

Research in sport pedagogy: Past, present and future

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1. INTRODUCTION

The title of this paper implies a rather ambitious project, an analysis of the past, present and future of sport pedagogy. My goals are considerably more modest than the title. First, my discussion will be primarily limited to an examination of North American research because of my greater familiarity with that literature and my inability to read literature published in languages other than English. Second, the historical analysis will focus on the last 25 years and will provide not a complete description but a backdrop for a discussion of current research. Third, the paper will identify issues rather than attempt to summarize results of the research. (For reviews and summaries of the research, see Bain, 1990a; Locke, 1984; Siedentop, 1983b; Steinhardt, in press; Templin & Schempp, 1989; as well as a number of topical reviews published in the *Journal of Teaching in Physical Education*.)

I recognize that an analysis of research in North America is not directly applicable to scholarly work in other countries. My hope is that an examination of North American research will serve as a case study

that may provide insight into issues that confront all sport pedagogy researchers.

Crum (1986) identified three research tasks which sport pedagogy researchers need to address:

(a) The hermeneutic research task - dealing with the ideological clarification of the relationships between fundamental conceptions, sports education objectives, and criteria for the quality of sport pedagogy;

(b) The descriptive-explanatory research task - dealing with the description and explanation of the empirical relationships between actual pre-stage, process, product and context variables of sport pedagogy;

(c) The constructive research task - dealing with design, controlled implementation, and evaluation of sport pedagogical improvements.

This list of research tasks provides a scheme for classifying the research done within sport pedagogy. Crum (1986) conducted an analysis of pedagogical journals in which he identified two major subcultures within sport pedagogy as West Germany and North America. He concluded that they have emphasized different research tasks. His view is that the West German scholars neglect descriptive-explanatory research while North American pedagogical science is "characterized by almost a denial of the hermeneutic research task" (p.216).

I would add to Crum's list a fourth task, that of deconstruction. A more complete discussion of post-structuralism and deconstruction will be postponed until the final section of the paper, but I want to briefly introduce the concept of deconstruction at this point. Sarup (1989, p.59) explains, "In the move from hermeneutics and semiotics to deconstruction there is a shift of focus from identities to differences, unities to fragmentations, ontology to philosophy of language, epistemology to rhetoric, presence to absence".

To some extent this paper will be an attempt to deconstruct research on sport pedagogy in the USA. For that reason, the analysis will not attempt to create a linear explanation of the history of sport pedagogy but will employ an approach called genealogical analysis. Genealogy is a form of critique which attempts "to establish and preserve the singularity of events" and "to reveal the multiplicity of factors behind an event"

(Sarup, 1989, p.64). The paper will examine differences within sport pedagogy and the continuing struggle over meaning within the field.

2. THE RECENT PAST

In the Introduction to the Terminology of Sport Pedagogy recently published by AIESEP, the authors acknowledge that one of their most difficult tasks was to define sport pedagogy itself (Piéron, Cheffers & Barrette, 1990). They suggest that disagreement regarding the term is based on philosophic and cultural differences and propose the following as a workable definition: "Disciplined inquiry from different perspectives into teaching and coaching in a variety of contexts in order to inform and improve practice" (p.24). To some extent, the difficulty in definition is seen as based on the relative youth of sport pedagogy as a field of study. This perspective is exemplified by a statement made by Metzler in a recent review article, "However one might define it, and whether one might want to include or exclude certain parts of it, there is little doubt that a serious contributing science of sport pedagogy has been around for only a few years" (Metzler, 1989, p.87). This portrayal of sport pedagogy as a new area of study is disputed by Dewar (1990, p.70) who notes, "It is the standards for judging what constitutes a science of sport pedagogy that are relatively new, not the existence of pedagogy in physical education". Dewar's point is well taken. There is a large body of pedagogical literature published before the recent surge of pedagogical scientific work.

The original focus of the field of physical education was the preparation of teachers, and pedagogical concerns were central in college and university programmes and in the literature from 1860 to 1960 (Spears & Swanson, 1978; Ziegler, 1975). Using the categories described by Crum, most of this early pedagogical literature could be classified as hermeneutic or constructive; that is, it dealt with the goals of physical education and how programmes could be designed to meet those goals. With the advent of the disciplinary movement in the 1960's, the focus of the field of physical education shifted from the preparation of teachers to the scientific study of human movement (Lawson, 1984).

