

Integrating Research Paradigms: Conducting Appropriate and
Useful Communication Inquiry

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There is much disagreement regarding the appropriateness of different types of research in different types of situations today as in the past. Reichardt and Cook (1979) note a foundation for this historical clash as originating between scientific and artistic views, while Lanigan (1979, 1982) posits the depths of the dispute into philosophical differences between episteme (knowledge) and *verstand* (understanding) through the concept of *Geisteswissenschaften* or human studies and *Naturwissenschaften* or physical sciences (Rickman, 1967). This dichotomy exists in the communication discipline as an interface continues between humanistic and behavioral approaches to communication inquiry (Lindlof & Taylor, 2002, pp. 1-53; Tucker, Weaver, & Berryman-Fink, 1981, p. 275).

Defining a Research Paradigm

It is important to stipulate a basis for paradigmatic categorization and organization before progressing into a discussion of these research types. The conceptualization of paradigmatic classification was constructed by Kuhn (1962, 1970). Patton (1990), however, defines a paradigm as “a worldview, a general perspective, a way of breaking down the complexity of the real world” (p. 90). Thus, it is practical to identify and label research paradigms as rationalistic and naturalistic. Guba (1981, p. 80) and Guba and Lincoln (1981, pp. 53-56) describe the rationalistic paradigm as concerned with experimentation and objectivity and the naturalistic paradigm as involving field study and confirmability.

Describing the Naturalistic and Rationalistic Paradigms

The purposes of this paper are to (a) compare and contrast the rationalistic and naturalistic research paradigms and (b) resolve tensions between them by suggesting a

paradigm of choice research (Patton, 1980, p. 17) which is appropriate for communication research. See Table 1 on the this page. This paradigm of choice is, then, applied to communication research through a dissertation by Parcels (1983) to demonstrate the appropriateness and usefulness of both paradigms in communication inquiry.

Table 1 - Juxtaposition of Research Paradigms

Type of Characteristics	Rationalistic	Naturalistic
Philosophical Derivation	Positivism	Phenomenology
Nature of Reality	Single Reality (stable)	Multiple Reality (dynamic)
Nature of Inquiry	Distance & Independence	Closeness & Interdependence
Nature of Truth Statement	Nomothetic (generalization & similarities)	Ideographic (context-bound with similarities & differences)
Method	Quantitative	Qualitative
Quality Criterion	Rigor	Relevance
Source of Theory	A priori (deductive)	A posteriori (inductive)
Knowledge Types	Propositional (objective)	Tacit & Propositional (subjectivity)
Instruments	Physical	Inquirer
Design	Preordainment	Emergent
Setting	Laboratory	Natural

Source: Guba, 1981; Reichardt & Cook, 1979, p. 10.

Philosophical Derivation. Patton (1980, 1990) identifies logical positivism and phenomenology as philosophical foundations for the rationalistic and naturalistic paradigms. He sees the positivist as one seeking facts without little, if any, concern for individual subjectivity or social phenomena that surely influence human behavior. Phenomenologists seek to understand human behavior from the individual's own point of reference as they examine how the world is experienced through the eyes of individuals.

Nature of Reality. The rationalistic paradigm presumes a single, stable reality on which inquiry can converge. Inquiry is separated into parts which may be manipulated; these parts (or variables) may be studied or controlled singly and are not viewed as interdependent upon one another. The naturalistic paradigm assumes a dynamic, multiple reality through which investigation will diverge. All parts are interrelated in a whole; thus, the study of parts by necessity involves all other parts (Guba, 1981, p. 77; Reichardt & Cook, 1979).

Nature of Truth Statement. The rationalistic paradigm presumes that generalizations (context-free and durable statements of truth) are both possible and desirable. In fact, from rationalistic perspective, this is the primary purpose of inquiry. The development of nomothetic knowledge of concentration on the similarities between objects under investigation is the domain of the rationalistic inquirer. The impossibility of generalization and the goal of particularization is the foundation of the naturalistic paradigm. The focus here is ideographic knowledge where both the similarities and differences between objects are taken into consideration within the whole of any situation (Guba, 1981, p. 77; Reichardt & Cook, 1979).

