ORIGINAL PAPER

# From Scientism to Science: How Contemporary Epistemology Can Inform Practice Research

**Jeane W. Anastas**

**Abstract** Fifty years ago, social work understood research as depicted by logical positivism and its successors, and an obsolete scientism still held sway. This paper will briefly trace the history of the epistemological debate that has taken place in social work in the last 30 years, which is directly related to the credibility of agency-based research and of qualitative methods as well as to issues in knowledge development about oppressed groups. Contemporary epistemologies–realism and pragmatism–offer frameworks that are compatible with what is needed for practice-relevant research and knowledge development: firm grounding for methodological pluralism, attention to the social and political nature of science, the embrace of theory, and an end to scientism without resort to relativism. If these changes in epistemological thinking can be fully embraced, the twentyfirst century can be a very productive one for agency-based and practice-relevant social work research.

**Keywords** Social work research · Epistemology · Realism · Pragmatism · Critical theory · Practice research

Fifty years ago, social work and the social sciences understood research as depicted by logical positivism and its successors. In 1960, what Heinemann (Pieper) (1981) called an obsolete scientism still held sway, discrediting both practice-based research and analytically-informed practice. Since then, social work has grown in the sophistication of its thinking about epistemology, which can

J. W. Anastas (✉)
Silver School of Social Work, New York University,
1 Washington Square North, New York, NY 10003-6654, USA
e-mail: jwa1@nyu.edu

legitimate practice-relevant research methods and models for the future. However, greater knowledge of contemporary epistemologies will be needed to strengthen practice-relevant research in the years to come.

This paper will briefly trace the history of the epistemological debate that has taken place in social work in the last 30 years, which is important for the credibility of agency-based research and of qualitative methods as well as to issues in knowledge development about oppressed groups. It will outline two contemporary epistemologies—realism and pragmatism—that can inform and support a range of research methods and innovative approaches to practice-relevant research. Influences from social constructionism and from feminist and post-colonialist analyses will also be briefly discussed since they have influenced contemporary thinking in both realism and pragmatism.

To position myself in this task, I am not formally educated in philosophy or epistemology. However as a teacher and practitioner of social work research, I encountered problems with the dominant view of science and research, and I was fortunate to have had a doctoral education that introduced me to epistemological thinking. Feminist critiques of knowledge development were also influential. The views I have developed on these matters come from reading in the field over many years, but they do not do justice to the precise and important debates that take place among philosophers of science. My goal instead is to present the broad outlines of two kinds of current epistemological thinking. However, no reader should assume that my depiction of these epistemologies is complete but should pursue further independent reading. My argument is that science, and hence research methodologies, are now understood quite differently than was the case in 1960 (or when I received my doctoral education in the 1970s). These new ways of thinking about science and research can be used

to validate the kinds of research that social workers do and the knowledge that they draw from to inform their practice.

## The Academic Debate on Epistemology in Social Work

In clinical social work education, it is hard to re-imagine the time before Kuhn's (1962) influential work in the history of science and Berger and Luckman's (1966) widely-read book on social constructionism began changing the received view of science and knowledge-building in the social sciences. To illustrate, Zimbalist's (1977) book on the history of social work research in the United States from the 1870s to the 1970s emphasized the dominant "themes" or subject matters of this research, which he described as research on the causes of poverty related to the charity organization movement, the social survey movement that studied poverty and living conditions, the development of quantitative measures and indexes, efforts to evaluate the effectiveness of social services, and the study of the "multiproblem family" (p. 8). To Zimbalist, what the scientific method was or ought to be was taken for granted, and social work research was distinguished from social science research only by its aim to inform agency and practitioner efforts to address the problems faced by individuals, families and communities in need. It happens that 1960 was the year that the first major textbook on *social work* research was published under the auspices of the Research Section of NASW (Polansky 1960; Zimbalist, p. 23), suggesting an embrace of mainstream social science methods applied to social work concerns. However, in this framework, research was described as being exploratory, descriptive or explanatory in nature (see Kahn's chapter in Polansky's 1960 edited text, which was widely used in several editions for many years). All research not explanatory in design, meaning not experimental, was inferior by definition; qualitative, "hypothesis-generating" methods were seen as legitimate only in paving the way for later descriptive or hypothesis-testing studies. The Polansky (1960) text also did not address epistemology, which had not yet, in today's terms, been problematized.

