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The Place of Science in Social Work

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A narrow concept of science has reduced rather than enlarged the scope of human inquiry. This paper considers the principles of quantum physics and the philosophy of Wilhelm Dilthey as two different ways of creating approaches to research more consonant with social work practice.

One of social work's enduring traits has been its capacity for self-examination. In spite of the discomfort caused by these searching assessments, the profession has continued to ponder definitions of its work, its role and function, and the nature of its contribution to society. However, these attempts to contend with the image and substance of social work have not produced an intellectual rallying point for social workers, much less an interpretation for society at large. When such strenuous attempts do not meet with success, it is useful to take a longer look at the nature of the dilemma. For what beleaguer social work is an expression of a much larger process affecting all the social and behavioral science disciplines. Understanding the dimensions of the problem provides a window through which to see other more fruitful directions.

Put in its broadest terms, the problem centers on the place of science in social work. In recent years, this topic has produced a lively debate within the profession and has resulted in useful analyses of some of the dimensions of the issues (Saleebey, 1979; Heineman, 1981; Fischer, 1981; Gordon, 1983; Imre, 1984). This paper is an attempt to extend the discussion by examining two central issues. The first concerns the role of the classical scientific paradigm within a total scientific enterprise. This distinction will help us attend to shifts within the natural sciences which show that the model of science borrowed by the social sciences is not the only available choice. The second issue to be addressed is the more general problem of transferring a methodology from the realm of physical matter to the world of
living systems, specifically human systems. The social sciences grounded their enterprise on this translation and it is crucial that we examine the consequences of this choice. Both of these issues highlight different aspects of the same problem and, once addressed, lead to the consideration of a significantly different approach to social work inquiry.

The Scientific Heritage

Entertaining a discussion of the role of classical science within the scientific enterprise necessitates a view of a wide reach of history. While it is true that since the end of the Middle Ages the supreme arbiter of truth has been the scientific method, it is important to realize how dramatic was its appearance in the intellectually stultifying air of the Middle Ages. The dogmatic scholasticism of the medieval period prized reason, supplemented by faith, as the sole route to knowledge. Knowledge of the universe was gained by logically deducing first principles available through the light of rationality. Set within a theological superstructure, knowledge thus derived was monopolistic. Theological philosophers determined what was divinely ordained truth and, as the Inquisition demonstrated, the price for challenging that view of truth could be both severe and final.

The approach to knowledge which overturned medieval scholasticism has been properly called a revolution. Nothing could have formed a sharper, more radical contrast with reliance on pure reason than the method adopted by Newtonian science. Instead of logical deductions about the nature of reality, the new scientists went to Nature herself. It was experience, rather than reason, that emerged as the criterion of truth—not experience by itself but experience put to the test through experiment. If one wanted to know about the world, one looked at it, tested it, measured and remeasured it. In contrast to the dogmatism of scholastic philosophy, Newtonian science was democratic and antimonopolistic. Knowledge was not a private, protected industry but was open to anyone who could learn and apply the methods.

It is interesting to note that this fundamental difference in approach to knowledge and, ultimately, beliefs about what is true, was not radically different in all its assumptions. Both
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scholastic theologians and Newtonian scientists believed that there was a fundamental law-likeness underlying the natural world. In spite of the different constructions about the origin of the laws, it was thought that unaided reason or the experiment could pry out of Nature her secret and enduring processes. Both systems relied on logic as the basic ground of analysis. For scholastics, it was pure logic; for Newtonians, it was logic as expressed in mathematics. The ability to convert observations into quantities and manipulate their relationships according to a logically pure system of numbers was an extension of the reliance on the logic of the scholastics. The difference for the new science was its reliance on empirical referents. As we shall see, it is this reliance on a particular interpretation of empiricism which is the core of the dilemma for social work and for the social sciences from which much of its knowledge derives.

The scientific revolution must unquestionably stand as an enormous step forward in humankind's attempt to uncover some of the mysteries of the natural world. Its methodology broke the chains of ecclesiastical authority by commandeering the sphere of material reality as the proper domain of science. The physical realm belonged to scientists and the metaphysical realm was left to philosophers and theologians. The world thus divided showed itself to be remarkably accessible to the prodgings and calculations of scientific investigation. The methods of science, of putting nature to the test, came to be seen as the only way in which reliable knowledge could be produced.