Method. Those individuals functioning within the naturalistic paradigm are closely tied to qualitative methodology, while practitioners of the rationalistic paradigm consistently utilize quantitative methods. Creswell (2009) indicates that qualitative research is

a method of understanding the meaning individuals or groups ascribe to social of human problem [while quantitative research is] a means for testing objective theories by examining the relationship among variables. (p. 4)

Patton(1990) believes that qualitative methods allow the researcher to study issues in greater depth and detail without requiring the restraints of preordained criteria while quantitative methods provides the researcher with an opportunity to measure reactions of many subjects to a very specific set of items providing broad and generalizable findings (pp. 13-15).

Creswell (2009) advocates mixed methods research commenting that it “is an approach to research that combines or associates both quantitative and qualitative forms” (p. 4). Reichardt and Cook (1979, p. 7) review examples of both types of methods. Quantitative methods are best portrayed as techniques such as randomized experiments, quasi-experiments, “objective” tests, multivariate statistical analyses, and surveys, while qualitative methods include ethnography, case studies, in-depth interviews, participant observation, and open-ended questionnaires.

Patton (1980, p. 22) conceptualizes qualitative research as concerned with empirically-collected data from descriptions, quotations, and case studies, while quantitative measurement uses instruments to collect data for analysis in specific and pre-determined categories.

Quality Criterion. The most important criterion from which to appraise the quality of an investigation in the rationalistic paradigm is rigor (or internal validity),

while relevance (or external validity) is stressed in the naturalistic paradigm. Guba (1981, p. 78) summarizes this situation as a stand-off where the greater the rigor (or control for the laboratory situation), the less the relevance (or usefulness in the “real” world) as results apply only in another laboratory situation.

Source of Theory. The naturalistic paradigm favors a posteriori theory where the theory emerges from the data through induction (Guba, 1981, p. 78) and has both an empirical and eidetic foundation (Lanigan, 1982). Glaser and Strauss (1967) consider this approach to be grounded theory. On the other hand, the rationalistic paradigm prefers a priori theory derived through hypothetical-deduction with its empirical foundation (Lanigan, 1982). Merriam-Webster (2009) defines a priori as “deductive, relating to or derived by reasoning from self-evident propositions, and a posteriori as “inductive, relating to or derived by reasoning from observed facts.” Thus, a process of hypothesis testing is employed.

Knowledge Types. A distinction between propositional knowledge (or knowledge capable of being put into language form) and tacit knowledge (or knowledge not capable of being stated by somehow “known”) is clearly articulated by Polanyi (1958).

The naturalistic paradigm utilizes propositional knowledge, but also concentrates on tacit knowledge. This suggests that people “know” more within themselves than is ever communicated and attaches the naturalistic paradigm to the notion of subjectivity.

The rationalistic paradigm functions only with propositional knowledge since everything researched is carefully controlled and rigidly stipulated. Specification by some type of language form, including mathematical symbols, is essential. Thus, the notion of objectivity as specificity, detachment, and manipulation in inquiry is applicable to the rationalistic paradigm (Guba, 1981, p. 78; von Eckartsberg, 1971).

Instruments. Researchers in the rationalistic paradigm place instrumentality between themselves and the phenomenon under investigation. This removes them from direct contact with the object of inquiry, providing distance, and enhancing the reliability and objectivity of the research. This is performed due to the belief that instruments have greater technological precision for sensitivity than human observers.

Naturalistic inquirers use themselves as instruments, although there is a definite chance they would dislike this metaphorical comparison with “instrumentality” (Guba, 1981, pp. 78-79; Reichardt & Cook, 1979; and von Eckartsberg, 1971). This places the researcher in close proximity to the research, allowing for a union of subject and object within the experience investigated resulting in a statement of description and structure (Colaizzi, 1973, pp. 19-33). The association with subjectivity is obvious.

