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Naturalistic research is offered as an alternative to the more familiar hypothesis-testing methods of research. Naturalistic research is disciplined inquiry conducted through personal, long-term contact between the researcher and the object of research. Rather than arbitrarily operationalizing the variables and specifying the hypotheses in advance of contact with the case, the meanings held by persons involved with the case and the effects of the context on the case are allowed to emerge from the data and thus become the objects of study. In this article the assumptions of the methodology of naturalistic inquiry are contrasted with those underlying traditional hypothesis-testing methods.

MARY LEE SMITH

Naturalistic Research

One of the goals of these special issues of the *Personnel and Guidance Journal* is to decrease the gap between counselors and research methods, making the latter more accessible and the former more amenable. This goal assumes that many counselors are alienated from methodology. Perhaps, as the philosophy of naturalistic inquiry suggests, this sense is not a deficiency of counselors but an understandable reaction to methods that are not only arcane but inappropriate to the study of human behavior. In this paper, I will describe naturalistic inquiry and offer it as an alternative to forms of inquiry typical of most research in contemporary journals. A guide to the literature on naturalistic inquiry is presented in the Appendix.

Although naturalistic inquiry may be unfamiliar, it is not new, for it subsumes a variety of methods from several disciplines. It is a more general term for ethnography, sociological field methods, case study methods, participant observation, ecological psychology, and psychodynamic social psychology.

In naturalistic inquiry a case (e.g., a group, community, institution, program, or social system) is studied intensively over an extended period of time. The case is studied in and for itself and not as a sample element representing a population of similar cases. Attention is paid not only to the case itself but also to the ecology, context, or milieu in which it exists. The researcher is in direct, personal contact with the case and is solely responsible for gathering and interpreting the data. The researcher does not intervene (i.e., institute an experimental treatment), but instead studies the natural stream of

events as they are found. In naturalistic inquiry, unlike experimental studies, the meaning of the constructs or ideas to be studied is not arbitrarily fixed (operationalized) in advance of the data collection. Instead, the researcher deliberately tries to elicit the multiple meanings about those ideas that are held by each person. Similarly, hypotheses are neither derived from theory nor stated in advance. Rather, explanations about the relationships among variables come from the data rather than from preexisting theories.

As most readers who have taken the one or two required courses in research methods will recognize, these characteristics seem to violate all the criteria for sound "scientific" research. Nothing is said about selecting a sample at random from a defined population, nor randomly assigning subjects to an experimental and control group, nor using instruments that are reliable and valid, nor stating hypotheses in advance, nor using a multifactor analysis of covariance to test the significance of effects at the .05 level. These may be good standards for judging experimental studies, but they do not define science. If these standards are the touchstone of science, then geology, astronomy, and paleontology are not science; much less are history or cultural anthropology. Perhaps "science" is a modern shibboleth, and our efforts would be liberated by substituting the term "disciplined inquiry" for science (Cronbach and Suppes, 1969).

For an inquiry to qualify as disciplined, it must be conducted and reported so that its logical argument can be carefully examined; it does not depend on surface plausibility of the eloquence, status, or authority of its author; error is avoided; evidential test and verification are valued; the dispassionate search for truth is valued over ideology. Every piece of research or evaluation, whether naturalistic, experimental, survey, or historical must meet these standards to be considered disciplined.

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The confusion about what counts as science comes about because of the hold that psychology has on research methodology in counseling and educational research. The dominant methodology in psychology mimicked the methods of the physical sciences, emanating from the philosophy of logical positivism. We learned in our graduate courses that to deviate from the hypothetico-deductive methods (hypotheses deduced from theory, variables operationally defined in observable form, objective methods to generate data that provide a test of the hypotheses) was to forfeit the privilege of calling our work "scientific."

The error in this thinking is the belief that logical positivism is more a religion than a philosophy whose propositions can be evaluated. The proposition of intersubjective confirmability holds that no datum will be considered scientific unless it can be found by another person using the same methods as the original researcher. Thus, scientific knowledge must be public, impersonal, and reproducible and any difference between what two observers report is called error (this is what causes some people to value a multiple-choice test over an essay test, for example). Determinism refers to the assumption that there is uniformity in nature, that human behavior is lawful and can be explained by causal relationships among variables. The task of the scientist is to define these variables operationally, then set up controlled situations in which they can be studied. The aim is to establish generalizable relationships among these variables that hold up over different times, situations, and individuals. Monism is the proposition that there is only one kind of reality—materialistic—and that all substances, forces, and events can be completely explained in physical or chemical terms. As human behavior is not a different form of reality, the same research methods that are used in the natural sciences are appropriate for the behavioral and social sciences.

