological ecology, or the molar analysis of people in their natural surroundings. The second part of Lewin's work is action research (Lewin, 1946), which combines participatory fact gathering with implementation. On the face of it, these approaches are different in that psychological ecology, especially as Barker (1965) has described it, studies nature while disturbing it as little as possible, while action research is based on deliberate intervention and change. My resolution of the seeming paradox of studying a phenomenon while at the same time trying to change it has been facilitated by an affiliation with the Agricultural Experiment Station of a renowned college of agricultural and environmental sciences.

Biologists associated with the Agricultural Experiment Station travel to far-flung corners of the globe to study behavior in the field. As they slog through rain forests or observe wildlife on the tundra, they are intensely aware that these habitats and species will change or disappear in their lifetimes if nothing is done.

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Rather than stand by while this happens, or dispassionately document its occurrence, some have become activists. They have formed organizations, written books and articles, lobbied politicians, started boycotts, and sold T-shirts in shopping centers. Their actions are linked to a worldwide environmental network and its political organizations, whose agendas range far beyond traditional conservation issues. Mass transit, inner-city development, recycling, and preservation of open space are high on the agendas of environmental organizations (Hoge, 1989).

These biologists have demonstrated that good science and activism can be complementary and synergistic. Their research provides reliable information that lays the groundwork for effective programs and sometimes convinces governments of the need to protect habitats, while their activism preserves the settings for present and future research and for the inhabitants. I have been struck by the effects of the field experience upon the researchers. Some suppose that these botanists and zoologists are motivated by environmental activism when they go out to study plants or bats in the rain forest. The causal sequence that I have observed is often the reverse. Faculty and graduate students go out into the field motivated largely by scientific concerns, but become radicalized when they observe firsthand the profligate despoliation. If you are an animal behaviorist studying tropical bats in danger of being exterminated, you are likely to join Bat Conservation International. Nature writers are also likely to become active in conservation for the same reasons. If you make a living off a place, you feel obliged to protect it. The origin of the Mono Lake Committee in California illustrates the energizing effects of field work in endangered habitats:

In 1973 Dave Gaines had a small contract to inventory Mono County's natural areas. . . . The next year, as a teaching assistant at Stanford, Dave sparked interest in Mono Lake among the students. They teamed up with friends at U.C. Davis to write and earn an NSF grant to study the lake ecosystem . . . the study chronicled for the first time the elegantly simple ecosystem on which over a million birds depend and the damage (Los Angeles) water diversions were inflicting on the lake habitat. All the salient points that the Mono Lake Committee depends on to defend the lake came from this early study.

Once we realized what would be lost if the lake died, it became a moral dilemma. How could we in good conscience stand by and not try to save it? That is how a group of idealistic biologists started a single-issue organization . . . we decided on a three-part plan of action: legal, legislative, and education. (Gaines, 1989, p. 4)

The work of the Mono Lake Committee is science-based, with a strong political orientation, and linked to a larger environmental movement. It illustrates the possibility of *acting locally and thinking globally*. I believe this to be a useful model for the social sciences. Following Lewin's action research framework, it is possible to do research that improves conditions of the setting and its inhabitants, advances knowledge, and refines the practice of action research. In this paper I describe four concepts from the natural sciences that we have found useful in our application of action research. These concepts are *local variation*,

seeing the general in the specific, connectedness as the fundamental law of ecology, and the field station.

Local Variation

Lewin (1948) declared that lawfulness in science means an if-so relation, a linkage between hypothetical laws and hypothetical effects and this does not tell us what conditions exist locally at a given place or time, do the job of diagnosis, or prescribe a strategy for change. Those tasks must be performed at the local level, where circumstances are always unique. In the natural sciences, phenotypic variation is used to understand how genotypic laws are modified by environmental circumstances. An understanding of why the fungus *Anamita muscaria* is most often bright yellow or yellow-orange on the East Coast and red on the West Coast involves fundamental questions of plant–environment interaction. Homelessness in Manhattan is not the same as it is in Atlanta, and curbside recycling will not take the same form in Duluth as it does in Detroit. There will be similarities, but there will also be critical differences that must be heeded in order to implement effective programs. We teach our students genotypic laws, but we rarely teach them how to adapt these laws to local circumstances.

