Research in Physical Education and Sport: Exploring Alternative Visions

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Chapter 1

The Paradigms Debate: An Extended Review and a Celebration of Difference

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During recent years in a range of academic disciplines within the natural and social sciences there has been an intense debate going on regarding the nature of research. This debate has led to major upheavals in how we conceptualize the research process, ourselves as researchers, and how we come to understand the world around us. As a consequence, Phillips (1987) suggests that during the last three decades the epistemological status of science has been called into question. Indeed, several influential books on the philosophy of science have included the word revolution in their titles, and Lincoln (1985, 1989a and 1990) believes that a paradigm revolution is taking place in the academic disciplines ranging from business administration and organizational theory to occupational therapy. Using a more aggressive metaphor Gage (1989) talks of the paradigm wars that raged in the world of educational research during the 1980s and reached their sanguinary climax in 1989. There appears to be much unrest within the world of research in general and the social sciences in particular. According to Bernstein (1976):

the initial impression that one has in reading through the literature in and about the social disciplines during the last decade or so is that of sheer chaos. Everything appears to be 'up for grabs'. There is little of consensus — except by members of the same school or sub-school — about what are the well-established results, the proper research procedures, the important results, the important problems, or even the most promising theoretical approaches to the study of society and politics. There are claims and counterclaims. (pp. xii)

Within this turbulent intellectual landscape the world of physical education (PE) has not gone untouched. Towards the latter part of the 1980s
signs of this debate began to manifest themselves with increasing frequency in a range of scholarly journals. We have been able to witness vociferous exchanges between advocates of particular ways of researching into the world of PE who have argued eloquently for the beauty and appropriateness of their views in relation to other contrasting visions. The net effect of these exchanges has led Hellison (1988) to suggest that "Winds of change are ruffling the study of teaching in physical education. New research paradigms are being advocated both in education and physical education -- the employment of alternative approaches to research -- are no longer confined to isolated pockets of "fringe" scholars." (pp. 84-6). Likewise, Bain and Jewett (1987) note how the historical dominance of the empirical paradigm in PE is being challenged by the interpretive and critical paradigms in such a way that the focus and methodology of research is changing.

For many of us who study PE these are exciting times in which alternative visions of research challenge each other as they contribute their own particular insights to the terrain of knowledge in this area. I, for one, welcome a multiplicity of visions and, rather than perceive intellectual conjunctures such as the present one as conjuncture of crisis, I take the current debate to be a sign of growing maturity, confidence and effervescence within the PE community. Indeed, I would be more likely to talk of crisis if the debate was not taking place. As Metzler (1981) comments in relation to PE pedagogy:

What was once a fairly small cadre of relatively like-minded scholars is growing larger and more diverse. Both are healthy trends. It is quite likely that the impending debates will result in methodological and epistemological splits in our ranks. That too is healthy, as long as we can look past those differences while working together for a shared agenda in research on teaching and teacher education, (p. 110)

Having indicated that a debate is taking place in PE and many other disciplines my next task is to attempt to provide some kind of framework for making sense of the debate and the contributions contained in this volume. This task is extremely difficult as there are many complex strands running through the debate and in choosing to focus upon some aspects others are necessarily ignored. As Smith (1989) comments "The terms used to acknowledge this discussion have become common currency: quantifiable versus qualitative, scientific versus naturalistic, empiricist versus interpretive, and so on. No matter which labels are selected, however, there is still a lack of clarity as to what is involved in this discussion." (p. 1).

In such a context, I need to signal that while, as a neophyte researcher, I am excited by the current debate I am also confused by it. Therefore, this introductory chapter needs to be seen as an expression of my own confusions in which I present a personalized view of the ways in which I have attempted to, and am still attempting to, make sense of what is going on.

Consequently, my introduction can only be partial and is replete with a range of distortions. For instance, while I discuss three particular views of research in this chapter I find two of them (the interpretive and the critical) more interesting and satisfying than the other (positivist) in terms of my own personal engagement in the research process. Also, since all the chapters in this book are located within the interpretive and critical paradigms I devote more time to discussing these in detail. Having said this, my intention is not to advocate one view over another but to highlight key issues within the current debate so that each viewpoint can be positioned relative to the others in such a way that the contribution of each to our understanding can be properly acknowledged. Furthermore, I want to emphasize that this is a way I see things and it should not be taken to be a widely agreed upon position. Others will tell the story in different ways.

In order to provide a provisional framework for understanding what I take the debate to be about I begin by considering the nature of paradigms and the manner in which they operate to shape the research process as a totality. Next, I outline the basic assumptions of three of the major paradigms that have impacted upon the world of PE in recent years. These are the positivist, interpretive, and the critical paradigms. In order to illustrate how the basic assumptions of each of these shape the work of researchers I provide brief details of the different ways that each conceptualizes the issue of validity within its boundaries. Having outlined some of the major differences I conclude that attempts to accommodate different paradigms are problematic and that they need to be seen as viable and valuable alternatives in their own right that should be judged accordingly using appropriate criteria.

The Nature of Paradigms

The individual research act does not take place in a vacuum but in the social context of "invisible colleges", that is, a community of scholars who share similar conceptions of proper questions, methods, techniques, and forms of explanation. Schulman (1986) has suggested that the term most frequently employed to describe such research communities, and the conceptions of problem and method they share, is paradigm. This term is most often associated with the work of Kuhn and his book The Structure of Scientific Revolutions which takes a historical view of scientific development and was first published in 1962. It is impossible to do justice to the issues raised by Kuhn and detailed discussions of his work are available elsewhere. For our purposes it needs to be recognized that there are various ways of defining what a paradigm is and Kuhn himself used the term in more than twenty different ways in his book (see Masterman, 1970). Bearing this in mind, Patton (1978) provides a useful working definition:
A paradigm is a world view, a general perspective, a way of breaking down the complexity of the real world. As such, paradigms are deeply embedded in the socialization of adherents and practitioners: paradigms tell us what is important, legitimate, and reasonable. Paradigms are also normative, telling the practitioner what to do without the necessity of long existential or epistemological consideration. But it is this aspect of paradigms that constitutes both their strength and weakness — their strength in that it makes action possible, their weakness in that the very reason for action is hidden in the unquestioned assumptions of the paradigm. (p. 203, my emphasis)

More recently Guba and Lincoln (1989) have argued that paradigms are basic belief systems that represent the most fundamental positions we are willing to take and which cannot be proven or disproven, 'If we could cite reasons why some particular paradigm should be preferred, then, those reasons would form an even more basic set of beliefs. At some level we must stop giving reasons and simply accept whatever we are as our basic belief set — our paradigm' (p. 80). The adoption of a paradigm for Lincoln (1990) literally permeates every act even tangentially associated with inquiry, such that any consideration even remotely attached to inquiry processes demands rethinking to bring decisions into line with the world view embodied in the paradigm itself" (p. 81). At a most fundamental level different paradigms provide particular sets of lenses for seeing the world and making sense of it in different ways. They act to shape how we think an act because for the most part we are not even aware that we are wearing any particular set of lenses.

As with any form of belief system, the values and assumptions individuals adopt regarding the nature of the research enterprise are a product of their life history during which a personal stock of recipe knowledge and system of relevancies is developed via the process of socialization. Therefore, to become a competent and accepted member of a given research community, the individual must not only learn the content of the field but also a particular way of seeing the world that eventually becomes not only unquestioned but unquestionable. For Popkewitz (1984) 'Learning the exemplars of a field of inquiry is also to learn how to see, think about and act towards the world. An individual is taught the appropriate expectations, demands and consistent attitudes and emotions that are involved in doing science' (p. 5). At the heart of this socialization process is the taking on of certain assumptions regarding questions of ontology and epistemology.

Ontological assumptions revolve around questions regarding the nature of existence, that is, the very nature of the subject matter of the research — in our case, the social world. As Burrell and Morgan (1979) point out, social scientists are faced with the basic ontological question: whether the 'reality' to be investigated is external to the individual — imposing itself on individual consciousness from without — or the product of individual consciousness; whether 'reality' is of an 'objective' nature, or the product of individual cognition; whether 'reality' is a given 'out there' in the world, or the product of one's mind. (p. 1)

The former may be classed as an external-realistic view while the latter is an internal-idealist position. Linked to issues of ontology are a second set of assumptions of an epistemological kind that refer to questions of knowing and the nature of knowledge.

These are assumptions about the grounds of knowledge — about how one might begin to understand the world and communicate this as knowledge to fellow human beings. These assumptions entail beliefs, for example, about the forms of knowledge that can be obtained, and how one can sort out what is regarded as 'true' from what is to be regarded as 'false'. Indeed, this dichotomy of 'true' and 'false' itself presupposes an epistemological stance. It is predicated upon a view of the nature of knowledge itself: whether, for example, it is possible to identify and communicate the nature of knowledge as being hard, real and can be transmitted in tangible form, or whether 'knowledge' is of a softer, more subjective, spiritual or even transcendental kind, based on experience and insight of a unique and essentially personal nature. The epistemological assumptions in these instances determine extreme positions on the issue of whether knowledge is something which can be acquired on the one hand, or something which has to be personally experienced on the other. (Ibid, p. 2)

The former may be classed as an objectivist view while the latter is a subjectivist epistemology. A third set of assumptions identified by Burrell and Morgan that are linked to ontological and epistemological issues, but conceptually separate from them, concerns human nature. Any form of research that involves people in a social context involves making assumptions of this kind and in particular about the relationship between people and their environment. Some might adopt an extreme view in which people are seen as responding in a mechanistic and deterministic way to the situations that confront them in their external world. Such a stance would take people and their experiences to be products of the environment in which they are conditioned by their own circumstances. This is a deterministic view. An opposing view would posit that people are much more in control of their lives and are actively involved in creating their environment. In this voluntaristic view people are the controllers and not the controlled and there is a sense of agency, autonomy and 'free will'. Clearly, these are extreme views of human nature and most researchers would probably locate their assumptions somewhere
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on a continuum between the two poles that would allow for the influence of both situational and voluntary factors to be considered in relation to how people think and act. Nonetheless, assumptions regarding this relationship are constantly made.