The denial of monism and the assumption that knowledge about humans is fundamentally different from knowledge in physics is basic to the philosophy underlying naturalistic inquiry. A physical entity can be viewed as an object independent of the observer, but all perception of human experience is colored by the perceptual apparatus and experience of the observer. The observer becomes an intervening or disturbing, subjective element in the human sciences. This is true no matter how many filters the researcher builds in to ensure objectivity (e.g., objective tests, blind laboratory conditions). Furthermore, studying overt, observable behavior misses the important part of human action that is composed of those overt behaviors plus a whole complex of personal meanings, perceptions, cognitions, and emotions that are necessarily subjective. *Verstehen* is the term used to denote knowledge about human action and means the subjective, empathetic understanding of human action (behavior plus meaning). This knowledge is attained by firsthand acquaintance of the researcher with the subject and by inference from analogy with the researcher's own experience. This process should be especially familiar to counselors as the model for most clinical work. This philosophy also contains the corollary that the meaning of human action can only be grasped and interpreted in the context in which the action took place. Determinism is not denied, but the causal relationships are not so easily stated and tested as the positivists claim and they certainly vary from context to context. There can be no context-free generalizations about human action. The job of the researcher is to get close enough to the subjects to grasp an understanding of the action in the context in which it occurred and then to interpret that action for the person not present—the reader of research.

DESCRIPTION OF NATURALISTIC INQUIRY

Unlike the familiar stages an experimentalist goes through, a naturalistic researcher's procedures are likely to be different

from one study to the next. In fact, the methodological literature in ethnography and sociological field studies is rather sparse on matters of research procedures. Nevertheless, there seems to be certain stages through which such an inquiry goes: entree and access to the site, data collection, interpretation and analysis, writing, and finally leaving the site. I will illustrate these stages with a vignette of a hypothetical research study as well as excerpts from actual studies.

THE COMPUTERIZE CAREER INFORMATION SYSTEM AT LINCOLN HIGH SCHOOL

Last September, Carol Johnson made a career decision of her own—to devote a year to try and understand how the Computerized Career Information Service (CCIS) really worked and what effects it had. This decision came about because of her frustration with the results of the study she conducted a year earlier as her dissertation. The earlier work was a traditional experiment in which she hypothesized that use of CCIS by sophomores would increase their career information-seeking behavior, a variable that she operationally defined as the score on an inventory she constructed. She ran this study at several high schools in Urbanville district, was able to randomize subjects to experimental and control groups, control attrition and exposure to the independent variable, and in general follow all the tenets of good experimental design. But her results, unfortunately, were equivocal. She was unable to reject the null hypothesis of differences between the treated and untreated groups. The averages jumped around, in a tantalizing way, from school to school, suggesting to her that perhaps CCIS had effects but were somehow obscured. Carol committed herself to conducting a case study of the working of CCIS in Lincoln High.

She started with the superintendent of the district to get permission for the study. Next she approached the principal of Lincoln High, explained the purpose of the study and its general outlines (how long it would take, that she would be there observing and interviewing people) as well as her policy on maintaining confidentiality and protecting her informants. Following the principal's consent, Carol had to gain rapport with and explain the study to the counselors and teachers. She made reports and answered questions at meetings of the student council, parent advisory committee, and the local affiliate of the NEA. The district's director of counseling was initially opposed to the study, but finally acquiesced.

Carol knew from the first that she needed to determine whether there were patterns in the students' use of CCIS. Therefore, she began her data collection by taking up an observation post in the CCIS room to watch pupils as they used it. Almost immediately a pattern suggested itself and within 3 weeks she was confident that the pupils were spending much of the time there playing the tic-tat-toe game that is supposed to break the ice, get the pupils acquainted with how the machine works, and get them into the actual work of finding career information. As people became accustomed to seeing Carol in the CCIS room she began asking them informally about what they were doing there, who sent them, what they hoped to find out about careers. Although their initial answers were the stereotyped responses an adolescent gives an adult who looks like a teacher, some of the pupils—those who came more than twice—were more thoughtful. Carol carefully recorded all their responses and set up formal interviews with some of the serious ones and some of the playful ones. She also asked the volunteer who managed the CCIS room to keep a journal about what pupils were doing and saying and the number of times the computer broke down.

