

Chapter 1

Ecological Engagement: Promotion of Knowledge Production



Júlia Sursis Nobre Ferro Bucher-Maluschke

Psychology research seeks understanding of human phenomena on the intrapersonal and subjective plane as well as the interpersonal or interactional. Realizing this goal has become the primary challenge for researchers.

How does one capture a part of reality that escapes one's immediate perception?

In ancient Greece, pre-Socratic philosophers were well aware of the complexity of apprehending reality. Some of their observations that have survived until the present attest to their ability to discern the difficulties inherent in the search for knowledge.

While Heraclitus emphasized the shifting character of reality: "You cannot step into the same river twice, for other waters are continually flowing on" (D12) p. 25; Parmenides distinguishes the path of truth from the path of opinion. The fundamental distinction between the two paths is that, for him, on the path of truth, a man allows himself to be guided by reason only, while on the other, the sense information does not lead to the discovery of the truth (*aletheia*) and to certainty, dwelling instead in the unstable realm of opinions (p. 21), indicating that our senses induce illusions and that words are what determine reality but alert us nonetheless to the fact of their deceitfulness.

With Socrates comes a change of focus from the search for knowledge search to mankind, emphasizing to his disciples the necessity of knowing oneself.

Although ancient, these observations persist today and continue to challenge researchers.

In our capacity as researchers, we pose two questions as a starting point:

- How do we capture the truth or possible systems of truth?
- How was the system we described generated?

J. S. N. F. Bucher-Maluschke (✉)
Universidade de Brasília, Brasília, Brazil

It is in this vein that we will address ecological engagement as a possible path to knowledge production that is as close as possible to reality.

Let's look at some of the assumptions of ecological engagement.

The efforts of social scientists, psychologists, and anthropologists to achieve the best possible understanding of the social, psychosocial, subjective, and intersubjective or relational dimensions inherent to the human being's life experience are enormous. One of the challenges pertains to the vocabulary used in scientific investigation. For example, methodology and method are often confused, according to the descriptions of those doing the research.

Potter (1996) differentiate methodology and method, defining them:

"...methodologies are perspectives on research; they set out a vision for what research is and how it should be conducted. They are the connection between axioms and methods; methods are tools – techniques of data gathering, techniques of analysis, and technics of writing. Because it is a tool, a particular method can often be used by many different methodologies (both qualitative and quantitative). Therefore, methodologies are at a more abstract (or general) level than are methods. Methodology is like a strategy – or plan – for achieving some goal; methods are the tactics that can be used to service the goals of the methodology. In essence, methodologies provide the blueprints that prescribe how the tools should be used. Those prescriptions can be traced to the axioms- beliefs about how research should be conducted." (p. 50).

This distinction is important as it clarifies two aspects in constant interaction which are not, however, synonymous.

For years, in the human sciences, quantitative research has been developed under the parameters of the natural sciences. Only quite recently has so-called qualitative research enjoyed greater acceptance in academia.

It is important to remember that qualitative investigations start with the development of case studies. Atkinson (1998) presents a life or oral story as "...a narrative form that becomes a qualitative research method when it seeks to capture, to obtain information about the subjective essence of a person's entire life." (p. 3).

Case studies are done in clinical psychology (Bucher-Maluschke, 2010), but it was Freud who initiated this method of investigation, thereby contributing to the development of psychoanalytic theory. Among the various case studies he performed, the studies "Leonardo da Vinci and a Memory of his Childhood," published in 1910, as well as "Psycho-Analytic Notes on an Autobiographical Account of a Case of Paranoia" from 1911 are noteworthy. His studies were important milestones for the development of psychoanalysis.

Since then, other case studies have been done using individual narratives as much as primary documents. Allport (1942) elaborated tests about the development of individuals based on this investigation method. Erikson analyzed Luther's (1958) and Gandhi's (1969) lives. In 1975, Helm Stierlim published a study about Adolf Hitler from his family's perspective.