In its own way, the scientific method and the world view from which it derived was thus not as removed from dogma as its early social science adherents might have liked. Science came to be thought of as not only the best way but the only way to understand reality. The belief in the methodological premises of scientific method as the surest approach to knowledge was most fully developed by the logical positivists of the early twentieth century and continues to be held by the scientific community at large and by the many whose opinions scientists influence. It was a belief that inspired budding sociologists and psychologists, as well as early social workers such as Mary Richmond, to fashion their disciplines in accord with these principles.
As is the case with any dominant world view, it is difficult to stand back from strongly shared assumptions and see them in a new light, much less to wonder whether other assumptions might be more advantageous. Yet it is only at the level of assumptions that profound change can be entertained. Once basic premises are agreed to, disagreements will be only about form, not about substance. And it is substance that must concern us. The substantive question is this: Is the methodology of physical science, as expressed by Newtonian physics, an appropriate one for the study of human beings?

The Problem of Translation

It is not difficult to understand the lure of Newtonian physics as the premier paradigm for the social sciences. The application of the scientific method yielded insights into the workings of nature that produced unheralded gains in knowledge in many fields. Technology became the prime tool for intervening in nature, whether it was put to the use of more accurate scientific predictions or of human comfort and well-being. The power and respectability of the method seemed to provide propitious ingredients for the emerging fields of social and behavioral studies and a proper antidote to their religious and metaphysical origins. However, in order to gain this respectability, social scientists had to adopt the assumptions basic to the Newtonian model.

If we examine the nature of the assumptions from which classical science derives, four characteristics can be identified. There is the supposition that there is an empirical world to be investigated, that the empirical world is law-like and ultimately deterministic: observed effects are due to prior and, in theory, identifiable antecedents, (Heron, 1981) that objective observation is possible and to accomplish this, human investigators must place measurement as a buffer between themselves and what they observe, and finally, that the process of observation or manipulation can be identified so that the results can be replicated. The method that flows from these assumptions is a logical extension: select aspects of the empirical world susceptible to measurement, construct a statement about the nature of their relationship, test the statement against reality, and draw a
conclusion about the posited relationship based on the results of observation. These elements form the methodology and the methods which social scientists adopted and sought to emulate.

A general way of understanding the problem caused by the translation of the physical science model to the social sciences is by considering the different kinds of knowledge with which each science deals. It is helpful here to draw on a distinction made by Wilber (1983) when he categorizes domains of knowing into sensory, mental and transcendental spheres. In the sensory domain lies all the knowledge theoretically admissible to scientific investigation because it is or can be reduced to physical and thus measurable dimensions. This is the domain carved out by the physical sciences and forms a major constituent of the empirical world. It is the world with which we feel most familiar, believing that our senses are the primary, if not sole, connection with all that can be known. But as Wilber points out, the domain of matter is only one of the routes to knowledge. There is a world of ideas, where mind and consciousness are central, and the transcendental level, where knowing is achieved by disciplines that go beyond matter and ideas. The fundamental flaw in applying the physical science model to human beings is in the form of a “category mistake” as Ryle (1949) first presented it or “category error,” which is Wilber’s (1983, p. 10) term. Each refers to an error in logic which occurs when the assumptions and methods of one domain, in this case sensory data, are applied to mental data. In order for the physical science model to be useful in the world of ideas, one must assume that thoughts, beliefs, values, attitudes and such are reducible to and legitimately explained by the assumptions underlying the material world.

This leap of logic is one which should trouble us more than it does. When it reaches an extreme position, as in behaviorism, there may be some objection to reducing all of human behavior to circuitry. But typically, the fault is thought to be with the method, not the methodology. The assumptions that human behavior can be meaningfully explained by isolating its constituent parts is as causally deterministic as the prediction about the velocity and position of a billiard ball, even if all would admit that a prediction in the former case would be staggeringly difficult, while in the latter actually possible.
The first effect, then, of the marriage of assumptions about the physical world and the human world is that human life can be made quantifiable. There is no question that human behavior is empirical if by that we mean that human beings can be observed in many of their complex interactions. But whether those observations can yield in any meaningful way to measurement is a matter of greatest importance. Certainly social scientists have been remarkably clever at developing concepts and constructs which have proxy measures. The commonplace concepts of social class, mental illness, and intelligence all have measures which purport to demonstrate their degree of presence or absence in a given situation. But there is a serious question about their utility. Blumer (1978) takes to task the procedure of operationalizing concepts, as occurs when a concept is given an empirical reference such as a test, questionnaire, or scale. Because of the diverse ways that an attribute like intelligence, for example, is displayed in human life, he calls it "ridiculous and unwarranted...to believe that the operationalizing of intelligence through a given intelligence test yields a satisfactory picture of intelligence" (pp. 33–34). By devising such limited proxies for complex aspects of human behavior, social scientists adhere to the form but do grave injustice to the substance.