The initial interviews were unstructured, although Carol had some issues and questions for the people she interviewed. She was trying to find out what meanings CCIS held for the counselors, teachers, and others. For example, she tried to get

the counselors to explore their own reactions to questions such as Where does CCIS fit into your counseling program? or On what occasions or what kind of student do you refer to CCIS?, following whatever train of thought the counselor chose. All the interviews were tape recorded and transcribed. Sometimes a counselor suggested another informant whom Carol should seek out, such as one math teacher who was interested in computers and had worked to get CCIS started at Lincoln High. One teacher suggested during an interview that he had heard the computer was "down" so often that the "students feel CCIS is a joke." These leads and others like them were followed.

Existing documents went into Carol's growing collection of data. Two years earlier the regional accrediting agency had evaluated the school and in the ensuing report was a pertinent section on the counseling department and how time was spent there. The district recently completed a parent survey to a random sample of students to see how pervasive was the attitude that CCIS was not taken seriously.

All the while Carol studied Lincoln High School—watching its students, listening to conversations in the teacher's lounge, attending meetings and even a basketball game—all with the object of finding out what kind of a place this is and how these characteristics might influence CCIS.

Carol began collecting data with a mind open to all patterns and possibilities, yet with a large store of theoretical and empirical information about counseling, career development, and career information. These yielded numerous questions, issues, and working hypotheses about the possible consequences of CCIS. She maintained a list of these hypotheses and modified them as she went through the process of collecting data. For example, from her knowledge of development she wondered whether freshmen and sophomores might be too immature to profit from CCIS. The hypothesis about age relating to CCIS use was formulated early on, yet it was changed in form as Carol became increasingly familiar with this case. An issue initially on the list involved the perceived lack of support for CCIS on the part of the principal. This issue was dropped from the list after the discovery that the principal himself frequently referred students to CCIS.

From studying and thinking about all the notes collected in a year's time, Carol derived a set of statements of patterns for use of CCIS and the meanings CCIS held for counselors and students. She formed a series of hypotheses about possible relationships among the variables and explanations for these patterns. Two of these statements will serve as examples.

Counselors perceive CCIS as replacing one of their roles—that of information-provider. The extent of a counselor's referrals to CCIS reflected their feelings about what roles would replace the lost one. Some were threatened; others challenged that they would have time to work on personal, adjustment problems of students.

There is a critical point of development, not strictly determined by age, after which students will use CCIS as it was intended to be used. If a student is sent to CCIS before that point, he will likely use the time on computer games.

Carol attempted to verify each statement using different sources of information (e.g., seeing whether the questionnaire data corroborated the observational data; asking an independent researcher to read the data record and check connections between data and hypotheses or patterns). Some statements were confirmed and others were not.

In Carol's report were a journalistic description of Lincoln High School, its counseling program, and CCIS, as well as photographs, narration taken from her recorded observation protocols, quotations from her interviews, and her set of statements that interpreted the program. At the end was an appendix that contained a detailed account of her methods of data

collection and analysis. She circulated the report to the people who had given her information, making sure to get permission to report the data that could be associated with the individual who provided it.

This vignette is idealized and fictitious, yet it illustrates how a naturalistic inquiry might be done. At the entry stage, the researcher typically conducts negotiations with both the legal authority for the site and all levels of participants as well, trying to gain the acceptance of each key group or individual and explaining the purpose of the study. During this time the researcher stated in detail what her policy on confidentiality will be. For example, in the Case Studies in Science Education (Stake & Easley, 1978) our policy was this: that the site and the informants will be anonymous and that each informant owns the data that is provided and must decide in the end whether any data that can be identified with the informant will be printed in the report. Because of the sometimes intimate nature of information that naturalistic researchers collect, naturalistic inquiry places greater ethical obligations on the researcher than is true of other forms of research.

Data collection goes on over many months and typically centers on in-depth, open-ended interviews, direct observation, examination of documents, and community studies. It cannot be determined in advance, however, the proportion of time the researcher should devote to each of these activities. Perhaps one study might yield more informative data in interviews than observations so that the researcher should then spend relatively more time there. Quantitative data are not avoided; for example, if the researcher thought she saw a trend or pattern among some of the members of the case and wanted to know if that pattern was general, she might send out a questionnaire to find out, provided what one wished to learn would be divulged in a survey. All during data collection, copious notes are kept, including verbatim accounts of what was observed and the responses of interviewees. The total file of information is known as the data record and forms the basis for data analysis.