These are just a few examples of studies using people's life histories, which deal with development concepts that are important for the development of other research, as, for example, occurs with the concepts of individual and family lifecycles as well as the creation of other investigation techniques, such as the family genogram.

As a form of scientific investigation, there was a systematization of case studies and identification of some sources for data and information gathering. Yin (2005) presents six sources of evidence in case studies: documents, archive registries, interviews, direct observation, participative observation, and physical artifacts.

Physical artifacts may consist of movies, photos, and videotapes as well as projective techniques, psychological tests, proxemic information (proxemics is the study of cultural, behavioral, and sociological aspects of the physical space between individuals), kinesiology or the study of nonverbal bodily movements in communication, street and community ethnography, and life stories.

To Yin, a case study "... is an empirical investigation into a contemporary phenomenon within a real-life context, particularly when the boundaries between the phenomenon and context are not clearly defined" (p. 111). He draws a distinction between this and case studies of laboratory experiments in which the context is "controlled" by the facility's own environment and only a few variables are selected for the experiment.

Quantitative and qualitative research have their own characteristics regarding data collection and analysis. In the search for information, Denzin and Lincoln (2006, p. 23) make a distinction between the two systems (quantitative and qualitative). "Quantitative studies emphasize the act of measuring and analyzing causal relations between variables and not processes," while qualitative studies emphasize "the processes and meanings that are not examined or measured experimentally in terms of quantity, volume, intensity, or frequency."

This distinction of objectives and procedures raises new questions: how does a process come to be and how do we approach it? The other question is, what are meanings and how do we reach them and understand them?

These are two of the great challenges of qualitative research.

As for understanding "what a process is," Strauss and Corbin (2008) address process using music as a metaphor:

"We know that music, be it jazz, pop, or classical, is composed of a series of notes, some faster, some slower, some louder, others softer, sometimes played in one tone, sometimes in another, with a constant come and go across the keys. Even the pauses have a purpose and are part of the sound. It is the playing of those notes, with all its variations and coordinated sequences, that gives music its sense of movement, rhythm, fluidity, and continuity" (p. 162).

The authors conclude that a process is like music in the sense that it represents rhythm, mutating and repetitive forms, pauses, interruptions, and varied movements that form the sequences of action and interaction (p. 162). In this link between music and process, capturing the constituent elements of a process to understand it and explain it demands intense study, as we will see below.

With regard to the meanings or senses, by being polysemic, they invite a certain confusion and, therefore, we must have clarity as to their use by researchers. Bunge (2002) defines meaning as object signified and adds that it signifies something to someone in the measure that it designates and denotes something. He says further that "two symbols are equally meaningful if and only if they designate or denote the same object, as is the case of "3" and "three" (p. 352).

Qualitative investigation in psychology continues to grow. It is intensive and the analysis of its results is an interpretation of the significance of human language and action. The researcher has the arduous task of decoding a language, a culture, to recode in another which will be used for the theoretical explanation, which could eventually be defined as making interpretations that might be cultural, psychoanalytical, systemic, psychodynamic, bioecological, or anything else consistent with the researcher's theoretical parameters.

Becker (2007, p. 86) highlights two questions that can be asked in the interviews "how?" and "why?" and that they will inform the type of information the researcher will obtain. According to Becker, the question "why?" provokes a defensive response in the sense that it demands an explanation, while the question "how?" provokes a descriptive response. For example, "how did things happen?" instead of "why did things happen?" The first question gives people more freedom to respond, is less restrictive for telling a story.

Postmodern ethnology makes a significant contribution through field studies carried out over decades.

Initially, observers were kept in a position and status exterior to the studied object. Thus, such objects (whether groups or societies) were seen through western eyes, which evaluated them through the lens of western values and beliefs. Later, participant observation arose as a method of ethnologic study, having been introduced by Malinowski in the early twentieth century, after having immersed himself for several years in Malian societies. Another article, from the University of Chicago, backs the term "participant observation." We are faced with two unitary ideas—**observation** and **participation**.