The position taken with regard to the three sets of assumptions outlined here will have a bearing on how researchers set about gathering data in order to understand the social world. Some might adopt a nomothetic approach that emphasizes the importance of basing research upon systematic protocol and technique:

It is epitomized in the approach and methods employed in the natural sciences, which focus upon the process of testing hypotheses in accordance with the canons of scientific rigour. It is preoccupied with the construction of scientific tests and the use of quantitative techniques for the analysis of data. Surveys, questionnaire, personality tests and standardized research instruments of all kinds are prominent among the tools which compromise nomothetic methodology. (ibid, pp. 6–7)

In contrast, others may adopt an ideographic approach which is based on the view that to understand the social world we need to gain first-hand knowledge of the subject under investigation. Such an approach emphasizes the importance of getting close to one's subject and exploring its detailed background and life history:

The ideographic approach emphasizes the analysis of the subjective accounts which one generates by 'getting inside' situations and involving oneself in the everyday flow of life — the detailed analysis of the insights generated by such encounters with one's subject and the insights revealed in impressionistic accounts found in diaries, biographies and journalistic records. The ideographic method stresses the importance of letting one's subject unfold its nature and characteristics during the process of investigation. (ibid, p. 6)

In drawing attention to the kinds of assumptions that researchers make I have made no attempt to argue a case for any of them. My point is that all researchers make assumptions of some kind or other in relation to issues of ontology, epistemology, human nature and methodology and that these assumptions tend to cluster together and are given coherence within the frameworks of particular paradigms. What this means is that we cannot, and do not, enter the research process as empty vessels or as blank slates that data imprints itself upon. Essentially, ontological assumptions give rise to epistemological assumptions which have methodological implications for the choices made regarding particular techniques of data collection, the interpretation of these findings and the eventual ways they are written about in texts and presented orally at conferences (see Evans, chapter 9 in this volume; Lyons, chapter 10 in this volume; Sparks, 1989, 1991 and chapter 11 in this volume). At the most fundamental level this will mean that those operating with different sets of paradigmatic assumptions will see the world in a different way, go about investigating it in different ways and report their findings in different ways.

Essentially, as Morgan (1983) points out, any form of science is a process of engagement whereby scientists engage a subject of study by interacting with it through a particular frame of reference. Therefore, what is observed and discovered in the object, that is, its objectivity is as much a product of this interaction and the protocol and technique through which it is operationalized as it is of the object itself. Such a stance 'emphasizes the importance of understanding the possible modes of engagement' (p. 13). This form of understanding is crucial in terms of the paradigms debate since, according to Eals (1986), the researcher's basic assumptions concerning the nature of reality, truth, the physical and the social world infuses all aspects of the investigative process. Therefore, the often quoted advice that the 'problem' will determine both the approach and the methods of investigation is grossly misleading and is an example of a prevailing confusion between philosophical and technical issues (see Bryman, 1984; Sparks, 1989). The former concerns the appropriate foundations for the study of society and its manifestations whereas the latter is concerned with the appropriateness or superiority of the methods of research in relation to one another, for example, direct observation of events versus the survey.

This confusion has been exacerbated by the indiscriminate use of such terms as method, research methods, and methodology in the literature. In an attempt to clarify matters, Bulmer (1984) offers the following classifications: (a) general methodology (philosophical issues in my sense), which donates 'the systematic and logical study of the general principles guiding sociological investigation. . . . and . . . has clear and direct lines to the philosophy of social science'; (b) research strategy or research procedure, which refers to the way in which particular empirical studies are designed and carried out and, 'what notions about the task of sociological research are embodied in the approach used'; and (c) research techniques (technical issues in my terms), which refer to the 'specific manipulative and fact finding operations which are used to yield data about the social world', for example, questionnaire construction, observation schedules, interviews, participant observation techniques, and various forms of statistical analysis (pp. 4–5).

Bulmer suggests that the choice of research strategy and techniques is rarely independent of philosophical issues. However, in terms of the view that I have articulated so far, I would argue that they can never be independent but are inseparable in making sense of the research process within any given paradigm. According to Popkewitz (1984), methods are not simply technical skills that exist independently of the purpose and commitment of those who do the research; rather, techniques emerge from a theoretical position that reflects certain values, beliefs and dispositions
towards the social world. Hence, in terms of the meanings attached to any method and the interpretation of the data produced by them, it is not the problem that determines the method but rather a prior intellectual, emotional, and political commitment to a given philosophical position that orientates the researcher to conceive of, and formulate, the problem within the context of these commitments.

In identifying what is crucial and what is not crucial to the paradigms debate Smith (1990a) points out that there is little to be gained by devoting our attention to alternative research techniques and their specific applications and that such a focus is unproductive. That is, the paradigms debate is not simply about the techniques of research although it does have implications for how techniques are chosen and used. For example, those who adhere to a realist ontology and an objectivist epistemology are likely to prefer techniques that differ from those who hold to an idealist ontology and a subjectivist epistemology. Therefore, the real issues of the paradigms debate do not revolve around technical issues because, as both Locke (1986) and Schempp (1988) have pointed out, the techniques of research are flexible and no method of data collection is inherently linked to any one world view. As a consequence, techniques of data gathering do not constitute the uniqueness of a paradigm. In relation to this Erickson (1986) provides a good example in his discussion of a data collection technique known as 'continuous narrative description' that has been used in social and behavioural research since the latter part of the nineteenth century and involves a play-by-play account of what an observer sees observed people doing. He emphasizes that the use of this technique will vary according to the paradigmatic assumptions held by the researcher:

The technique of continuous narrative description can be used by researchers with a positivist and behaviourist orientation that deliberately excludes from research interest the immediate meanings of actions from the actor's point of view. Continuous narrative description can also be used by researchers with a non-positivist, interpretive orientation, in which the immediate (often intuitive) meanings of action to the actors involved are of central interest. The presuppositions and conclusions of these two types of research are very different, and the content of the narrative description that is written differs as well. If two observers with different orientations were placed in the same spot to observe what was ostensibly the 'same' behaviour performed by the 'same' individuals, the observers would write substantively differing accounts of what had happened, choosing very different kinds of verbs, nouns, adverbs and adjectives to characterize the actions that were described. (p. 120)

Clearly, the uniqueness of a paradigm comes in the particular perspectives of those who use the techniques. Therefore, the crucial features of the paradigms debate according to Smith (1990a) revolve around the complex webs of background knowledge and the philosophical commitments that researchers bring with them, either explicitly or implicitly to their researches. In relation to this Hawkins (1987) notes how such assumptions are rarely consciously and deliberately adopted. They tend to be taken for granted, intuitively acquired, almost inherited — like some intellectual gene from whatever popular culture happens to have fathered us' (p. 372). This is why an awareness of paradigmatic assumptions is crucial to the debate since they shape the ways that the world is seen. With this in mind I want to now provide portraits of the three of the paradigms that have influenced research within PE. However, before beginning this task I want to make the reader aware of some of the dangers associated with my approach.

First, there is a need to acknowledge the timely warning provided by Locke (1989) and Siedentop (1987 and 1989) regarding the dangers of trying to simplify paradigmatic differences via the use of caricatures and cartoons. Often, such an approach leads to fruitless disputes and professional animosities in which a few leading scholars are singled out as villains or heroes (there are rarely heroines in a male-dominated research world) as Griffin (1989) reminds us and the complexity of their views and the variety of the contributions they have made to the field of study is ignored. Furthermore, as Hawkins (1987) comments:

The temptation is that by labelling something, we think everyone will know what we are talking about. It would be nice if that were true. Unfortunately, many of the labels we use are associated, even in a scientific culture like ours, with various connotations that often misrepresent the position the labels are intended to designate. In these cases the labels become polemical ghosts, intellectual punchbags erected to serve as sparring partners for the opponent. (p. 370)

In what is to follow I have no desire or interest in cartooning the beliefs and works of individual scholars. However, I do admit that in order to highlight key issues within the paradigms debate, I present ideal-type characterizations of paradigms that have all the faults inherent in such forms of representation. For example, as with all stereotypes and generalizations they may not be true in all cases. Furthermore, as with any ideal-type or caricature, only the central tendencies and dimensions of each paradigm are revealed, and this strategy invariably glosses over certain distinctions within a paradigm and does not give full weight to their internal disagreements about procedures and perspectives. Paradigms are not homogeneous or monolithic and there are many contrasting traditions contained within any one particular paradigm, that is, there is internal diversity within paradigms. For example, if we take just the interpretive paradigm we find Jacob (1987 and 1988) drawing upon work in North America talking of six traditions that range from human ethology.
to cognitive anthropology while Atkinson et al (1988) review seven approaches that have been used in British educational research that range from symbolic interactionism to neo-Marxist ethnography, and feminism. To complicate matters even more there are also considerable internal disagreements regarding whose work is representative and about what constitutes the main features of a given tradition within a particular paradigm.

In such a confused situation caricatures can provide a service in that they draw on central and recognizable features. Indeed, if the caricature did not bear some resemblance to the subject it claims to represent then it would not be able to perform its function and be recognizable. In this context we need to be aware that while it would be wrong to suggest that each paradigm contains homogenous schools of thought, it would also be an error not to recognize that certain intraparadigmatic similarities exist. For example, Giddens (1976) claims that the schools of thought contained within the interpretive paradigm are closely associated with philosophical idealism while the positivistic position is closely associated with philosophical realism. Therefore, in the light of the dangers and limitations that I have signalled the manner in which I proceed to draw on the concept of paradigms as a disciplinary matrix of assumptions needs to be seen as a heuristic device that polarizes world views for the sake of discussion, without, I hope, denying the complexities of the research approaches involved in any of them. Like Etzioni (1990a) I am fully aware that the complexities of the research process cannot be neatly separated and captured in a few categories or dimensions but as he argues ‘you also know, as I do, that analysis requires separation, even if the parts are part fiction... I address each aspect separately because language itself is a diachronic, not a synchronic, medium. I bracket in order to illuminate and write in parts because I write rather than paint’ (p. 88).

The Positivist Paradigm

According to Jacob (1989) ‘Until recently, educational research has drawn primarily from psychological traditions that operate within a positivistic approach’ (p. 16). Some of the terms associated with this approach include empiricist, empirical-analytical, behaviourist, radical behaviourist and quantitative. Not surprisingly, Giddens (1974) notes that, while positivism as a philosophy has a long and illustrious history, this term has acquired a variety of meanings. He suggests:

Positivism in philosophy, in some sense revolves around the contention, or implicit assumption, that the notions and statements of science constitute a framework by reference to which the nature of any form of knowledge may be determined. Positivism in sociology may be broadly represented as depending upon the assertion that the concepts and methods employed by the natural sciences can be applied to form a ‘science of man’, or a ‘natural science of society’. (p. 3)

This view was forcefully articulated by Auguste Comte in France during the early part of the nineteenth century and his advocacy of this view forms part of a tradition that has had a substantial impact on how we conceptualize and seek to conduct research on social phenomena today. According to Smith (1989):

By the middle to late nineteenth century, an approach to the study of social life modelled on the natural sciences was in the process of being firmly established. The desire to master social life expressed itself in a concern for the discovery of social laws; in the development of a methodology that stressed the observation of experiences, experiments, and comparisons; in the separation of facts from values; and in the separation of the cognizing subject from the object of cognition. (p. 45)

In view of the historical importance of positivism and the tremendous gains in knowledge it fostered within the natural sciences during the last century it is understandable that it became the dominant paradigm for research within PE as this discipline gradually emerged. This dominance is evident more in some countries than others and Crum (1986) has argued that with regard to sport pedagogy research the majority of work in North America has been carried out in what he calls a descriptive-explanatory framework. In relation to this, Harris (1983a, p. 83) notes how the study of PE has historically been rooted in the biological sciences, for instance with exercise physiology, biomechanics/kinesthesiology there are obvious linkages while motor learning, motor development and sport/exercise psychology also have strong biological components. Due to this close link with the life sciences it is hardly surprising that physical educators, for the most part, have utilized a research paradigm that was developed in the natural sciences. For her, ‘This choice of a model for seeking truth has perhaps been facilitated by the almost unquestioned respectability this research paradigm is granted within academia in general’.