While the Research Section of NASW did not survive for long, this modernist view of science based in logical positivism or logical empiricism did. As Zimbalist points out, this tradition, common to social work and the social sciences in the late nineteenth century, was typical of progressive ideas in that era:

> The prevailing cultural climate was one of eager emancipation from the religious dogma and mysticism that had long obstructed the objective study of society and human problems, and unbounded faith in

the application of rational intelligence—and its keenest instrument, the scientific method—to the solution of the mounting social ills of the time. Zimbalist 1977, p. 19

Although embracing science helped in the professionalization of "scientific charity" and its social work successors, it is a matter of curiosity to epistemologists that this view remained unquestioned in the social sciences as long as it did—long after twentieth century physics had changed views in the "hard" sciences. Peile and McCouat (1997) suggest that positivism's strong influence in social work "dovetails with the interests of government and business" as funders of social work research (p. 348). Zimbalist saw the persistent and infamous practice-research "gap" in social work as originating in the withdrawal of the National Conference on Charities and Corrections from the American Social Science Association, one marker of the well-known art versus science debate (pp. 18–19). However, contemporary epistemologies do not require that non-experimental or even non-empirical sources of knowledge be discredited, which can help to bring research and practice knowledge closer together again.

It was a woman struggling with a university committee over what kinds of practice-relevant research could be accepted as a dissertation—Martha Heineman Pieper—who first and most effectively challenged the outmoded epistemological views in social work in 1981 (Pieper 1989). She and Tyson went on to promote the "heuristic paradigm" (Tyson 1995), which she believes I misunderstand (Heineman-Pieper et al. 2002), because I see it as based in the realism of Harré (1978). However, others have supported my view that realism offers an epistemology that does not require the invention of a new epistemology (Boland and Atherton 2002). Supported by social workers interested in social constructionism (e.g., Hartman 1990; Witkin 1991), one of the most immediate effects of Heineman Pieper's ground-breaking work was to help legitimate qualitative research as a credible method of inquiry in itself. There were debates about whether qualitative research and practice were or were not "hand in glove" (Gilgun 1994; Padgett 1998), not to mention assertions that a change in perspective was not needed at all (Thyer 1993). A concrete example of this struggle over epistemology and research methods was the adoption of the journal *Research on Social Work Practice* as a member benefit by the Society on Social Work and Research, which was not approved by its board until they were given assurances that editorial policies would change to allow for the submission and review of qualitative as well as quantitative studies. Within social work, clinical practice more readily embraced social constructionism and qualitative methods, as illustrated by a study of doctoral programs in

social work which found in the 1990s that those doctoral programs with a greater direct practice emphasis also were more likely to teach about epistemology (Anastas and Congress 1999). However, by the 1990s, this epistemological argument was declared settled in "postpositivism" (Fraser et al. 1991; Videka-Sherman and Reid 1990), a term not precisely defined but which has been described as a "less methodologically dogmatic" version of positivism or empiricism that retains "objectivity" as an ideal (Peile and McCouat 1997, p. 348).

## Influences from the Social Sciences

### Social Constructionism

This history of the social work-specific epistemological argument does not adequately capture the general influence of social constructionist thinking in calling the received view of science into question. Logical positivism and its successors are based in correspondence theory—the idea that a concept exists in reality to which it more or less reliably and validly "matches up." Social constructionism questioned this notion in two ways. The first was to demonstrate how profoundly perceptions of "things" differ as mediated by culture, history and language (see for example Berger and Luckman 1966; Gergen 1999). Social and psychological things, the concerns of social work, are most obviously affected by these contexts. However, to some social constructionists, our experiences of the world are so crucially modified by language, culture and other factors that we cannot say with any confidence that there is a reality independent of our perceptions of it. The second contribution was through studies of science itself (see for example Latour and Woolgar 1986), which showed that science was not apolitical, asocial, or value free in its actual practice. Kuhn's (1962) notion of paradigm shifts illustrated how the understanding of facts changes according to the theoretical frameworks through which they are viewed, the classic example being the Copernican revolution from an earth-centric to a sun-centric view of the solar system. Meanwhile, of course, in the twentieth century, relativity theory and quantum physics changed the idea that observation could ever be neutral, non-reactive or a positional (Barad 2007; Gleick 2011), making both levels of critique raised by the social constructionists more easily credible. However, despite its usefulness in "unsettling" traditional thinking, social constructionism, at least in some of its forms (Gorman 1993), has raised concerns about relativism in social work, which can create problems for a practice profession (e.g., Peile and McCouat 1997).

By now, as Hacking (1999) observed, books and articles addressing "the social construction of ___" are ubiquitous.