Design. The rationalistic paradigm requires a preordainment design (Stake, 1975) with every part of the research from the problem through analysis specified in advance of the investigation. There is little, if any, opportunity for flexibility and adaptability once rationalistic research is undertaken.

The naturalistic paradigm is highly flexible and adaptable to change as research is viewed as holistic and process-oriented involving the researcher and the researched as interdependent. Thus the notion of emergential design, including, many times, an intentional lack of specificity in method-procedure and design (Creswell, 2009; Guba, p. 79; Reichardt & Cook, 1979).

Setting. The rationalistic paradigm is embedded in the laboratory setting, whereas the naturalistic paradigm stresses research in a natural environment often referred to as a field study (Guba, 1981, p. 79; Reichardt & Cook, 1979).

Summarizing. There is no requirement for researchers to remain within the boundaries of either the rationalistic or naturalistic paradigms. However, traditionally

communication researchers have been bound by these parameters of inquiry (Tucker, Weaver, & Berryman-Fink, 1981, pp. 275-277). Guba (1981) further summarizes the tradition of these research paradigms noting that

While adherence to one or another of these sets of postulates is not required nor logically completed by the underlying axioms, followers of these paradigms seem to be strongly inclined to do so, probably because they were so trained. The assumption of one of these postures has become identified with the proper way to do research – a kind of orthodoxy. But such intransigence is unfortunate. (p. 79)

Creswell (2009) advocates mixed methods research commenting that it “is an approach to research that combines or associates both quantitative and qualitative forms” (p. 4). A paradigm as proposed by Creswell (2009) offers the opportunity for triangulation of research methods. Alan Bryman of Loughborough University in the UK defines triangulation as “the use of more than one approach to the investigation of a research question in order to enhance the confidence in the ensuing findings.” Bryman believes that triangulation provides a rather strong rationale for multi-method research or what I propose as a new paradigm of choice.

A New Paradigm of Choice

Reichardt and Cook (1979, p. 16) conclude that attributes of either paradigm are not necessarily tied to either paradigm. Paradigms are not the determinant of methods. Such a choice should be based on each particular situation. Filstead (1979, p. 42) believes that research advantages come from the creative combination of qualitative and quantitative methods. He suggests that the climate is appropriate for a change in the emphasis of paradigms and that a new paradigm of choice should be implemented into communication research.

This new paradigm of choice is a movement away from the rationalistic investigation toward more naturalistic inquiry. However, Filstead (1979) warns against any radical shift by equating it to the already existing over-indulgence so obvious in the rationalistic paradigm (pp. 39-42). The solution is the development of a third paradigm, a paradigm of choice.

Patton (1980) has introduced this new paradigm of choice.

Today's evaluator must be sophisticated about matching research methods to the nuances of particular evaluation questions and the idiosyncrasies of specific decision-maker needs. Thus, today's evaluator may be called on to use any and all social science research methods....The active-reactive-adaptive evaluator is...committed to research designs that are relevant, rigorous, understandable, and able to produce useful results that are valid, reliable, and believable. (pp. 17-18)

Putting the Paradigm of Choice Into Practice

The Study. Parcells (1992) conducted an organizational analysis study at two Mid-Continent radio stations WTSO-AM and WZEE-FM in Madison, WI. The study focused on the effectiveness of station operations and staff relations reviewing the stations organizational communication. The concept behind this investigation was to use staff members to: a) discover potential or existing problems; b) identify major achievements; and, c) establish and mesh individual, department, and station goals. The a priori theoretical aspect of the rationalistic paradigm accounts for the specification of research purpose prior to conducting the investigation as opposed to allowing them to emerge (a posteriori) from the data. A qualitative method of in-depth interviewing and an instrument allowing for open-ended written responses is associated with the naturalistic paradigm (Guba, 1982; Patton, 1980 & 1990).

The Method. I used phenomenology as a form of research primarily involved in qualitative evaluation, and loosely belonging to a paradigm of naturalistic inquiry with such methods as ethnography, semiotics, historiography, and phenomenal study (Guba, 1981). Patton (1980) defines phenomenology as seeking to understand human behavior by examining "how the world is experienced from the actor's own frame of reference" (p. 45). Lanigan (1979, p. 6) presents phenomenology as an investigative method concerned with explaining experience or making.

