Chapter 3

THE QUANTITATIVE QUALITATIVE DOGMA, THE INCOMPATIBILITY THESIS, AND THE PRAGMATIC ALTERNATIVE

Combining quantitative and qualitative methods has become commonplace in educational research. Indeed, such a combination is not only permitted, but often encouraged. But this methodological innovation was not without its detractors. Advocates of what I call the "incompatibility thesis" criticized it on the grounds that the alleged compatibility between quantitative and qualitative methods is merely apparent; the idea that quantitative and qualitative methods may be combined ignores deep epistemological difficulties and ultimately rests on the epistemologically suspect criterion of "what works" (e.g., Guba, 1987; Smith 1983a, 1983b; Smith & Heshusius, 1986).

The incompatibility thesis permits *disjunctive* combinations of quantitative and qualitative methods within the same study, in which different methods are applied to different questions but in which the study as a whole presupposes different epistemological paradigms. The incompatibility thesis bars *conjunctive* combinations of methods, in which different methods may be applied to the same questions and in which the study as a whole presupposes the same epistemological paradigm.

This chapter advances the alternative "compatibility thesis," the view that a thoroughgoing integration of quantitative and qualitative methods is advisable and involves no epistemological incoherence. It has four major sections.

I begin by briefly illustrating how, in practice, differences between quantitative and qualitative data, design, analysis, and interpretation can be accounted for largely in terms of differences in research interests and judgments about how best to pursue them. That differences can be accounted for in these ways should prompt suspicion about the need to posit different and incompatible epistemological paradigms to account for the use of different research methods.

This initial suspicion sets the stage for the second section. Incompatibilists maintain that problems are largely hidden at the level of methods, and become

clearly visible only at the level of epistemological paradigms. In particular, they advance an argument along the following lines: (1) Positivist and interpretivist paradigms underlie quantitative and qualitative methods, respectively; (2) the two kinds of paradigms are incompatible; therefore, (3) the two kinds of methods are incompatible. I argue that a principle implicit in the incompatibilist's argument— that abstract paradigms should determine research methods in a one-way fashion—is untenable and advance an alternative, pragmatic view: that paradigms must demonstrate their worth in terms of how they inform, *and are informed by*, research methods that are successfully employed. Given such a two-way relationship between research methods and epistemological paradigms, they must be evaluated in terms of how well they can be brought into equillibrium.

In the third section, I characterize and discuss five general standards for evaluating educational research (adapted from Howe & Eisenhart, 1990). These standards are specifically formulated to be consistent with the compatibility thesis, for they apply indifferently to both quantitative and qualitative research.

Finally, I consider several criticisms that are commonly advanced against the pragmatic philosophical stance that underlies compatibilism. Specifically, pragmatism rejects epistemological imperatives that cannot be squared with the actual practices employed in gaining empirical knowledge. As a consequence, pragmatism is often accused of holding truth hostage to "what works" and of therefore being committed to relativism and irrationalism. I suggest that the threat of relativism and irrationalism purportedly posed by pragmatism is overdrawn, if not based on an outright misrepresentation of the pragmatic view, and that the alternative views of truth associated with the incompatibility thesis have serious problems of their own.

The Incompatibility Thesis and Research Practice

Consider Phillip Jackson's remarks regarding his pioneering "qualitative" educational research:

> Classroom life, in my judgment, is too complex an affair to be viewed or talked about from any single perspective. Accordingly, as we try to grasp the meaning of what school is like for students and teachers we must not hesitate to use all the ways of knowing at our disposal. This means we must read, and look, and listen, and count things, and talk to people, and even muse introspectively over the memories of our own childhood. (1968, pp. vii- viii)

Now, consider Michael Huberman's remarks:

> [In] any study, there are only bits and pieces that can be legitimated on "scientific" grounds. The bulk comes from common sense, from prior experience, from the logic inherent in the problem definition or the problem space. Take the review of the literature, the conceptual model, the key variables, the measures, and so forth, and you have perhaps 20% of what is really going into your study.... And if you look hard at that 20%, if for example, you go back to the prior studies from which you derived many assumptions and

> perhaps some measures, you will find that they, too, are 20% topsoil and 80% landfill. (Huberman, 1987, p. 12)

Huberman's remarks came some twenty years later than Jackson's, after the quantitative/qualitative debate was in full swing. Despite the growing concerns about the incompatibility of quantitative and qualitative research methods, Jackson and Huberman make a quite similar point: the practice of educational research is pervasively and unavoidably dependent on background knowledge and the exercise of practical judgment.

In this section, I apply this observation to three basic components of Research: data, design and analysis, and interpretation of results. My primary aims are to show that the quantitative/qualitative distinction is not pivotal within a larger scheme of background knowledge and practical research purposes, and that the incompatibility thesis does not accurately characterize the real problems that confront educational researchers as they carry out their investigations.

Data

When applied to data, the quantitative/qualitative distinction is ambiguous between its traditional meaning in measurement and the "intentionalist" meaning it has taken on because of its association with "qualitative" research methods. In terms of the measurement meaning, data are qualitative if they fit a categorical measurement scale; data are quantitative if they fit an ordinal, interval, or ratio scale. In terms of the intentionalist meaning, data are qualitative if they incorporate norms, values, beliefs, and intentions that go with the "insider's perspective;" data are quantitative (and here some extrapolation is required) if they exclude norms, values, beliefs, and intentions that go with the insider's perspective.

Combining these two meanings of qualitative and quantitative data yields four types (or potential types) of data, examples of which are provided in Table 3.1. The question to be asked of the incompatibility thesis is: In what way(s) are these types of data incompatible with one another?

Incompatibilists would be hard pressed to show that the problem exists between the rows (i.e., with the measurement meaning). This would entail that researchers cannot mix variables that are on different measurement scales, which is absurd. Perhaps the incompatibility is to be found between the columns (i.e., with the intentionalist meaning). But this sort of incompatibility seems equally difficult to defend, for the implication would be that it is illicit to mix demographic variables such as income with behavioral variables such as moral reasoning skills. This would condemn much, if not most, educational research as incoherent.

The remaining option for the incompatibilist is to bar one or more of the cells (i.e., to locate incompatibility in certain combinations of the measurement and intentionalist meanings). The most suspect cell is III, in which moral reasoning