Ten standard Objections to Qualitative Research Interviews

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ABSTRACT

Qualitative research has tended to evoke rather stereotyped objections from the mainstream of social science. Ten standardized responses to the stimulus "qualitative research interview" are discussed: it is not scientific, not objective, not trustworthy, nor reliable, not intersubjective, not a formalized method, not hypothesis testing, not quantitative, not generalizable, and not valid.

With the objections to qualitative interviews highly predictable, they may be taken into account when designing, reporting, and defending an interview study. As a help for new qualitative researchers, some of the issues, concepts, and arguments involved are outlined, and the relevancy of the standard objections is discussed. Alternative conceptions of qualitative research, coming from phenomenological and hermeneutical traditions, are suggested. The qualitative interview based on conversation and interaction here appears as a privileged access to a linguistically constituted social world.

INTRODUCTION

In recent decades there has been an increased use of qualitative research in the social sciences. This encompasses naturalistic studies, participant observation, textual analysis, and, to be discussed here, research interviews. Such qualitative research tends to evoke rather standardized objections from the mainstream of social science. These may vary from technical issues such as "Cannot the interview findings be due to leading questions from the interviewer?" to epistemological issues such as "Qualitative research does not lead to objective and scientific knowledge." Whereas the wording and tone may vary, there are about ten core responses to the same stimulus. The qualitative research interview:

1. is not scientific, but only common sense
2. is not objective, but subjective
3. is not trustworthy, but biased

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4. is not reliable, but rests upon leading questions
5. is not intersubjective; different interpreters find different meanings
6. is not a formalized method; it is too person-dependent
7. is not scientific hypothesis-testing; it is only explorative
8. is not quantitative, only qualitative
9. is not yielding generalizable results; there are too few subjects
10. is not valid, but rests on subjective impressions.

Such responses may follow nearly automatically, even before the specific findings and methods of an interview study have been presented. Critical objections appear endemic to current qualitative research. Bogdan and Biklen (1982) thus list and discuss eight common questions on the value of qualitative research. The concluding chapter of *Designing Qualitative Research* (Marshall & Rossman, 1989) is entitled "Defending the Value and Logic of Qualitative." The discussions of qualitative research tend to take a polarized form; some of the frequent dichotomies are treated in the essay "Beyond Qualitative Versus Quantitative Methods" by Reichardt and Cook (1979).

Much of the critique of current qualitative research is to the point: it may be sloppily carried out and yield trivial results. There is today a definite need for an internal improvement of qualitative research, for methodological stringency and production of knowledge worth knowing. Suggestions for improving the quality of qualitative research have been put forth by—for example—Flick, von Kardoff, Keupp, von Rosenstiel, and Wolff, 1991; Giorgi, 1985; Miles & Huberman, 1984; Mishler, 1986; Strauss, 1987; Tesch, 1990. The ideal approach to the standard critiques of qualitative research is to produce new, worthwhile qualitative knowledge, convincing in its own right.

The scope of the present discussion is, however, more limited: facing the standard external objections to qualitative interviews. These critiques may involve a prejudgment, based on a conception of social science where qualitative research is expelled or relegated to a secondary position. The standardized responses can be traced to a positivist philosophy of science, which, while philosophically obsolete, still survives in many social-science departments. This may be seen in traditional norms for the acceptance/rejection of master's theses and dissertations, in journal reviewers' comments to submitted papers, at scientific conferences, and—in extreme cases—where qualitative researchers go to court to defend their rights to do qualitative research. While the following discussion may be outdated philosophically and of little interest theoretically, it may still be use-

ful to researchers who in hard-core university departments have to face the standard objections to qualitative research.

The aim of the present essay to introduce novices in qualitative research to the most predictable responses to their research. The discussion focuses on the qualitative research interview, defined as an interview the purpose of which is to gather descriptions of the life-world of the interviewee with the intention of interpreting the meaning of the described phenomena (Kvale, 1983). The following catalogue of arguments may also pertain to a certain degree to other forms of qualitative research. A knowledge of the most common critiques to be expected allows the qualitative researcher to judge whether they pertain to his or her study. If the critiques are considered relevant to the specific study, they may be taken into account when designing the interview investigation and thereby improve the quality of the research. If the objections are not considered relevant, the arguments for this can be presented in the report. This may involve outlining how the specific qualitative study differs from a mainstream approach in the problems addressed and the answers sought.

When the standard responses to the finished report appear, the replies should be concrete, asking for how an objection pertains to the investigation reported. Such specific replies may be in the form: How does the critique of leading questions invalidate which of the findings reported? How does the objection of subjective interpretations change which of the conclusions are drawn from the study?

The following discussion will remain on a general level, outlining a framework for treating some of the many issues raised by the standard objections. A clarification of some of the concepts involved will be attempted, some main lines of arguments outlined, alternative conceptions of the issues suggested, and relevant literature mentioned. It is my hope that this discussion will help the researcher to save some of the time and energy often used for external defense, and leave more resources for internal improvement of qualitative research and for facing yet less standardized challenges, such as the study of the primacy of language and of personal interaction in qualitative research.

1. The Qualitative Research Interview Is Not Scientific, but Only Reflects Common Sense

The qualitative research interview is sometimes dismissed as not being scientific; it may perhaps provide interesting results and be propaedeutic to a scientific investigation, but the interview is not a

scientific method. The counterquestion hereto is "What is science?"

Neither textbooks on social science methodology nor dictionaries of the English language provide any unequivocal and generally accepted definition of science. It is thus difficult to unequivocally characterize qualitative research as scientific or unscientific. In *Merriam-Webster's Collegiate Dictionary* (1993) some of the definitions of science are, in abbreviated form: Knowledge as distinguished from ignorance or misunderstanding; systematized knowledge; one of the natural sciences; knowledge covering general truths or the operations of general laws especially as obtained and tested through scientific method; a system or method reconciling practical ends with scientific laws. The characterization of qualitative research as scientific or unscientific will then depend upon which definition of science is used.