The fact that human life has empirical, that is, observable dimensions, does not mean that our most important knowledge of it can be gleaned through the experiment. While the experiment is the *sine qua non* of physical science, in human life, the tracing of causal variables may be an exercise in futility. The methods invariably blot out the possibility that the richness, complexity and spontaneity characteristic of human interactions will be tapped. In the worst consequence of reductionism, human life is thought to be only what scientists construct.

In scientific inquiry, this attempt to reduce rather than enlarge the scope of human life is precisely the point at which most practitioners lodge their objection to the research paradigm. The goals of research appear to be antithetical to all that they experience in their daily work with people. While scientific energy is caught up in narrowing and quantifying the dimensions of human life, practitioners realize that it is the nonmaterial aspects of life which are the core of human drama. Feelings, attitudes,
beliefs and values all count for more and are infinitely less susceptible to quantifiable measure than are measures of temperature, velocity, color and mass.

The typical response to this dilemma takes two tacks. Either practitioners must be shown how they can adopt a more scientific stance in their work with clients or scientists must devise more valid measures of feelings, attitudes and beliefs. Neither position acknowledges the fundamental flaw in applying a physical science methodology to the human sphere. No amount of refinement in technique can override the existence of that flaw. Human beings do have physical properties but knowledge of those properties, even when developed in the most ingenious and sophisticated ways, does not exhaust what there is to know or what is most important to know about being human.

A New Physical Science Model

Having made this argument in the most stark way possible, it is now time to take a paradoxical detour: paradoxical because another argument will be made in favor of using a physical science model, albeit one with a very different form than its Newtonian predecessor. In order to justify this apparent contradiction, it is important to consider the role of theory in any human endeavor. Because none of us, except perhaps in earliest infancy, sees the world without some prior mental picture, theory can be thought of as a necessary and useful way to make sense of the world. It presents an “as if” picture—we behave as if the world conforms to the mental map we have constructed. This approach resembles Donald T. Campbell’s “hypothetical realism,” as discussed by Brewer and Collins (1981). The basic problem with any theory or map is that it becomes reified; by using the map, we come to believe that it presents the world the way it really is. It takes discipline and confidence to treat theory the way it must be treated: as a provisional, imperfect and occasionally useful way to package and repackage the continual blur of images and ideas that bombard us. The criterion of choice is whether a particular view allows us to capture the fullest possible expression of human life and whether the view
provides a good fit between what we experience as human beings and what the model describes.

There is an irony underlying the choice of a Newtonian model of the universe as the basis for social scientific endeavors. What social scientists are only now coming to realize is that the Newtonian model was not the only picture of the universe available for borrowing. During the early part of this century, developments in physics made it necessary to confront the limitations of the Newtonian paradigm. Einstein's theory of special relativity demolished the Newtonian principles of absolute space and absolute time by showing "that space-time and the laws of motion can be defined only by reference to an observer and his physical conditions" (Augros and Stanciu, 1984, p. 4).

In a separate but mutually-reinforcing occurrence, theorists studying the motion of subatomic particles discovered that the Newtonian laws of motion did not apply. In virtually every respect, the principles of the emerging theory contradicted those of the old: the coordinates of velocity and location of particles could not be used to predict motion because they could not be known simultaneously (Heisenberg's Uncertainty Principle); (Pagels, 1982) the act of measurement, rather than being an objective manipulation by the investigator, was known to create the result achieved; and the apparent stability and mass of large elements of matter was counterposed by the constant activity, dynamism, and flux of subatomic particles.

The result of this theoretical blossoming were two radically different theories for two different levels of the material world. Quantum theory applied at the subatomic level, while Newtonian-classical theory described matter at the macro level. Particle theory did not overturn Newtonian theory but it did establish boundaries around its sphere of application. No longer was or is Newtonian physics the preeminent paradigm for understanding the natural world.