Others have also noted this tendency and McKay et al (1990) have argued that one major strategy that has been used to enhance the credibility and security of PE has been the emulation of empirical-analytical science at the expense of other world views. Kirk (1989) suggests that this approach forms an orthodoxy within research on teaching in PE that, 'is guided in particular by a belief in the need for objective measurement of teaching and learning in real-life situations, which can be achieved through empirical observations of life in classrooms and in the gym, the construction of standardized instruments to collect data from these observations, and the often sophisticated deployment of statistical techniques in the analysis of the data' (p. 124). In essence, those operating within this
framework believe that the social world can be investigated in much the same way as the physical or natural world and that the methods, techniques, and modes of operation of the natural sciences are the best way to explore the social world. Such a belief is based on a host of interrelated assumptions and commitments that Popkewitz (1984) believes act to shape this paradigm. These are as follows:

1. Theory is to be universal, not bound to a specific context or to actual circumstances in which generalizations are formulated.
2. There is a commitment to a disinterested science in which statements of science are believed to be independent of the goals and values which people may express in a situation. That is, facts are free of the values and interests of those who produce them.
3. The social world exists as a system of variables that are distinct and analytically separable parts of one interacting system. Variables are to be studied independently of one another. It is believed that by identifying and interrelating variables, the specific cause of behavior within the system can be known. A cause is a relationship among empirical variables that can be explained or manipulated to produce conditionally predictable outcomes.
4. There is a belief in formalized knowledge which involves making clear and precise the variables of inquiry prior to research. Concepts should be operationalized, defined in such a way that there is an invariant definition which can be used to test and compare data. By making units of analysis invariant, the researcher can create 'independent' and 'dependent' variables to identify how one unit influences others, and how manipulation of one variable can produce 'effects' upon other variables.
5. The search for formal and disinterested knowledge creates a reliance upon mathematics in theory construction. Quantification of variables enables researchers to reduce or eliminate ambiguities and contradictions. (pp. 36–8)

These, and other assumptions that undergird positivism are outlined in Figure 1.1. While space does not allow a thorough interrogation of all these assumptions it is important to note that positivism adopts a realist-external ontology, an objectivist epistemology and prefers a nomothetic methodology.

With regard to ontology, positivism postulates that the social world external to individual cognition is a real world made up of hard, tangible and relatively immutable facts that can be observed, measured and known for what they really are.

Whether or not we label and perceive these structures, the realists maintain, they still exist as empirical entities. We may not even be
aware of the existence of certain crucial structures and therefore have no 'names' or concepts to articulate them. For the realist, the social world exists independently of an individual's appreciation of it. The individual is seen as being born into and living within a social world which has a reality of its own. It is not something which the individual creates — it exists 'out there'; ontologically it is prior to the existence and consciousness of any single human being. For the realist, the social world has an existence which is as hard and concrete as the natural world. (Burrell and Morgan, 1979, p. 4)

Consequently, 'things' such as intelligence, social class, self-esteem, motivation, and so on are conceived of as independent and separately existing entities — they exist whether we conceive of them or not. Since they are taken to be mind-independent and exist outside of the individual then they can be described and known for what they really are by researchers who aspire to a detached objective 'God's eye' point of view to see the world from nowhere in particular (cf. Putnam, 1981). That is, for positivists the ideal would be for the researcher to somehow gain a view the world from a detached viewpoint outside of it rather than from a place within it. This separation of mind and the world, or dualism, is a key issue because it leads to the view that truth has its source in this independently existing reality. Consequently, Guba (1990) argues, 'If there is a real world operating according to natural laws, then the inquirer must behave in ways that put questions directly to nature and allow nature to answer back directly. The inquirer, so to speak, must stand behind a thick wall of one-way glass, observing nature as "she does her thing"' (p. 19). Such behaviour is based on the premise that the researcher can explicate nature's secrets without altering them in any way.

Since reality can be known for what it actually is by the researcher adopting an unbiased and detached stance, it is important to control any possible sources of bias. Therefore, within the positivist framework a manipulative methodology is adopted which attempts to control both researcher bias and other external variables in the environment so that nature's secrets can be revealed for what they are. In this context a certain set of techniques are taken to be epistemologically privileged. Smith and Heshusius (1986) emphasize, 'for quantitative inquiry, techniques stand separate from and prior to the conduct of any particular piece of research' (p. 9). Indeed, the correct application of these techniques is deemed not only necessary but essential to match the criteria of internal and external validity plus reliability within this framework. Talking of research on teaching in PE, Siedentop (1983) suggests:

We have learned a great deal about data collection. We have many different tools for collecting data ... There is healthy attention to and discussion of what constitutes good data, precisely the kind of interest that is characteristic of one of the most important self-correcting mechanisms of science, the continual asking, in one way or another, of the fundamental scientific question 'How do you know? which translates most often into 'What methods did you use to collect your data?' (p. 5)

Given their basic assumptions concerning the nature of reality then for positivists to 'know' this reality is to be able to describe or reflect it accurately. Consequently, Goetz and LeCompte (1984) argue:

Validity is concerned with the accuracy of scientific findings. Establishing validity requires (i) determining the extent to which conclusions effectively represent empirical reality; and (ii) assessing whether constructs devised by researchers represent or measure the categories of human experience that occur. (p. 210)

Therefore, any given judgment is 'true' when it corresponds to this external reality and false when it does not. Thus, a correspondence theory of truth is adhered to whereby, according to Smith (1984) 'True statements are judged to have accurately reflected the qualities and characteristics of what is out there whereas false ones are those judged to have in some way distorted the nature of that independently existing reality ... The significant point is that truth has its source in an independently existing reality — a reality that can be known for what it really is' (p. 385). He goes on to comment that the process of observation, or empirical verification, is essential to the ability to judge whether or not a statement is true and how. For the positivist the dangers of subjectivity are a great worry in this area. Therefore, the quest is for objectivity, or as was said earlier to see the place from no particular place in it so that the values, desires and emotions of the researcher do not influence the object of study. To achieve this objectivity positivists adhere to certain prescribed methods (techniques) within a formalized process of investigation often called the 'scientific method'. These are taken to act as a constraint upon the researcher in terms of protecting her or him from distorting the qualities and characteristics of the object of study.

At the level of practice, adherence to these procedures will ensure that the study has been properly conducted. And if this is the case, we must accept the results, regardless of how we might feel about them. In other words, these are results to which all 'rational' people must accede, and disagreements can be reconciled by a properly done appeal to an independent reality. These procedures are neutral and non-arbitrary in that they stand over and beyond any one individual's interests, dispositions, or place in the world. (ibid)

More recently, Smith (1988, p. 20) has argued that for positivists the proper application of formalized methods (technical procedures) are taken
to allow the researcher to penetrate through the level of how things seem to any given person, at any given time and place to the level of how things are. This methodological penetration allows us to see nature in its own terms (cf. Rorty, 1982) which itself acts as the ultimate constraint on our knowledge. This reality is seen as, 'that permanent neutral matrix to which we may appeal to settle competing knowledge claims'. Not surprisingly, methods that accurately measure what they are designed to measure, that is, those that 'see' the world from no particular place within it are highly prized since it is believed that they protect against the intrusion of our subjective selves and allow valid claims to be established. Methods within positivism are taken to be the guarantors of truth, and knowledge is believed to rest on firm foundations.¹⁰

The Interpretive Paradigm

Alternative ways of making sense of social reality have always existed and in direct contrast to positivism stands the interpretive paradigm. I have chosen to use the term 'interpretive' because according to Erickson (1986), it refers to a whole family of approaches and is useful for three reasons:

(a) It is more inclusive than many others (for example, ethnography, case study); (b) it avoids the connotation of defining these approaches as essentially non-quantitative (a connotation that is carried by the term qualitative), since quantification of particular sorts can often be employed in this work; and (c) it points to the key feature of family resemblance among the various approaches — central research interest in human meaning in social life and its elucidation and exposition by the researcher. (p. 119)

As indicated, a range of research traditions can be located within the interpretive paradigm that go under various names including: ethnography, hermeneutics, naturalism, phenomenology, symbolic interactionism, constructivism, ethnography, case study and qualitative research. Not surprisingly, Smith (1987) argues 'The body of work labelled qualitative research is richly variegated and its theories and methods diverse to the point of disorderliness' (p. 173). Locke (1989) suggests 'At the best, qualitative research is a field characterized by zesty disarray' (p. 2). While Jacob (1988) claims 'What has been called "qualitative research" conveys different meanings to different people. Needless to say, this has caused considerable confusion among educational researchers' (p. 16). In her view it is inappropriate to view qualitative research as one approach. However, while there are differences between these traditions there are also many similarities in their approaches and for the purposes of simplicity I shall use them interchangeably throughout this section while using 'interpretive' as an umbrella term for discussing general issues.