Local research is site specific, in that the researcher seeks to understand or change conditions in a particular location at a particular time. This requires knowledge that goes beyond general laws or principles. If one were attempting to deal with homelessness in a community, it would be helpful to know previous research on the topic but essential to know the characteristics of the community. The term “local” comes from the Latin *locus*, meaning “place.” Each place has a spirit or *genius loci* who inhabits and protects it. The researcher who seeks to understand or change a place must know and respect its spirit, the constellation of attributes that sets it apart from all other places.

Seeing the General in the Specific

I try to create in my students a split view of problems, seeing with one eye the specific features of the setting and, with the other eye, the operation of general principles. Neither is seen at the expense of the other. Successful intervention will require recognition of local variation, but if we are to advance knowledge about social phenomena, we will also need to see commonalities across settings. I will use the farmers’ market to illustrate the double vision required in action research. As an economic institution, the farmers’ market is a means by which small growers sell fruits and vegetables directly to the public, but it also can be viewed as an anasocial institution that builds community, provides environmental education, and brings together individuals from different cultural and ethnic backgrounds under conditions likely to promote positive

attitude change. We documented the economic benefits for small farmers and consumers, and the utility of the markets in downtown development. This information was used by agriculturalists and activists to spread the farmers' market concept throughout the nation, and it encouraged the California state legislature to award start-up grants for successful inner-city markets. The research also brought us into contact with the Marketplace Collaborative, a New York-based organization dedicated to preserving and developing public markets worldwide.

Unlike the chain supermarket that imports its produce, routinely transfers its labor force, imposes a corporate logo, and exports its profits to corporate headquarters, farmers' markets take their form, layout, products, people, and symbols from the region and retain profits in the community. Farmers' markets reduce the schism between urban and rural residents, foster environmental awareness, encourage cross-ethnic communication, and reinforce local symbols and iconography. Through their promotion of regional varieties of fruits and vegetables, the farmers' markets are linked to Seed Savers and other organizations trying to preserve genetic diversity. Many seed companies have been taken over by chemical and pharmaceutical firms. Concern has been expressed that chemical firms running seed companies might not try very hard to breed seeds that resist diseases and pests when they also sell chemicals that control pests (Randolph, 1980). Among those chemical and pharmaceutical firms that have taken over seed companies are Celanese Corporation, Ciba-Geigy, Olin, Royal Dutch Shell, Monsanto, Occidental Petroleum, Pfizer, Purex, Sandoz, Union Carbide, and Upjohn (Fowler, 1979-80).

A farmers' market is a nexus of community activism. Groups concerned with social change gravitate there to distribute educational material and collect signatures. Photographs taken on a winter day at our local farmers' market show tables for the high school peace club, the Wildlife Federation, a worker collective, a senior housing co-op, a Sanctuary crafts project, and Trofic, an organization devoted to preserving rain forests. This brings us back to the young biologists described at the outset of this paper. The young man behind the literature table is working for his Ph.D. in genetics and the young woman has a master's degree in international agricultural development.

We have also looked at farmers' markets from the standpoint of environmental education. Customers are more likely than supermarket shoppers to suit their diets to regional and seasonal availability, and are less interested in the cosmetic perfection of farm produce resulting from generous applications of agricultural chemicals (Fjeld & Sommer, 1982). An ear of corn sold at a farmers' market may have a worm at the end of it. This has become so expected that if I buy a dozen ears at a farmers' market without a worm in one, I will be concerned about how it was grown. Oranges are likely to have minor scarring from the citrus thrips. This scarring does not detract from nutritional or flavor quality. We assisted CALPIRG, a statewide public interest group, to survey consumers

shown oranges with two levels of thrips scarring (Bunn, 1988). Initial levels of acceptance were low relative to a cosmetically perfect standard orange. However, when customers learned that the scarred oranges were grown with fewer pesticides and with no reduction in nutrition or flavor quality, they became more willing to buy the thrips orange than the cosmetically perfect standard. This research is being used by environmental activists to create pressures to reduce the pesticide load upon the environment.