In response to this change, a few pedagogy scholars associated with major research universities in the USA began a struggle to establish sport pedagogy as a scientific area of study. Their efforts were marked by an emphasis on descriptive explanatory research that has come to characterize North American sport pedagogy (Crum, 1986). Identifying sport pedagogy as a new area of study was a rhetorical device for distancing recent research from earlier pedagogical work and establishing the credentials of pedagogy scholars in the scientific community. The literature tends to give the impression that all North American sport pedagogy scholars undertook a similar programme of research on teaching. However, a closer examination of the past 25 years reveals differences and contradictions within the field that may help us understand the current paradigmatic debates. My analysis will focus on a handful of key pedagogy scholars. Focusing on individuals rather than trends directs our attention to the singularity of events. The individuals selected were chosen because of their influence on the development of sport pedagogy in North America. That influence derived in part from their writings but also from their roles as leaders of major doctoral programmes in sport pedagogy. Of necessity, my discussion must omit many other scholars who also made significant contributions to the development of the field.

William Anderson was one of the best USA scholars to begin a programme of research involving systematic observation of teaching in physical education within the doctoral programme at Teachers College, Columbia University. His 1971 article in *Quest* and his co-edited monograph, *What's Going on in Gym* (Anderson & Barrette, 1978), introduced descriptive-analytic research on teaching to the physical education profession. However, an interesting transition has occurred in the Teachers College programme which Anderson described at the 1982 AIESEP convention in Boston. Anderson (1982, p.209) indicates that he "got a little tired of studying teaching-particularly of coding teacher/student behaviour" and decided that maybe instead of just studying what was happening in physical education, we ought to try to change it'. The result was a shift to programme development research in which doctoral students from Teachers' College work with physical education teachers to improve programmes and simultaneously conduct case studies of the programme development process (Anderson, 1989).

Another of the scholars who helped to establish a scientific tradition within sport pedagogy in the USA is Larry Locke. Locke served as co-author of the chapter on physical education research in the influential *Second Handbook of Research on Teaching* (Nixon & Locke, 1973) and as author of a monograph summarizing research on teacher education (Locke, 1984). Both of these reviews are written within the process-product framework that characterizes positivist research on teaching. In addition to serving as a spokesperson for pedagogical research, Locke established a doctoral programme at the University of Massachusetts that focuses on physical education teacher education. Locke's work also shows a shift of emphasis from the 1970's to the 1980's and, to some extent, contradictory perspectives. While Locke's review articles were based on the positivist process-product paradigm, most of the recent doctoral work at the University of Massachusetts has used qualitative research methods based on the interpretive paradigm. Locke's (1989) tutorial on qualitative research methods in the *Research Quarterly for Exercise and Sport* has been an important contribution to the legitimation of such methods within the field. The University of Massachusetts programme under the leadership of Locke and his colleagues (Patt Dodds, Pat Griffin and Judy Placek) has emerged as perhaps the leading doctoral programme in the USA for training qualitative researchers in sport pedagogy.

Another of the doctoral programmes in the USA that initiated a systematic programme of research on teaching in the early 1970's was the Ohio State University programme under the leadership of Daryl Siedentop. The Ohio State programme is based on behaviour analysis and modification and the research has focused on procedures for training teachers (Siedentop, 1972; 1981, 1983a, 1983b, 1986). Siedentop's work has been influential in North America because of his extensive publications and because of the large number of pedagogy specialists trained in the Ohio State programme. As universities began to increase their emphasis on research and publication, the scientific skills of Siedentop's students made them successful candidates for faculty positions across the USA. In contrast to the shifts that have occurred in the programmes at Teachers College and Massachusetts, the Ohio State programme has maintained its emphasis on behaviour analysis. Although in the 1980's an increasing

number of Ohio State doctoral dissertations have employed qualitative methods, this does not reflect a shift in the philosophic basis of the programme. Instead, these studies have been viewed as exploratory research that could identify variables and hypotheses to be examined in subsequent experimental research (Siedentop, 1989).

While Siedentop's research on teaching has maintained a consistent emphasis on behavioural research, it should be noted that his other major scholarly contribution has been the explication of a curriculum model that he labels the sports education model (Siedentop, 1980; Siedentop, Mand & Taggart, 1986). This work, which has been both hermeneutic and constructive, tends to be viewed as separate from and unrelated to Siedentop's sport pedagogy research. This separation reflects a tendency in North America to differentiate curriculum work from research on teaching and to view the latter not the former as legitimate sport pedagogy research.