An alternative, apparently simple sociological definition of science is the activity of and the knowledge produced by scientists. Although circular, this operational definition points to the social and historical issue of who is a scientist and who has the power to define an activity as scientific or unscientific.

There do exist, however, some accepted core concepts of the meaning of science in our culture. Thus science should produce knowledge, and this knowledge should be new, be systematic, and be obtained methodically. A broad, fairly acceptable definition of science would then be *the methodical production of new, systematic knowledge.*

The concepts of this working definition—methodical, production, new, systematic, and knowledge—are again complex. Depending upon how these key terms are defined, qualitative research may be characterized as either scientific or as unscientific. The term "systematic" may thus refer to intersubjectively reproducible data, to quantitative data, to objective results, to generalizable findings, or to knowledge obtained by a hypothetical deductive method. The meaning of some of these terms will be discussed in more detail below in relation to the standard objections about objectivity, quantification, and generalization. The possibility of developing systematic and new knowledge by the interview method will be discussed more concretely in relation to these and other objections. The following sections will argue that the qualitative research interview may develop scientific knowledge in the sense of methodologically producing new and systematic knowledge.

In conclusion, given the complexity and many meanings of the concept of science, any general characterization of qualitative re-

search as scientific or unscientific is unwarranted. An automatic rejection of qualitative research as unscientific reflects a specific limited conception of science, rather than the meaning of science being the topic of continual clarification and discussion.

Arguing from a postpositivist perspective, Polkinghorne advocates a discursive understanding of science:

> Science, is not seen as an activity of following methodological recipes that yield acceptable results. Science becomes the creative search to understand better, and it uses whatever approaches are responsive to the particular questions and subject matters addressed. Those methods are acceptable which produce results that convince the community that the new understanding is deeper, fuller, and more useful than the previous understanding. (1983, p. 3).

2. The Qualitative Research Interview Is Not Objective, but Subjective

It is often claimed that the qualitative research interview lacks objectivity. Here the counterquestion is "How do you define 'objectivity'?" Or, more pointedly, "Do you have an objective definition of objectivity?"

Turning to social science texts on methodology and to ordinary language dictionaries, about a dozen meanings of objectivity may be found (e.g., Bergström 1972; *Merriam-Webster's Collegiate Dictionary*, 1993; Pedersen, 1980; Polkinghorne, 1989; Smalling, 1989). Objectivity is often discussed as one side of a polarity: objective–subjective, unbiased–biased, public–private, intersubjective–subjective, reflects the nature of the object–personal impressions only, reality as it exists independent of man–dependent on the subject, value-free–value-laden, impartial–partial, facts–values, physical–meaning, behavior–consciousness, mathematical–qualitative, stable–changing, and universal–local.

In addition, some less common meanings of objectivity may be mentioned. In phenomenological philosophy, objectivity is reached through the intentional acts of consciousness and is an expression of fidelity to the phenomena investigated. In dialectical materialism, objective knowledge is attained through the standpoint of the working class. And not only within therapy may one speak of the objectivity of love; also a psychometrician may plead for a loving approach as a basis for a valid human science, following Keller's arguments for a dynamic objectivity and love in biophysical research (Tschudi, 1989).

A first conclusion is that, according to a definition of objectivity as intersubjective agreement, the lack of intersubjective consensus on the meaning of objectivity testifies to objectivity being a rather subjective notion. The second conclusion is, accordingly, that the qualitative research interview cannot unequivocally be dismissed as lacking objectivity. The objectivity of the research interview shall be briefly discussed below with regard to three common usages of the term *objectivity*: free of bias, intersubjective, and reflecting the nature of the object.

Objectivity as *free of bias* refers to knowledge that is reliable, checked and controlled, undistorted by personal bias and prejudice, neutral, factual, and confirmable. Such a commonsense conception of objectivity as free of bias simply implies doing good, solid craftmanship by research, producing new knowledge which has been systematically checked and verified. In principle, the interview may be an objective research method in the sense of being unbiased.

The conception of objectivity as meaning *intersubjective* knowledge has been common in the social sciences. Scientific data shall be intersubjectively testable and reproducible—repeated observations of the same phenomenon by different observers shall give the same data. Objectivity may here refer to what a number of subjects or judges observe, sometimes expressed as "coder reliability." Scriven (1972) has termed this intersubjective form of objectivity "quantitative" and the above-mentioned conception of free of bias "qualitative." He criticizes the quantitative conception of objectivity as the "fallacy of intersubjectivism" with a confusion of the qualitative and the quantitative conceptions of objectivity—the sheer number of observers reporting the same phenomenon is no guarantee of truth, the success of stage magicians being one of many possible counterexamples. One may add the extreme position of the main character in Ibsen's play *An Enemy of the People*: "The most dangerous enemy of truth and freedom is the compact majority . . . The minority is always right."

In contrast to a conception of objectivity as *arithmetic intersubjectivity*, with coder reliability as measured mechanically by correlation of independent observers, we may conceive of a *dialogical intersubjectivity*, where intersubjective testability involves a rational discourse and reciprocal critique among observers identifying and interpreting a phenomenon.

In principle qualitative interviews may approach objectivity in an arithmetic sense of intersubjectivity. Although a single interview can

hardly be replicated, different interviewers may, if following similar procedures, come up with closely similar interview findings. In a dialogical conception of intersubjectivity, the interview obtains a privileged position—it consists of a conversation and negotiation of meaning between the interviewer and his subject.

Objective may also mean reflecting the nature of the object investigated, letting the object speak, *adequate to the object* investigated, expressing the real nature of the object studied. The understanding of objectivity as adequate to the object comes to rest on a theoretical understanding of the object investigated. Again the interview may in principle be objective. With the object of the interview understood as being within a linguistically constituted and interpersonally negotiated social world, the qualitative research interview here becomes more objective than the methods of the natural sciences, which were developed for a nonhuman object domain.