Phenomenological investigation is a descriptive and empirical method of research recognizing the value of the investigator's reflection (Colaizzi, 1973, pp. 25-26). I define reflection as the recollection and recall to consciousness of an event, while pre-reflection is awareness of the event at a level of immediate experience. Patton (1980, p. 127) notes that it is through reflection that an investigator may move close to the data as a participant. Implicit in such a movement is the notion that the researcher becomes personally involved in consciousness of the experience. Lanigan (1979, pp. 7-10) outlines the phenomenological process of investigation as containing three steps: a) description or "bracketing" the conscious experience; b) reduction to definition or reducing the essential parts of the description to a definition, "free imaginative variation;" and, c) interpretation where the meaning of the definition is specified (see Lanigan, 1982; Parcells, 1986).

The Instrument. All staff members participated by completing four sections of a survey instrument. The first section was called individual goals and requested the listing of the five most important goals to be achieved during the next year and during the next five years. Second, a section called department goals sought the five most important goals the respondent's department should achieve during the next year, and during the next five years. The third portion of the instrument called department and

station accomplishments, asked each staff member to identify and describe up to five accomplishments achieved by the department and the station during the last year. Finally, the last section entitled department and station problems, asked each staff member to identify and describe up to five problems which existed or had existed in the department and station during the last year.

The Interviews. During the two weeks when staff members were responding to the instrument, I conducted personal interviews with many of the staff members. My objective was to interview several individuals from each of the departments identified for the survey.

These interviews were conducted outside the station, usually over breakfast or lunch. Content focused on the four major areas of the instrument. These personal interviews provided the station staff with an opportunity to add color and flavor to the written material. Most interviewees spoke freely and frankly about their individual objectives as well as station/department goals, problems, and accomplishments. Following the completion of each interview, I spent the next hour reflecting on the major themes of the discussion.

Both the instrument and the interviews included open-ended questions allowing the subjects "free responses" with emergent data emphasizing the multiple reality of the naturalistic paradigm. The interviews included some closed-end questions as prescribed with a "limited frame" of choice for respondents. The researcher got close to the data due to the personal contact employed in the interviews.

Upon collection of all instruments and completion of all interviews, the description stage of the phenomenological inquiry was finished.

Reduction to Definition. Next, in the reduction to definition stage. I reviewed all materials by category and department. Similar statements were clustered together

based on similar meanings. I sorted and counted each repetitive statement by category. This was done for both the interviews and instruments, and both were then combined. The statements became themes representing each category by department. The themes were ranked in priority order based on total repetition. See Table 1 for an example of ranked and clustered themes. Themes were totaled for each department and for the total stations.

Definition. The themes continued to be clustered together netting a precise and concise definition of each category. A definition was prepared for each category by department, and for the overall station in the categories of accomplishments and problems. The definition becomes a narrative statement clearly but briefly defining each category.

Table 2 – Priority Order Themes for Station Problems

Rank	Theme	Repetition
1	Too many bosses exist; there's a lack of focus.	16
2	Inadequacy of building & parking space.	14
3	Poor telephone system.	7
3	Poorly answered telephone system.	7
4	Inefficient heating & air conditioning systems.	5
4	There's a lack of sense of unity among department heads.	5
5	WTSO leadership is too restrictive.	4
5	There's a camaraderie slippage among workers.	4

Interpretation. The final stage of phenomenological inquiry, or interpretation, actually began with the interviewing and the initial review of the completed

instruments. However, this is a necessary and healthy aspect of this form of qualitative research. Parcells believes that it binds the study to the context in which it is conducted; generalization is not permissible based on the uniqueness of the situation. It is here that the meaning is specified as conclusions are drawn and implications cited. See Table 3 for an example of data interpretation.

Analysis involved both paradigms as the open ended comments and responses employed an inductive approach aligned with a posteriori data retrieval. The limited closed-end responses used a deductive approach within the a priori framework of rationalistic inquiry.