It should be noted that **observation** constitutes one of the most important aspects of investigation procedures, nevertheless, it can be done in several ways. The subject-researcher can observe based on his beliefs, unable to see the object of his study in himself. This observation should be seen as a true tool of discovery, a method that, conducted in the proper manner, allows access to certain psychosocial dimensions or the ecological context of the investigated object.

Then, the word **participant** joined with observation and we stress that participation is one of the most difficult concepts to circumscribe in an operational manner. First, it is a word used in many areas today. One participates in everything and the etymological sense gets lost.

In that sense, participant observation creates a lot of ambiguity, and as such it demands investigation. One can say that participation in the context of research must be **interactive participation**. It is, therefore, a personal experience of psychosocial and cultural otherness.

The danger of participant observation, if not sufficiently understood by the researcher, is that of the Hawthorne effect, that is: the observer's presence modifies the situation being observed.

Another important contribution to qualitative studies came to us from the Chicago school, in the 1920s and 1930s, where the idea of human ecology was conceived. It addressed describing man within his context. The city assumes the role of research laboratory and human behavior is then analyzed in relation to the industrial,

geographical, and urban environments. The communities are studied through processes identified for vegetable and animal ecology. We find ourselves facing the need for the ecological engagement of the researcher.

Whyte (1981), in 1937, entered the neighborhoods and developed a degree of participation in the research–researched relationship, the systematization of observation, and the first treatment of the collected material.

The Chicago school experiments propelled qualitative research to new heights—outside of laboratories or predefined samples, showing the way to a postmodern ethnology.

This development of concepts and the way the researcher sees the world is molding itself for a better understanding of what ecological engagement is. The first principle to consider in ecological engagement is **interactive observation**.

To illustrate it, we offer the example of the research performed in Brazil with families from northeastern region of the country. It sought to study the dynamics of small farming families in the northeastern countryside. The first interviews carried out in the families' homes, after an introduction with the help from local native leaders, resulted in similar data with assertions that they had no belongings, animals like cattle or chickens, all of which the interviewer could see in front of her during the interview. Either those things were borrowed, or they had already been sold. In other cases, families refused to talk to the interviewers for irrational reasons. The families' behavior, the preoccupation with giving the impression that they had nothing or could not receive anyone in their homes, after the interview had been announced by the local leaders, demanded an explanation. The interpretation of this was given to us as follows. Some time ago the IBGE (Instituto Brasileiro de Geografia e Estatística, Brazilian Institute for Geography and Statistics) census interviewers had been there, and information spread in the community and surrounding areas that these people had been sent by President Lula to verify their possessions and cut "Bolsa-Família" (Brazil's income assistance program). With this new information came the realization that while the researcher is observing, the object of observation—in this case, the family and/or the head of the family—is observing as well. The researcher arrives there steeped in the elements he brings with himself, looking for knowledge about something he wants to learn; one who is investigated within one's context is in turn curious about new arrival as well—What does he want? What does he intend? How does he see me and to what use will he put what he learns about this place?

We believe that it was from this perspective that CONEP (Conselho Nacional de Pesquisa do Ministério da Saúde, the Ministry of Health's National Council of Research) developed the protocol of terms of consent.

To develop a high-quality ecological engagement, a consistent preparation comprising several stages is necessary.

The preparation that preceded the trip to the northeast was defined initially as learning how to observe. We all think we are observers, some more, others less, but how does one characterize, test this skill, how does one train it? The first exercise we do is observation. On a table we placed several rocks of different sizes, colors, types, textures, and forms. We then asked the students to observe what was on the

table and describe, in writing, what they saw, being at liberty to verify in the best possible way and elaborate a report about what had been observed. The behaviors related to observation are the most variable—some get up, look, hold, sniff, lick, and then describe in detail. Others write poetry, develop metaphors, interpret; some do not move from their places and fantasize; others get close, use the five senses and describe and relate afterwards. After reading descriptions of their observations, we began to reflect on the experience of the act of observing—what—how and why. This is what we called the first stage of learning for ecological engagement as a research procedure.