As he points out, this line of argument criticizes how we understand phenomena, showing that a problem has not always been understood in the same way, that there are harmful effects that arise from how it is currently understood, and that people might be better off if we changed the way we defined and reacted to/treated the problem. For example, Foucault's analyses of how views of mental illness (1965) and sexuality (1988) have changed in modern times in ways that gave rise to institutions with power over redefined people have had some influence in social work. Using social constructivism, Iverson et al. (2005) locate the roots of diagnosis and assessment in social work in early modernism and, from a social constructionist perspective, argue instead for the use of non-medical assessments, tools like the ecomap and genogram. However, most social work practice remains rooted in an empiricist view of diagnosis, driven no doubt by reimbursement issues that tend to reify what is being described. By contrast, social constructionists[1] have tended to favor the use of qualitative methods to reveal the subjective meanings of things to people, especially when those being studied are people who come from marginalized, often "voiceless" groups.

### Feminist and Post-colonial Analyses

Another line of thinking in social work that contributed to the critique of the logical positivist view of research was feminism, most durably represented in Swigonski's work (1993). While some feminists like Davis (1986) suggested that qualitative methods were most compatible with feminist research for giving voice to the voiceless, others, exemplified by Harding in the social sciences (1991, 2006), do not think feminist research is defined by its methodology. Swigonski's (1993) discussion of standpoint theory incorporates the idea of critical consciousness: an achieved understanding of how gender (in this case) shape's both one's experiences and one's knowledge of the world, often distorting knowledge when gender is not considered and enriching it when the subjugated knowledge of marginalized women is taken into account.

There are many feminisms (Saulnier 1999) and many feminist epistemologies, but what they have in common is the idea that research and the knowledge it generates cannot be ahistorical, apolitical and disembodied. This analysis stands in sharp contrast to the logical positivist view that "good" research is apolitical, its findings universal, the social relationships that produce researchers and resources to conduct research unimportant, and the power

---

[1] Although there is not complete agreement on this, "social constructionism" is the term most often used to describe these ideas as they emerged in sociology, while "social constructivism" can refer to these ideas in psychology. I will use the first term, "constructionism," to refer to both.

relationships between the people who conduct research and those who are its "subjects" unexamined. Critical race theory and post-colonial analyses may not use gender as the starting point, but they come to the same conclusion.

## Critical Race Theory and Post-colonial Perspectives

The epistemological debates in social work and the social sciences must be understood as a problem of Western culture. Since Europe's "age of discovery," it has become necessary in much of the world to speak of "indigenous people" in contrast to those who came from elsewhere to inhabit land areas that once belonged to others in Africa, the Americas, Australia and New Zealand, and many parts of Asia. Those who are concerned with indigenous peoples and knowledge development view science and research as a product and mechanism of colonialism, wherein knowledge of and about the people and the natural resources "discovered" has been and is being used to serve the interests of Euro-American investigators and business interests (Smith 1999; Harding 2006).

Critical race theory "belongs to the family of critical postmodern theory," which also includes neo-Marxism focusing on class, neo-feminism addressing gender, and queer theory, lines of thinking that are characterized by a "refusal of positivism," deconstruction of social constructions, a "rejection of totalizing categories," and attention to intersectionality (Ortiz and Jani 2010, pp. 176–177). Writing from a critical public health perspective, Cook (2009) describes these theories as "grounded in the lived experiences of multiple and intersecting oppressions" and in a recognition that current "hegemonic" research practices exclude the experiences and needs of those from oppressed and marginalized groups (p. 150). An understanding of these influences on knowledge-building for practice can be incorporated into both realism and pragmatism, which is necessary for a profession like social work that has social justice and service to marginalized populations as its mission.

Critical race theory is only now making its way into the social work education literature–not yet with respect to research but rather to human behavior theory and approaches to content on diversity (Abrams and Moio 2009; Ortiz and Jani 2010). However, issues like health disparities on a national or international scale bring race and gender into many discussions in social work related to the social determinants of health, illness and longevity (Murray et al. 2006); mental health; substance use and abuse; child development and child welfare; and individual, family and community well-being.

Critical theory is very much about who benefits from and who pays the costs of research activity, which some in pragmatism and critical realism draw attention to but do not make the center of their analyses. Feminist and post-colonial thinking centers these problems. It is most concerned with the critique of accepted knowledge, as in uncovering how our understandings are gendered and/or racialized. As Harding and Norberg (2005) put it, "… conventional standards of 'good research' discriminate against or empower specific social groups no less than do the policies of legal, economic, military, educational, welfare, and health-care institutions… construct[ing] 'conceptual practices of power'" (p. 2009). Using standpoint theory, they also observe that "dominant groups are especially poorly equipped to identify oppressive features of their own beliefs and practices" (p. 2010).

