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Progress, Unity, and Three Questions about Incommensurability

Stephen C. Yanchar

Brigham Young University

This article examines the relationship between unity and progress in psychology. It contends that psychologists have traditionally sought unity in order to fulfill positivistic criteria of progress and success. In accordance with innovations in the philosophy of science, and in accordance with recent trends toward methodological pluralism, such unity is neither required nor recommended. However, a problem that arises under the new philosophy of science — incommensurability — must also be addressed. It is argued that before psychology can be a coherent (though pluralistic) discipline, three important questions pertaining to incommensurability must be answered.

The story of psychology is one of deep disagreement. Since the discipline's modern inception in 1879, psychologists have argued vociferously over how to conceptualize an appropriate science of mind and/or behavior. Although these historical struggles have not slowed the generation of theories and isolated bits of knowledge, they have been an important concern to many commentators, though often for different reasons (see Yanchar and Slife, 1997a). Some are concerned that psychology will never mature and gain an equal footing with other well-established sciences until some form of unity is imposed on the discipline (e.g., Kimble, 1995; Staats, 1996) or until some indigenous epistemology or logic of justification is established (e.g., Fishman, 1987; Hoshmand and Martin, 1994).

Perhaps more importantly, however, a number of psychologists are concerned that increasing fragmentation will usher in the demise of institutional psychology — one possible eventuality that occurs as the subdivisions and specialties of psychology separate from the discipline proper and take

Portions of this paper were written while the author was at Morningside College. Requests for reprints should be sent to Stephen C. Yanchar, Ph.D., Department of Psychology, Brigham Young University, Provo, Utah 84602. E-mail: stephen_yanchar@byu.edu

part in other, ostensibly more relevant, scientific endeavors such as cognitive science or neuroscience (Gardner, 1992; Scott, 1991; Slife and Williams, 1997; Spence, 1987; Stanovich, 1998; Yanchar and Slife, 1997a). The crucial question lurking in the background of this discussion concerns whether there should be a scientific psychology in the first place. Some authors, such as leading cognitivist Howard Gardner (1992), have surmised that there should not.

As this article will suggest, these concerns over the state of psychology center on the issue of *progress*. That is, deep disagreement over fundamental issues, unchecked diversity, and fragmentation are barometers which suggest, either explicitly or implicitly, that no legitimate progress has occurred or can occur in the discipline of psychology as currently constituted. Truly this is an important topic, for a more harsh criticism — the patent lack of progress — could hardly be leveled at a scholarly discipline. This article will examine the relationship between progress and unity within science, and examine what this relationship suggests about the future of psychology. The principal challenge that faces the discipline, as progress and unity are pursued, will then be discussed.

Progress and Unity: Positivism

It seems that few would question the relationship between progress and science. Even if progress takes considerable time and effort to manifest, most agree that it should be at least one important consequence of the doing of science. Taken broadly, *progress* means that our scientific theorizing and research has as its logical terminus some noetic or practical goal, and that we are incrementally converging upon that goal with reliability. But what we specifically take the term progress to mean in science is less clear. What are the goals toward which science must progress? What does it mean to advance science and how do we know when such advancement has occurred?

Philosopher Paul Feyerabend discussed two traditional ways of looking at progress in science (1975, p. 18) — one that equates progress with the development of a theory that can be empirically evaluated, and one that equates progress with unity and harmony. Certainly both kinds of progress have been central to the traditional (i.e., positivist) view of science, and as we will see, to the mainstream of psychology as well. No doubt, a shift toward empirical adequacy, and away from speculative metaphysics, has long been a hallmark of progress, as has been the coherent organization of the world's diversity under a set of unifying principles or covering laws.

Prominent figures within the philosophy of science, since at least the nineteenth century, have advocated exactly this approach to progress. The influential American philosopher C.S. Peirce, for example, argued that we

advance our knowledge (in his terms, we secure true beliefs about the world) when we adopt the method of empirical science and use it to converge on a single account of reality:

Such is the method of science. Its fundamental hypothesis, restated in more familiar language, is this: There are Real things, whose characters are entirely independent of our opinions about them; those Reals affect our senses according to regular laws, and, though our sensations are as different as are our relations to the objects, yet, by taking advantage of the laws of perception, we can ascertain by reasoning how things really and truly are; and any man, if he have sufficient experience and he reason enough about it, will be led to the one True conclusion. (1877/1955, p. 18)