The researcher was close to the data due to thematic clustering, categorization, and interpretation (Patton, 1980 & 1990). The use of both open-ended and closed-end questions served to enhance the validity of the survey data. This was accomplished through the use of rigor (internal validity) from the rationalistic paradigm in comparison to relevance (external validity) from the naturalistic paradigm (Guba, 1981, p. 78).

Table 3 - Interpreting Themes About Radio Station Problems

Priority	Implications for Station
1	An organizational flow chart with specific job descriptions for every position must be prepared and made readily available to all staff members.
2	Specific goals and objectives for each department must be established and openly shared with all employees.
3	The operations manager must play a more active role in programming and personnel decisions about the stations, and provide more leadership to the various department heads.
4	Department heads must meet together on a regular basis and candidly discuss station problems.

- 5 Individual departments and stations as a whole need to establish a regular schedule of retreats held at a location away from the regular disturbance of daily station operations.
- 6 Individual and staff development seminars need to be offered by the station on a regular basis to boost and maintain positive staff morale.
- 7 Individuals must be better trained to operate the telephone system; a primary staff member needs to be designated for scheduling and maintaining a system of telephone reception.
- 8 Heating and air conditioning systems require attention as does parking spaces for all staff and guests.

Implications for this Study and A Paradigm of Choice

The Researcher as a Participant and Observer: It is important that the researcher is close to the station and staff. This means that relationships must be established and maintained during the study. The researcher becomes a part of the station staff observing as a participant in the day to day operations of the station (see Patton, 1980, pp. 127-130). This clearly enriches the data produced through staff interviews due to common bonds and mutual trust between researcher and staff.

Researcher and Study Credibility: It is clear that the themes identified from both the interviews and the instrument are consistent; thus establishing internal validity (credibility), reliability (consistency), and neutrality (confirmability) of the data (Guba & Lincoln, 1981, pp. 104-127). An additional aspect of data trustworthiness and believability concerns the researcher's credibility. My own familiarity with the commercial radio industry, including more than a decade in various broadcast management capacities and five years experience in the Madison, Wisconsin marketplace, enhances the credibility of the study. It is imperative that the researcher be familiar with the industry, marketplace, and the stations to be studied. Obviously this familiarity can be achieved in a variety of ways.

Reporting and Sharing of Results: The notion of reporting and sharing three results of the study is consistent with the promise to maintain confidentiality. But, it still merits some scrutiny. In the case of my study, a three-pronged process was employed. I was actively involved in the first two levels of the process, but not the last level.

First, initial meetings were scheduled with the general and operations managers of the stations. During these meetings the results for the entire station and each department were presented and summarized, and plans were made to report and share the results with department heads and their staff members. The importance of involving all department heads in the reporting process and allowing them to share the results with their own staffs was stressed throughout these talks.

Second, meetings were scheduled individually with each department head during which the results for only his or her department were presented. The station operations manager was included as an integral part of each of the meetings with the department heads. Positive reinforcement was always provided, and negative criticism was placed into a positive regard. Each department head was encouraged to schedule a series of meetings (often referred to as retreats) with their department staffs as well as to use the data as a basis for developing short term and long term goals. Department heads were given ample opportunity to discuss any aspects of the results during this meeting.

Finally, in addition to the meetings scheduled by each department head, a meeting was scheduled by the general and operations managers with all station employees to report and share the results. Again, ample opportunity was provided for feedback and discussion. I was not involved in this meeting in an attempt to force focus on only the station management and employees.

Practicality of the Results. An important criterion for phenomenological research is usefulness or practicality. Patton (1980) believes "there is a pragmatic bias...I've been concerned with the practical, the concrete, and the achievable: (pp. 282-283). Parcells (1983b, p. 6) describes external validity as relevance or usefulness of the results in the "real" world. My study has obviously useful results in the analysis of organizational communication via such practices as: a) agenda setting for department retreats; b) employing staff members as resources in establishing station and department goals; c) preparing long and short term station and department priorities (i. e., equipment purchases, promotions); d) identifying individual goals allowing for reconciliation of staff member goals with department and station priorities; e) determining leadership efficiency and effectiveness of staff-management relations; and, f) serving as a basis for individual conferences between department heads and top level management.