Connectedness

When I first learned statistics, the instructor used the example of a correlation between school achievement scores in Newark and gold prices in South Africa to demonstrate the difference between correlation and causation. The implication was that there could be no causal linkage between two such disparate events. Everything I have seen since leads me to question the basis of this logic. It is entirely possible that as Blacks in Newark gain more political and economic power, this will affect school achievement scores and their ability to lobby for the embargo of the apartheid government, which would influence gold prices.

To the ecologist, everything is connected. This has discouraged some individuals from adopting an ecological perspective, since problems that are unbounded often appear unsolvable. Those who have worked in the environmental movement have learned just the opposite. Paralleling Milgram's (1967) small world studies, one quickly moves from local to national and international issues. Begin with the study of nonuse of a city park, and you are likely to have a quick journey through unemployment, racism, homelessness, violence, rape, and drug abuse. Start with the farmers' market, proceed to consumer concern about pesticide residues, and you soon arrive at the role of government and multinational corruptions in promoting agrichemicals. Depending on how much scenery you want to observe along the way, a local project can be a rocketship or a Model T Ford in reaching national and international issues.

It is legitimate to ask why one should study a problem in one community when it is obviously a national and international problem. The answers are both tactical and strategic. Few of us will have the resources to study problems on a large scale. Even more important, in a world riven with geographic, cultural, and ethnic divisions, solutions must be developed that suit local conditions. There is no inherent competition between involvement in social issues at a local and international scale. Very likely there is a causal relationship between the two levels of activity. Those appointed to national or international commissions have probably been active on these same issues in their own communities.

Local research is ideally suited for the small-win strategy advocated by Weick (1984). Conceiving of social problems on a massive scale often precludes innovative action when, according to Weick, "the limits of bounded rationality

are exceeded and arousal is raised to dysfunctionally high levels" (p. 40). I can think of no better situation for a small win than in a community where the researcher knows the turf, the residents, and is a respected continuing occupant. When you live in a place, those opposed to change cannot outwait you, as they can with an outside researcher. Dealing successfully with problems in one community may be only a "drop in the bucket" insofar as national statistics are concerned, but if you can demonstrate success in one or more locations, the opportunities for replication are manifold.

Some of the satisfactions of doing local research are difficult to express in words. They include the approbation of friends and neighbors, the surprise of discovering that powerful intellectual tools fit mundane problems, and that it is possible to facilitate social change and assess its impact. Consistent with Lewin's dictum of "no research without evaluation," the routine follow-up of the dissemination and utilization of findings is an important component of our research program. We have devoted some of our research time to examining interventions that were *not* effective (Sommer & Nelson, 1985). Not every study will succeed equally in the three objectives of advancing knowledge, assisting the participants, and improving the practice of action research. Frequently one objective must be traded off against another.

We have used our community, Davis, California, as a laboratory for studying citizen participation, energy conservation, affordable housing, alternative transportation, and appropriate technology. Social scientists have been involved in planning these changes, fine-tuning the implementation, and evaluating outcomes. The concern with local development does not preclude community interest in larger national and international issues. The community has been very active in Sanctuary and in Sister Cities. Last year a visiting delegation was received from Uman, our sister city in the Ukraine, and this summer a delegation from Davis visited Uman.

Opponents of progressive measures accept the principle of connectedness. That is why the National Rifle Association so strongly resists gun control whenever it is proposed. They even oppose the regulation of toy guns, claiming it to be a step toward the confiscation of firearms. Twenty years ago when our city council passed a beverage container tax to promote recycling, there was a firestorm of protest from the beverage industry, which saw this as the opening shot of a national campaign to ban nonreusable containers. These industries were alarmed at what a single community was trying to do and put a lot of money into reversing the city council action.

Field Stations

There are two parallel and respected traditions in the natural sciences, one to study species in the laboratory and the other to study species in natural habitats. According to primatologist Thelma Rowell,

To study the social behavior of animals in the field is to take on the most challenging of all scientific endeavors . . . you are faced not only with the biological elaboration of animals as individuals but also with the interaction that only becomes comprehensible in the context of their habitats and their relations with other group members. (1988, p. 58)

Field stations are used to support continuing multidisciplinary projects in the field. The University of California administers nine field stations, strategically located in the state's major climatic zones, to provide facilities and support to researchers and aid in public education. Two examples should illustrate the complementary basic and applied research activities in this type of setting. The Hopland Station in the brush-covered hills of the Coast Range is a major sheep research facility. It is also the site of long-term studies on range improvement, brushland management, and watershed maintenance. The Sierra Foothills Station had been a working cattle ranch until it was acquired by the University in 1960, and it still retains that atmosphere. Most of the research conducted there is related to beef cattle, but researchers also use the station to investigate management of open space and various issues of rangeland maintenance, water quality, and soil erosion (Myers, 1984).