Positivist August Comte similarly advocated the pursuit of a “one true conclusion,” via the scientific method, but also proposed a well-organized model of scientific endeavor, where all legitimate sciences formed a hierarchically arranged, coherent, and unified system of description (Robinson, 1986). Beginning with mathematics at the base of the hierarchy and extending through sociology at its peak, each subsequent science would build on and extend the science that hierarchically preceded it. Thus, according to Comte, scientific progress involved not only the accumulation of knowledge per se, but also a singular description of physical reality. Logical positivists such as Rudolph Carnap (1955) and Herbert Feigl (1953) refined the ideas of Comte, and argued that the goal of science was the development of a comprehensive theoretical system, based on a foundational set of axiomatic claims applicable to the whole of physical reality. Such a single set of axioms — which would underwrite all explanation in a general and uniform way — would give rise to what the logical positivists termed the *unity of science* (Neurath, 1955).

Other prominent twentieth century thinkers have tied scientific progress to the notion of unity. Carl Hempel’s (1965) nomological–deductive model of explanation, Karl Popper’s (1959) deductive–falsificationist philosophy of science, and Imre Lakatos’s (1970) proposal for sophisticated falsification (and historical, rational reconstruction), all utilized increasing empirical content and an ability to absorb counterexamples under a single axiomatic system of explanation as criteria for scientific progress (see also Bury, 1932; Dupre, 1993; and Wilson, 1998, for commentaries on unity in knowledge and science).

Although the above formulations differ somewhat with regard to the mechanics of fostering scientific unity, they seem to revolve around the notion that reality is ready-made and independent of human interpretation, yet at the same time knowable to any perceiver who possesses the correct investigative methods and tools. Given such a metaphysical stance on the nature of science and reality, it is not difficult to see why unity in scientific theorizing and research would be desired: if the natural world really is a

coherent and unified datum, then our models, theories, and explanations of the world must reflect that underlying unity — they must themselves fit into a coherent, well-organized picture and be thusly unified.

Progress and Unity: Psychology

The discipline of psychology, which has historically (though often implicitly) taken itself to be a positivist-style science (e.g., Kimble, 1994; Staats, 1983 [see also commentaries by Bakan, 1987; Osbeck, 1993; Polkinghorne, 1983; Robinson, 1986; Slife and Williams, 1997; Stam, 1992; Williams, 1990]), has traditionally sought positivist-style progress and unity (e.g., Hull, 1952; Kimble, 1985; Moore, 1985; Skinner, 1953; cf. Koch, 1954). One need only consider the various grand theories of psychology — particularly those proposed by Hull, Skinner and other behaviorist-style theorists — to see the pursuit of a single axiomatic system of explanation that would have covered the whole of psychological or behavioral reality. No doubt, it is largely for this reason that many psychologists have been concerned with the discipline's increasingly fragmented state (e.g., Fowler, 1990; Heidbreder, 1933; Hull, 1935; Kantor, 1922; Krantz, 1987; Royce, 1970; Staats, 1983). If external reality, including psychological reality, is a coherent, well-organized, essentially unified phenomenon, then our precise description and explanation of it — that is, the models we formulate to represent psychological reality — should ultimately match its uniformity and coherence.

Of course, this is not to suggest that psychology should have been unified and coherent from its modern inception, for even classical sciences like physics and chemistry went through periods of disunity and disorganization before unifying principles brought coherence to the subject matter (Krantz, 1987; Kuhn, 1962, pp. 10–22; Staats, 1991). But under this realist–representationalist view of science, empirical research should ultimately produce accounts that converge on a single, accurate representation of what we are studying. In the absence of such convergence, the rationality and viability of science is open to question (cf. Krantz, 1987).

Not surprisingly, those who view psychology as a more or less positivistic science have argued in favor of unifying principles and grand theoretical formulations (e.g., Fowler, 1990; Krantz, 1987; Miller, 1985; Staats, 1996 [cf. Leahey, 1995]), perhaps ones that could provide a theoretical anchor on par with Newton's laws of motion or Darwin's principle of natural selection. This unity would allow scientific knowledge to grow smoothly and cumulatively, with developments in each subdivision or specialty area cohering with developments in other areas. Because all research and theorizing would adhere to a single scientific principle, all research findings and knowledge claims would eventually fit into a single grand theory. An overarching theoretical princi-

ple would thus facilitate scientific progress and increase the likelihood that psychology evolve into a unified, coherent scientific discipline.¹