Interpretation and analysis of data begin, not at the end of the project, but soon after data collection is begun. These activities involve making sense of the data or deriving meaning from them, and may be quite analytical and technical in the way Glaser and Strauss (1967) recommend, or more intuitive. An illustration of the intuitive approach to data interpretation comes from Rosalie and Murray Wax (Wax, 1971), who described the manner in which they—tried to make sense of what was taking place in schoolrooms on an Indian reservation. They began their fieldwork with the observation that Indian students did poorly in schools. They formulated several theories for why this was so, one of which was the "preservation of identity theory" ("that Indian parents might see formal education as a technique of turning their children into White people, and, in consequence, as a threat to their identity" (p. 251).

When they began to observe classroom life on the reservation, they clearly identified the pattern that in the primary grades, the children were "enjoying themselves," were "attentive and obedient; and some even seem to delight in the drill routines by which the teacher tried to teach them to read and write English and learn arithmetic" (p. 252). The intermediate grades were astonishingly different, with the students disregarding the teacher, disrupting the class with mass migrations to the pencil sharpener, creating bedlam. The junior high grades presented an even different picture, the classroom "enveloped in an eerie silence," and the children completely unresponsive. The Waxes could not fit this information into their theoretical framework and took it as a problem to solve. "Why should eager, industrious little children who hung on every word their teacher said, turn suddenly into little imps

who seemed deliberately to frustrate everything the teacher tried to do? And why, again, should these imps, at age thirteen to fifteen, turn into young people who behaved as if they were deaf and dumb?" (p. 255).

To solve this problem they continued to observe and question informants, each of whom had some explanation but not one that fit the data. One informant blamed the teacher's lack of discipline. Another blamed the language barrier. Finally one of the mothers who worked at the school alerted the researchers to the teasing about boyfriends and girlfriends that begins in the late elementary years. By the time they get to junior high the children are so afraid of this teasing that they will not stand or respond to the teacher in any way that will draw attention to themselves. Wax remembered that there had been several instances of this cruel teasing but that she had not had the "moral courage" to put them into her notes. Then the fragments of data and explanations fell together: "I had to accept the novel fact that, as the situation now stood, it was the children who were successfully sabotaging the process of learning, not because they disliked learning, the school, or the teacher, but as part of the development of their own group discipline" (p. 263).

In naturalistic inquiry the act of writing assumes an importance it does not have in conventional research. People could be highly skilled observers and interviewers, but those skills would count for nothing if they cannot write. Precise use of language, rich descriptions, and clear presentation of ideas are required to produce a vicarious experience for the persons who could not be there themselves.

The form the report takes is also unique, relying not on statistics, graphs, or abstract models but on the language familiar to the reader and images that evoke the reader's associations. The following passage illustrates this form. It is an excerpt from a participant observation (Smith, Gabriel, Schott, & Padia, 1976) of Outward Bound, a wilderness training program that sends small groups of young people to the mountains of Colorado, teaching them survival skills and expecting profound psychological changes to result. The participant observation was performed to see what bases exist in the experience for expecting these changes to occur.

The next day the entire patrol started on our first long alpine expedition. We hiked all day, coping as best we could with the different hiking speeds. Late in the afternoon we had not yet reached the projected camp site. By our own idiosyncratic process of decision making, we determined that the two strongest hikers would push ahead to locate the camp before sunset and guide the rest of us in. We hiked until it grew dark and once nearly missed the trail. Walking became laborious when the terrain unexpectedly turned to swamp. Our packs, recently loaded with food, settled into sore spots on shoulders and hips. We were plodding, making little progress, with no sign of our advance troop. Finally a light appeared in the distance, someone signaling us with a flashlight. We signaled back and kept sloshing. The night was cold, and we hadn't eaten. The Rio Grande, just wide enough to be troublesome, lay between us and the camp. The water was fast. It was too dark to see where to step, so the only method was to take off your boots and feel your way through the rocks. With a sense of resignation I tied my boots to my pack and waded through the icy water. From behind me I heard Chris whimpering; she had lost her sneakers and couldn't make it. Not pausing to question myself, I dropped my pack on the bank, waded back and carried Chris on my back across the stream, then crossed for the third time to carry her pack. By that time my feet were so numb and my body so fatigued that I stumbled over a rock and fell. (p. 415)