The objectivity of the interview method can be discussed further with respect to the many meanings of objectivity. In the present context it shall merely be concluded that the qualitative research interview cannot be generally characterized as an unequivocally objective or subjective method. Rather, the many different meanings of objectivity and the different forms of interview research need to be addressed specifically.

The issue of the objectivity of the interview method is not a mere question of conceptual clarification; it is linked to a pervasive dichotomy of objectivism and subjectivism in Western thought. Bernstein describes in *Beyond Objectivism and Relativism* (1983) *objectivism* as the basic conviction that there exists some permanent, ahistorical matrix or framework to which we can ultimately appeal in determining the nature of knowledge, truth, reality, and goodness. A realist version of objectivism implies that an objective reality exists independently of the observer and that only one correct view can be taken of it. The counterposition of *relativism* involves a view that all concepts of knowledge, truth, reality, and goodness are relative to a specific theoretical framework, a form of life or culture. In an attempt to go beyond the polarity of an objectivist realism and an "anything goes" relativism, Bernstein follows a hermeneutical tradition arguing for a dialogal conception of truth, where true knowledge is sought through a rational argument by participants in a discourse. And the medium of a discourse is language, which is neither objective or universal, nor subjective or individual, but intersubjective.

3. The Interview Results Cannot Be Trusted; They Are Biased

The statements of interviewed persons are sometimes dismissed as not trustworthy. A polemical reply to this statement could be something like: "If you cannot trust the results of an interview, how can you trust the results of our conversation?" And following this line of argumentation one ends in philosophical skepticism, as expressed in the liar's paradox—one man from Crete says all men from Crete are liars.

A more productive counterquestion pursuing a practical skepticism would be: "Who cannot be trusted—and in what sense?" A common form of question—"How do you know if your informant is telling the truth?"—has been analyzed by Dean and Whyte (1969). They differentiate the many meanings of the question, as to whether the statement refers to subjects' experiences and dreams or to almost objective observations, e.g. eyewitness reports; and they suggest various checks for ascertaining the trustworthiness of different types of statements.

The lack of trust may refer to deliberate deception, or to unwitting bias. Deception by subjects is known as cheating in tests and lying in anamnestic interviews; and various checks are usually built into these procedures. The possibility of deliberate deception in research interviews can be checked with careful interviewing techniques, even though deception is less probable here than in test situations where subjects have more at stake. Deliberate deception on the part of the researcher is in all likelihood rare but cannot be excluded. Scientific fraud is a general, non–method specific issue; it may also occur in apparently well-controlled intelligence testing and natural science experimentation.

Unintentional bias, by both subjects and researchers, is in all likelihood a more pervasive problem. The studies of Orne (1962) and Rosenthal (1966) have demonstrated how the expectancies of the experimental subjects and researchers may unintentionally influence the results of the experiments. Corresponding to these well-documented biases of experimental research, similar biases may be expected to operate in interview research. Whereas the interview opens for investigation the existence and influence of the subjects' expectations of the interview, the influences of the interviewer's expectations are more difficult to control. One may expect an interviewers' bias—where the interviewers' hypotheses bias their questions and

their interpretations of the answers. With interview procedures being little standardized, and the interpersonal interaction in the interview having a decisive impact on the results, the potential influence of interviewer bias—in the form of the researcher's opinions and prejudices influencing the results—deserves careful attention.

Bias in research cannot be completely avoided, but counteracted by carefully checking for effects of bias in subjects and researchers. Regarding the latter, efforts by the researcher to formulate explicitly and reflect upon his/her own presuppositions and prejudices will be one step towards counteracting their unwitting influence on the research findings. In the following three sections researcher bias will be discussed more specifically in relation to leading questions, the issue of subjective interpretations, and the person dependency of interview findings.

4. The Interview Findings Are Not Reliable; They Rest upon Leading Questions

This may be the most frequent of the stereotyped responses to the interview, often formulated as: "Cannot the interview results be due to leading questions?" Again a liar's paradox is involved—an answer such as "Yes, this is a serious danger" may be due to the question leading to this answer. And a "No, this is seldom the case" may demonstrate that leading questions are not that powerful.

It is a well-documented finding that even a slight rewording of a question in a questionnaire or duing the interrogation of eyewitnesses may influence the answer. When results of public opinion polls are published, the proponents of a political party receiving low support are quick to find biases in the questions. In one experiment on witness reliability, subjects saw the same film of two cars coliding and were then asked about their speed. The average speed estimate to the question "About how fast were the cars going when they smashed into each other?" was 41 mph. Subjects seeing the same film, but with "smashed" into replaced by "contacted" in the question, gave an average speed estimate of 32 mph (Loftus & Palmer, 1974).

While the wording of a question may inadvertently shape the content of an answer, leading questions are also used deliberately by—for example—for example lawyers and reporters to obtain information they suspect is being withheld. And a psychologist investigating taboo areas may deliberately put the burden of denial upon the subject, as by the question "When did you last beat your wife?" The technique is described in Polonius's lesson on the interview method:

"Your bait of falsehood take this carp of truth; by indirections find directions out" (*Hamlet*, act 2, sc. 1). In Rorschach testing, leading questions are used when "testing the limits" for specific forms of perceiving. And in Piaget's interviews with children, questions leading in wrong directions were used to test the strength of the child's concept of, for example, reversibility. Police officers and lawyers may systematically apply leading questions to test the consistency and realibility of a person's statements, a technique also demonstrated in Hamlet's interview with Polonius (act 3, sc. 2).

Leading questions are necessary parts of many questioning procedures; their use depends upon the topic and purpose of the investigation, as well as the subjects. While politicians are well experienced in warding off leading questions from reporters, leading questions to small children who are easily suggestible may invalidate the findings. The qualitative research interview is particularly well suited for using leading questions for checking the reliability of the interviewees' answers. Thus, contrary to popular opinion, leading questions do not have to reduce the reliability of interviews, but may enhance it; rather than being used too much, deliberate leading questions are today probably too little applied in research interviews.