This distinction between curriculum and instruction has had a significant effect on the way the work of Ann Jewett has been received in the USA. Jewett is a curriculum scholar whose primary professional contributions have been the authoring of textbooks (Nixon & Jewett, 1980) and the development of the Purpose Process Curriculum Framework (Jewett, Jones, Luneke & Robinson, 1971; Jewett & Mullan, 1977). Although Jewett's doctoral students at the University of Wisconsin and the University of Georgia have conducted a number of empirical studies to validate the curriculum framework (Jewett & Bain, 1987), the primary emphasis of her work has been hermeneutic.

Jewett's other major contribution to hermeneutic scholarship in the USA has been to organize a biennial curriculum theory conference starting in 1979. (The seventh such conference is scheduled in March, 1991 at the University of Georgia and proceedings from previous conferences are available from that institution.) Jewett has also recently initiated a curriculum research and development centre affiliated with the National Association for Sport and Physical Education. The centre organizes research on programme development at various sites throughout the USA. Jewett's work exemplifies hermeneutic and constructive work within sport pedagogy. However, because of the hermeneutic emphasis of

Jewett's work, she tends to be viewed as a theorist not a researcher by the scientific sport pedagogy community.

The four people I have just described have probably been the most influential in sport pedagogy in the USA in the past 25 years. However, I also want to talk about two other people whose influence has been more recent. I will not attempt to recognize all those scholars who have made important contributions to the knowledge about teaching, but will limit my attention to two individuals who have influenced the paradigmatic debate within the field.

Hal Lawson (1983b, 1986, 1988) has emerged in the 1980's as the major spokesperson for the socialization perspective in research on teaching and teacher education. Lawson (1983a) was also one of the first North American scholars to discuss alternative paradigms for sport pedagogy research. One of Lawson's important contributions has been to provide a theoretical foundation for the growing number of qualitative research studies within the field.

Another individual whose role in the sport pedagogy paradigmatic debate is worth noting is Don Hellison. Hellison (1978, 1985), who has been somewhat of a maverick, has spent 15 years developing and field testing a curriculum model he calls the social development model. Only recently have he (1983, 1988) and others (Bain & Jewett, 1987) begun to describe his work as research. In effect, Hellison was conducting case studies that attempted to empower participants before the critical theory perspective justifying such an approach as research appeared in the sport pedagogy literature. Despite recent efforts to locate his work within the critical theory paradigm, some scholars grounded in the positivist paradigm continue to dismiss his work as anecdotal.

It should be noted that while Lawson and Hellison have had influence through their publications and presentations, neither has been in an institution with a doctoral programme so they have not played a role in training the next generation of pedagogy scholars. Nevertheless, they have helped to frame the paradigmatic debates.

What does this brief examination of pedagogy scholars reveal? Despite generalizations about the scientific orthodoxy within North American sport pedagogy, diversity has existed among the leaders.

Although there has been a focus on descriptive-explanatory research, there have been strong elements of hermeneutic and constructive work. To some extent, this contradicts Crum's conclusion that North American scholarship has ignored the hermeneutic task. However, the hermeneutic and constructive work has frequently not been legitimized as research and this may have contributed to his conclusion.

There has also been considerable variation in the types of descriptive-explanatory research conducted. The empirical research has included not only process-product research but qualitative research based on interpretive or critical perspectives.

In addition to the diversity among leaders, individual scholars have had shifting and sometimes contradictory approaches to pedagogical work. Some have shifted over time from a positivist position to constructivist research. Some have seemed to embrace interpretive work while clinging to some of the tenets of positivism. This observation is not intended as a criticism but as a recognition that individuals as well as social groups are characterized by complexity and ambiguity. In a recent article in *Quest* I have acknowledged the shifting and contradictory elements of my own work (Bain, 1990b).

I should note that gender appears to have had an influence on the development of sport pedagogy in the USA. Although 56% of physical education teacher education faculty are female, men are more likely to have a doctoral degree and to publish (Metzler & Freedman, 1985). Many early women leaders had an interest in pedagogy, but most of those who led the effort to transform sport pedagogy into a scientific area of study were men. However, the curriculum component of the field has been dominated by women, primarily Jewett and her students. This gender pattern may have reinforced the dominance of the empirical study of teaching and the lesser status of the hermeneutic examination of curriculum.