Chris's life was beauty contests, formal dances, and "Daddy." She came to Outward Bound with purple nail polish and an expensive coiffure. On the first day she

accosted the instructor, demanding that he help her with a recalcitrant sleeping bag zipper. She was laden with more cosmetics and clothes than an actress. During the first week she suffered stomach aches and homesickness. Everyone thought of her as a crier and complainer. In each new situation she whined that she couldn't do it and wouldn't do it. Then she would stumble in and do it, complaining the entire time. She seemed immature and sheltered. I decided that Outward Bound was especially designed for people like Chris. She had never worked, never been challenged, never really lived except vicariously through her parents and the media. The course forced her into a series of compacted experiences, causing her maturation to be accelerated. One could almost see her stamina and confidence grow as the course progressed. She tried hard, but never stopped complaining. She could not give up her ploy of professing weakness and hiding her strengths. The strategy must have worked for her; didn't it get her a free ride across the Rio Grande on my back? (pp. 417-418)

READING A NATURALISTIC STUDY AND JUDGING ITS MERITS

It would be foolish to say that naturalistic inquiries do not vary in quality. At the same time there are no simple, conventional standards for judging the merits of an inquiry of this type. There are certain characteristics, however, that the reader should look for.

- 1 *Duration.* Were the researchers in direct contact with the case for sufficient time to become thoroughly familiar with all its aspects and its context?
- 2 *Scope.* Is there evidence that the case was studied comprehensively?
- 3 *Ethics.* Is there evidence that the researchers fulfilled ethical obligations, maintained confidentiality and protection of the site and the informants?
- 4 *Logic.* Is there an internal logical fit between the data in the data record and the ideas or analysis that purports to come from them?
- 5 *Verification.* Have the researchers employed techniques of triangulation and verification of data and inferences from them?
- 6 *Stance of the researcher.* Have the researchers maintained a nonideological, dispassionate stance toward the case, or at least clearly identified their prejudices?
- 7 *Writing.* Is the report an effective and pleasing piece of writing?
- 8 *Contribution to knowledge.* Do the researchers not only describe but enlighten? Is the reader left smarter about the psychological and social ideas that the information yielded?

Because no highly technical skills nor abstract statistical knowledge is required to perform a naturalistic inquiry, some people feel that it is an easier or more accessible form of research than surveys or experiments. The truth is just the opposite. Few of us can commit a full year to a research project. Few have the discipline to work alone, relying only on themselves to decide whether to interview this person or that person or instead spend the day observing. In conventional forms of research, all these decisions are made when the study is designed, after which time the researcher merely follows the design. Like counseling, naturalistic inquiry requires a certain tolerance for ambiguity.

Like counseling, naturalistic inquiry cannot be learned out of a book (although it is necessary to read extensively of existing studies and methodological papers). Instead it requires working under the supervision of a trained and experienced researcher. It requires the ability to interview in-depth and without a questionnaire, the skill of observing a social event and recording accurate and detailed accounts of what was observed, the skills to describe events and explain ideas. It

requires an extensive store of theoretical knowledge with which to interpret the data that were collected. These skills are components of training in naturalistic inquiry, but without supervision they do not sum to the whole.

LIMITATIONS OF THE METHOD

The biggest problem with naturalistic inquiry is that it is labor intensive. Committing a highly skilled professional person for a year to conduct a study is a major investment. Moreover, there is little agreement on what qualities make for a good naturalistic researcher, except the notion that the qualities are rare. Training programs are tied to the disciplines of anthropology or sociology and therefore are not widely accessible.

Because the study is intimately tied to the ego, abilities, energy level, and social philosophy of a single researcher, there is always the possibility that the integrity of the report may be compromised. For example, the results might be predictable if a Marxist were to study the tracking system of a high school. Or, a person with a low level of energy or intellectual ability might miss subtle but significant patterns of events occurring late in the day. Most researchers defend against these possibilities, trying to avoid error and prejudgment. A strong political sentiment ought to be identified at the outset so that the reader can judge the report accordingly. But the unscrupulous ideologue can fool the reader no matter if the research is naturalistic or experimental.

Other weaknesses of naturalistic inquiry—e.g., establishing causality and generalizing results—are weaknesses (although seldom acknowledged) of experiments and surveys as well. Each form of research has its benefits and its limitations. In the past, counseling researchers have restricted themselves to some forms; now it is time to consider others. The unresolved questions that underlie each piece of research—not unthinking dogma—should govern the methods the researcher chooses for its solution. Methods, after all, are the slaves, not the masters of disciplined inquiry.

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APPENDIX

This list is no more than a sampler of readings in various forms of naturalistic inquiry. It is divided in two parts, the first being examples of existing reports and the second being papers and monographs devoted to methods and issues of this form of inquiry.

WORKS

- BARKER, R. G., & WRIGHT, H. F. *One boy's day*. New York: Harper & Row, 1951. (Ecological psychology)
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