Because we are taking a metaphoric approach, concern lies not with the "truth value" of these theories within physics. Physicists, for their part, seem not to want to deal directly with the fact that the radical opposition of their two dominant models may be the edge of a paradigm shift. The luxury of being outsiders to physics allows us to pursue a borrowing strategy
in just the same way that social sciences originally did from physics and as social work did from the social sciences. The difference this time rests with our becoming more sophisticated and discriminating borrowers. If the previous bout of borrowing contributed to a fundamental rift between knowledge and its application, would a more selective choice heal that rift? Let us play out the elements of that question.

For reasons that are mostly understandable, the social sciences until the last decade have been relatively untouched by the ideas embedded in quantum theory. Although the basic outline of the theory was put in place in the Copenhagen Interpretation of 1927 (Jones, 1982), the content of that theory, unlike Newtonian physics, seems totally remote from human experience. While most minds stumble when trying to imagine something called an atom, it defies the imagination to consider the realm of matter where particles whir in unpredictable ways around the atom’s nucleus. Max Planck used the term “energy packets” to describe the quality of quantum motion (Zukav, p. 50). In this sphere, there is a dramatic departure from the sensible world of solid, physical objects. Only through the coordinates of mathematics and experimental measures can their existence be ascertained; the one who measures is inevitably intertwined in the effect produced.

It would be ludicrous to assert that theory about the behavior of subatomic particles is in any way intended to describe human behavior. Physicists would justifiably reject this idea, just as they tend to scorn social science’s attempts to mimic the Newtonian model in the human world. However, the scope of metaphor allows a playful, less restrictive approach. In this metaphoric mood, let us assume an “as if” stance and consider how we would envision human behavior if quantum principles were applied.

First, we would acknowledge that human behavior is set within a web of relationships where dynamic interaction is a key feature. It is not possible to isolate one element in the web without disrupting the pattern or patterns in which it exists. Secondly, the nature of those relationships is not governed by determinism. Human behavior is acausal, in the sense that human action, except in the most narrow sense, cannot be predicted
from prior behavior. As in quantum theory, prediction is only possible for group activity, not for any individual within the group. Certainty, however tenuous, is cast in global terms. It leads to such generalizations as: Without water, humans will die; Given socio-cultural pressures toward marriage, most adults will marry. Such statements are interesting but intrinsically lacking in predictive power at the individual level. Probability theory reduces the range of error in prediction but it is devised for group, not for individual, data.

The third principle derived from quantum theory is, to put it in human terms, intersubjectivity. The web of relationships that characterize all human life is built on multiple, intersubjective realities. It is not possible for human beings to observe or manipulate their environment without being intimately tied to the "other." A belief in objectivity, of seeing human life "as it is," without confounding the observation with the person-as-observer, is untenable. No matter how sophisticated the measure, no matter how "nondirective" the listener, the interactive component must be assumed. What is being observed, at the very least, is the object plus observer.

The final and most subtle aspect of quantum theory is its air of mystery. While much is known about particle activity, there is a sense of incompleteness that goes beyond the usual limitations of method. Because it is so far removed from the world of solid, visible matter, the language takes a poetic and sometimes whimsical turn. Particles are identified as "bundles of energy" (Capra, p. 318), their movement is characterized as a "dance" (Zukav, p. 317); newly identified particles have been given the name "quarks"—an allusion to James Joyce’s Finnegans Wake (Pagels, p. 226). From an outsider’s point of view, these descriptions capture a color and richness that applies in profound ways to human life. It is the dimension sadly lacking in the dreary, mechanistic nomenclature inherited from Newtonian science.

The most far-reaching effect of quantum theory is that it challenges the bastion of certainty held by classical theory for the past three centuries. The principles underlying conventional physics have not been disproved but the sphere of their application has been reduced. Instead of explaining the activity of all matter, they can speak to only part of it. The reminder implicit
in this shift is that Newtonian theory was not able to capture, even with its elegance and precision, all of the fundamental aspects of the motion of physical objects.

The importance of this for social sciences and for related fields such as social work is that theory, by its nature, is incomplete. What social science strived to adopt as its main metaphor, that is, the resemblance of the physical and human worlds, is seriously flawed. For the physical science theory from which it derived was necessarily limited. Its range of application took into account only certain realms of matter, leaving others unaccounted for. And it turns out that the realms left unaccounted until quantum theory emerged are precisely the areas with which human behavior has its strongest kinship.

What we see within the principles of quantum theory is a picture of a world which is the opposite of a mechanistic and lawful one. It is a world where chance operates, where constant change exists, where relationships are central. The observer is not in control of that which is observed; experimental manipulations can set certain activities into motion but the results are not wholly predictable. To turn this metaphor to the human scene, it depicts much of what we experience as the dynamics of human life: change, unpredictability, and lack of precise control.