The stations are expected to be a resource for solving regional problems. Residents know that they can turn to the field station for assistance, and the researchers accept public service as a necessary responsibility. Collaboration proceeds in both directions. Farmers and environmentalists maintain detailed records of bird populations, pest infestations, crop yields, and other information sought by researchers, who in turn provide technical advice in solving practical problems. These longitudinal records are necessary for developing control measures, such as Integrated Pest Management, which work with natural processes.

Field stations have a core staff of researchers and support personnel, and a flux of visiting scientists, including graduate students who use the facility for training and their own research. Some field stations have advisory committees to give local residents input into research priorities. Field stations also have cooperative extension agents who travel around the region to identify problems, bring this information to researchers, and then return to the community with answers. Extension specialists also disseminate the results of university research in the community.

At field stations, there is no inherent contradiction between long-term naturalistic studies and specific problem-oriented research. Researchers at a marine station will leave certain parts of the coastline undisturbed for longitudinal recording and as a baseline for future comparisons while at the same time allowing experiments on other parts of the shoreline. At a woodlands station, researchers will leave certain portions of the forest in its pristine form to study patterns of growth and succession while at the same time undertaking systematic studies in other sections to evaluate planting procedures, new tree varieties, and insect control procedures.

Barker (1979) has advocated the field station as a means for psychologists to

collect longitudinal data about communities. Barker describes how Lewin, at the same time he was moving to action research as a means of facilitating social change, was "supportive of efforts to establish baselines in unaltered communities against which to assess the effects of changes" (p. 2153). This approach is eminently feasible not only in rural areas, but in housing projects, factories, schools, or health facilities, in which certain portions are left undisturbed for naturalistic observation while other portions become the focus of change programs. The undisturbed sections can serve as a control for those portions used for action programs. I can think of dozens of exciting projects that a field station could undertake in a large urban high school, including studies of student attitudes and motivation, informal interaction in the cafeteria and schoolyard, vocational classes and part-time jobs, burnout among the teaching staff, and the process by which many students get tracked out of academic careers. The intense participation of the occupants will focus the research on issues of genuine importance to them and help develop a constituency for change.

Experiences in Field Stations

The presence of a field station can convert a setting into a questioning community (Hutchins, 1968) or experimenting society (Campbell, 1969). I have been privileged to witness this transformation in two very different settings. The first experience occurred at a provincial mental hospital in Western Canada. Over time, employees at all levels viewed the research department as a valuable resource to help improve the hospital. The occupational therapist asked patients their preferences for craft materials. The recreational therapist surveyed the interests and talents of long-stay patients. Social workers interviewed families. The hospital librarian developed a questionnaire on library use. The research staff assisted these individuals and others to write questions, tabulate results, and prepare the findings for publication. Academics often forget the excitement of authorship for lay people. Publication gave them recognition among their peers, which translated into tangible support for our research program.

The research yielded several new concepts, including *disculturation*, referring to the process by which staff and patients became institution centered in their thinking; *sociofugal space*, which discourages interaction; and its opposite, *sociopetal space*, which brings people together under conditions likely to promote interaction. Research-guided changes, which were then used to test and extend concepts and findings from the research program. The first systematic use of behavior modification on a mental hospital ward took place at this hospital (Ayllon & Michael, 1959). There were studies demonstrating the impaired size constancy associated with schizophrenia and the implications of this for ward design (Weckowicz, 1957).

My next experience in a setting where local people viewed social researchers as collaborators on problems of mutual concern came 20 years later at

the Center for Consumer Research at the University of California, Davis. The center has become an intellectual resource for consumer-interest organizations in the region. Consumers are unorganized and vague in their allegiance to the consumer movement. If we attempted to produce information of benefit to consumers in order to give this information away—to use what I consider to be a very unfortunate metaphor—I am not sure that anyone would stop by the office to pick it up, even if it were free. “Giving psychology away” puts too much distance between those who produce new knowledge and those who will use it. Knowledge produced in this way is not likely to be in a form that lay people want or can understand.