As the brief history (and longer past) of psychology has illustrated, however, no unifying principle has emerged from the collective research programs of psychology, and little agreement has occurred over exactly which theoretical commitments are appropriate for the task of underwriting and uniting psychology (Koch, 1981; Yanchar and Slife, 1997a). For example, the principles of conditioning, as articulated by behaviorists, are largely rejected by cognitive psychologists (e.g., Baars, 1986; Brewer, 1974), while information processing models have been criticized or rejected by other psychologists who call for still other theoretical formulations (e.g., Rychlak, 1991; Sampson, 1981; Slife, 1995). Indeed, it seems that psychology's lack of a unifying principle has long divided the discipline and compromised its scientific status. Historian of psychology Daniel Robinson has expressed it this way:

Psychology is young in the sense of still conducting its affairs in the absence of a unifying theory of the kind advanced by Copernicus, Galileo, or Newton. To the extent that this is the case, we must be prepared to accept the possibility, though disturbing, not simply that psychology is young as a science but that *it is not yet a science at all*. (1986, p. 397, italics included in original)

Other prominent thinkers have questioned the scientific status or viability of institutional psychology. Stephen Toulmin (1972) referred to psychology as a "would be" scientific discipline, Charles Taylor (1973) referred to psychology as a discipline intellectually divided against itself, and Sigmund Koch (1971) flatly stated that psychology cannot be a coherent scientific enterprise. Even Howard Gardner has professed: "Psychology has *not* added up to an integrated science, and it is unlikely ever to achieve that status. It no longer makes sense to discuss scientific psychology as a tenable long-term goal" (1992, p. 180, italics in original). At best, these thinkers view psychology as an immature, pre-scientific scholarly endeavor. Sustained incoherence and fragmentation, however, have made them dubious of psychology's ability to attain genuine scientific status and thus gain an equal footing with other well-accepted sciences (see also Krech, 1970).

According to the generally positivistic view described above, such internal disagreement and strife sends a distinct message: psychology, with its lack of unifying principles or findings, has not fulfilled minimal criteria for scientific

¹Whether such unity should be imposed on the discipline through a concerted effort by psychologists, or whether it should emerge merely as a consequence of good theory construction and genuine scientific progress has been a matter of debate. In either case, the idea of progress is bound up with the idea of unity: we must either impose unity so that we may achieve some kind of progress (Staats, 1991, 1996), or we must achieve some kind of theoretical and scientific progress so that unity may emerge (Green, 1992; Kukla, 1992).

progress. The fact that no unifying principle has been discovered or that no theoretical positions have been consensually endorsed suggest that psychological research has not produced knowledge like that seen in classical physics (often taken to be the model for psychological science [see Koch, 1981; Krantz, 1987; Leahey, 1995; Slife, 1993; Williams, 1995]) and that no unifying theoretical framework for psychology is forthcoming (Koch, 1981; Leahey, 1992, p. xix; Royce, 1970). Rather than gradually converging on reality (*pace* Peirce, 1877/1955) and achieving smooth progress toward a univocal account of psychological phenomena, psychology has been, and continues to be, beset by conflicting theories and research programs as well as conflicting approaches to methodology and philosophy of science in general.

Of course, advances have been made in our understanding of some human phenomena — for example, the laws of psychophysics and the limitations of memory. Moreover, microtheories have proven to be a popular way of generating knowledge claims within limited areas of research. But such advances do not add up to a coherent account of human action, and they do not come free of a host of divergent interpretations regarding their viability and place within a coherent psychology. For those committed to a rationally progressing psychology that produces scientific facts, this disunified state is alarming and unacceptable. How can institutional psychology be taken seriously when psychologists themselves disagree over fundamental issues such as how to define or investigate the discipline's core subject matter?

Unity Through Method

In responding to this difficult question, many psychologists vested in the advancement of psychology as a natural science have appealed to the crux of positivism, empirical methodology, as a default unifying principle (e.g., Kimble, 1989, 1994; Observer, 1982; Schneider, 1992; Stanovich, 1998). This *unity-through-method* position (Yanchar and Slife, 1997a) provides unification in that it would have all psychologists be involved in the same general activity, and in that all psychological knowledge claims would be justified by the logic of publicly observable, controlled experimentation. Indeed, if psychologists were willing to commit to the scientific method, it is argued, the discipline could be unified in the present, irrespective of widespread theoretical diversity (Rychlak, 1988, 1993; Stanovich, 1998). Stanovich clearly illustrates this *unity-through-method* perspective:

If we wish to find any unity in the subject of psychology, we must not look for connections among the topics that psychologists study. We must instead address the methods that psychologists use to advance knowledge. Here is the only place that we have any hope of finding common cause among psychologists. (1998, p. 6)

Because of its long history in the western intellectual tradition, and because of its central role in positivistic science, it is not surprising that many psychologists have looked to method as the fundamental principle by which psychology may be unified. Indeed, method is often viewed as the vehicle by which truth is apprehended, and thus the mechanism by which the pursuit of truth may be unified. Those within a scientific discipline must, from this perspective, agree on the most fundamental aspect of the scientific project in general: its mode of systematic investigation.