So, in a profound way, the borrowing from the physical sciences, even if this is the course to be pursued, has been incomplete. Since the early part of this century, two metaphors have been available from the physical sciences represented by Newtonian and quantum theory. It can be said that social sciences chose the wrong metaphor, leading almost a century of social science theory to attempt to show that human beings are governed by the same laws that govern atoms and rocks. One can only imagine the different course of events if social scientists had been interested much earlier in considering how quantum principles could reveal fundamental aspects of the human condition.

**Different View of Empiricism**

Pursuing this different approach to physical sciences, as fruitful as it might be, is only one tack theoretical development might take. It seems obvious that choosing an approach which
draws us into a more profound understanding of human life is a key to our endeavors. What is needed is a theoretical world view that substantiates and draws out our intuitive collective sense about what constitutes human life. In order to develop the rudiments of this perspective, let us now turn to the ideas of a German philosopher named Wilhelm Dilthey whose life work was devoted to just these issues.

Dilthey, whose life spanned the years 1833-1911, had as a primary though by no means sole concern, the place of what he called human studies in the development of the sciences (Rickman, 1979). He lived and wrote at the time when the social sciences were trying to break away from their origins in theology and moral philosophy and develop identities which gained stature through an association with the physical science paradigm. August Comte, an acknowledged founder of sociology, coined the term "positivism" in an attempt to make sociology a "positive", that is, precise science. As Ermarth (1978) notes,

The final task of science appeared to be the resolution of the complex patterns of human thought and activity into an order of laws derived from the hard stratum of simple fact. The new disciplines of anthropology, sociology, and physiological psychology applied these assumptions in a particularly uncompromising manner. (p. 72)

It was this reductionism to which Dilthey strenuously objected (Ermarth, 1978, p. 81).

In contrast to the extremes of positivism, it was Dilthey's view that the study of human beings required a very different approach than that used for the physical sciences. The difference, as Rickman (1976) relates, came from Dilthey's recognition that:

...the human world, with which the social sciences deal, differs significantly from the physical world which is the subject-matter of such sciences as physics, chemistry of biology. Human beings, unlike stones or trees, or even insects or guinea pigs, reflect on what they do. They interpret the situations they are in, set themselves deliberate aims and plan for the future, communicate with
each other, adopt conventions and follow traditions; we cannot study man without taking these into account. (p. 6)

What was needed in order to study "the problem of living as a human being in the human world" was the "building up of a comprehensive, coordinated body of knowledge about man" (Rickman, 1976, p. 25).

Dilthey's goal may strike us as being completely transparent and commonplace. What could be more obvious than the observation that human beings are not entirely or even primarily explainable by reference to their physical aspects? And yet when one considers the thrust of most social science research during the past century, we see that it is precisely upon these aspects that attention has been devoted.

The genius of Dilthey was in his resolute resistance to falling prey to an old dichotomy of body-mind. Although he was open to and influenced by other major thinkers of his day, he did not revert to the idealism which was a strong strain in German philosophy in his time. Instead, he conceived a study of human life that was grounded in experience, that is, in empirical data, but which avoided "an emasculated, metaphysical construction of experience in terms of sense data" (Rickman, 1976, p. 21).

The distinction he makes between knowledge that comes from sensory data and that from "lived experience" is crucial and instructive. The physical sciences elevated knowledge derived through the physical senses as the preeminent route to reliable knowledge. The only other choice as conceived by philosophers was the route of pure reason. The old division between empiricism and idealism was so constructed. What Dilthey offered was a middle ground by focusing on the special nature of human experience. There were, he claimed, two different modes of experiencing reality: "inner lived experience" and "outer sensory experience." It is the "lived experience" which is the empirical base for the human sciences. In contrast to the natural sciences which "build their constructs and laws upon abstractions from sensory experience," human beings "have an awareness of things and ourselves which is immediate, direct, and nonabstractive. We 'live through' life with an intimate sense of its concrete, qualitative features and
myriad patterns, meanings, values and relationships” (Ermarth, 1978, p. 97).