In that situation, the concept of “the field” is learned—what becomes “the field” of investigation—in the case of the exercise with the rocks, the field is space—the table upon which the rocks had been placed—but the field can be anywhere where the subjects, or our objects of study, are.

How is one ecologically inserted into this field? Then we began a reflection on the second presupposition of engagement, that being enunciation, because the connection with words is fundamental. The narrative—the discourse, the role of words—is of crucial importance. Psychoanalysis has already posited the importance of words in the healing of the subjects that submit to it.

In qualitative research, understanding and being understood presupposes a dialogically guided relationship in a communication process defined by the pragmatics of communication developed by Watzlawick of the Mental Research Institute of Palo Alto.

We have, in effect, an example of nonengagement from this perspective. When we began a progress evaluation of a study on violence in poor communities in the suburbs of Fortaleza, Brazil, the interviewers initially returned with information that there was no violence in those families. This result was astonishment in all who were accustomed to seeing children bruised or absent from school, or even hearing reports from the children themselves of mistreatment in the family.

After a big discussion about what had happened, we saw that the topic of violence required another approach and so the interviewers made a change. Instead of discussing violence, interviewers started by asking about exchanges of affection, fondness in the family, step by step getting around to the questions about violence and from there identifying what violence meant to them. For them, violence had been defined as a “corrective,” “teaching someone a lesson,” but that was not considered violence as they did not go to a hospital and not ended another’s life.

We were facing a phenomenon called banalization of violence—“a little slap does not hurt,” as the popular song says.

This interactive observation that includes word and the meaning attributed to it by the observer as well as the observed is only one means of engagement into the ecological context of the studied group, to the extent that the researcher begins his work of translating the meanings inherent in the words said, or in the silence (the words unsaid) or the “mis-said,” those between the lines and the gestures that accompany them, a translation that allows the development of strategies of those who welcome or who refuse the researcher. In this manner, they are defining themselves in relation to the researcher.

This, as well as the rural northeast examples, contribute to the learning of enunciation which we call conceptual engagement—a fundamental stage for the observation to be interactive, that is, the researcher observes what the study's subject or group is observing about the research and researcher. This allows the elucidation of not only complex and symbolic systems, but also of the nearly imperceptible elements of observation of beliefs that accompany gestures, the most commonplace and barely visible. This means methodically exploring, in all directions, the elements that compose the studied scene.

Rites, narratives, beliefs, myths, object classification, be they natural and social, all testify equally, but differently, to the exercise of thought, of reflection. The act of interpreting cannot focus merely on the first datum or on an isolated case, but it must support other data uncovered with the comparison itself producing the space and the time necessary for the manifestation of meaning.

The heuristic demand presupposed in ecological engagement, that is, the attempt to discover other things in a field of uncertainty, tries to identify and redefine the normative ideas the researcher had before and promotes appreciation of the facts in other ways.

The elaboration of explanatory models demands that the senses, significances, or meanings of the context, or of what is inherent to the subject or group under study, be obtained.

Today we see in dissertations and even theses, the use of the notion of a *corpus*, which originates from linguistics and quantitative history, however, ecological engagement is not reducible to obtaining a closed set of facts to describe and reduce to a general model of functioning.

The ecological engagement approach supposes a progressive or processual elaboration, whose factual, historical, geographical, and cultural contours, in the perspective of the bioecological model of Bronfenbrenner, are situated in the interior of the macro- and exosystem. Thus, we confront a deep and intense dynamism that is translated through the provocative complexity of constant reflection-action-reflection-action-... This we call the movement of knowledge before, no longer the universe, but the “pluriverse” in which the human being lives.