Within the multimethod framework that seems most practicable for real-world issues, we have made relatively little use of formal experimentation with random assignment of individuals to treatment conditions, a method that is usually too arbitrary and artificial for a collaborative format. Other methods, including quasi-experiments and survey research, have been far more productive. The self-survey is ideally suited for community groups that are member rich and capital poor, provided they receive technical assistance. We help groups clarify the issues to be covered, develop a sampling plan, refine questions and format, and undertake the data analysis. We also become advocates of the methods and analysis after the findings are disseminated. Those who are opposed to the findings, often the entrenched forces who do not want to lose a privileged position, will criticize the questionnaire design and analysis. The technical consultant can answer these questions and maintain the credibility of the survey.

Obstacles To Be Overcome

Funding has traditionally been a problem for action research in the social sciences. Government agencies such as the National Institutes of Health and National Science Foundation require detailed proposals with a heavy theoretical superstructure and all variables and methods neatly spelled out. This enumeration is antithetical to the collaborative pragmatic flow in action research. Until this situation changes, there is little likelihood of success in applying to traditional sources for funding. Instead, I recommend turning to some of the more imaginative foundations, such as Kellogg, Grant, and Mott, and to agencies and groups that support research at the local level.

Finding publication outlets can also be a challenge. We need to inform our students about the availability of non-APA journals, both refereed and non-refereed, for articles on social issues. Following a dual dissemination model, our research team publishes articles for social scientists in technical journals and separate articles for practitioners and community groups in newsletters and practical periodicals. As an example, our studies of consumer cooperatives appeared in co-op magazines and newsletters and also in refereed journals.

Except in comparative psychology, field research has been downgraded in

psychology. Field study is not laboratory science out-of-doors, but a different type of science, requiring different skills and training. Systematic observation is a difficult, time-consuming, and often arduous activity that is not for everyone. The fundamental law of observational research is that most of the time nothing happens. There is also the tedium of coding and transcribing detailed observational records. Natural observation reveals the complexity and interrelationships among phenomena. It also facilitates serendipity when the environment becomes information and learning is discovery. Barker (1987) described Lewin's influence on their investigation of children's response to frustration. Rather than employ tight checklists and rating scales, Lewin directed the observers to take detailed narrative records of each child's behaviors without regard for theory or preconceptions. Some of the existing theories were confirmed, but the surplus data revealed unexpected aspects of the children's behavior, which became the basis of a more adequate understanding of frustration. Training in observational methods must cover issues of reactivity, interobserver reliability, methods of recording and data analysis, ethics in observational research, and visual documentation.

The hostility to natural observation has deep philosophical roots in our field, probably going back to the days when psychology was a branch of philosophy with its Platonic distrust of the senses. Plato believed the cave wall shadows were deceptive and truth could only be known through mental reflection. I would not dispute the importance of reflection as a means of organizing experience, but I also recognize that open eyes and ears can bring in useful information beyond the bounds of existing categories.

Students in social psychology, with few exceptions, are not taught how to adapt research methods to real-world constraints. Rigor in experimental design is not an end in itself in action research. There will be times when rigor must be traded off for something more important. A self-help group may believe it can obtain all the information it needs from a convenience sample of members at the monthly meeting rather than investing more time and expense in a mail survey using random sampling. Encouraging union members to write survey questions will result in departures from a professional format, even with technical assistance. Using lay people as interviewers will lower reliability relative to a survey using paid professional interviewers. These are illustrations of what I consider to be necessary trade-offs between rigor and the community involvement inherent in action research.

As preparation for action research, students must learn the conventional techniques for doing research, and more. The "more" in this case is how to adapt these procedures to less-than-ideal conditions, when it is not possible to achieve random samples, equal-sized groups, or to check interviewer reliability. The situation is not unlike what occurs in teaching people to play a card game such as bridge. Beginners are taught the correct point count for opening bids,

overcalls, and so on. Most players will spend their entire bridge careers adhering to these rules. However, for every rule taught the beginner, there will be exceptions in tournament play.