His point is an interesting one. Perhaps because of the influence of the physical sciences, we treat information about the physical world as though it is more real and apparent than any other sphere of life. What Dilthey offered was a very different perspective: that the physical world is more remote than is the world of our human experience. In Dilthey’s words, “Nature is alien to us. It is only an externality, not an inner reality. Society is our world. We experience sympathetically . . . the interaction of social forces with all the power of our whole being, because we have within us the conditions and forces which make up the social system” (Ermarth, 1978, p. 98).

Dilthey’s view leads us to distinguish kinds of knowing. To know a rock is a different kind of knowledge than knowing a human being. In the physical sciences, it is sufficient to analyze the constituent parts of an object such as a rock or tree in order to claim that one knows what it is and how it functions. In human studies, knowing a human being is infinitely more complex and, paradoxically, familiar and mysterious in equal parts. There is a way in which a smile is perceived that makes it immediately understood, although other counter-clues may make us distrust its meaning in a specific situation. Eyes which look angry or bored, a body held rigidly, a mouth that returns too quickly to a tense line all belie the friendly meaning of a smile. It is the interpretation of meaning in all these myriad ways that forms the nature of the special challenge of inquiry in human studies.

By making the distinction between lived experience and sensory experience, Dilthey liberated for inquiry a part of the human world which science had steadfastly ignored. As Ermarth (1978) observes,

mental phenomena are, to be sure, accompanied by physical processes, but the former cannot be reduced to or explained by the latter. . . . A true psychology of experience discloses complex mental phenomena such as the consciousness of self and others, of memory and expectation, of duty, sympathy, and a special kind of freedom—for all of which there are not verifiable physiological correlates. (p. 171)
The task of understanding these complex human processes formed the core of his methodology of inquiry. His emphasis on "verstehen" (understanding) "is the one essential part of the methods of human studies which differentiates them from the sciences" (1979). Dilthey's central strategy for understanding human life was hermeneutics*, a concept he revived from classical Greek, meaning the art or method of interpretation. The method of hermeneutics was adopted by Heidigger in his development of phenomenology (Rickman, 1979, p. 17). An important part of Dilthey's work was devoted to developing principles of inquiry which would lead to a disciplined approach to the study of meaning as it was reflected in human social life. It did not, as some current efforts do, emphasize linguistics as the main route to this understanding. If anything, it was based on the notion that "everyday understanding is natural, familiar...a largely tacit process of interpretation." Understanding is already a natural part of the human repertoire. In Dilthey's words, understanding can be seen "as the knowledge of that which is already known" (Ermarth, 1978, p. 248).

What this view conjures for us is an approach to the human world which strives to make more explicit the meanings of human activities which are already known by us in a tacit way. This type of knowledge is developed by Michael Polanyi (1958, 1966) and its relevance for social sciences developed by Imre (1985). In contrast to the approach we must take with the physical world, which is not like us, approaching the human world can be done with the comfort of familiarity. We already have a rich array of meanings and understandings about what constitutes life for us. The goal of human studies is to open ourselves more generously to a disciplined study of this multitude of facets which composes our social-human world. As Dilthey's (Rickman, 1976) writings suggest,

We must start from the richly varied experience of normal mature observers who see trees in bloom, talk to other people, read newspapers, enjoy poetry and music, play chess, worry about the future, remember past holidays and resent noisy neighbors...This

* Editor's note: See discussion of hermeneutics in Sherman paper in this volume.
complex experience which makes up life is the basis of all science and study of the human world . . . (p. 21)

The principles implicit in his approach to method are not fully developed. It is acknowledged that the elements of inquiry such as "observing, logical reasoning, comparing, classifying, abstracting, as well as framing and testing hypotheses or analyzing by means of statistical techniques, are used just as much in the human studies as in any other science" (Rickman 1979, p. 144). In spite of the fact that he identified "lived experience" as the domain of human studies, he saw this experience and sensory experience as "two sides of the same experience (which is) viewed from different vantage points" (Ermarth 1978, p. 103). However, the empirical data must, in the human domain, constantly be tested against understanding. It comes ultimately to a question of meaning—of understanding what is observed within a context of human meaning.

He was critical of the role theory and hypothesis-testing often played in the social sciences. Too often they are mental constructions which have nothing to do with the phenomena they purport to explain. This very argument is now being raised again in social sciences by writers such as Herbert Blumer (1978), known for his development of Symbolic Interactionism, when he notes that "the broad arena of research inquiry in the social and psychology sciences . . . instead of going to the empirical social world in the first and last instance, resort . . . to a priori theoretical schemes, to sets of unverified concepts and to canonized protocols of research procedure" (p. 34). Dilthey was not opposed to theory but he cautioned that "hypotheses and explanations must be postponed until the most careful observation and description of experiences have been accomplished" (Ermarth 1978, p. 174). Instead he proposed a "preliminary question or framework which sets the terms of the inquiry without predisposing the results; this kind of preliminary orienting 'thesis' is essential to all inquiry . . ." (Ermarth 1978, p. 175).