While a narrow definition of positivist empiricism has been the dominant philosophy propounded by those seeking academic credibility for sport pedagogy, threads of hermeneutic and constructive work as well as alternative paradigms for empirical research existed. Sport pedagogy has, not a singular past, but a multiplicity of histories. Recognizing this may help us to situate and understand the complexity of the field in the present.

3. THE PRESENT

As noted in the definition of sport pedagogy cited earlier, the fundamental purpose of pedagogical research is to guide and improve educational practice. For that reason, it seems appropriate to organize a review of the present status of sport pedagogy research around the question of how well this purpose has been achieved.

Any discussion of the impact and implications of research must begin with a recognition that research is a socially-constructed enterprise and that part of the construction is a view of the relationship between research and practice. When we ask, "Has research had an impact on practice?", the meaning of the question and the basis for the answer derive from our paradigmatic assumptions. The question as posed implies a cause-effect relationship between two distinct entities, a view derived from a «research and development» perspective. Our examination of pedagogical research in physical education will reveal that the traditional R & D model is based on positivist assumptions and is less compatible with other research paradigms. There are three distinct research traditions within North American physical education pedagogy, and each defines research and its relationship to practice differently. The dominant research paradigms are behaviourist research and socialization research. There is also an emerging area of research based on critical theory. We will explore the view of research and practice embedded within each tradition and examine the impact of research based on each paradigm's definitions and standards.

3.1 Behaviourist Paradigm

The behaviourist or natural science paradigm of research on teaching and teacher education is based on positivist assumptions that view the purpose of research as the discovery of generalizable laws of human behaviour. The initial focus of the work is on the description of effective teaching, usually through process-product research that identifies teaching variables which relate to student learning outcomes. Much of this research, including that in physical education, has led to the delineation of models of "direct teaching" and "active teaching" seen as effective in producing student learning (Siedentop, 1983). Some have criticized the rese-

arch for focusing on basic skills rather than higher order learning and on generic management behaviours rather than content-related teaching behaviours. However, advocates of the behaviourist paradigm argue that a substantial body of information about teaching has been identified and that future research can extend the work to more complex teaching and learning situations.

The second phase of behaviourist research is to develop training procedures that enable teachers to acquire the teaching behaviours identified as effective in process-product research. It is at this point that the behaviourist becomes concerned with impact on practice. Daryl Siedentop (1986), the primary spokesperson for the behaviourist perspective in physical education pedagogy, identifies the following as necessary characteristics of teacher education research based on a natural science of behaviour:

First, the studies would have to focus on teacher behaviour as a natural phenomenon studied for its own value rather than as an epiphenomenon studied only to infer something about other less accessible variables....Second, the training intervention would have to be defined with sufficient specificity to allow for replication. And finally, the research design would have to allow for some internally valid means for attributing changes to the presence and absence of the training strategy. (p.5)

The goal of such research is to identify procedures for developing effective training programmes for teachers.

A substantial body of research has applied behavioural analysis principles to the training of pre-service and inservice teachers in physical education. Selected behaviours are targeted for change, and an intervention consisting of goals, explanatory materials, regular observation, and feedback is provided. Such interventions have been successful in producing changes in targeted behaviours, and evidence indicates that university supervisors, co-operating teachers, school principals, peers or teachers themselves can be trained to act as change agents (Borys, 1986; Cusimano, 1987; Mancini, Clark & Wuest, 1987; Ratliffe, 1986; Siedentop, 1981, 1986).

One could argue that there is a strong case for the impact of behaviourist research on teaching and teacher education in physical education.

However, there are two issues that must be examined before reaching that conclusion. The first is whether skills attained through behavioural training are sustained after the completion of the programme. The second deals with the extent to which the behavioural training model has been or will be adopted by pre-service and inservice teacher educators.

The issues of transfer of teaching skills from training to practice and retention of those skills over time are complex problems. Locke (1984) identifies factors that seem to influence transfer and retention as including a degree of initial mastery, context, and trainee acceptance or rejection of skills. Siedentop (1986) notes that behavioural and developmental theories make different assumptions regarding the problem. The developmental or socialization perspective assumes that what needs to be modified is some "inner essence which, once changed, is permanent" and that is reflected in behaviour (pp.12-13). The behavioural perspective assumes that generalization from training programme to work place requires bringing the behaviour under the control of contingencies that will continue to be present in the work place and that support the desired behaviour. For example, teachers need to be trained to respond to indicators of student learning as reinforcers rather than to student enjoyment as their primary satisfaction.