Moreover, method is thought to play the important role of neutral, meta-level evaluator — sifting the useful or empirically supported hypotheses from irrelevant or unsupported speculation. In this sense, the unity-through-method position is attractive because of its putative ability to provide unification that rules out few theoretical formulations a priori, but which possess clear criteria for evaluating them all. In fact, some argue that any testable hypothesis should be falsifiable through correct use of the scientific method, irrespective of the theory from which the hypothesis was deduced (e.g., Rychlak, 1988). Others are somewhat more exclusive about the kinds of theories or hypotheses that may be tested via the scientific method (e.g., Kimble, 1994; Schneider, 1992). Nonetheless, these psychologists agree that the fundamental principles of the scientific method alone will unify psychology in the present, the extent to which unification is possible and reasonable at all.

As the above quotation and description illustrate, the unity-through-method approach seeks to unify psychology by standardizing the tools of psychological investigation. In this sense, psychology would literally be defined by the *process* associated with the collection of scientific facts, and psychologists would be literally defined as the practitioners who engage in this process. This definition increases the likelihood (though does not guarantee) that psychologists will fit squarely within the boundaries of traditional, positivist-style science by demanding that all psychologists adhere to simple methodological principles. Unfortunately, this definition begs the question of why there should be psychologists in the first place, and thus seems curiously deficient as a response to Howard Gardner's poignant question (from above) of whether should there be a science of psychology at all.

This daunting question requires serious consideration because it strikes at the heart of psychology's disciplinary woes. Given the increased specialization and fragmentation of the discipline, and given debate over its long-term viability, it seems crucial that persons vested in psychology's sustained existence formulate some definition, ontology, or purpose that is uniquely psychological in nature, and thus that is able to support a unique scientific enterprise. Merely ascribing to psychologists the trappings of science, however, in no way demarcates a uniquely psychological discipline or identifies a

rightful ontology. Put simply, it does not follow from the fact that we all use the scientific method that we are all psychologists or even that we all belong in the same scientific discipline. Clearly, most or all social, natural, or other kinds of sciences are referred to *as sciences* at least partly because they employ a recognizably scientific method. But the unique questions asked by the anthropologist, sociologist, criminologist, biologist, chemist, and so forth are demarcated in some fashion that will, of necessity, go beyond the mere fact that all of these disciplines (and a variety of others) employ the tools of science. This means that there must be some definition, idea, or content, aside from the tools and methods used, that provides unity and gives purpose to the scientific project.

An immediate response by the unity-through-method advocate might come in the following form: "Everybody knows that it is *human behavior* we are studying with the scientific method; thus we already have in psychology both a content and a method." Although this response appropriately senses that a core subject matter is necessary for a coherent psychology, it provides little help in carving out a unique niche for psychology *per se*. What unique questions concerning human behavior are *not* already being scientifically answered by other disciplines such as medicine and psychiatry, biology, ethology, cognitive neuroscience, sociology, anthropology, economics, criminal justice, actuarial science, communications, and others? This question is not meant to imply that there are no uniquely psychological questions (see Yanchar, 1997), but rather that serious consideration must go into the formulation of those questions (and into the formulation of methods that properly interrogate those questions). To merely orient psychology around a method, however, rather than such questions or a clearly defined subject matter, begs the question of whether or why psychology should exist in the first place.

Perhaps we could be unified, at least in part, by some uniquely *psychological* method. As a partial solution this proposal is surely acceptable; however, it is clear that it would still demand fairly precise identification of the unique psychological questions and subject matter to be studied via such a method. In tailoring a method to fit psychology, we must first know what psychology is.