Although his writings and their analysis could be more comprehensively presented, Dilthey's basic goal and the steps he took toward achieving it offer an interesting and different panorama for approaches to human inquiry. Human beings are not, as the natural science and social science derivatives
have argued, merely physical entities, governed by discoverable physical laws. Humans are also and predominantly psycho-social beings whose "world of mind is not...directly observable; (whose) purposes, values and norms cannot be seen" (Rickman, 1979, p. 66). In order to approach this world of mind, there must be a method of inquiry which allows this world to reveal itself. What is needed is precisely what Dilthey recommended, a strategy of inquiry which combines a method of interpretation with empirical method. If human beings are mind and matter, as our dualistic conventions have conceived it, then there must be disciplined ways to learn about both spheres on their own terms. Reducing mind to matter or absorbing matter into mind does not do justice to the complexity where there is both-and rather than either-or.

**Human Inquiry and Social Work**

The place of social work in meeting this challenge is much more central than might be guessed. If the nature of the dilemma has been accurately stated, then the social sciences have provided an incomplete foundation for a knowledge base for practice. To the extent that social science theories have relied too exclusively on conceptions not firmly grounded in the world of human experience or have tested theory according to research canons derived exclusively from deterministic assumptions, they have provided misleading or erroneous information about human life. If social workers have often felt alienated from and confused by the welter of explanations about human beings, their sense has been well-justified. Theories from which social work has borrowed have not fit the complexity, mystery, and richness which social workers encounter in their own lived experience and in their practice with people. This sense of alienation from the research enterprise and its products is not an inevitable state of affairs. Joining research and practice under a common goal, governed by similar principles, is one way to assure that the development of knowledge receives the broadest possible consideration.

The goal which bridges the apparent gap between research and practice is the search for understanding and, more specifically, meaning. In both research and practice, there is a
disciplined attempt to discover the nature of the human phenomenon being presented. It is also important to note, however, that the usual linear strategy which typically is presented as the ground for the parallel structure of research and practice (Siegel, 1984) is not the appropriate path. The rationalist problem-solving approach imposes a structure on human situations which graphically demonstrates the effect of applying a preconceived strategy to a human situation. Believing that there is a problem, that the cause of the problem can be ascertained, and that knowing the cause allows for a plan of intervention all speak to a mechanistically-oriented approach to knowledge.

If we are to give full credence to the special character of human life, the search for meaning becomes central. The element that makes this search mysterious is that we cannot assume that the meaning of any event is totally or even mostly apparent. For example, we know that the birth of a child is generally laden with positive meaning. It is seen as an occasion of joy and celebration. But we cannot automatically assume that the event has that meaning in every individual situation. In a way not unlike the strategy employed by quantum physicists, the range of probabilities for a particular result can be calculated. What cannot be predicted is the particular result in a particular case. It is the combination of searching our broad human patterns while noting unique individual expressions which characterizes the knowledge-seeking enterprise. Thus, there will be continued efforts to document broad patterns within society, as well as a study of the ways in which people live out and change these patterns.

Although the outlines of new strategies of inquiry are still being formulated (Reason and Rowan, 1981; Lincoln and Guba, 1985; Gergen, 1985), it is possible to indicate some of the principles that serve as guidelines. In keeping with the proposed connection between research and practice, it is useful to see that the principles are common to both research-based and practice-based approaches to knowing. The first principle asserts that human experience is uniquely characterized by the presence of meaning, which gives structure and significance to human life events and processes. The discovering and uncovering of meaning is the primary goal of knowledge-seeking in the human
sphere. This goal makes several assumptions about its focus. Human beings are able to create collective meanings for shared experiences, in addition to constructing individual meanings which are varied and idiosyncratic. The collective experience establishes broad patterns or parameters of meaning but the meaning of experience on the individual level can never be assumed. It is also taken to be true that meaning changes over time and is thus capable of being reconstructed. (The process of this reconstruction is one of the central issues of inquiry, for it refers to a fundamental process of how people grow and change.) A third element is that people know the meaning of life events and processes, even though that knowledge may be tacit, that is, hidden from their conscious thought. The fact that they understand but do not know, to use a distinction Dilthey makes, leads to the goal central to both research and practice, that is, to make more clearly known what is, at some level, already understood.