## Realism

There are many varieties of realism, the writings of Rom Harré (1985, 1986) and Roy Bhaskar (1978, 1989, 2008) being among the most influential in the social sciences. Heineman's original paper (1981) cited Harré's work, as did Manicas and Secord (1983), who endeavored to introduce what they called "fallibilistic realism" to psychology.[2] More recently, Mansoor Kazi (2000, 2003) has used the work of Pawson and Tilley (1997) and others to argue for realist evaluation methods to examine both process and outcomes in social work practice and social service programs. Houston (2001) and Mäntysaari (2005) have also been promoting realism as a sound epistemological base for the profession.

There are several key tenets in realism. The first premise is that there is a "mind-independent reality," which stands in contrast to many forms of social constructionist thinking. As Bergin et al. (2008) emphasize, realism distinguishes between the intransitive nature of reality and the transitive nature of our knowledge of it (p. 173). Although there are differences among realists on how independent of human thinking and language this reality may be (Mäntysaari 2005), this premise seems to me to be important in many aspects of professional practice, including research.

What distinguishes realism from the positivist or empiricist view, however, is another of its premise that reality has three levels: the real, the actual and the empirical. To be real is to exist naturally or socially and to have certain characteristics and potentials; to be "actual" is to be active and potentially knowable (Sayer 2000, pp. 11–12; Bhaskar 2008, p. 56). The real therefore includes much more than what has captured our attention or interest (the actual) and also much more than has been directly observed

---

[2] I remain indebted to Dr. Marian MacDonald, Professor of Psychology at the University of Massachusetts, Amherst, for introducing me to this paper.

and scientifically described (Sayer 2000, p. 12; Bhaskar 2008, p. 56). In this view, concepts—theories of action or causation, ideas about "kinds" of things, ideas about mind as opposed to brain, for example—can be real even if they have not (or not yet) been empirically observed. By contrast, when the most outspoken logical positivists in social work, who were also behaviorists, argued that if it could not be measured, it did not exist, they were seen as discrediting psychodynamically-informed practice, even in the face of the long tradition of empirical research in psychotherapy, still under-utilized in social work. In realist thinking, something not empirically observed can still be real, so things that are hard to measure (transference being a classic example) may yet exist. In addition, it is what data *mean* that is important, and theories are an important source for these explanations. Therefore Houston (2001) argues that realism is useful for social work in returning "depth" to practice, citing attachment theory and social structural concepts like social class as valid explanations for aspects of human behavior even when not consciously experienced as such. While attachment type is said to have a "gold standard" measure in toddlers (the Strange Situation procedure), this "mindset" or emotional disposition is inferred from an observation of behavior, and it is the systematic inference that it valued, not the description of specific behaviors seen.

In the realist view, facts do not dominate; our conceptual explanations of them, even when they cannot yield predictions, are the most important thing, even though these are subject to change (e.g., Kuhn's paradigms). This stems from an important problem often discussed: the under-determination of theory by evidence. Theory is used to predict or explain relationships among things, as when we say that the experience of trauma often results in certain psychological problems. However, a realist holds that even when people agree that the data demonstrate a relationship between two things, the data cannot determine how that relationship or mechanism of action is to be *explained conceptually*. The importance granted to theory in the realist view of science is compatible with the importance that most practitioners, especially dynamically-informed ones, give to it in their work (Houston 2001; Mäntysaari 2005). In the realist view of program evaluation, it is not enough to show "inputs" and "outputs;" identifying and understanding the mechanisms that explain how the inputs get transformed into outputs are also essential (Pawson and Tilley 1997).

In addition, realism supports methodological pluralism, or the idea that all kinds of research methods, including qualitative ones, can be equally valid, useful and "scientific." These differing types of research are explained as being relatively open or closed systems of study Manicas and Secord 1983). Explanation is the point, not necessarily

the determination of causation, which many forms of inquiry can contribute to. In postmodern terms, realism adds the referent to the relationship between the signifier and the signified (Sayer 2000, pp. 36–37). Because it posits that the signified may exist in the natural or social world, realism has the advantage of being compatible with professional functions, as when social workers report suspected child abuse or make an assessment or diagnosis that leads to resource allocation, as in diagnosis-based reimbursement for treatment.

However, realism also understands all knowledge, including scientific knowledge, as potentially fallible and limited. As Bergin et al. (2008) put it for issues of gender and mental health in the field of nursing, "critical realism… allows coexistence for 'sex' [biological] and 'gender'[social] within mental health related research and practice" (p. 177). Examples of important recent work that examines but also questions a biological or embodied basis for gender and sexuality can be found in Fausto-Sterling's famous study of what intersex phenomena tell us about what is wrong with our binary system of gender classification (2000) or Jordan-Young's (2010) critique of the brain organization hypothesis about how sex and gender develop. In realist terms, Fausto-Sterling uses the *empirical*—data on the prevalence of ambiguous genitalia in newborns—to question the *actual*—the social and legal idea that all humans are male or female—to argue that what is *real* in the human body is more multifaceted and complex than we now appreciate.