While Siedentop's explanation provides a theoretically consistent view of the problem, it is unclear whether behavioural training can actually accomplish transfer and retention of teaching skills in the diverse and often constraining circumstances in which physical educators teach. Will there be indicators of student learning to which teachers can respond in overcrowded, underequipped classes? Will the reinforcing power of teaching physical education outweigh the pressures and contingencies associated with coaching? Research seems to indicate that teachers, even distinctive teachers, find student enjoyment a more powerful reward than student achievement (Earls, 1981; Placek, 1983) and that when learning does occur teachers may think it is due to factors outside their control (Veal, 1988). Research also indicates that coaching is often of greater importance than teaching to physical educators, especially males (Bain & Wendt, 1983; Chu, 1978; Sage, 1989; Segrave, 1980), and this may weaken the strength of reinforcers in the physical education set-

ting. The extent to which behavioural training can address these contextual constraints has not been answered.

The second major issue related to impact or influence of behaviourist pedagogical research is that despite a growing body of research based on the paradigm, the behavioural training approach to physical education teacher education programmes has not been widely implemented. Several reasons have been suggested including cost, inability of faculty to conduct such a programme, and incompatibility of such a training programme with the norms and values of the university (Siedentop, 1985). While some public school systems in the USA have installed teacher supervision systems based on process-product research (most notably the Madeline Hunter model), physical education behavioural research seems to have had relatively little **influence on teacher** education or public schools.

It is difficult to explain this lack of influence of behaviourist research from within the tradition itself. Examining decisions about teacher education programme design raises questions about the beliefs and values of the decision-makers and the politics of universities and school systems. However, behaviourists do not study beliefs and politics. To understand their dissemination problem, behaviourists may have to turn to the second research tradition, socialization research

3.2 Socialization Research

The second major theoretical paradigm for pedagogical research in physical education has been socialization research or what Lawson (1983a) has called research on teachers rather than research on teaching. Occupational socialization “includes all of the kinds of socialization that initially influence persons to enter the field of physical education and that later are responsible for their perceptions and actions as teacher educators and teachers” (Lawson, 1986, p.107). Research based on this perspective studies not just teachers’ behaviours but their characteristics, perceptions and beliefs.

Most of the socialization research in physical education can be classified as post-positivist. Phillips (1989) defines post-positivism as the search for “warranted assertions” rather than truth. The goal of science remains the development of generalizable theory but all theory is seen as

tentative and temporary. Assertions are warranted when they survive criticism from multiple perspectives, but those warrants are based on probability not certainty. Objectivity is viewed not as an attainable reality but as a "regulative ideal" in which one's work withstands critiques by peers. While some early socialization research has been based on a deterministic perspective characteristic of positivism, more recent work has suggested that socialization is "problematic, not automatic" and that "while institutions try to typecast individual acts and actions, people also try to transform institutions" (Lawson, 1983b, p.4).

Researchers within the socialization paradigm see their research as providing insight and understanding that can serve to guide but not prescribe teaching decisions and policy decisions. Major themes in socialization research relate to teachers' perceptions of their work and how these perceptions influence their actions. Studies of recruitment improve our understanding of the characteristics and beliefs of those who choose a career in physical education (Dewar & Lawson, 1984; Templin, Woodford & Mulling, 1982). Studies of students' experiences in professional training programmes provide insight into how students interpret and negotiate in such programmes (Graber, 1989; Tousignant & Brunelle, 1987; Steen, 1986). Studies of induction into the work place shed light on the effects of bureaucratic socialization.

An area of socialization research of particular relevance to our topic today is the examination of teachers' utilization of information sources. The evidence seems to indicate that teachers rely on peers rather than research as a primary source of information (Campbell, 1988; Earls, 1981; Vertinsky, 1989). One explanation might relate to the contrast that Lawson (1985) has drawn between the knowledge systems of researchers and practitioners. He suggests that practitioners prefer not scholarly, scientific knowledge but working knowledge that blends selectively perceived, scientific knowledge with professional ideology and experiential knowledge. Such an interpretation views practitioners not merely as consumers of information but also as active participants in the generation and reinvention of knowledge.

What this suggests is that research can potentially provide a guide to thinking but not a guide to action. Reid (1978) defines educational deci-

sions as uncertain practical problems in which action must be taken within a specific, unique set of circumstances and the consequences of alternatives not chosen can never be known. He sees theory and research as providing, "Not statements of lawful relationships which might tend to devalue the role of responsible judgment, but data that help us to identify and define problems for decision and that increase our capacity for generating alternative solutions and for improving the quality of our deliberations about which of these should be adopted" (p.27).