While the technical issue of leading questions in interviews has been rather overemphasized, the leading effects of the research questions of a project have received less attention. These orienting questions of a project determine what kind of answers may be obtained. The task is, again, not to avoid leading research questions, but to recognize the primacy of the question and attempt to make the orienting questions explicit, thereby providing the reader with a possibility of evaluating their influence upon the research findings and assessing the validity of the findings.

That the issue of leading questions has received so much attention may be due to a naive empiricism. There may be a belief in a neutral observational access to an objective social world, independent of the investigator, implying that interviewers collect verbal responses like botanists collect plants in nature. Within an alternative view, the interview is a conversation where the data arise in an interpersonal relationship, coauthored and coproduced by the interviewer. The decisive issue then is not whether to lead or not to lead, but *where* the interview questions lead, whether they lead in important directions, yielding new and worthwhile knowledge.

5. The Interpretations of Interviews Are Not Intersubjective: Different Interpreters Find Different Meanings

Different readers read different meanings in the same interview; the results are entirely subjective and dependent upon the interpreters, who find only the meanings they expected to find, and the interview is therefore not an intersubjective, scientific method. Different interpretations of the same verbatim interview texts definitely occur, though probably less often than is commonly believed. In the daily practice of interview research there are rather too few than too many interpretations.

We may here distinguish between a biased and a perspectival subjectivity by differences of interpretation. A *biased subjectivity* simply means unprofessional work, readers only noticing evidence supporting their own opinions, selectively interpreting and reporting statements justifying their own conclusions, overlooking any counterevidence. A *perspectival subjectivity* appears when readers adapting different perspectives and posing different questions to the same text come out with different interpretations of the meaning. A subjectivity in this sense of multiple perspectival interpretations is one of the specific strengths of interview research.

There is sometimes a demand for objectivity in the sense that a statement has only one correct and objective meaning, and the task of interpretation is to find this one and only literal meaning. Contrary to this demand for unequivocality, a hermeneutic mode of understanding allows for a legitimate plurality of interpretations.

When different interpretations appear arbitrary, this may be because the questions asked to a text are not explicitly stated. The meaning of a literary text thus will differ when read with respect to what the author originally meant to express, and when read with respect to what the text says of relevance to our contemporary human condition. When readers' different perspectives on a text are made explicit, the different interpretations should also become comprehensible. The main problem of current interview analysis is not the variety of interpretations but the lack of clarification of the research questions asked to a text. With an explication of the perspectives adopted towards an interview text and a specification of the researchers' questions to an interview passage, several interpretations of the same text will not be a weakness but a richness and a strength of interview research.

The relation between questions to an answers from a text are illustrated by a statement from an interview with a high-school pupil on grading: "Grades are often unjust, because they very often—very often—are only a measure of how much you talk, and how much you agree with the teacher's opinion."

Read *experientially*, the meaning of this statement appears clear: the pupil experiences grades as unfair and a result of how much one talks and agrees with the teacher. Read *veridically*, the pupil's statement puts forth a hypothesis about a causal connection between how much one speaks and what grades one gets, a hypothesis which received some indirect support by triangulation and correlations (Kvale, 1989). Read *symptomatically*, the statement may be a possible rationalization: the pupil justifies his own low grades by pointing to unfair grading practices. And read *consequentially*, the pupil's hypothesis may, even if wrong, still be the basis of the pupil's behavior toward teachers and thus be real in its consequences. The four interpretations presented here are not subjective or contradictory but are simply different answers to different questions and involve different forms of verification.

In other instances there may be entirely different answers to the same question, such as "Why did van Gogh cut off his ear?," discussed by Runyan (1981) in relation to the problem of alternative explanations in psychobiography. Rather than to give up in the face of a dozen explanations provided in the literature for this single act, Runyan shows how it is possible to concretely evaluate the plausibility of the different explanations on the basis of their empirical support and logical inferences. In general, the more alternative interpretations have been put forth and refuted, the stronger the remaining interpretations are.

It should be noted that the interpretation of interviews need not be a commonsense impressionistic analysis but may draw upon methods developed in the humanities, as textual and linguistic analysis and narrative analysis (see Jensen, 1989; Mishler, 1986). If one does not conceive of the social world as reducible to a mathematically ordered universe of isolated and quantifiable variables, but as constituted by language, then linguistic approaches are essential to the objects investigated. And with a linguistically constituted social world containing a multiplicity of meanings, different interpretations of meaning are not necessarily haphazardly subjective, but objective in the sense of reflecting the nature of the objects investigated.

6. The Interview Is Not a Formalized Method; It Is Too Person-Dependent

There exists a common worry that different interviewers will come up with different results. The interviews are then not intersubjectively reproducible and thus do not provide reliable, objective data. It is correct that interviews by different interviewers using the same interview guide may vary. This may be due to the different sensitivity of the interviewers concerning personal interaction as well as to their ear for and knowledge of the interview topics.

A scientific method is sometimes conceived of as a standard procedure of fixed steps, publicly descriptive, which can be followed, in principle, by all competent researchers. The qualitative research interview, also termed an open, unstructured, or unstandardized interview, does not live up to such demands of a formalized scientific procedure. The research interview is flexible, context-sensitive, and dependent on the personal interaction of the interviewer and interviewee. According to the perspective taken, the absence of standardization in the interview is respectively a vice or a virtue of qualitative research.

For some purposes, as with comparisons of groups, it may be desirable to attempt to standardize the sensitivities of the interviewers. with most uses of qualitative interviews it is, however, desirable to employ the varying abilities and sensitivities of the interviewers to obtain different nuances and depths of the interview topic.