Conclusions

Following the admonition that less is more, I will sum up the points already made rather than expand the range of topics or examples.

Recognition of local variation is necessary for diagnosing problems and developing solutions suited to local conditions. Seeing the general in the specific shows how genotypic laws are shaped by environmental forces to produce individual variation. This duality of vision allows us to think abstractly and work concretely. I do not want to deny anyone the pleasures of soaring to ethereal heights of theory, so long as we can spend some time on the ground seeing the world as it is and working for a just and humane society.

The principle of connectedness links local studies to national and international issues. Boycotting Burger King in Philadelphia to protest the destruction of rain forests in Costa Rica sounds bizarre at first hearing, but if you ask members of Trofic about the role of American fast-food chains in promoting unwise agricultural practices in the Third World, they can provide extensive documentation of the linkages.

The field station can be used to collect longitudinal data with a high degree of external validity, and at the same time it provides a structure for consultation and assistance on regional problems. Dual dissemination is desirable—i.e., publication of the findings in technical journals and in periodicals directed to lay organizations and the public.

Start an innovative program small in areas of least resistance, and use formative evaluation to improve its operations and ascertain its effectiveness before disseminating the findings to colleagues and practitioners. The researcher should be personally available for advocacy and consultation during the fine-tuning, dissemination, and diffusion of the project.

This is a framework in which a researcher can fulfill the three goals of action research as described by Lewin: advance knowledge, improve the situation of the participants, and contribute to the improvement of the action research through follow-up evaluations. When I say that a researcher can fulfill all three objectives, I recognize that not everyone will want to. Differences in temperament, environment, and resources influence the types of research that people do. The important point is that we should avoid thinking in terms of dichotomies and hierarchies among field and laboratory, observation and experiment, qualitative and quantitative approaches, general laws and local variation, and between theory and action.

References

- Ayllon, T., & Michael, J. (1959). The psychiatric nurse as a behavioral engineer. *Journal of the Experimental Analysis of Behavior*, 2, 323-335.
- Barker, R. G. (1965). Explorations in ecological psychology. *American Psychologist*, 20, 1-14.
- Barker, R. G. (1979). Settings of a professional lifetime. *Journal of Personality and Social Psychology*, 37, 2137-2157.
- Barker, R. G. (1987). Prospecting in environmental psychology: Oskaloosa revisited. In D. Stokols & I. Altman (Eds.), *Handbook of environmental psychology* (pp. 1413-1432). New York: Wiley.
- Bunn, D. (1988, September). *CALPIRG survey. Looks aren't everything: Consumers choose less pesticides*. Unpublished report, Los Angeles, California Public Interest Research Group.
- Campbell, D. T. (1969). Reforms as experiments. *American Psychologist*, 24, 409-429.
- Fjeld, C. R., & Sommer, R. (1982). Regional-seasonal patterns in produce consumption at farmers' markets and supermarkets. *Ecology of Food and Nutrition*, 12, 109-115.
- Fowler, C. (1979-80). Plant patenting. *CoEvolution Quarterly*, 34-37.
- Hutchins, R. M. (1968). *The learning society*. New York: Praeger.
- Lewin, K. (1946). Action research and minority problems. *Journal of Social Issues*, 2(4), 34-46.
- Lewin, K. (1948). *Resolving social conflicts*. New York: Harper.
- Milgram, S. (1967). The small world problem. *Psychology Today*, 1, 60-67.
- Myers, H. M. (1984). *Agricultural field stations*. Berkeley: University of California Division of Agriculture and Natural Resources.
- Randolph, E. (1980, June 15). Fighter full of beans as he seeks to save all varieties. *Sacramento Bee*, p. A26.
- Rowell, T. A. (1988). Monkey business. *Natural History*, 97, 58-60.
- Sommer, R., & Nelson, S. A. (1985). Problems in the self-survey of a divided organization. *Journal of the Community Development Society*, 16, 94-104.
- Weckowicz, T. E. (1957). Size constancy in schizophrenic patients. *Journal of Mental Science*, 103, 432-440.
- Weick, K. E. (1984). Small wins. *American Psychologist*, 39, 40-49.