Thus, from within the socialization perspective, the question is not "does research affect practice?" but instead becomes, "How well has pedagogical research served as a guide to thinking about practical problems in physical education?" The answer to that question is difficult to determine. Within higher education, it may have changed the language we use to discuss teaching and teacher education programmes. However, there is little evidence that research has changed the ways in which physical education teachers view teaching. What has been called "knowledge creep" may have permitted some research findings to find their way into work organizations (Weiss, 1980), but such indirect influence has had limited effect on practitioners' discourse and actions.

Some would argue that this limitation can be overcome only if the separation between research and practice is removed. This position has been endorsed by those within the third perspective, that of critical theory.

3.3 Critical Theory

Although most North American pedagogical research in physical education is based on the behaviourist or the socialization perspectives, a few scholars are examining teaching and teacher education from a critical theory perspective (Bain, 1989, 1990; Bain & Jewett, 1987). G.L. Anderson (1989) provides the following summary of critical research:

Critical ethnographers seek research accounts sensitive to the dialectical relationship between the social structural constraints on human actors and the relative autonomy of human agency. Unlike other interpretivist research, the overriding goal of critical ethnography is to free individuals from sources of domination and repression. (p.249)

The critical theorist declares that all research is value-based not value-free and inescapably tied to issues of power and legitimacy. A goal of much of the research is to empower those being researched, that is, to provide them with the insight necessary to demystify and critique their own social circumstances and to choose actions to improve their lives (Lather, 1985). Most critical research is grounded in feminism or neo-Marxism and focuses on issues of gender, race or class. These value-based research programmes are committed to research that challenges the status quo and contributes to a more egalitarian order.

Pedagogical research based on the critical theory perspective treats practitioners as participants in the research process rather than subjects to be studied. Participants help to frame questions, to interpret data, and to examine how insights might serve as a basis for action. Lather (1986) suggests that the validity of critical research depends not only on the trustworthiness and credibility of the interpretation, but also on what she labels catalytic validity, that is, the effectiveness of the process in empowering the participants. It should be noted that some critical research studies the oppressor rather than the oppressed, and therefore aims at extending our understanding of power relations but not empowering those studied. Nevertheless, such research shares the emancipatory goal of critical research.

For the critical researcher, impact on practice is an issue to be addressed throughout the research rather than after the study is completed. Therefore, for the critical theory paradigm, the question is not "Does research affect practice?" but "Has this research project empowered participants to act more effectively on their own behalf?" The primary focus is on impact in the specific setting in which the research was conducted. However, critical theorists do choose to publish their work with the intention that it have a broader impact. The hope is not that the results can be directly applied in other settings but that reading the study will inspire others to critically examine their own circumstances. The research dissemination process seeks to provide «consciousness-raising» experiences for the reader.

Relatively little critical research has been conducted in physical education pedagogy in the USA. Some researchers have begun to conduct

feminist critical research (Bain, 1985; Bain, Wilson & Chaikind, 1989; Dewar, 1987; Griffin, 1989b) and Hellison (1978, 1983, 1985) has established a research programme with "at-risk" students that may fit within the empowerment tradition.

It is difficult to assess the impact of critical research on practice in physical education. Many of the research reports provide relatively little information about the «catalytic validity» of the study; that is, how effective the project was in enabling participants to understand their own behaviours and make choices based on that understanding. In addition, the consciousness-raising effects of the research reports depend on their accessibility to teachers as well as other researchers. Hellison's work seems to have had relatively broad impact based on several factors: a programme of work conducted over more than 15 years, publications and presentations that are accessible to teachers, and a personal style that enhances credibility with practitioners. However, Hellison's work seems to have focused on human agency and personal growth but has given little attention to social structural issues. It is too early to judge the impact of the more recent feminist critical research, but one might conjecture that its radical feminist roots will be perceived as threatening by many in the mainstream of physical education, especially given the conservatism of physical educators (Hendry & Whiting, 1972; Kenyon, 1965; Locke, 1962; Sage, 1980).

3.4 Summary of Current Research

What conclusions can we draw and what are the implications? The first conclusion is that the question about the relationship of research and practice must be asked differently for each of the research paradigms. For the behaviourist paradigm, the traditional R&D question, "Does research affect practice?", is appropriate. For socialization research, the question becomes, 'Does research influence the ways in which we think about practical problems?' For the critical researcher, the question is, "Does this research empower participants to change their lives?"