And rather than attempt to eliminate the personal interaction of interviewer and interviewee, we may take a lead from therapeutic interviews and regard the person of the interviewer as the primary methodological tool, with the relevant data constituted by the unique interaction created by the interviewer and interviewee (Sullivan, 1954). The focus on the interviewer as an instrument puts strong demands on the empathy and competency of the interviewer. Salner (1989) argues that when one gives up the idea of a detached, nonintervening researcher, who the researcher is as a human being greatly affects the outcome of the research. Traditionally the competencies of a human-science researcher include knowledge of methods; Salner adds knowledge of epistemology, analysis of everyday language, attention to the ethical dimension of social research, and also an aesthetic sensitivity.

7. Qualitative Interviews Do Not Involve Scientific Hypothesis Testing; They Are Only Explorative

Qualitative studies may be accepted as relevant in the first exploratory phases of research, but in a scientific investigation the preparatory qualitative steps should lead to more precise hypotheses and theory, which can be experimentally tested.

Contrary to this standard objection from social scientists, exploratory, descriptive studies may themselves be an important part of science. Descriptive studies of a discipline's subject matter are essential in fields as diverse as geography, zoology, anatomy, and linguistics. The descriptions are of importance in their own right; they may also be categorized, systemized, and in some cases be subject to causal explanation. It does not make sense, however, to consider Brahe's planetary observations and Kepler's computation of their trajectories as less scientific than Newton's subsequent application of the law of gravity to the planets's trajectories.

To obtain precise, nuanced, and rich descriptions is an important aim of qualitative research. The descriptions may then serve to work out the intrinsic structures of the described phenomena and to develop theoretical concepts and practical guidelines for the area. The descriptions may be at a low level of abstraction, as by the—too common—mere reproduction of interview statements. The descriptions may also be more conceptualized and systematic, involving interpretations and categorizations, with no strict line of demarcation between meaningful description and interpretation of meaning.

Experimental testing of hypotheses is no necessary criterion or goal for social research. The nuanced descriptions of the phenomena studied have intrinsic value and constitute one of the strengths of the qualitative research interview. Hypothesis testing is not a necessary part of interview research, but it may take place. This may be on a general design level, such as testing hypotheses of different groups having different attitudes toward a phenomenon. And the single interview may be a process of continual hypothesis testing—the interviewers's questions being designed to test a hypothesis, with an interplay of counterquestions, leading questions, probing questions, and so forth.

Qualitative research seldom follows a linear route from hypothesis formulation to data collection, data analysis, and theory construction. There is rather a continual back-and-forth process between observation and interaction, description and interpretation, concep-

tualizing and theorizing. Particularly in the ground-theory approach (Strauss, 1987), there is an interplay between discovery and verification, between data collection, interpretation, and theorizing, with a continual formulation of new hypotheses and reinterpretation of old data.

8. The Interview Is Not Quantitative Only Qualitative

The qualititative research is sometimes dismissed as unscientific, because it does not result in quantitative data; quantitative methods are considered the sole scientific approach. The degree to which observations are quantified is regarded as an index of the maturity of a science.

One of the most persistent requirements in modern social science has been that scientific knowledge should be quantitative. Quantification is often considered the very criterion of science, when not taken as self-evident, quantification is legitimated by referring to the natural sciences. The qualitative descriptions of the interactions of animals with their habitat by natural scientists as Darwin and Lorenz are then somehow overlooked. While quantification is an important tool in the natural sciences, large areas of geology, biology, and zoology involve qualitative descriptions and interpretations.

Mathematization of the social sciences is sometimes legitimated by pointing to the most advanced of the natural sciences, physics. The conception of physics in the social sciences has seldom been based on empirical observations of physicists' research; more often, the evidence has come from positivist philosophers' idealized and outdated representations of physics, resulting in the two worlds of "the physics of the physicists and the physics of the psychologists" (Brandt, 1973). In recent analyses of the practice of the natural sciences, for example by Hesse (see Bernstein, 1983), any sharp bifurcation of the human and the natural sciences breaks down. Thus, apart from the basic question of why the social sciences should try to imitate the natural sciences, a brief look at the actual practice of the natural sciences erodes any automatic outlawing of qualitative research as unscientific.

Criticizing positivism and a quantitative hegemony in the social sciences is today sometimes dismissed as attacking a man of straw. The quantitative man may be of straw in some disciplines, whereas at the congress of the International Union of Scientific Psychology in 1984, the presidential address by Klix from the former East Germany

advocated the development of psychology as a natural science in accordance with the principle evolved by Galilei: measure what is measurable, and make measurable what is not.

The issue of qualitative versus quantitative methods has been a heated topic in the social sciences for some time; attempts at bridging the gap (Lazarsfeld, 1944), and arguments that it is a pseudo-issue (e.g., Reichardt & Cook, 1979; Tschudi, 1989) have little impact. And the title of one article appears somewhat premature: "Closing Down the Conversation: The End of the Quantitatve-Qualitative Debate Among Educational Researchers" (Smith & Heshusius, 1986). Below, some conceptual and practical problems with strict qualitative-quantitative bifurcation will be pointed out, and some reasons why a restricted quantitative conception of science still remains will be suggested.

"Quality" refers to what kind, to the essential character of something. "Quantity" refers to how much, to how large, the amount of something. In the *Merriam-Webster Collegiate Dictionary* (1993) "qualitative analysis" is described as a chemical analysis designed to identify the components of a substance, and " quantitative analysis" as a chemical analysis designed to determine the amounts or proportions of the components of a substance. A qualitative analysis is here a presupposition for an quantitative analysis in chemistry. And in the actual practice of natural scientists both forms of analysis may be required; thus a recent job announcement for oil geologists listed as a qualification "qualitative and quantitative intepretation" of the petrophysical sediments.