The process at the heart of both research and practice is the relationship. In contrast to the traditional convention of maintaining objectivity, the approach proposed here denies the possibility of objectivity in the human sphere. Rather than attempting to create false circumstances where personal influence (ideas, attitudes, theories) are not thought to affect the outcome, there is the assumption that all interaction among human beings has intersubjective dimensions. Instead of trying to negate these aspects, an attempt is made to develop them in a conscious and intentional way. In the practice arena, it is returning to an old-age principle of social work: the conscious use of self in relating to another human being or, to put it even more colloquially, the use of the relationship as the medium for change. What this attention on relationship recognizes is the dynamic and inevitably creative, that is, nondetermined, nature of human interchange. What, we might ask, are the qualities of a relationship that are most conducive to people uncovering the meaning of their life experience? In asking such a question, we see also that the source of knowledge is not primarily the practitioner's or researcher's. This approach assumes that each person is her or his own source of knowledge and is the only one to determine its meaning. The relationship, then, is not governed by power
principles built on knowledge monopolies. The knowledge and experience of the researcher or practitioner comes to bear in creating a loose but purposive structure of the inquiry and by creating a conducive human environment for the enhancement of understanding and the discovery of meaning.

A point must be made about the context within which interpretation takes place. It is worth returning to Dilthey here in order to underscore his emphasis on historicity. An important aspect of collective shared meanings comes from life events shared by people during certain times in society. He did not consider this in a causal but rather contextual way. In fact, we would argue that life events are acausal—that it is neither pertinent nor possible to trace antecedents to current phenomena. However, it is worthwhile to acknowledge seriously the cultural-social influences in people's lives. Dilthey saw the individual as "simultaneously an element in the interaction of society—a crossing-point of the various systems of interaction who consciously and deliberately reacts to their influence—and also a contemplating and investigating intelligence" (Rickman, 1979, p. 153). One might note how eloquently this captures social work's "person-in-environment" concept. This understanding led Dilthey to emphasize the historicity of human society and to consider as a separate category the shared meanings that are expressed as ideologies and the institutions to which they give rise.

A final aspect which must be noted in approaches to human inquiry is the issue of methods. Here, not surprisingly, we find that methods of inquiry are not categorically different from those already employed in studies of the natural world. As we have seen, it is the methodology, that is, the collection of assumptions about the nature of knowledge and inquiry, that is crucial. Methods are always in service to these basic assumptions. We find, then, that reliance on careful observation is as much a part of human studies as it is of the natural sciences. But rather than examining single variables, an attempt must be made to discover broad patterns of human activity. The focus of such examination can be aided by a change in terminology. Rather than looking at behavior, which implies a discrete and measurable entity, Dilthey suggested the word "expressions" to
capture the various ways in which mental content is made observable (Ermarth 1978, p. 273). The process of communication emerges as a central expression of what we observe and what meaning we attribute to it.

The overall direction of these principles is toward a qualitatively different sort of inquiry. Whether in research or practice, there is a sense of respect for mystery and uncertainty, a provisionality and tentativeness about what is known, a reliance on each person as the final arbiter of the meaning of his or her own experience, and a newly awakened curiosity about the panoramic world of mind. For many complex reasons, Dilthey, who was called the pioneer of human studies, has not had many settlers in his territory. In large measure, it is the false allegiance to natural sciences which has so limited our vision of what is possible. If, in social work, that model has not served us well, how much better it would be to strike out in pioneer fashion for our own purposes.

We can, of course, choose to wait until a new methodology is developed in the social sciences and comes to us whole cloth. There are efforts in psychology and sociology to come to terms with the limitations of a model cast in the image of the physical sciences. As an alternative to this wait-and-see posture, we can join in the rudimentary but nonetheless vigorous efforts to create an approach to inquiry more suited to our understanding of the human world. Social work can use its foundation as a practicing profession to keep these efforts grounded in the lives of real people, so that the unfortunate division between knowing and valuing, between measurement and meaning, can finally be laid aside. By engaging the human world in all its richness and mystery, we can acknowledge the qualitative aspects of life within a systematic approach to inquiry. To begin our work from a place where knowledge and values join would be an incalculably strong footing for these new explorations.

References