Study and Paradigm of Choice Conclusions. The phenomenological approach described in this article is an ideal tool for consultants or management to explore the organizational communication of a particular radio station. The results provide an important decision making tool for dissecting station operations and staff relations.

The use of both open-ended and closed-end questions served to enhance the validity of the survey data. This was accomplished through the use of rigor (internal validity) from the rationalistic paradigm in conjunction to relevance (external validity) from the naturalistic paradigm (Guba, 1981, p. 78).

Naturalistic and rationalistic paradigm procedures may be applied to enhance the quality of communication research in both the design of the study and the analysis and interpretation of data. Methods from both paradigms, used interchangeably (triangulated), provide a comprehensive process of research demonstrating the

appropriateness of interrelating procedures and maximizing the usefulness of the results; thus, increasing validity, reliability, and believability in communication study.

References

- Backstorm, C. H., & Hursh-Cesar, G. (1981). *Survey research* (2nd ed.). New York: John Wiley & Sons.
- Bryman, A. *Triangulation*. Retrieved on October 23, 2009 from <http://citeseerx.ist.psu.edu/10.1.1.1.83.9785.pdf>.
- Colazzi, P. F. (1973). *Reflection and research in psychology: a phenomenological study of learning*. Dubuque, IA: Kendall-Hunt.
- Creswell, J. T. (2009). *Research design: qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage.
- Filstead, W. J. (1979). Qualitative methods. In T. D. Cook, & C. S. Reichardt (Eds.), *Qualitative and quantitative methods in evaluation research* (pp. 33-48). Beverly Hills, CA: Sage.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory*. Chicago: Aldine.
- Guba, E. G. (1980). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational communication and technology journal*, 29, pp. 75-91.
- Guba, E. G., & Lincoln, Y. S. (1981). *Effective evaluation: improving the usefulness of evaluation results through responsive and naturalistic approaches*. San Francisco: Jossey-Bass.
- Kuhn, T. S. (1962, 1970). *The structure of scientific revolutions*. Chicago: University of Chicago Press.
- Lanigan, R. L. (Nov, 1982). Short course #23 presented at the meeting of the Speech Communication Association (now National Communication Association) Convention, Chicago.
- Lanigan, R. L. (1979). The phenomenology of human communication. *Philosophy Today*, 23, pp. 3-15.

- Lindlof, T. R., & Taylor, B. C. (2002). *Qualitative communication research methods* (2nd ed.). Thousand Oaks, CA: Sage.
- Merriam-Webster. (2009). *Merriam-Webster online*. Retrieved from [http://www.merriam-webster.com/dictionary/a priori](http://www.merriam-webster.com/dictionary/a%20priori) and [http://www.merriam-webster.com/dictionary/a posteriori](http://www.merriam-webster.com/dictionary/a%20posteriori).
- Parcells, F. E. (1992). Evaluating radio station operations and staff relations. *Feedback*, 31(3), p. 11 and pp. 26-27.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage.
- Patton, M. Q. (1980). *Qualitative evaluation methods*. Beverly Hills, CA: Sage.
- Patton, M. Q. (1978). *Utilization focused evaluation*. Beverly Hills, CA: Sage.
- Polyani, M. (1958). *Personal knowledge*. New York: Harper & Row.
- Reichardt, C. S., & Cook, T. D. (1979). Beyond qualitative versus quantitative methods. In T. D. Cook & C. S. Reichardt (Eds.), *Qualitative and quantitative methods in evaluation research* (pp. 7-32). Beverly Hills, CA: Sage.
- Stake, R. E. (1975). *Evaluating the arts in education*. Columbus, OH: Charles E. Merrill.
- von Eckartsberg, R. (1971). On experiential methodology. In A. Giorgi (Ed.), *Duquense Studies in phenomenological psychology* (Vol. 1) (pp. 66-79). Pittsburgh: Duquense University Press.