In social science textbooks on methodology, the basis of quantification is discussed in relation to scaling, and four types are distinguished: nominal, ordinal, interval, and radio. Qualitative research leading to categorization—as occurrence/nonoccurrence of a phenomenon—involves scaling on a nominal level; and if the categories also include a ranking as more or less, this involves scaling at an ordinal level. Scaling at an equidistant interval level, as attempted by intelligence tests, and at a ratio level with an absolute zero, as by measurement of length, is, however, outside the realm of qualitative analysis. Conceptually there appears to be no ground to uphold a sharp dichotomy of qualitative and quantitative analysis, neither according to the dictionary definition of the terms nor according to the meaning of scaling in the social sciences.

In the practice of research, qualitative and quantitative approaches interact. In the "content analysis" tradition, the content and form

of qualitative material is quantified and made amenable to statistical treatment. In the more open approaches to interview texts, qualitative and quantitative analysis intermingle. And in sophisticated forms of interpretation, specialized techniques such as linguistic and statistical analysis may complement each other. The relative emphasis will depend on the type of phenomena investigated and the purpose of the investigation. For example, in media research of TV soap operas, both linguistic and narrative analyses of the plot and statistical analysis of viewer frequency and social distribution of the viewers may be required to understand and predict the impact of a TV series.

Not only the analysis phase but also the whole research process involves an interaction of qualitative and quantitative approaches (Mayring, 1983). An investigation starts with a qualitative analysis of the existing knowledge of a phenomenon and development of precise qualitative concepts and hypotheses for the specific study. The following phases of data collection and data analysis may be mainly qualitative or quantitative, often—as depicted above—with an interaction. The final phase of reporting the results is predominantly qualitative; even tables and correlation coefficients require a qualitative interpretation of their meaning.

There may, however, be a tendency to downplay the qualitative aspects of the research process in the published reports. Whether owing to external editorial requirements or to a self-censorship by the researcher, the "soft" qualitative aspects of the research process and the findings tend to be washed away, leaving only the "hard" quantified facts as fit for public presentation.

Despite the conceptual and practical interweaving of the qualitative and quantitative aspects of social science research, a dichotomized conception with a bias toward the quantitative side may still prevail. Most social science programs today offer mandatory courses in statistics, however, even voluntary courses in linguistics or narrative analysis are a rarity. Social science students acquire professional competency in analyzing the social world as mathematically constituted but remain amateurs in the face of a linguistically constituted social reality.

Establishing a legitimate status for qualitative research is, however, not done by merely pointing out the conceptual and practical interweaving of the qualitative and quantitative aspects of social research. A further step involves an interpretation of the meaning of the strong demands for quantification in current social sciences. There may be an *ontological* assumption of the social world as a basically

mathematically ordered universe, where everything exists only in number form; and, accordingly, the objective data of a science of the social world must be quantitative. Also there may be an *epistemological* demand that empirical findings within different theoretical approaches should be commensurable, and the research data should thus be quantitative in order to be comparable across theories. There may further be a pragmatic, *technical* interest in quantification, in that statistical techniques are powerful tools for handling large amounts of data. And the demand for quantification may stem from the anticipated audience of a research report—a dissertation committee, the scientific or the public community, or government agency. The use of numbers may be *rhetorical* here; when it comes to convincing an audience, the hard quantified facts may appear more trustworthy. Further, a closer look at the actual practices and contexts of quantification in the social sciences may show it less linked to the actual practices of the natural sciences than to the administrative procedures of *bureaucratic* institutions. Here strictly formalized procedures of categorization and quantification are ways of ordering and structuring the social world, with quantification as one means of legitimating administrative decisions. The positivist philosophy legitimating a corresponding conception of science appears here as a philosophic bureaucracy. The different reasons for demanding quantification of social science research—simplified here and presented as ontological, epistemological, technical, rhetorical, and bureaucratic—involve again different positions for qualitative research.

9. Interview Results Are Not Generalizable: There Are Too Few Subjects

A demand for generalization has loomed heavily in the social sciences. To the critical question "Why generalize?" the answer would probably be: in order to predict and control, or because science aims at universal knowledge. The quest for general laws of human behavior has been particularly strong in psychology, but with rather meager results emerging from the attempts to generalize the experimental laws of behavior to nonlaboratory contexts.

In qualitative interview research the number of subjects tends to be either too small or too large: too small to make statistical generalizations if that is intended, and too large to make penetrating interpretations. The number of subjects necessary depends upon the purpose of a study. If the purpose is to predict the outcome of a national election, a representative sample of about 1,000 persons is

normally required, and qualitative interviews are here out of bounds. If the purpose is to understand the world as experienced by one specific person, this one subject is sufficient.

To the common question "How many interview subjects do I need?" the answer is simply "Interview so many subjects that you find out what you need to know." If the purpose of the study is, for example, to explore, describe, and chart attitudes toward housework, new interviews are conducted to a point where further interviews yield little new knowledge, until the law of diminishing returns applies. If the research purpose is to test a hypothesis about different attitudes of men and women toward housework, the necessary sample for a Fisher test of a hypothesis of significant differences between the two groups at a .05 level may be as small as three interviewees in each group (Siegel, 1956).

To the question of how many subjects are needed, a paradoxical answer is that if the aim of a study is to obtain general knowledge, then focus on a few intensive case studies. The contribution of Freud's case studies to the general knowledge of pathology and personality is one case. Less attention has been given to the fact that a pioneer study of natural-science psychology, Ebbinghaus's experimental-statistical study of memory, was a case study with a single subject—himself. And in "A Case History in Scientific Method" (1959), Skinner argues against the use of large groups and statistics: they are excuses for researchers who do not work hard enough to find the specific reinforcement schedules controlling the behavior investigated. Although long discredited in social science research, the case study is recently being rehabilitated (e.g., Kazdin, 1981; Yin, 1989).