Realism fully and coherently embraces methodological pluralism, differentiating between studies conducted in (relatively) closed systems, as in the experiment, or in more open (reflexive) ones, as in qualitative research (e.g., Manicas and Secord 1983). In addition, it addresses scientism very directly. For example, Sayer (1992, p. 13) describes as misconceptions the ideas that:

> knowledge can be safely regarded as a *thing* or *product* [emphasis in the original], which can be evaluated independently of any consideration of its production and use in social activity; [and] that science can simply be *assumed* to be the highest form of knowledge and that other types are dispensable or displaceable by science.

Although science is valued, there is no "scientism," no valorization of empiricism.

Finally, although all forms of realism take context into account, Bhaskar's (2008) critical realism is the version most explicit about incorporating the political and social aspects of science, knowledge, and of who benefits from knowledge-generating activity. Bhaskar and his followers (e.g., Sayers) in particular are concerned with the emancipatory *potential* of science (Bergin et al. 2008), which is,

of course, not always achieved. The early empiricists also hoped for this outcome (see quotation above), gender and race-based analysis of the processes and outcomes of knowledge development were not included by definition in their thinking. Consideration of how power and politics are inherent in all of science—its institutions, practices and products—is one feature that differentiates postpositivism from many varieties of realism.

## Pragmatisms[3]

While realism has its roots in Europe, pragmatism stems from the early modern period in the United States (Haack and Lane 2005). The roots of pragmatism are generally described as being in the works of Charles S. Peirce, William James, and John Dewey, but Jane Addams, who identified Dewey's work as an influence on her own, is recently being recognized as someone who developed (along with applying) these ideas in her settlement house work (Stanford Encyclopedia of Philosophy 2011).

Pragmatism is not a "let's just get on with it" attitude, as Kazi (2000) has claimed. While philosophers of knowledge are often most concerned with truths, pragmatists in general are more concerned with determining which ideas are *useful* in achieving some social good. Hence pragmatism is a value-based perspective, which is both a strength and a weakness. However, professional practice is also value-based, a major argument for its relevance to social work and other professions. Pragmatism, like logical positivism, emerged in the late nineteenth and early twentieth centuries to counter metaphysical thinking and idealism; therefore it emphasized knowledge, including empirical knowledge, based in experience. Some forms of pragmatism are realist in asserting that empirical knowledge has some specific virtues, those based in the work of Peirce and his followers (e.g., Mizak 2009); others, based in James' and Dewey's work, draw more heavily from social constructionist ideas, as Rorty (1982) does. Whether realist or not, there are important ideas common to all pragmatist epistemologies that will be outlined here.

The social basis of science—in the community of experts who debate and strive to reach consensus on knowledge claims though review of research findings and the methods generating them—is explicitly acknowledged in pragmatism. In addition, the social groups considered relevant to evaluating claims of truth or usefulness are generally broader, that is, not consisting just of scientific experts in a specific field, reflecting Dewey's democratic

ideals. Hence service users as well as professional experts would be allowed a voice in determining what works.

Pragmatism is also a perspective, like contemporary realism, that embraces methodological pluralism, as well as historical studies and theoretical (non-empirical) inquiry. Inductive knowledge is seen as equally valid as deductive (e.g., hypothesis-testing) work, Goldenberg (2006) has used pragmatism to critique evidence-based medicine (EBM), specifically its "hierarchy of evidence" that privileges knowledge generated by RCTs and their derivatives (e.g., meta-analysis) and "the displacement of… normative considerations in favor of methodological and technical considerations" (Goldenberg 2009, p. 170). Nevertheless, she argues, RCTs are not to be totally discounted since they have such a pragmatic goal–determining what does (or does not) produce an effect–despite the many legitimate criticisms that can be made of them.

Pragmatism has been criticized for its emphasis on utility–the useful and the practical—most infamously in James' statement about the "cash value" of truth "in experiential terms" (James 1948, p. 200). However, its focus on knowledge for action is used as an argument for its relevance to practice professions (Goldenberg 2006, 2009; Hansen 2007; Cornish and Gillespie 2009). Another criticism is that there are often competing values involved in deciding what is "good" or "useful" for an individual or a society. Pragmatists would say that such debates need to be resolved through public, democratic debate and deliberation, which is difficult to achieve in actuality in complex societies. However, as in critical realism, pragmatism also holds that analysis of the interests served by knowledge is essential.