Talking in an optimistic vein to a North American audience Locke (1987) comments, 'Few members of the Academy will be surprised by the prediction that we are in for a prolonged love affair with qualitative research methods in general and, to a lesser degree, the qualitative research paradigm in particular. That is where the cutting edge of research on pedagogy is located now, and where it is likely to remain for some time to come' (p. 86). However, Harris (1983b) suggests that the interpretive paradigm has received relatively little attention within PE. In relation to this, Lincoln (1989) points out that the bulk of qualitative studies have only just begun to see the light of day in the United States and it needs to be recognized that 'it is only recently — within the last fifteen years or less — that scholarly journals have seriously considered publishing the products of qualitative inquiry (p. 237).¹¹

Like positivism, the interpretive paradigm has deep historical roots and it emerged forcefully in the nineteenth century as a critical reaction to the former. An influential figure in this reaction was Wilhelm Dilthey who argued strongly that, whereas the natural sciences dealt with a series of inanimate objects that can be seen existing outside of us, this could not be so for the social sciences. The focus of the latter concerns the products of the human mind and these products are intimately connected to human minds, including all their subjectivity, interests, emotions and values. Dilthey concluded that:

society is the result of conscious human intention and that the interrelationships among what is being investigated and the investigator are impossible to separate. For all people, lay people and social scientists alike, what actually exists in the social world is what people think exists. There is no objective reality as such, which is divorced from the people who participate in and interpret that reality. From this perspective, human beings are both the subject and the object of inquiry in the social sciences, and the study of the social world is, in essence, nothing more than the study of ourselves. (Smith, 1983, p. 35)

This legacy remains with us and interpretive researchers believe that while the natural science approach with its positivistic assumptions may be appropriate for the study of the physical world they are not appropriate for the study of the social world which they see as having very different characteristics. Poppkowitz (1984) argues, the unique quality of being human is found in the symbols people invent to communicate meaning or an interpretation for the events of daily life, 'To an atom, the language of culture means nothing. To people immersed in Azanda or American life, the ideas, concepts and languages of interactions create ways of expressing and defining the possibilities and limitations of human existence' (p. 41). Since human beings are thinking, conscious, feeling, language-, and symbol-using animals, interpretive researchers do not feel drawn towards the natural science approaches for understanding the social
world. Rather, they take the humanities to be a more appropriate starting point, especially social history since it emphasizes the interpretation of the past through what people have left behind them. In relation to this, Burrell and Morgan (1979) argue:

The interpretive paradigm is informed by a concern to understand the world as it is, to understand the fundamental nature of the social world at the level of subjective experience. It seeks explanation within the realm of individual consciousness and subjectivity, within the frame of reference of the participant as opposed to the observer of action. It sees the social world as an emergent social process which is created by the individuals concerned. Social reality, insofar as it is recognized to have any existence outside of the consciousness of any single individual, is regarded as being little more than a network of assumptions and intersubjectively shared meanings. Everyday life is accorded the status of a miraculous achievement. Interpretive philosophers and sociologists seek to understand the very basis and source of social reality. They often delve into the depths of human consciousness and subjectivity in their quest for the fundamental meanings which underlie social life. (pp. 28–31)

The interpretive paradigm is undergirded by a network of ontological and epistemological assumptions that are very different to those of positivism (see Figure 1.1). They adopt an internalist-idealist ontology, a subjectivist epistemology, and prefer an ideographic methodology. For example, Guba (1990) in explaining constructivism, argues that facts do not exist in some external reality since facts can only become facts within some theoretical framework. As a consequence, reality can only exist in the context of a mental framework (construct) for thinking about it, that is, 'reality' can only be seen through a window of theory, whether implicit or explicit. If this is the case, then it also means that reality can only be seen through a value window which means that all facts are value laden and many constructions are possible. Finally, knowledge is seen as the outcome or consequence of human activity, that is, knowledge is a human construction, which means that it can never be certifiable as ultimately true but rather it is problematic and ever changing.

Ontologically, if there are always many interpretations that can be made of any inquiry, and if there is no foundational process by which the ultimate truth or falsity of these several constructions can be determined, there is no alternative but to take a position of relativism. Relativism is the key to openness and the continuing search for ever more informed and sophisticated constructions. Realities are multiple, and they exist in people's minds. Epistemologically, the constructivist chooses a subjectivist position... If realities only exist in respondents' minds, subjective interaction seems to be the only way to access them. (Ibid, p. 26)

Therefore, with regard to ontology, interpretivists take reality to be mind-dependent and adopt an internalist-idealist position on this issue. They argue that there are multiple realities and that the mind plays a central role, via its determining categories, in shaping or constructing these. Consequently, there can be no separation of mind and object since the two are inextricably linked together—the knower and the process of knowing cannot be separated from what is known, and the facts cannot be separated from values. However, as Smith (1989) reminds us, 'Mind-dependence here does not mean that the mind "creates" what people say and do, but rather that how we interpret their movements and utterances—the meanings we assign to the intentions, motivations, and so on of ourselves and others—becomes social reality as it is for us. In other words, social reality is the interpretation' (p. 74).

Such an approach clearly rejects the positivistic notion of an independently existing reality that can be known through a neutral set of procedures. Since social reality is mind-dependent, there can be no data that is free from interpretation, there can be no 'brute data' out there on which to found knowledge or verify our positions. As Smith (1988) argues, 'Methods themselves, including statistical procedures, are not and cannot be interpretation-free. And if this is so, then the knowledge claims supported by methods cannot be interpretation-free' (p. 20). The same author comments:

Whereas an externalist perspective holds to the independence of the instrument from the attribute or object measured, the internalist position finds this separation impossible to accept. For this latter position, an instrument does not simply reflect or mirror reality but contributes to constructing or defining social reality. Social scientists, then, through the use of their measuring instruments, are actually participants in the process of making social reality rather than discoverers of the qualities and characteristics of an independently existing reality. (Smith, 1989, p. 84, my emphasis)

Therefore, according to interpretivists a 'God's eye view' of the world is impossible, we cannot hope to see the world outside of our place in it—all that we can ever have are various points of view that reflect the interests, values and purposes of various groups of people. In view of this interpretivist focus on the interests and purposes of people (including the researcher), on their intentional and meaningful behaviour, then by attempting to construe the world from the participant's point of view they try to explain and understand how they construct and continue to reconstruct social reality, given their interests and purposes. As Wolcott (1990) speaking of his own work comments 'I do not go about trying to discover a ready-made world; rather I seek to understand a social world we are continuously in the process of constructing' (p. 147). Brown (1990) also notes, 'The characteristic which sets naturalistic research apart from other approaches to research is the focus on the participants'
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perspectives of the phenomena under study or the culture within which the study is being conducted. This approach from within the culture in terms of participant categories has been termed in anthropology as the emic approach (p. 1).

According to Wolcott (1990b) the term ethnography is derived from anthropology, and means literally 'a picture of the way of life' of some identifiable group of people' (p. 188). In relation to ethnography Fetterman (1989) suggests that an emic perspective - the insider's or native's perspective of reality - is at the heart of this form of research, and that this perspective is instrumental to understanding and accurately describing situations and behaviours... An emic perspective compel the recognition and acceptance of multiple realities. Documenting multiple perspectives of reality in a given study is crucial to an understanding of why people think and act in the different ways they do' (p. 30). As a consequence, Woods (1986) feels that ethnography:

is concerned with what people are, how they behave, how they interact together. It aims to uncover their beliefs, values, perspectives, motivations, and how all these things develop or change over time or from situation to situation. It tries to do all this from within the group, and from within the perspectives of the group's members. It is their meanings and interpretations that count. This means learning their language and customs with all their nuances, whether it be the crew of a fishing trawler, a group of fans on a football terrace, a gang of grave-diggers, the inmates of a prison or a religious seminary... These have each constructed their own highly distinctive cultural realities, and if we are to understand them, we need to penetrate their boundaries, and look out from the inside, the difficulty of which varies according to our own cultural distance from the group under study. In any event, it will mean a fairly lengthy stay among the group, first to break down the boundaries and be accepted, and second to learn the culture, much of which will be far from systematically articulated by the group... It is, thus, no ordinary picture. A snapshot gives merely surface detail. The ethnographer is interested in what lies beneath - the subjects' views, which may contain alternative views, and their view of each other... The ethnographer thus aims to represent the reality studied in all its various layers of social meaning in its full richness. (pp. 4–5)

To gain such insights means spending an extended period of time with the group and often the researcher attempts to become a full and active member of the group in order to learn about their way of life from the inside, to feel what it is like for the people in the situation. According to Brown (1990) the primary goal of the use of participant-observation as a data collection strategy is for the researcher as instrument of data collection to live the "slice of life" with the participants and to generate her own constructions of the events and the interactions which are observed and which are lived. These constructions, along with the constructions of the participants, form the data from which interpretations are made (p. 1). While this role of participant-observer is a central method in ethnography the researcher can also draw upon a wide range of methods to help understand the views of the participants. These include, various forms of interviewing (unstructured, structured, life history/ autobiographical, key informant), projective techniques, archive analysis along with the analysis of other written documents, the analysis and collection of non-written sources (for example, maps, photographs and film, artefacts, video and audio tapes) and standardized tests plus other measurement techniques to provide quantitative data where required (see Fetterman, 1989; Hammersley and Atkinson, 1983). However, as Wolcott (1990b) is quick to point out:

The most noteworthy thing about ethnographic research techniques is their lack of noteworthiness... There is no way one could ever hope to produce an ethnography simply by employing many, or even all, of the research techniques that ethnographers use. Ethnography... is not a reporting process guided by a specific set of techniques. It is an inquiry process carried out by human beings... it is not the techniques employed that make a study ethnographic, but neither is it necessarily what one looks at; the critical element is interpreting what one has seen. (pp. 191–202)

Interpretive research and the 'Researcher as Instrument'

The views expressed so far place the human being as interpreter at the centre of the ethnographic research process. Indeed, Hammersley and Atkinson (1983) in recognizing the role of the researcher as an active participant in the research process note "He or she is the research instrument per excellence" (p. 18). In relation to participant-observation in ethnography Ball (1990) notes how very often, 'Not only do researchers go into unknown territory, they must go unarmed, with no questionnaires, interview schedules, or observation protocols to stand between them and the cold winds of the raw real. They stand alone with their individual selves. They themselves are the primary research tool with which they must find, identify, and collect the data... My point is that ethnographic fieldwork relies primarily on the engagement of the self, and that engagement can only be learned enactively' (pp. 157–8).

For Ball, this means that in conducting an ethnographic study the social skills and creative intelligence of the researcher, rather than a set of technical competencies, are of crucial importance as she or he is involved in any fieldwork interaction on at least three levels: (i) in terms of 'normal interaction, fieldworkers must strain to keep their everyday 'good'

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researcher persona in place, (ii) as data gatherers, fieldworkers must sift and select 'data' from what is going on. This includes what should be said and done next. If appropriate, in order to elicit more data, and (iii) as reflective analyst, the fieldworker must weigh the impact and effects of their presence, their personas and the respondent's perception of them, for the status, usefulness, and limitations of the data recorded. He concludes:

Data are a product of the skills and imagination of the researcher and of the interface between the researcher and the researched. The choices, omissions, problems and successes of the fieldwork will shape the process of the research in particular ways... Indeed, what counts as data, what is seen and unnoticed, what is and is not recorded, will depend on the interests, questions, and relationships that are brought to bear in a particular scene. The research process will generate meaning as part of the social life it aims to describe and to analyze. (ibid, pp. 169-70)

Since, in interpretive research, the researcher is the instrument Brown (1988) reminds us, 'There are no reliability and validity coefficients for the researcher who is observing and interviewing participants in the natural setting' (p. 95). In view of this it should come as no surprise to find that, for interpretivists, methods (techniques) are not seen as guarantees of truth as they are in positivism. Smith (1989) notes 'An interpretive researcher cannot come to a study with a pre-established set of neutral procedures but can only choose to do some things as opposed to others based on what seems reasonable, given her or his interests and purposes, the context of the situation, and so on. In other words, there are no privileged methods for interpretive inquiry' (p. 157). Rather, we find, as Reason and Rowan (1981) have argued, 'validity in new paradigm research lies in the skills and sensibilities of the researcher, in how he or she uses herself as knower, and as inquirer. Validity is more personal and interpersonal, rather than methodological' (p. 244).