Taking into account the differences between the pioneering case studies mentioned above, two reasons for the obtainment of significant and generalizable knowledge from a few subjects may be suggested. Quantitatively, each of the studies contained an immense number of observations of single individuals. Qualitatively, the focus on single cases made it possible to investigate in detail the relation of a specific behavior to its context, to work out the logic of the relation between the individual and the situation. The specific kind of relation may vary from the reinforcement schedules of a learning experiment to the complex deeper meanings of therapeutic case studies. What is common is the working-out of consistent and recurrent patterns through intensive case studies.

Polkinghorne (in press) argues that social scientists should go beyond inductive generalizations based on formal statistical arguments

to include an assertional logic to support generalization claims. Assertive logic may have many forms; it is involved in the legal form of argumentation in court, and it may involve analytic generalizations based on theory. By specifying the supporting evidence and making the arguments explicit, the researcher can allow readers to judge the soundness of the generalization claim.

In conclusion, the reply to the standard objection that there are too few subjects to generalize is threefold. First, if you want to generalize, then in some cases a few intensive case studies may provide generalize knowledge. Second, if assertions of generalization are based upon a strong theory, a few subjects may in some cases be sufficient. And third, why generalize?

In recent approaches to the social sciences the quest for universal generalizations is being replaced by an emphasis upon the contextuality of knowledge. In system evaluation, knowledge is sought that can be applied to change the specific system evaluated (Scriven, 1986). In a dialectical social science, one attempts to surpass the common polarity between universal and singular knowledge by a concrete determination of the relationship between the general, particular, and singular aspects of a specific case (Dreier, 1980). In social constructivism, the focus is on the historical and social context of knowledge (Gergen, 1992); In a postmodern culture, the quest for universal knowledge is replaced by a focus on local knowledge, thus shifting from generalization to contextualization (Kvale, 1992).

10. The Interview Is Not a Valid Method: It Rests Upon Subjective Impressions

To the objection that qualitative interviews do not yield valid knowledge, the counterquestion is: "What kind of validity does the interview not live up to?"

In ordinary language, "validity" refers to the truth and correctness of a statement. A valid argument is well grounded, justifiable, strong, and convincing. A valid inference is correctly derived from its premises. In this ordinary-language meaning of validity, the research interview may in principle yield valid knowledge, depending upon the quality of the craftsmanship in interviewing and interpreting.

In social science textbooks one finds both a narrow and a broad definition of validity. The most common definition of validity is expressed by the question: Are we *measuring* what we think we are measuring? Qualitative interviews and interpretations are then invalid if they do not result in numbers. A broader conception of validity

pertains to whether a method *investigates* what it purports to investigate and to the extent to which observations reflect the phenomena of interest. Here the qualitative interview may in principle be a valid research method.

The standard definitions of validity in social science have been taken over from the criteria developed for psychometric tests and formalized by Cronbach and Meehl in the 1950s. This applies to the empirical criterion-based *concurrent* and *predictive* validity, which involves testing the scores of a test against some other test or observation that serves as a criterion. And it applies to the logical forms of validity, as *content* validity, which means how well the content of a test samples the intended subject matter, and *construct* validity, which pertains to the measurement of a theoretical construct. With the possible exception of content validity, qualitative research can hardly fulfill the traditional validity criteria taken over from psychometric research.

Cronbach (1971) has argued for a broader concept of construct validity that pertains to qualitative summaries as well as numerical scores. It is an open process—to validate is to investigate: ". . . validation is more than corroboration; it is a process for developing sounder interpretations of observations" (p. 433). According to Cronbach's open conception of validity, a research interview aiming at qualitative interpretations may in principle be a valid method. In current discussions of validity in social science, however, the fact that narrow-correspondence concepts of validity have long been under critique by psychometric theoreticians is often overlooked.

Within recent philosophy of science there has occurred an extension from the empiristic grounding of truth and validity upon correspondence with an objective reality. Two consequences of giving up correspondence theory of knowledge will be briefly outlined: a move from truth as a mirror of reality to defensible knowledge claims, with an extension of validation from correspondence validity to include also a communicative and pragmatic validity.

With an alternative concept of validity—going from correspondence with an objective reality to defensible knowledge claims—validity is ascertained by examining the sources of invalidity; and the stronger the attempts at falsification a proposition has survived, the more valid, the more trustworthy the knowledge. Validation becomes investigation, continually checking, questioning, and theoretically interpreting the findings. An investigative concept of validation is inherent in the grounded-theory approach of Glaser and

Strauss (1967). Validation is here not some final product control or verification; verification is built into the research process with continual checks of the credibility, plausibility, and trustworthiness of the findings. Miles and Huberman (1984) emphasize that there are no canons or infallible decision rules for establishing the validity of qualitative research. Their approach is to analyze the many sources of potential biases that may invalidate qualitative observations and interpretations, and to outline in detail different tactics for testing and confirming qualitative findings.

A move from knowledge as correspondence with an objective reality to knowledge as a social constitution of reality leads to a change of emphasis from observation of, to conversation and interaction with, the social world, which in turn involves a communicative and a pragmatic concept of validity (Kvale, 1989). *Communicative validity* implies testing the validity of knowledge claims in a dialogue. Valid knowledge emerges as conflicting knowledge claims are argued in a dialogue. A communicative approach to validation is found in disciplines such as psychoanalysis and system evaluation, and it raises the issues of the form of the dialogue—rational discourse versus an emotional encounter—and of who are the participants in the conversation: the subjects of the investigation, the community of scholars, or the general public. *Pragmatic validation* is verification in a literal sense, "to make true." Man must prove the truth; that is the reality and power of his thinking in practice. A pragmatic understanding of validation is found in action research, as well as in psychoanalysis and system evaluation. Pragmatic validation goes beyond the consensus ideal of a dialogue to involve action also; it focuses on whether the new interpretations lead to changes in behavior, and whether an investigation can be used to improve the conditions studied.