Writing about pragmatism for health psychology, Cornish and Gillespie (2009) assert that the selection of problems for study should be based in people's lived experience and that priority among problems for study should be resolved through public debate, suggesting that citizens beyond the intellectual elite in any field should have a say in what is studied and what is funded for study. They summarize pragmatism as supporting methodological pluralism without "epistemological or moral relativism" (p. 807) from an action-oriented perspective, meaning that studies of the usefulness of programs and practices without a "hierarchy of evidence" would have high priority. The adoption of the harm reduction approach to substance abuse treatment is an example of pragmatism in action: An idea "proven" in practice took hold in contrast to abstinence models, and later empirical study has confirmed its effectiveness (Lushin and Anastas 2011). However, while the usefulness of pragmatism as an epistemology has been discussed in other fields (Goldenberg 2006, 2009; Hansen 2007; Cornish and Gillespie 2009), I have not yet found it elaborated in the current social work literature.

---

[3] I wish to acknowledge Dr. Barbara Levy Simon of Columbia University's School of Social Work for first suggesting to me the relevance of pragmatism for social work.

## Conclusion

Contemporary epistemologies, like realism and pragmatism, offer social work frameworks that are compatible with what is needed for practice-relevant research and knowledge development: firm grounding for methodological pluralism, attention to the social and political nature of science, the embrace of theory, and an end to scientism without resort to relativism. Feminist and post-colonial analyses have to some extent been incorporated to contemporary versions of both lines of thinking.

There are several ways in which these contemporary epistemologies can support practice research in social work. Pragmatism is easily understood to value practice wisdom. In addition, it would suggest that that research on practice incorporate the views of a range of stakeholders—service users as well as family members and practitioners. Methods of study such as Epstein's clinical data mining (Epstein 2010) are based in pragmatism in the philosophical as well as the general sense, providing ways for practitioners to study the practices they engage in by systematically using data they collect for practice purposes.

Realism, while methodologically pluralistic, both calls for methodological sophistication and rigor and reminds us of the limits of empiricism. The importance of identifying the unseen mechanisms that underlie what is observed (Pawson and Tilley 1997) is reflected in researchers' efforts to specify mediators and moderators in their studies (Barron and Kenney 1978). On the other hand, realists understand that theory is underdetermined by evidence. This problem can be seen in debates about treatments like EMDR: Does it work because of the eye movements specific to the method or because of the more general elements it shares with other cognitive methods employing desensitization methods? So too does the larger long-standing debate about common factors versus specific effects in psychotherapy (see Drisko's excellent 2004 discussion of this issue).

Finally, one emerging research model in social work can be supported by either pragmatism (Oquist 1978) or critical realism (Houston 2001): community-based, participatory action research (PAR–Whyte 1991; Healy 2001; Eckhardt and Anastas 2007; MacIntyre 2008; Hart and Bond 1995 ). In PAR, people who belong to the communities and groups being studied, including those who will be participants in a study, are involved in determining the research questions, designing the study, developing and implementing sample recruitment and data collection methods, and analyzing and interpreting the data obtained. Study findings are considered to belong first and foremost to the groups or communities being studied for the purpose of challenging prevailing social injustices, and study participants and other community representatives should be empowered to be and become researchers themselves, which is the reason that Houston (2001) finds this research model to be compatible with the social justice aims of social work. Mohall et al.'s study of recovery among Alaska natives (2004) illustrates how the views of community representatives and research participants can transform research, in this case exploring culture-specific views of and resources for achieving sobriety in this population. This model of inquiry is an unthinkable one to those who subscribe to the "received view" of research in which only the disciplined and disinterested researcher/scholar could possibly achieve an objective and hence trustworthy version of "the truth." Although few studies are able to incorporate all features of this model fully, addressing power and accountability in research is an important concern of critical theorists in general. While standard research methods texts in social work, including my own (Anastas 2000), have not in the past included the PAR model, it will be interesting to see whether this remains true in the years ahead. These are all sweeping changes when compared to 50 years ago which, if fully embraced, can make the twentyfirst century a very rich and productive one for agency-based and practice-relevant social work research.

## References

Abrams, L. S., & Moio, J. A. (2009). Critical race theory and the cultural competence dilemma in social work education. *Journal of Social Work Education, 45*(2), 245–261.

Anastas, J. W. (2000). *Research design for social work and the human services* (2nd ed.). New York, NY: Columbia University Press.

Anastas, J. W., & Congress, E. (1999). Philosophical issues in doctoral education: A survey of doctoral program directors. *Journal of Social Work Education, 35*(1), 143–154.

Barad, K. M. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Durham, NC: Duke University Press.