Within each of the three paradigms, there is reason for optimism as well as discouragement. The behaviourists have developed a body of technical knowledge about teaching, some of which is indirectly affecting tea-

chers and teacher educators through a process of “knowledge creep”. The socialization researchers have established a solid base of qualitative research that provides greater insight into the daily lives of physical education teachers. Critical researchers have begun to establish a foothold and to create a critical discourse within the field. Each of the research traditions has matured to a point where it has a cadre of well-trained researchers ready to move beyond descriptions of existing programmes to seek an impact on practice. However, the problems of school physical education are enormous and the progress made in addressing those issues has been slight (Dodds & Locke, 1984).

As indicated earlier, this review has focused on research and practice within the USA. Despite the tendency for North American scholars to be isolated from other cultures, they have had some contact with the work of sport pedagogy scholars from other countries. This awareness tends to be limited to publications in English and to presentations at international meetings such as AIESEP. Behaviourists are familiar with the work of Maurice Piéron (1986) from Belgium. Those interested in curriculum have read Herbert Haag (1978) of West Germany, Len Almond (1986) of England, and Peter Arnold (1979,1988) of Scotland. Scholars with an interest in interpretive and critical research know the work of John Evans (1986, 1988) and Andrew Sparkes (1986, 1988) of England and of David Kirk (1988), Kirk & Tinning (1990), Richard Tinning (1987, 1988) and Jennifer Gore (1990) of Australia.

These international contacts seem to have been particularly helpful in nurturing alternatives to the dominant positivistic, behaviourist paradigm. As Crum (1986) noted, hermeneutic work has thrived in Europe. Interpretive and critical research have also had a stronger if not dominant presence in England and Australia. The emergence of alternatives to positivism seems likely to be the most salient characteristic of the immediate future of sport pedagogy research.

4. THE IMMEDIATE FUTURE

Our examination of the future of sport pedagogy research must be situated in an understanding of the status of social theory and research.

The most notable development in the past thirty years has been the growing rejection of the assumptions of positivism and objectivism. Objectivism is the «basic conviction that there is or must be some permanent, a historical matrix or framework to which we can ultimately appeal in determining the nature of rationality, knowledge, truth, goodness, or rightness» (Bernstein, 1985, p.8). The assumption is that there is a reality “out there” that we can discover through rigorous scientific study. At the heart of this new era is a questioning of the basic assumptions of positivist science: neutrality, objectivity, and observable facts. Lather (1989) summarizes the critique:

Facts are not given but constructed by the questions we ask of events. All researchers construct their object of inquiry out of the materials their culture provides and values play a central role in this linguistically, ideologically, and historically embedded project that we call science. (p.5)

Bernstein (1985, p.8) concludes that the concepts of truth, reality, and so forth «must be understood as relative to a particular conceptual scheme, theoretical framework, paradigm, form of life, society, or culture».

What has emerged from this rejection of positivist science has been a collection of views labelled post-structuralism or postmodernism. One element of post-structuralism focuses on the role of language in creating rather than mirroring reality. Any text has multiple and shifting meanings that are created by the reader as well as the producer of the text. Post-structuralists employ the method of deconstruction created by Derrida to examine texts in order to reveal inconsistent and paradoxical use of concepts (Sarup, 1989). Rejection of the objectivist perspective has also changed our understanding of human cognition (Lakoff, 1987; Lakoff & Johnson, 1980; Johnson, 1987). The process by which humans categorize and interpret their experience is not a mirror of reality but reflects both experience and imagination. Human beings create metaphors based on preconceptual bodily experience and social experience; these metaphors create as well as describe reality. Because there are multiple interpretations rather than a single reality, post-structuralists are also interested in the ways in which power relates to the creation of knowledge. Power is reflected in what Foucault (1980) calls regimes of truth, in which status and power determine who is “charged with saying what counts as true”

(p.131). Power is envisioned not merely as conscious repression, constraint or prohibition, but as the creation of ways of viewing the world which legitimize certain Knowledge and practices. Power permeates all social relations and an understanding of power and knowledge is central to our understanding of the social world.