The field of study then becomes the moment in which, with the perception of the unnoticed, there is a work of discovery in the face of blinding evidence. Then some hypotheses are extracted which a reasonable exploration will put to the test, verifying, refining, and extending.

The researcher is an actor in a psychosocial game: since the moment of his arrival he is involved, independently whether he wishes to be or not, in a network of alliances and oppositions; he is put in a position that will shift across the procedures of field investigation; but, on other hand, he experiences something all his own. In this sense, the researcher in an ecological engagement is produced like an actor through the intense processes that he defined as objects of analysis. In the test originated by Gadamer (1989), in no way can the situation be considered external, since the observer is necessarily one of the actors. He adds that when the author as well as the reader are historically situated, they can share the meaning, opening the possibility of constant reinterpretation and reevaluation, to the extent that different meanings

are projected into the work in question. We are thus looking at a “fusion of horizons”—the metaphor used by him. The distance that structures the researcher’s activities and which describes production through the “founding” operation, that is, ecological engagement, must be considered as internal to a communication whose subjects are the actors and of which the researcher is a part and it does not lend itself to a simple translation based on an exterior position. The interpretation demands permanent self-reflection and inter-reflection with the supervisors.

Ecological engagement as methodology was inaugurated in psychology starting with studies developed at CEP-Rua, a research group connected to the Universidade Federal do Rio Grande do Sul (UFRGS, Federal University of Rio Grande do Sul). We highlight some research in which ecological engagement has been described in detail in a natural environment, specifically in the streets with youth in “street situations” (Paludo & Koller, 2004). Another illuminating study of ecological engagement was carried out with at-risk families in a natural environment which focused on resilience and vulnerability in families living in adverse conditions (Ceconello, 2003; Ceconello & Koller, 2004).

Leaving CEP-Rua and entering “CEP-Rio,” where another natural environment study was carried out in a riverside community in the state of Amazonia by the research group attached to the Laboratório de Estudos do Desenvolvimento do Programa de Pós-graduação da Universidade Federal do Pará (Graduate Program Laboratory for Developmental Studies of the Federal University of Pará). Several aspects of riverside life were investigated, such as family structure and dynamics, school, and social environment. From the ecological engagement perspective, the study highlighted the role of the informant and the use of photography as crucial strategies for the development of the proximal processes, fundamental for the research’s success (Mendes et al., 2008).

In 2003, Ceconello and Koller, in their study of families in situations of risk, presented ecological engagement into the community as a methodology and a guarantee for “ecological validity,” as developed by Bronfenbrenner (1996).

A more recent study presents and deepens ecological engagements as a methodological proposal (Prati, Couto, Moura, Poletto, & Koller, 2008).

The ethics of the researcher is a part of ecological engagement as well. Ceconello and Koller (2004, p. 288) properly observe that

“... [the] methodology of ecological engagement must be used with ethical responsibility by investigators, as, in the process of carrying out research, they become part of the daily life of the people involved. The line between ecological engagement and harmful belonging can be fine indeed if the research team lacks clarity as to its role in the process underway.”

To end this essay, we bring two images identified by Vincenzo Di Nicola (1998, p. 112). The first one is of the Tower of Babel, a structure built to reach the heavens, and for which the Lord, to punish presumption of men, confused the language of the builders, preventing their communication. The second image is the Rosetta Stone, an ancient Egyptian rock discovered in the city of Rosetta in 1799, containing an inscription in two languages and three writing systems: Egyptian hieroglyphs above, Demotic characters in the middle, and Greek below. It was through the study of this

rock that J. F. Champollion uncovered the means to translate hieroglyphs, thereby opening the doors to the knowledge of an entire civilization. Di Nicola concludes: while the Tower of Babel is symbol of human misunderstanding, particularly between cultures, having become the image of the problem, the Rosetta Stone came to be a symbol of translation and of access to other cultures, becoming the image of the solution.

As qualitative researchers, we expect that learning ecological engagement will greatly benefit the resolution of methodological programs.

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