Berger, P. L., & Luckman, T. (1966). *The social construction of reality: A treatise in the sociology of knowledge*. New York: Anchor Books.

Bergin, M., Wells, J. S. G., & Owen, S. (2008). Critical realism: A philosophical framework for the study of gender and mental health. *Nursing Philosophy, 9*, 169–179.

Bhaskar, R. (1978). *A realist theory of science*. Brighton: Harvester.

Bhaskar, R. (1989). *Reclaiming reality*. London: Verso.

Bhaskar, R. (2008). *A realist theory of science*. New York: Routledge.

Boland, K., & Atherton, C. (2002). Heuristics versus logical positivism: Solving the wrong problem. *Families in Society, 83*, 7–13.

Cook, C. (2009). Women's health theorizing: A call for epistemic action. *Critical Public Health, 19*(2), 143–154.

Cornish, F., & Gillespie, A. (2009). A pragmatist approach to the problem of knowledge in health psychology. *Journal of Health Psychology, 14*(6), 800–809.

Davis, L. V. (1986). A feminist approach to social work research. *Affilia, 1*(1), 32–47.

Eckhardt, E., & Anastas, J. W. (2007). Research methods with disabled populations. In F. K. O. Yuen, C. B. Cohen, & K. Tower (Eds.), *Disability and social work education: Practice and policy issues*. Binghamton, NY: Haworth Press.

Epstein, I. (2010). *Clinical data mining: Integrating practice and research*. New York: Oxford University Press.

Fausto-Sterling, A. (2000). *Sexing the body: Gender politics and the construction of sexuality*. New York: Basic Books.

Foucault, M. (1965). *Madness and civilization: A history of insanity in the age of reason*. New York: Random House.

Foucault, M. (1988). *The history of sexuality* (Vol. 1). New York: Vintage Books.

Fraser, M., Taylor, M. J., Jackson, R., & O'Jack, J. (1991). Social work and science: Many ways of knowing? *Social Work Research & Abstracts, 27*(4), 5–15.

Gergen, K. J. (1999). *An invitation to social construction*. Thousand Oaks, CA: Sage.

Gilgun, J. F. (1994). Hand into glove: The grounded theory approach and social work practice research. In E. Sherman & W. J. Reid (Eds.), *Qualitative research in social work* (pp. 163–174). New York: Columbia University Press.

Gleick, J. (2011). *Information: A history, a theory, a flood*. New York: Pantheon Books.

Goldenberg, M. J. (2006). On evidence and evidence-based medicine: Lessons from the philosophy of science. *Social Science and Medicine, 62*, 2621–2632.

Goldenberg, M. J. (2009). Iconoclast or creed? Objectivism, pragmatism, and the hierarchy of evidence. *Perspectives in Biology and Medicine, 52*(2), 168–187.

Gorman, J. (1993). Postmodernism and the conduct of inquiry in social work. *Affilia, 8*(3), 247–264.

Haack, S., & Lane, R. (Eds.). (2005). *Pragmatism, old and new: Selected writings*. Amherst, NY: Prometheus Books.

Hacking, I. (1999). *The social construction of what?*. Cambridge, MA: Harvard University Press.

Hansen, J. T. (2007). Counseling without truth: Toward a neo-pragmantic foundation for counseling psychology. *Journal of Counseling & Development, 85*, 423–430.

Harding, S. G. (1991). *Whose science? Whose knowledge? Thinking from women's lives*. Ithaca, NY: Cornell University Press.

Harding, S. (2006). *Social science and social inequality: Feminist and postcolonial issues*. Urbana, IL: University of Illinois Press.

Harding, S., & Norberg, K. (2005). New feminist approaches to social science methodologies: An introduction. *Signs: Journal of Women in Culture and Society, 30*(2), 2009–2015.

Harré, R. (1985). *Philosophies of science*. New York: Oxford University Press.

Harré, R. (1986). *Varieties of realism*. Oxford: Blackwell.

Hart, E., & Bond, M. (1995). *Action research for health and social care*. Buckingham, England: Open University Press.

Hartman, A. (1990). Many ways of knowing. *Social Work, 35*(1), 3.

Healy, K. (2001). Participatory action research and social work: A critical appraisal. *International Social Work, 44*(1), 93–105.

Heineman (Pieper), M. (1981). The obsolete scientific imperative in social work research. *Social Service Review, 55*, 371–396.

Heineman-Pieper, J., Tyson, K., & Heineman Pieper, M. (2002). Doing good science without sacrificing good values: Why the heuristic paradigm is the best choice for social work. *Families in Society, 83*(1), 15–28.

Houston, S. (2001). Beyond social constructionism: Critical realism and social work. *British Journal of Social Work, 31*, 845–861.