The result of the post-structural analysis is a rejection of what Lyotard (1984) calls «metanarratives» which attempt to provide overarching explanations of history first-order principles for the discovery of truth. Instead, legitimation of knowledge and action becomes plural and local. Fraser and Nicholson (1990) summarize:

Instead of hovering above, legitimation descends to the level of practice and becomes immanent in it. There are no special tribunals set apart from the sites where inquiry is practiced. Rather, practitioners assume responsibility for legitimizing their own practice. (p.23)

In this nonfoundational view of science, knowledge is no longer seen as absolute but as plural and context specific. The result is a recognition that the world is “spoken from many sites” (Lather, 1989). The unresolved and troubling issue is how to reconcile the post-structuralist view with the political commitment to social justice. Fraser and Nicholson (1990) state the dilemma for feminists as follows:

How can we combine a postmodernist incredulity toward ©metanarratives with social-critical power of feminism? How can we conceive a version of criticism without philosophy which is robust enough to handle the tough job of analyzing sexism in all its endless variety and monotonous similarity? (p.34)

Post-structuralism has been criticized by some as being apolitical and perhaps neoconservative (Sarup, 1989). Hartstock (1990) notes that just as those who have been silenced begin to form theories about the world and to talk about changes, “ideas of progress and the possibility of systematically and rationally organizing human society become dubious and suspect” (p.164). While no assumption is made of a conspiracy, the issue remains of how to ground one’s political beliefs and actions without resorting to metanarratives.

Several answers have been proposed. Lather (1989) proposes that inquiry in the post-structural world involves not a quest for certainty but

a celebration of ambiguity and competing discourses. Cherryholmes (1988) suggests that we consciously create a dialectic of construction-deconstruction in order to avoid despair:

Constructors must realize that what is built is temporal, fallible, limited, compromised, negotiated, and incomplete or contradictory. Each construction will eventually be replaced. And deconstructive arguments must be shaped so that construction will be encouraged and follow. (p.143)

Flax (1990) discusses the implications for feminism, saying:

Feminist theories, like other forms of postmodernism, should encourage us to tolerate and interpret ambivalence, ambiguity, and multiplicity as well as to expose the roots of our needs for imposing order and structure no matter how arbitrary and oppressive these needs may be. If we do our work well, reality will appear even more unstable, complex, and disorderly than it does now. (p.56)

In this disorderly world, political action must be local, diffused and strategic (Sarup, 1989).

What are the implications of the decline of positivism and the emergence of post-structural thought for sport pedagogy research? The first is that there will continue to be multiple paradigms for pedagogical research and that an increase in interpretive and critical research seems likely. However, the struggle for acceptance of alternative paradigm research will be slow. It will be made more difficult by the conservatism of physical educators, the dominance of positivist research in exercise and sport science, and the marginal status of sport pedagogy within the broader field of kinesiology. As indicated by the post-structural view, the struggle will occur at local sites (e.g. tenure decisions within specific academic departments and manuscript reviews by editorial boards of particular journals). The outcome of the struggle will not be a consensus about the right way to teach or to train teachers or to do research, but an ongoing dialogue about these issues.

The second implication is that as sport pedagogy scholars become more familiar with post-structural thought, we will begin to recognize the shifting and contradictory nature of our discourse and practices. This recognition will result in scholarly activities that fall within the broad category of

deconstruction. Some examples have begun to appear such as Jennifer Gore's (1990) analysis of pedagogy as text with multiple meanings, Andrew Sparkes (in press) examination of the rhetoric of research reports, and Richard Tinning's (1990) keynote address at this meeting. Although we may expect that relatively few will undertake such analyses and that deconstruction will remain at the fringes of sport pedagogy, the publication of such work will change the perspectives of most sport pedagogy scholars and increase the sense of uncertainty and ambiguity within the field.

Because of our commitment to the improvement of practice, this uncertainty will be especially difficult for sport pedagogy scholars. Our tendency is to search for the right answer, the best way to teach. Our task will be to accept the ambiguity and uncertainty of the post-structural era without retreating from a commitment to action. The benefit of ambiguity may be to enable us to build what Young (1990) has called a politics of difference:

A politics of difference lays down institutional and ideological means for recognizing and affirming differently identifying groups in two basic senses: giving political representation to group interests and celebrating the distinctive cultures and characteristics of different groups. (p.319)

However, such affirmation of difference is not a necessary outcome of the poststructural era or perhaps even a likely one.

In developing the conclusion for this paper, I have had to resist historicism or the notion that there is an overall pattern in history. The temptation has been to embrace the metanarrative that progress is inevitable and that the uncertainty of the age will lead to a better future. Instead, I must conclude that the future is also uncertain and that we must live with the joys and the frustrations of the here and now.

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