Furthermore, since within an interpretivist framework the anti- or non-foundational assumption is made that there is no independent reality or data that is free from interpretation on which to found knowledge, which means that knowledge cannot be built upon a certain or indubitable base, then truth or validity cannot be a matter of correspondence as it is in positivism. For interpretivists, it becomes a matter of coherence. Smith (1984) notes, 'For interpretive inquiry, the basis of truth or trustworthyness is social agreement; what is judged true or trustworthy is what we can agree, conditioned by time and place, is true or trustworthy' (p. 386). Therefore, within a coherence theory of truth a proposition is judged to be true if it coheres (is connected and consistent) with other propositions in a scheme or network that is in operation at a particular time, thus making coherence a matter of internal relations as opposed to the degree of correspondence with some external reality. For Popkewitz (1984) 'What is "real" and valid is so because of mutual agreement by those who participate. Objectivity, then, is not a law that guides individuals but the result of an intersubjective consensus that occurs through social interaction' (p. 42). He emphasizes that while this is so for individuals interacting, it also applies to the scientific community itself. 'The knowledge of science is considered valid and "truthful" only insofar as it reflects the consensus of the scholarly community. The scientific community presupposes conventions and agreement about appropriate knowledge' (p. 42).

Inherent in such a position is the notion that at certain times and in certain situations, agreement will be greater in degree and extent than others. Truth then is what we make it to be based on shared visions and common understandings that are socially constructed. For example, in considering the meaning of validity in cooperative inquiry Heron (1988) adopts the stance that the 'real world' is, 'already constructed by us. We can never get at it outside our constructs to find out whether our statement corresponds to it' (p. 41). He goes on to suggest that validity relates to when, 'propositional knowledge asserted by the research conclusions is coherent with the experiential knowledge of the researchers as co-subjects, and their experiential knowledge is coherent with their practical knowledge in knowing how to act together in their researched world' (ibid, pp. 42-3). In considering aspects of this form of validity in more detail he comments:

Firstly, the research conclusions need to be coherent with each other: they are consistent with each other, interdependent and mutually illuminating. Secondly, the inquirers are in agreement about these conclusions... the agreement sought between inquirers is not total unanimity, but the illumination of a common area of inquiry by differing individual perspectives. Validity is enhanced by a diversity of views that overlap. It is not found simply in the common properties of the different views, but rather in the unity-in-variety of these views... Agreement of this sort cannot be absolute, at any rate so far as coherence with experience is concerned, and in the early stages of developing a researched world. It admits of degrees. It is a matter of judgment when the degree of agreement is so low that it constitutes a criterion of inadmissible disagreement. (ibid, pp. 43-4)

The key point here is the manner in which Heron emphasizes notions of coherence in terms of what validity means to cooperative inquiry and the procedures that he suggests for enhancing the validity of conclusions in this form of research. In relation to this Fetterman (1989) argues that the success or failure of an ethnographic report depends on the degree to which it 'rings true to natives and colleagues in the field' (p. 21). However, such agreement does not guarantee the validity of the findings in any foundational sense. Here, an example from my own research will help illustrate the point. During 1983-86 I conducted a case study of a teacher-initiated innovation within a PE department at a large urban
coeducational comprehensive school in England.13 During the academic year 1983–84 I adopted the role of researcher-participant and conducted interviews and documentary analysis. From 1984–86 I had to rely on interviews only. During the first year of the study I interpreted the newly-appointed department head's management style as autocratic, in terms of how he used the various forms of power at his disposal to ensure the adoption of certain innovations in the department. On discussing this issue with him in 1984, it became evident that he strongly believed that he was using a democratic management style. Note, this teacher was not disagreeing with my reporting of events, conversations or interviews which he saw as accurate and reliable. However, in effect he was disagreeing with my interpretation as researcher; there was a definite mismatch in this sense.

However, in 1984–86 this same teacher attended a diploma course in educational management and the understanding he gained from it led him to reassess his previous actions and to conclude that he had been autocratic in his approach. Therefore, in 1984 the subject disagreed with my interpretation but in 1985 he agreed with it retrospectively; so where does this leave my interpretation? Does his agreement enhance the credibility of my interpretation and, conversely, does his initial disagreement reduce the credibility of my interpretation? What if the study had ended in 1984 and I had not been able to gain access to his reappraisal in 1985? Where would this have left my original interpretation?

My interpretation as researcher stands as simply that; an interpretation of a set of events. Agreement or disagreement by the subjects of this interpretation need not necessarily reduce or enhance its credibility. To believe otherwise is to adopt a stance that is somewhat simplistic in that it ignores those aspects of power that develop in social relationships, plus it infers that 'lay' assessments (by subjects) are validators of 'professional' (researcher) judgments and interpretations. Thus an insider's view is assumed to be more credible than an outsider's view, even when very often the researcher is able to, and aspires to, gain insights into behaviours and processes that are beyond those available to the people involved in the action. Furthermore, Schutz (1967) reminds us that lay people produce their own distinctive sociological accounts of their various social worlds (first-order constructs), and these will very often differ from those produced by the sociological researcher (second-order constructs) since each is formulated in relation to different interests.14 As Miles and Huberman (1984) point out, 'Even if people do not themselves apprehend the same analytical constructs as those derived by researchers, this does not make such constructs invalid or contrived' (p. 19).

This is not to deny the importance of the researcher discussing her or his findings to check for their accuracy and to confirm that certain words were used in a conversation or that certain events took place. It is also appropriate for the researcher to discuss his or her interpretations of events with those involved in the study, given that agreements and disagreements are illuminating in themselves and provide a rich source of data that is itself pertinent to the researcher's analysis and ongoing interpretation. Therefore, these interactional episodes are themselves subjected to analysis that allows the researcher's interpretation to be extended and enriched. Consequently, taking findings back to the field should not be seen as a test of the 'truth' but an opportunity for reflexive elaboration (see Sparkes, 1989). As Fetterman (1989) suggests:

These readers may disagree with the researcher's interpretations and conclusions, but they should recognize the details of the description as accurate. The ethnographer's task is not only to collect information from the emic or insider's perspective, but also to make sense of all the data from an etic or external social science perspective. An ethnographer's explanation of the whole system may differ from that of the people in the field and at professional meetings. However, basic descriptions of events and places should sound familiar to native and colleague alike. (pp. 21–2)

Differences regarding interpretation can take place within a community of scholars even when the same group have been the subject of the study. Ball (1990, p. 167) explores this issue and notes that it would not be uncommon for ethnographies to turn out differently when different researchers conduct the fieldwork. However, he believes that the differences would be a matter of emphasis and orientation rather than in the story being told. For him the 'complexity and the "becomingness" of social life belies the possibility of a single, exhaustive or definitive account. And both as an analytical decision-making process and as a social process, we should expect different researchers to pick their way through fieldwork differently'. Quite simply, decisions about who to talk to, where to be, and when to be in certain places will have an impact upon what data is and is not collected. Also, decisions made in the field regarding sampling, the role adopted and the kind of relationships established, and the events and encounters participated in will contribute to the construction of a particular fieldwork trajectory and a limited set of possibilities for interpretation... The presence, the effect, and the biases and selections of the researcher cannot be removed from qualitative research. Qualitative research cannot be made "researcher proof".

What we are left with in interpretive research is a situation in which multiple interpretations are possible regarding the same group under study each of which can be coherent in themselves. That is, there can be many 'truths' available. The problem then becomes that of choosing between a multitude of interpretations of a given event or process, that is, on what basis does choice take place within a process that is essentially locked into a hermeneutic circle? According to Harris (1983a):

... a major problem associated with interpretive cultural research is the likelihood of multiple interpretations concerning the same
culture or subculture. The problem of multiple interpretations may arise at the time a researcher studies a culture, or it may arise when the interpretations of two or more researchers who have studied the same culture are compared ... Confronted with multiple interpretations, is there any way to determine which is best or most nearly correct? This is a major problem for those who conduct interpretative cultural research because there is no ultimate, agreed-upon authority to which investigators can turn to adjudicate or arbitrate among alternative interpretations. (p. 90)

What this means is that in relation to a coherence theory of truth it is possible for there to be any number of internally coherent systems of belief, and because there are no criteria for choosing among them, it cannot be known which is the 'right' one (cf. Greylang, 1982). Within such a framework there is always the possibility of one interpretation of reality coexisting with another interpretation of reality because with its anti-foundational assumptions there can be no independent, absolute or external criteria on which to decide between two plausible cases. However, this does not mean that 'anything goes' or that we accept all interpretations since to do so would be to do away with the concept of a 'mistake'. As Solis (1984) reminds us, to be open to other people's views and interpretations is not to be empty minded; at the end of the day 'it does not release us from exercising judgment' (p. 9). This is so, even though interpretivism adopts a relativistic stance. Relativism is a complex concept and has been discussed in detail elsewhere. Rorty (1985) claims that there are three main views associated with this term:

The first is the view that every belief is as good as any other. The second is that 'true' is an equivocal term, having as many meanings as there are procedures of justification. The third is the view that there is nothing to be said about either truth or rationality apart from descriptions of the familiar procedures or justifications which a given society — ours — uses in one or another area of inquiry. (pp. 5–6)

Most interpretivists adhere to the third view. This means that they do not hold to the view that propositions do not have the property of being true. They simply insist that judgments of truth are always relative to a particular framework, paradigm, or point of view. Therefore, relativism holds that proposition X can be true for an individual in framework Y1 but false for individuals in framework Y2. It all comes back to the point that was made earlier concerning the coherence theory of truth and the issue of internal relations. Consequently, not everything goes, since judgments are made by researchers operating within the interpretive paradigm who differentiate between a 'good' piece of research and a 'bad' one by utilizing the criteria appropriate to their own particular framework.

Regarding the issue of criteria for passing judgment, Smith (1984), suggests that this term can have several meanings. In its strong form it can mean a 'standard against which to make judgment' (p. 383), and in this sense it has definite foundational connotations in that the criterion becomes a point of reference that can be applied directly to differentiate the 'good' from the 'bad', the correct from the incorrect; this is how research must be done. In its softer form it can refer to a 'characterizing trait' which has at best 'mild prescription for inquirer behaviour and does not necessarily refer to something that is held to be foundational'. In this sense there is little hint of prescription or orthodoxy, since all that is being articulated are the characterizing traits of a particular research approach that simply indicates that this is the way that researchers seem to be doing things in this area or tradition at the present; this is how research can or may be done.