Iverson, R. R., Gergen, K. J., & Fairbanks, R. P. (2005). Assessment and social construction: Conflict or co-creation? *British Journal of Social Work, 35*, 689–708.

James, W. (1948). *Pragmatism*. New York: Longmans, Green & Co.

Jordan-Young, R. M. (2010). *Brain storm: The flaws in the science of sex differences*. Cambridge, MA: Harvard University Press.

Kazi, M. A. F. (2000). Contemporary perspectives in the evaluation of practice. *British Journal of Social Work, 33*, 755–768.

Kazi, M. A. F. (2003). Realist evaluation for practice. *British Journal of Social Work, 33*, 803–818.

Kuhn, T. M. (1962). *The structure of scientific revolutions*. Chicago, IL: University of Chicago Press.

Latour, B., & Woolgar, S. (1986). *Laboratory life: The construction if scientific facts*. Princeton, NJ: Princeton University Press.

Lushin, V., & Anastas, J. W. (2011). Endpage: Harm Reduction in Substance Abuse treatment: Pragmatism as an epistemology for social work practice. *Journal of Social Work Practice in the Addictions, 11*, 96–100.

MacIntyre, A. (2008). *Participatory action research*. Los Angeles: Sage.

Manicas, P. T., & Secord, P. F. (1983). Implications for psychology of the new philosophy of science. *American Psychologist, 38*, 399–413.

Mäntysaari, M. (2005). Realism as a foundation for social work knowledge. *Qualitative Social Work, 4*, 87–98.

Mizak, C. (Ed.). (2009). *New pragmatists*. London: Oxford University Press.

Mohall, G. V., Hazel, K. L., Allen, J., Stacheirot, M., Hensel, C., & Faith, R. (2004). Unheard Alaska: Culturally anchored participatory action research on sobriety with Alaska natives. *American Journal of Community Psychology, 33*(3/4), 263–273.

Murray, C. J. L., et al. (2006). Eight Americas: Investigating mortality disparities across races, counties, and race-counties in the United States. *PLos Medicine, 3*(9), e260. doi:10.1371/journal.pmed.0030260.

Oquist, P. (1978). Epistemology of action research. *Acta Sociologica, 21*(2), 143–163.

Ortiz, L., & Jani, J. (2010). Critical race theory: A transformational model for teaching diversity. *Journal of Social Work Education, 46*(2), 175–193.

Padgett, D. (1998). Does the glove really fit? *Social Work, 43*, 373–381.

Pawson, R., & Tilley, N. (1997). *Realistic evaluation*. London: Sage Publications.

Peile, C., & McCouat, M. (1997). The rise of relativism: The future of theory and knowledge development in social work. *British Journal of Social Work, 27*, 343–360.

Pieper, M. H. (1989). The heuristic paradigm: A unifying and comprehensive approach to social work research. *Smith College Studies in Social Work, 60*, 8–34.

Polansky, N. A. (Ed.). (1960). *Social work research*. Chicago IL: University of Chicago Press.

Rorty, R. (1982). *Consequences of pragmatism*. Minneapolis, MN: University of Minnesota Press.

Saulnier, C. F. (1999). *Feminist theories and social work: Approaches and applications*. New York: Haworth Press.

Sayer, A. (2000). *Realism and social science*. Los Angeles: Sage Publications.

Smith, L. T. (1999). *Decolonizing methodologies: Research and indigenous peoples*. London & New York: Zed Books.

Swigonski, M. E. (1993). The logic of feminist standpoint theory for social work research. *Social Work, 39*(4), 387–393.

Thyer, B. (1993). Social work theory and practice research: The approach of logical positivism. *Social Work and Social Sciences Review, 4*(1), 5–26.

Tyson, K. (Ed.). (1995). *New foundations for scientific social and behavioral research: The heuristic paradigm*. Needham Heights, MA: Allyn & Bacon.

Videka-Sherman, L., & Reid, W. (1990). *Advances in clinical social work research*. Silver Spring, MD: NASW Press.

Whyte, W. F. (1991). *Participatory action research*. Newburk Park, CA: Sage.

Witkin, S. L. (1991). Empirical clinical; practice: A critical analysis. *Social Work, 36*(2), 158-163.

Zimbalist, S. E. (1977). *Historic themes and landmarks in social welfare research*. New York, NY: Harper & Row.

## Author Biography

**Jeane W. Anastas** Ph.D., LMSW, is Professor at NYU's Silver School of Social Work and President-Elect of NASW. She has done agency-based research on services for pregnant and parenting teens and substance-abusing women and has studied doctoral education. Her most recent book is *Teaching in Social Work* (Columbia University Press.)