The understanding of validation suggested here—validation as investigation, with a communicative and a pragmatic approach to validity—does not solve the issue of the validity of the research interview, nor does it come up with a set of alternative criteria to the psychometric forms of validation. Rather, it suggests alternative context for understanding the validity of social research, with alternative questions to be asked about the truth of the results. The approach to validation as investigation involves going beyond a true/false dichotomy, and it conceives of validation as good craftsmanship in research. And by going beyond the correspondence theory of knowledge at the root of the older psychometric validity concepts to con-

ceive validation as communication with and action upon the social world, the research interview based on conversation and interaction attains a privileged position.

Section 1 of this essay concluded with a quote from Polkinghorne on a discursive conception of science, where scientific arguments have to convince the community that a new understanding is better. I will conclude this section on validity by a quote from Cronbach (1980). In an article where he argues that value-free standards for validity is a contradiction in terms, he concludes with a discursive concept of a validity resting upon public discussion:

> As with a scientific theory . . . , interpretation of a test is going to remain open and unsettled, the more so because of the role values play in action based on tests.
>
> The validity of an interpretation cannot be established by a research monograph or detailed manual. The aim for the report is to advance sensible discussion. . . . The institution of the polity are geared to weigh up reasonable, partly persuasive, disputed arguments; and they can be tolerant when we acknowledge uncertainties. The more we learn, and the franker we are with ourselves and our clientele, the more valid the use of tests will become. (p. 107)

CONCLUSION

The present focus on external critique is a double-edged sword: it may support an already strong trend of external legitimation in qualitative research, or it may be conducive to an internal improvement of the quality of qualitative research. Today a disproportionate amount of time and energy is spent on defense and legitimation of interview research. These high defense expenditures occur at the expense of an internal improvement of the quality of qualitative research, of enhancing its stringency and creativity. The purpose of the present discussion of the 10 standard objections has been to acquaint new qualitative researchers with some of the most predictable responses to their research. This knowledge may save the novice some of the time often spent on external defense, and leave resources for improvement according to internal criteria relevant for qualitative research. In the long run the scientific merits of qualitative research will not be established by arguments of legitimation but by contributions of significant new knowledge about a linguistically constituted social world.

Rather than being threats to qualitative research, the standard objections may serve to strengthen it by improving the research design

and by a clarification of the specific nature of qualitative research. Some of the standard objections may be due to lack of knowledge concerning internal quality criteria of qualitative research. Taking the standard objections seriously may contribute to diffuse some pointless controversies about qualitative methods and instigate a dialogue for a common ground on how to develop valid knowledge of the social world.

Three conclusions of the preceding discussion will be drawn here. First, the standard objections contain many global and ambiguous concepts—objective, valid, and so on. In order to clarify the research status of the interview, a first task is simply to start *defining* the concepts used in the standard objections. The meaning of the ambiguous terms may be interpreted, and the meanings employed in a specific research project should be defined as precisely as possible. Furthermore, it is necessary to clarify which of the objections to the qualitative research interview involve general problems of research, such as investigator bias, and what objections raised issues more specific to the interview, such as the impact of leading questions. Also the levels at which the objections are raised need to be specified; the question of leading questions may thus involve interview technique as well as the philosophical issue of a neutral access to an objective empirical world.

Second, not only is the content of the objections to qualitative research standardized, but so is the polarized form as *dichotomies*—objective versus subjective, quantitative versus qualitative and so on. The very form of the objections, or questions, is leading; they have an implicit presupposition of the nature of knowledge as dichotomized into true or false. Each part of the posited dichotomy may then serve as a tribal banner for competing groups; at the outset fueling a heated controversy, gradually replaced by an insight that the controversy may involve a pseudo-issue. The field is then abandoned and reoccupied by a new controversy under a different banner, but it retains the dichotomized form as well as several of the old themes and supporters on each side. There appears to exist a dichotomy of the decade in the social sciences: in the sixties, natural sciences versus humanities; in the seventies, quantitative versus qualitative, in eighties objectives versus subjective; and in nineties universal versus local knowledge. The way out of the dichotomized pseudo-issues would be to go beyond a dichotomized thinking in either/or categories by a description of and dialogue about the qualitative differences and nuances of the issues raised (e.g., Bernstein, 1983).

A third conclusion is the impetus to question *the nature of a social science* on the basis of the objections commonly raised to the qualitative research interview. Is the dependence upon the person of the interviewer, on his or her sensitivity and competence, thus a vice or a virtue of social research? And, more generally, is it fruitful to conceive of social research as investigating an objective social reality independent of the language and the constituting concepts of the investigator? Much current discussion on qualitative methods has remained on an atheoretical method level, without questioning the relation of a method to the nature of the objects investigated, which involves a theoretical conception of the social world. Perhaps one main contribution of the current interest in qualitative research will be an impetus to rethink the nature of the social world studied by the social sciences.

The present discussion started with 10 standard objections to interview research. As an impetus to rethink the nature of the research interview, 10 alternative challenges will be put forth. Current interview research is *individualistic*: it focuses on the individual and neglects its embeddedness within networks of social relations. Interview research is *isolationist:* it focuses on individual experiences decontextualized from their culture and history. Interview research is *intellectualistic:* it neglects the emotional aspects of knowledge, overlooking empathy as a mode of knowing. Interview research is *idealistic:* it ignores the situatedness of human experience and behavior in a social and material world. Interview research is *immobile:* its subjects sit and talk, they do not move or act in the world. Interview research is *verbalizing:* it makes a fetish of verbal transcripts, overlooking their rootedness in a bodily situated personal interaction. Interview research is *alinguistic:* although the medium is language, linguistic methods for analyzing language, as well as philosophical analysis of the social world as linguistically constituted, are ignored. Interview research is *atheoretical:* it rests upon interview statements, seldom draws on existing research and theory of the field. Interview research is *atheoretical:* published reports are often a boring empiristic collection of interview quotes, rather than a well-told convincing story. Finally, current interview research may be *insignificant,* producing trivial knowledge; the main challenge to the development of qualitative interview research is to produce new knowledge worth knowing.

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