Recently, Smith (1990b) has outlined how over the last few years interpretive researchers have discussed the process and products of this form of inquiry in the form of lists. Initially, these lists were thought of as the first step on the road to a more definitive criteria but now they are accepted for what they actually are, 'an open-ended, always evolving, enumeration of possibilities that can be constantly modified through practice' (p. 178). In relation to this, Guba and Lincoln (1989) use lists to indicate how the quality of constructivist research might be judged. These criteria include those of trustworthiness, credibility, transferability, dependability and authenticity. Listings are provided for each of these, for example, with regard to authenticity the following are mentioned; fairness, ontological authenticity, catalytic authenticity and tactical authenticity. All these are presented as ways to help in passing judgment on the goodness of constructivist research. Similarly, Harris (1983a) considers that at least three levels of interpretation appear necessary for the careful pursuit of 'good' interpretive research:

The research must be grounded in the shared understandings about the culture developed between the researcher and the members of the group being examined; it must include the researcher's insights about details of the culture that are not well articulated by members of the group; and it must include theoretical generalizations that go beyond the particular details of the culture to link the study to relevant portions of other research. (p. 92)

Athens (1984) in considering how to evaluate qualitative studies also suggests three criteria. First there is 'theoretical import', 'the contribution they make toward the development of new concepts or theories or the refinement and further development of existing ones' (pp. 261–5). A second criterion that can be used is whether or not the scientific concepts developed in the study are empirically grounded. The third criterion is 'scientific credibility'. Since no study is intrinsically credible or incredible the researcher must make it so, 'The way in which a researcher makes a
study credible is by supplying an adequate account of his or her research along with a description of its results. An account is merely a story told by the researcher about how he or she performed the research in question.

But remember, these criteria are not absolute and do not prevent researchers from different frameworks and theoretical orientations conducting studies of the same group or culture and coming up with different interpretations after having carried out good pieces of interpretive research. In such situations Harris (1983a, p. 92) suggests that adjudication takes place in ways that are similar to legal situations. That is, the means by which one interpretation in a courtroom is judged to be better than another, 'is by the presentation of sufficient evidence to convince the judge or jury of its relative soundness. In a similar fashion, when confronted with two different interpretations of a culture, all that a third person may be able to do is to examine the two sets of evidence presented and decide which seems to be the stronger'. Of course, the notion of 'stronger' returns us to the hermeneutic circle in which all researchers, regardless of their paradigmatic stances, utilize a range of rhetorical devices to persuade and convince the reader of the worthiness of their particular interpretation of the world, that is, truth is rhetorically constructed (see Sparkes, 1991 and chapter 11 in this volume). Ultimately, as Taylor (1971) reminds us, 'a good explanation is one which makes sense of the behaviour; but then to appreciate good explanation, one has to agree on what makes good sense; what makes good sense is a function of one's readings; and these in turn are based on the kind of sense one understands' (p. 14). We end up coming back to the point that truth is what we agree to be true at any particular time.

Therefore, for interpretivists there are no absolute minimums to work out differences in interpretations since the hermeneutic process has no definite beginning or end and contains no specific procedures or established criteria to determine who has got it absolutely 'right' or 'true'. Fortunately, as Harris (1983a) rightly argues, while choices between conflicting interpretations sometimes have to be made, it is not usually a matter of choosing one interpretation and eliminating another. 'Two or more interpretations often lend a richer or broader view of a culture than any interpretation could provide alone' (p. 92). In a world of multiple realities, multiple truths can exist, and this means that for interpretive researchers the meanings associated with the term validity are very different from those of positivistic researchers. Indeed, notions of validity as used by positivists may be meaningless to interpretive researchers, implying, as they do, some impersonal, automatic truth.

The Critical Paradigm

There has been a limited amount of critical research in PE but there are signs that this kind of research is increasing. As with the positivist and
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One of the major concerns for critical researchers has been the alleged macro-blindness of interpretive research that, with its concern to understand how people construct and reconstruct their realities in the gymnasium and on the sports field, has tended to ignore the power relationships within which people operate when these realities are constructed, and so tells us little about how individual and group behaviour is influenced by the way in which society is organized. Evans (1987) and Hargreaves (1980) have argued that such studies have resulted in distorted and incomplete accounts of life in schools because they have adopted a position of ‘splendid isolation’ whereby classrooms are taken to exist in a social and cultural vacuum that is not touched by the economic demands, political pressures and social influences of the wider society. As such the contexts in which teachers work have been ignored. In summarizing these concerns, Sharp (1982) has argued that not enough attention has been given to the underlying nature of the, ‘structural patterns of social relationships (that) pre-exist the individual and generate specific forms of social consciousness’ (p. 48).

Therefore, while critical researchers can agree with interpretivists that organizations and institutions are the product of shared meanings that are actively created by people via intersubjective negotiation, they emphasize that the results of any negotiations over meanings by individuals or groups takes place, and are determined within, a social and organizational context that is permeated by unequal power relations that are related to such issues as social class, gender, sexual orientation, race/ethnicity, disability, etc. That is, social reality is not constructed in a free and voluntary process since negotiations are shaped by particular organizational relations, structures and conditions. In view of this, while critical researchers seek to understand the world from the point of view of the participants and ask questions regarding how meanings are constructed and maintained, they also pose questions in terms of ‘what counts’. For example, Anderson (1989a), in drawing on the work of Bates (1980), suggests the following as a set of critical research questions regarding the nature of knowledge in organizations.

(i) What counts as knowledge?
(ii) How is what counts as knowledge organized?
(iii) How is what counts as knowledge transmitted?
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(iv) How is access to what counts as knowledge determined?
(v) What are the processes of control?
(vi) What ideological appeals justify the system? (p. 6)

As indicated, for the critical researcher, the interest is in how specific forms of knowledge, ways of knowing, and certain values are privileged and legitimized, that is, given meaning and authority relative to others. The central emphasis is upon human consciousness and the ways in which it is shaped and limited by existing social arrangements in such a way as to serve the interests of some groups in our society at the expense of others. To explore these issues a relational analysis is often utilized. According to Dewar (1990) this form of analysis attempts to understand how our practices in PE have been constructed, why they have been constructed in certain ways, and who and what categories of individuals benefit from these decisions (p. 74). Therefore, a relational analysis questions how practices are structured in physical education in ways that may help to legitimate, reproduce or challenge the social relations of power and privilege that exist in Western capitalist patriarchal societies’ (p. 74).

Dewar (ibid., p. 20) in discussing a relational analysis of gender in sport argues that such work begins with the assumption that sporting practices are historically produced, socially constructed and culturally defined to serve the needs and interests of powerful groups in society. In this sense, sport is seen as a cultural representation of social relations and is not assumed to be neutral, objective and ahistorical. She adds, ‘Rather, it is seen as a set of selected and selective social practices that embody dominant meanings, values and practices which are implicated in the creation and maintenance of hegemonic social relationships’ (see also Apple, 1979 and 1982). In summarizing the beliefs inherent in such a critical perspective Griffin (1990) notes:

(i) Society is made up of groups with power and privilege and
groups without power and privilege.
(ii) Social institutions in a society perpetuate the status quo of
power imbalance among groups.
(iii) The powerful and the privileged have a vested interest in
maintaining their power and privilege (maintaining the
status quo).
(iv) The powerless and disadvantaged have a vested interest in
social change.
(v) These competing interests result in conflict and tension
which is often below the surface of apparent harmony and
consensus.
(vi) The role of the critical perspective is to bring the contra-
dictions between apparent harmony/consensus and conflict/
tension to light, to ‘problematize’ the status quo.
(vii) A critical perspective is concerned with ‘why/why not’
questions and is critical of ‘how’ questions that do not
consider ‘why’ (who’s interests are served?). The intention
is to change the world, not describe it.
(viii) A critical perspective believes in the importance of
changing individual and group consciousness in creating
social change. (p. 2)

These interests shape the ways in which critical researchers conduct their studies. For example, they might draw upon the data collection techniques associated with ethnography as discussed in relation to the interpretive paradigm. However, as Harvey (1990) points out a critical approach to ethnography is different in that it ‘attempts to link the detailed analysis of ethnography to wider social structures and systems of power relationships in order to get beneath the surface of oppressive structural relationships’ (pp. 11–12). He suggests three ways in which this can be done. The first is to consider the subject group in a wider social context. This is taken to be the weakest form of critical ethnography. Indeed, it may not be critical at all if it just takes the form of ‘analyzing functional relationships between subject group and the wider social milieu’. The second is to focus on the ‘wider structural relations and examine the ways in which the social processes that are evident in the subject group are mediated by structural relations’.

The final and strongest form is to incorporate ethnography directly into a dialectical analysis in which the understandings from the former are analyzed in relation to the social structures that shape the lives of people. Therefore, while the first two approaches tend to explore the group and then situate it, the latter approach begins with structural relationships and then undertakes an ethnographic study in order to facilitate a structural analysis. As Harvey (1990) emphasizes, the important thing about critical ethnography is that the probing of the subjects’ meanings is not the end of the story. ‘The group operates in a sociohistorically specific milieu and is not independent of structural factors. Their meanings may appear to be group centred but are mediated by structural concerns’ (p. 12). Therefore, as Anderson (1989b) comments:

... like other ethnographers — particularly those who define themselves as interpretivists — critical ethnographers aim to generate insights, to explain events, and to seek understanding. They also share with interpretivist ethnographers the view that the cultural informant’s perceptions of social reality are themselves theoretical constructs ... Where critical ethnographers differ is in their claim that informant reconstructions are often permeated with meanings that sustain powerlessness and that people’s conscious models exist to perpetuate, as much as to explain, social phenomenon. Critical ethnographers, therefore, attempt to ensure that participants in research 'are not naively enthroned, but systematically and critically unveiled' (Anderson, 1989b, p. 253)
As part of this unveiling, researchers investigate the process by which certain meaning structures become accepted as natural, taken-for-granted, and legitimate and then consider whose interests they represent. Next they actively engage with members of the group under study in order to assist them develop alternative meaning structures in order to facilitate social transformation and emancipation. As Bain (1989, 1990a and 1990b) has emphasized, for critical researchers the purpose is not simply to describe the world but to change it by empowering those people involved in the process. Part of this empowerment process involves providing them with the insights necessary to demystify and critique their own social circumstances and to choose actions to improve their lives.

Consequently, while critical researchers argue that any form of social research is always a political act which constitutes an assertion of interests which cannot, therefore, be value free (see Brigley, 1990), they acknowledge that their own form of research, which is undergirded by emancipatory interests, is openly ideological. This means that explicit interests and values are substituted for implicit ones and the researcher disclaims any notions of 'value neutrality' since the aim is to challenge the status quo and contribute to a more egalitarian social order. For example, with regard to feminist research, Ramazanoglu (1989) comments:

The notion of a feminist standpoint from which to produce knowledge is a response to the need to connect feminist understanding of social life with feminist political practices. Feminism constitutes attempts to transform the bases of current social, economic and political relationships between men and women... Sociological knowledge from a feminist standpoint... would also be knowledge for women. It would mean taking gender seriously in what we look for, together with the political implications of revealing gendered relationships. The political commitment to social transformation distinguishes research on women, which can be taken from any methodological position, from research for women, which is politically and methodologically feminist. (p. 428)

Likewise, Lather (1986) notes, 'the overt ideological goal of feminist research is to correct both the invisibility and the distortion of female experience in ways relevant to ending women's unequal social position' (p. 68). With regard to two of the other traditions that she feels have provided a major thrust to critical research in recent years she suggests, 'The overt ideological goal of neo-Marxist critical ethnography is to expose the contradictions and delusions of liberal democratic education in order to create less exploitative social and economic relations' (p. 70). While for Freirian 'empowering' research, 'The openly ideological goal is to blur the distinction between research, learning, and action by providing conditions under which participant's self-determination is enhanced in the struggle toward social justice' (p. 73).

Such emancipatory interests call for a different form of engagement than that associated with positivistic and interpretive research forms. As Guba (1990) notes:

If the aim of inquiry is to transform the (real) world by raising the consciousness of participants so that they are energized and facilitated toward transformation, then something other than a manipulative, interventionist methodology is required. Critical theorists (ideologists) take a dialogic approach that seeks to eliminate false consciousness and rally participants around a common (true?) point of view. In this process, features of the world are apprehended and judgments are made about which of them can be altered. The result of effective, concerted action is transformation. (p. 24)

Consequently, participatory forms of engagement are required. That is, research is undertaken with the full participation of the people who are involved in the situation under study so that they are empowered to transform this very situation themselves. As Bain (1989) outlines, there is a reciprocity between researcher and researched that serves not only to corroborate the interpretation of data but also to provide participants with insights that might serve as the basis for action and change. This latter issue is important since in critical research people are defined as participants in the research process rather than subjects to be studied. As such, they help to frame questions, to interpret data, and to examine and explore how the insights gained from their engagement in this process might assist in the promotion of change. Indeed, for Griffin (1990) this sharing of decision-making and sense-making between the researcher and the participant is essential if both are to enrich their own understanding of their lives in relation to dominant ideologies and then engage in planning and collective action to change their situation as part of the research plan.

Not surprisingly, notions of validity within critical research differ from those of the positivistic and interpretive paradigms. As Brigley (1990) suggests in relation to collaborative research in education, this form of research implies 'radical changes in the relationship between researcher and research subject, and in accepted notions of truth and validity in social research' (p. 29). He goes on to argue that while collaborative enquiry begins with the understandings and realities of the subject it also has a transformative function that enables participants to recognize factors which frustrate their aims and aspirations and to develop strategies to eliminate them:

An endogenous research model... offers the optimum collaboration by permitting participants to define the enquiry, choose the methodology and employ their own theory of knowledge to validate research findings. In the generation of constructs, hypotheses and typologies in endogenous research, it is
the participant who determines their relevance to social practice. Within such research paradigms, relationships of empathy and negotiation between researcher and research subject replace positivist detachment and objectification. They have to be nurtured and sustained by consensus-seeking techniques such as group therapy, if the knowledge yielded by the research is to be experiential and practical, as well as propositional in character. In this way, researchers and participants may establish a form of research collaboration which takes full account of participants' views of their research needs. For the final test of a research's validity is its being understood by practitioners as relevant to, and therefore potentially transformative of, their situation. (Ibid, p. 30)

Likewise, Anderson (1989b) argues that critical ethnography with its aim of social critique, its concern to locate respondent meaning in larger impersonal systems of political economy, and its 'front-endedness', 'raises validity issues beyond those of mainstream naturalistic research' (p. 253). In view of this, Lather (1986) has begun the difficult task of reconceptualizing validity within the context of openly ideological research and suggests the following guidelines to guard against the researchers' biases distorting the logic of evidence in this form of research. First, with regard to construct validity there is a need for systematized reflexivity in order to indicate how a priori theory has been changed by the logic of the data. Second, face validity needs to be seen as much more integral to the process of establishing data credibility whereby member checks are involved that recycle the data analysis and tentative results back to at least a sub-sample of the respondents and the findings are refined in the light of the subject's reactions. Finally, there is catalytic validity which, 'refers to the degree to which the research process reorientates, focuses, and energies participants in what Freire (1973) terms "conscientization", knowing reality in order to better transform it' (p. 67). Therefore, validity in critical research relates not only to the trustworthiness and credibility of the interpretation but also how effective the research process has been in actually empowering the participants and enabling them to create change.

Notions of catalytic validity would seem to be specific to the critical paradigm given its aims of empowerment and emancipation. Lather (1986) acknowledges that this conceptualization of validity is by far the most unorthodox since it 'flies directly in the face of the essential positivist tenet of researcher neutrality' (p. 67). Indeed, this form of validity has no reference point within positivist research and consequently it makes little sense to those operating with positivist assumptions. Similarly, since the main purpose of research for many interpretivists is to understand the world from the participant's point of view without necessarily changing it, then notions of catalytic validity are also problematic within this paradigm. Therefore, as Anderson (1989b) argues, 'The critical ethnographer's concern with unmasking dominant social constructions and the interests they represent, studying society with the goal of transforming it, and freeing individuals from sources of domination and repression continues to make any discussion of validity, as defined by both positivist and interpretive researchers, difficult' (p. 254). This communication is difficult because the meanings attached to the term validity are context bound and specific to the conceptual framework in which they are used. Quite simply, a critical researcher gives the term validity a different meaning than a positivistic or an interpretive researcher.

Comment

It would appear that the paradigms discussed offer differing visions of the research process. As Eisner (1988) argues, different paradigms provide their own particular portrait of the world and 'the terms they employ slice the pie in different ways and harbor their own assumptions' (p. 15). Therefore, just as the word 'space' when used in Newtonian and Ensteinian physics has quite different meanings in each, so the term 'valid' has different meanings when used by advocates of the positivist, interpretive and critical paradigms since in all three the term is embedded in a contrasting set of assumptions, theories and purposes. This is in accordance with the principle of semantic holism that suggests the meaning of any term is determined by its location in a total network of associated meanings and relationships in such a way that changes in one part of the system can bring about changes in the meaning of interrelated terms within the network. Consequently, the term valid derives its meaning from its location within a wider conceptual web of meanings and associations that is the paradigm, and in effect becomes a different term in each paradigm. As Cherryholmes (1988) emphasizes with regard to but one form of validity:

Construct-validity and research discourses are shaped, as are other discourses, by beliefs and commitments, explicit ideologies, tacit worldviews, linguistic and cultural systems, politics and economics, and power arrangements. . . . Different discourses produce different 'truths'. (p. 107, my emphasis)

If this is the case then, quite simply, people will conceptualize validity in different ways depending on their paradigmatic orientation. They will see the social world differently and go about studying it in different ways depending on their purposes and interests. This is not to infer that one vision is better than another. Only, that they are different and should be understood in their own terms when judgments are to be made about their particular research forms. Therefore, none of the paradigms that have been discussed is the paradigm of choice, that is, the right one.
Rather, as Guba (1990) comments, 'Each is an alternative that deserves, on its merits (and I have no doubt that all are meritorious), to be considered' (p. 27). He goes on to argue that the dialogue is not to determine which paradigm is, finally, to win out. Instead it is about taking us to another dimension in which all these paradigms will be replaced by other paradigms whose outlines we are, as yet, dimly aware of. Importantly, this new paradigm or paradigms will not provide a closer approximation to the 'truth' but will simply be more informed and sophisticated than the visions we presently entertain. In saying this we need to be cautious, in particular with regard to how alternative paradigms research is cultivated and nurtured in the future within the domain of PE. As Scheppe (1990) reminds us:

Research paradigms, like most educational movements, are often susceptible to becoming fads. What is popular today is often taken to be the new panacea born of some magnificent intellectual nova. While it is often enjoyable to bask in the warmth and light of such novas, it is usually short lived and soon passed over in favor of the next latest and greatest idea... In ushering a new paradigm, we must also be cautious. Preservation and celebration of present research traditions are important conditions for continuing the expansion of our body of knowledge. Too often, new research agendas are suggested at the expense of current traditions. The cost for such proclamations is ignoring hard fought battles that have given us insight into the teaching of sport and physical education. (p. 82)

Therefore, the contribution that a variety of paradigms can make to our understanding needs to be recognized. However, in terms of the current paradigm debate, it needs to be acknowledged that it is inappropriate for positivist criteria to be utilized when passing judgment on a piece of interpretive research or critical research and vice versa. To do so just doesn't make sense given the starting position of each and only leads to confusion and a closing down of any possible dialogue. For example, if positivist criteria (based on foundational assumptions) are used to judge the worth of interpretive work (based on anti-foundational assumptions), then the outcome is a foregone conclusion since, given the assumptions of the former, the latter can only be defined as inadequate no matter how good the interpretive study is in its own terms. Of course, the reverse also holds true. It needs to be recognized that they are separate, distinct and alternative paradigms and so studies in each need to be judged by criteria that are consistent with their own internal meaning structures in relation to the basic epistemological and ontological assumptions, interests and purposes of each world view.

In relation to this Chalmers (1982 and 1990) emphasizes the inappropriateness of transferring the methods and standards of the natural or physical sciences to other areas of study like sociology and history. He suggests that there is no timeless and universal conception of science and scientific method that can serve the purpose of appraising all claims to knowledge. For him the going is much tougher than that because we cannot legitimately defend or reject items of knowledge simply because they do not conform to some ready-made criterion of scientificity.

If some area of knowledge, such as Freudian psychology or Marx's historical materialism, to take two favourite targets of philosophers of science, were to be criticized on the grounds that they did not conform to my characterization of physical science, then it would be implied that all genuine knowledge must conform to the methods and standards of physical science. This is not an assumption I am prepared to make, and is one that I think would be very difficult to defend. (Chalmers, 1990, p. 9, my emphasis)

Essentially, there are many ways of knowing, understanding and explaining the world. Therefore, as Lincoln (1989b) argues, 'Until we, as a research community, are more familiar with the traditions our colleagues have adopted, we cannot fully comprehend the meanings they would make of their inquiries, nor can we judge their work in a way that is consonant with their starting premises and intents' (p. 238). This sentiment is echoed by Siedentop (1983) who feels that an examination of initial assumptions is so important that there should be a brief section in research studies that make explicit 'the view of man (sic) from which these methodologies arise' (p. 11). He suggests that such a section would not only alert the reader to the basic point of view of the researcher but, more importantly, it would also require the researcher to consider seriously the implications of the questions asked and the assumptions underlying the methodologies used to answer those questions.

Therefore, let me suggest that part of our efforts in the next few years be directed toward a lively debate concerning the basic assumptions and research strategies compatible with each set of assumptions. It seems to me that such a debate would be the best way we could avoid becoming efficient technocrats who cannot see beyond their data nor integrate those data so that they might eventually have an impact on some of the larger questions facing our profession. Without that kind of debate, we might risk becoming a group that knows more and more about less and less. (Ibid, p. 14)

This is not to imply that positivist researchers should engage in interpretive or critical research or vice versa, unless of course they choose to do so. The point to be emphasized is that unless each becomes conversant with the basic assumptions of the other then it is likely that deafness by dissonance will occur as adherents offer blind allegiance to their particular paradigm and refuse to acknowledge the contribution that other
ways of knowing can offer to our understanding of the world of PE. In such situations the possibilities for dialogue and debate are reduced and the critical capacities of the research community are substantially diminished as we become like ships that pass in the night. Clearly this kind of scenario is not in our best interests and Hellson (1988) while recognizing that differences exist between various paradigms, suggests that 'two ships passing in the day and radioing to each other their most defensible cases with their assumptions made as clear as possible might be preferable to seeing which ship can sink the other' (p. 87). In relation to this Lincoln (1989b) reminds us:

If higher education scholars are not aware of the paradigm revolution in the academic disciplines, they risk engaging in research which does not compete with that of other disciplines in its breadth, its vision, or its innovativeness . . . the paradigm revolution in all the disciplines studied carries with it new languages, new terminology, and new forms of discourse. To fail to be familiar with these new languages and new forms of discourse is to be out of the conversation with many of today's cutting edge researchers. Higher education scholars and decision makers cannot afford to be unable to converse substantively with scholars from other disciplines, or indeed, with vanguard scholars from their own disciplines. They must have a working vocabulary and set of understandings in order to share, to utilize, and shape their own inquiries. (p. 9)

Elsewhere, I have argued (Sparks, 1991) that we need to develop a polyvocal research community that encourages many voices and visions to be articulated as this would enhance theoretical vitality and understanding in PE. Here, different paradigms (old, newly emerging, and yet to be conceived), and the traditions contained within them, are given the chance to provide whatever they can offer. If one voice, or paradigm, dominates then there is a real danger that we end up just speaking to ourselves. This can lead to a form of tunnel vision whereby some problems are explored exhaustively while others are not even perceived. Hearing only one voice leads to other problems as well. For example, it can lead to individuals with excellent research skills but with a trained incapacity to think in theoretically innovative ways. On this issue Coser (1984) comments, 'Much of our present way of training as well as our system of rewards for scientific contributions encourages our students to eschew the risks of theoretical work and to search instead for the security that comes with proceeding along a well-travelled course, chartered though it may be by ever more refined instruments of navigation' (p. 298). He goes on to warn us that in such conditions there is a danger that the methodological tail ends up wagging the substantive dog!

Of course, making the effort to listen to the voices of others and to understand assumptions that are not familiar to our own is difficult. It is not easy to think with the mind of another, especially when the person has an approach that seems antithetical to one's own. Indeed, the truly open-minded scholarship required to engage in this kind of thinking may be the exception rather than the rule at present. However, as we approach the twenty-first century we need to cultivate such open-minded scholarship and encourage a pluralistic stance that recognizes that there is no single, legitimate way to make sense of the world. As Eisner (1990b) argues:

Different ways of seeing give us different worlds. Helping people participate in a plurality of worlds made, I believe, is what education ought to try to achieve. The ability to participate in a variety of worlds need not lead to a Tower of Babel: And the specter of everyone marching to the same drummer or forced to speak an official social-science Esperanto thrills me not. We need multiple voices and we need people who can understand them. (p. 12, my emphasis)

Likewise, Bain (1990a, p. 9) comments, 'If we want to create a new world we must have new ways of seeing the world. We must have new visions and new voices'. As a consequence, the ability to hear and understand different voices in a spirit of intellectual curiosity and respect is essential if theoretical vitality is to be nurtured within the PE community. In developing these abilities and becoming more aware of research paradigms that offer alternatives to our own, even if we disagree with them, we become far less parochial. Furthermore, recognizing and learning to celebrate ambiguity and diversity introduces a certain humility as we are continually made aware of the precarious quality of our particular ways of knowing and our own research agendas. This instability will be ongoing as the landscape of PE continues to shift as consciousness is raised and what was once considered settled and sacrosanct is reexamined and challenged. In the coming years the conversation within the research community will get deeper, more complex and more problematic as new forms of thinking about knowing and knowledge emerge. Exciting times are ahead and we should approach the future with a sense of optimism.

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Notes

1 For insights into some of the many discussions taking place within the natural sciences see Bohm and Peat (1987), Chalmers (1982 and 1990), Laura (1988) and Levidow (1986).
ideal whereby researchers attempt to remain as neutral as possible and hold up their own biases for critical scrutiny by the research community. Furthermore, whereas early positivists liked to operate in the tightly controlled environment of the laboratory which dislocated people from the context in which they normally acted, many post-positivists are in favour of conducting their enquiries in the natural setting in which people work and live. That is, much greater attention is now given to context. In relation to this, while techniques that provide high levels of precision are favoured, post-positivists are prepared to utilize interpretive techniques at the data gathering stage of their work. However, the use of such techniques is often seen as a preliminary to conducting more 'rigorous' forms of enquiry (in their terms). Most importantly, these techniques are used within a framework which contains the assumptions associated with positivism/post-positivism. Consequently, when they are used they are used in a modified form so that the methodological safeguards derived from the natural sciences can be applied. While the song does not remain exactly the same it appears to be very familiar. For a powerful counter view to that of Cuba (1990) see Phillips (1990). For example, if we take specific editions of journals devoted to a particular issue as an indicator of their readiness and willingness to accept research of a different genre then the following moments are significant since they are when issues devoted to interpretive research appeared. In 1986 the Journal of Teaching in Physical Education Vol 6, No 1, published a special monograph dedicated to naturalistic research. Following this in 1987 an editorial comment by Templin and Griffey (1987) specified that both quantitative and qualitative research perspectives were appropriate for this journal. In 1987 the American Educational Research Journal devoted a special section with a view from the Publications Committee to broaden the methodological and disciplinary ranges of the published articles in this journal. The invited paper by Simark (1987) is of particular interest since its task was to outline the criteria appropriate for judging the work of several traditions within the interpretive paradigm. In 1989 the Research Quarterly for Exercise and Sport (Vol 60, No 1) focussed upon qualitative research in detail. These public declarations can be read as a recognition of differences between research paradigms.

Once again, we need to be aware that cultural differences exist and Crum (1986) indicates that there has been a very strong German tradition in sport pedagogy based on what he classifies as hermeneutic research at the expense of positivist research forms. In Great Britain the approach has been more eclectic and the dominance of positivism has not been so overpowering as it has in North America. For example, the first edition of the Physical Education Review in 1978 contained a paper by Ward and Marsh that drew on phenomenological theory. However, it was not until 1986 that an edited book by Evans made a collection of qualitative studies available to a more general readership.

At a stage I was going to discuss the post-positivist paradigm that has emerged as a reaction to the numerous critiques of positivism in recent years. I decided against this because in many ways, as Guba (1990) suggests, post-positivism may be seen as a modified version of positivism. For example, there is a shift from 'naïve' realism to 'critical' or realism with regard to ontology. The latter holds that the world is real is indeed driven by real and natural causes but that humans, because of their imperfect sensory, perceptual and cognitive capabilities are unable to arrive at the reality is as it is. Although it is accepted that reality can never be known for what it really is there is little doubt that the ultimate truth (reality) is 'out there' beyond the individual. Therefore, realism remains the central concept and prediction and control the major concern.

In terms of epistemology a modified objectivism is adopted. It is accepted that it is impossible for researchers to view the world from nowhere in particular. Since objectivity cannot be achieved in an absolute sense it is now a regulatory

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forms they are contradictory since they are based on at least one set of opposing metatheoretical assumptions that are in endemic opposition. These paradigms are alternatives in the sense that one can operate in different paradigms sequentially over time, but mutually exclusive, in the sense that it is not possible to operate in each of these paradigms at any given point in time, because in accepting the assumptions of one, the assumptions of the other are denied. The same would hold for the relationship between the interpretive paradigm and the radical structuralist position within the critical paradigm which adheres to an externalist ontologization and an objectivist epistemology. Clearly, the radical humanist or interpretive-critical strand within the critical paradigm is based on the same epistemological and ontological assumptions as the interpretive paradigm. However, this should not be taken to signify total compatibility since the interests and purposes of each are very different. Also see Smith (1990a) and Smith and Heshusius (1986) for a commentary on incompatibility.

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Chapter 2

Studying the Lifeworld of Physical Education: A Phenomenological Orientation

Stephen J. Smith

Over fifty years ago Edmund Husserl spoke of a crisis in our understanding of the world brought on by a gross neglect of the natural, pre-theoretical attitude to life from which all theoretical understanding derives. Such neglect was due, he said, to the fact that we have turned our attention away from the lifeworld (lebenswelt), the world that is experienced in the 'natural, primordial attitude', the world that is 'taken for granted', 'pregiven' and 'already there' — the 'unspoken ground' and 'grounding soil' of our most theoretical accomplishments (Husserl, 1970, pp. 103–186). Husserl was especially critical of the ways in which our natural, pre-theoretical attitude to the lifeworld falls victim to scientific interpretation. What was required in his estimation was no less than a suspension of belief in 'all objective theoretical interests, all aims and activities belonging to us as objective scientists or even simply as (ordinary) people desirous of (this kind of) knowledge' (p. 135), coupled with a kind of intuitive inquiry which treats the lifeworld as both point of departure and continuing point of return.

This claim of a crisis in understanding carries particular meaning for those of us pursuing a human science of physical activity. It makes us suspicious of the kind of connections that are assumed to exist between our experiences of physical activity and the kinesiological and sociocultural sciences of that activity. We begin to question the relation of our scientific discourses to the meanings we derive for ourselves from our games, sports, dances and physical recreations. The claim also gives pause for thought regarding the connectedness of pedagogical science to those experiences of physical activity which comprise the lifeworld of physical education. For, as we continue to fashion a pedagogical science that emulates other sciences of behaviour, we risk overlooking the lifeworld of physical education in all its experiential complexity.

Studying the lifeworld of physical education requires, in the first instance, an attentiveness to experiences that comprise our collective sense