Perhaps even more problematic for the unity-through-method position, however, is the widespread call for methodological pluralism (Bevan, 1991; Hoshmand, 1989; Howard, 1986; Polkinghorne, 1983; Roth, 1987) and related forms of scientific liberalism (e.g., Feyerabend, 1975; Hesse, 1980; Rorty, 1991). Indeed, many within and without psychology have convincingly argued that scientific progress is not achieved by following the well-prescribed rules of a single sufficient method (i.e., a cookbook approach to science); rather progress is the result of much innovative, pluralistic, or even anarchistic scientific practice (Feyerabend, 1975 [see also Hoshmand and Martin, 1994; Polkinghorne, 1983]). Paul Feyerabend, one innovator of this

liberal movement within the philosophy of science, illustrated that major breakthroughs in science have occurred historically not because scientists followed the rules of a single method, but rather because they broke such rules. He summarized:

Indeed, one of the most striking features of recent discussion in the history and philosophy of science is the realization that events and developments, such as the invention of atomism in antiquity, the Copernican Revolution, the rise of modern atomism (kinetic theory; dispersion theory, stereochemistry; quantum theory), the gradual emergence of the wave theory of light, occurred only because thinkers had either *decided* not to be bound by certain "obvious" methodological rules, or because they *unwittingly broke* them. This liberal practice, I repeat, is not just a fact of the history of science. It is both reasonable and *absolutely necessary* for the growth of knowledge. (1975, p. 14, italics in original)

Feyerabend is interpreted as making an extreme case in much of his work, but his notion of progress through liberalized scientific practice has been very influential within contemporary philosophy of science. Combined with the work of other luminaries such as Hesse (1980), Kuhn (1962), Quine, (1960), and Toulmin (1953), Feyerabend's work has helped undermine the positivist view of science by showing that method and observation language is neither theoretically neutral nor value-free. Indeed, few contemporary philosophers of science take seriously the traditional, positivist view of science based on objectivity and neutrality.

Within psychology, a growing number of researchers have argued that theoretical and methodological diversity, innovation, and even anarchy, is essential to, rather than problematic for, continued advancement of the discipline (e.g., McNally, 1992; Sternberg, 1996; Toulmin, 1987; Viney, 1996). Indeed, many acknowledge that any science — including natural sciences such as chemistry or biology and social sciences such as psychology — will require an essential amount of diversity and creativity as its researchers develop and investigate new, potentially fruitful, avenues of thinking. Each branch or subdivision of a science is thought to make an important contribution to the discipline as a whole, though such individual contributions do not always cohere with other contributions or promote disciplinary unification outright. As philosopher of science Stephen Toulmin has stated:

The problems facing neuropsychiatry and developmental psychology, or evolutionary psychology and psycholinguistics, are no closer related to one another than those facing the different sub-branches of biology. So, psychology does not need a single comprehensive conceptual system to provide a theoretical vocabulary for all its branches. (1987, p. 353)

Some psychologists have argued this point forcefully: "From an epistemic standpoint, diversity, plurality, and even some anarchy are the life blood of a

science while too much unity results in stagnation or intellectual death" (Viney, 1996, p. 37). From this perspective, plurality, disunity, and scientific anarchism in psychology are not the least bit problematic. Rather, they are crucial to scientific progress.

Too much unity, on the other hand, would actually be harmful to the discipline if it foreclosed on exploration, innovation, and progress. In this sense, psychologists need not be worried so much with achieving rigid unity — for example, being dogmatically organized around a single scientific principle. But psychologists do need to be concerned with the task of evaluating the widely divergent philosophical commitments, theoretical orientations, and methods adopted by various research communities within a pluralistic discipline. Surely some minimal standards for scientific or theoretical integrity are required (Hoshmand and Martin, 1994; Kukla, 1989; Osbeck, 1993; Robinson, 1985, pp. 1–19; Yanchar, 1997).

Incommensurability

This project of evaluation is not necessarily an easy task, however, for as Feyerabend (1975), Kuhn (1962), and others have theorized, competing research programs, discourse communities, or paradigms may be *incommensurable* — that is, they may be so different that they cannot *in principle* be compared, contrasted, and evaluated according to some rational standard (Newton–Smith, 1981). The lack of a neutral, sense-datum language with which to report findings (Hesse, 1980; Quine, 1953, 1960; Wittgenstein, 1953) and the lack of a neutral, value-free methodology (Feyerabend, 1975) are two principal impediments to the evaluation of rival scientific conceptions (i.e., research programs, paradigms, and so on). The incommensurability thesis, thusly interpreted (see, for example, Newton–Smith, 1981, pp. 148–182), is problematic because it ushers in a kind of epistemic nihilism where there is no good reason to select any theory or deeper philosophical commitment over another — they are all relative to a conceptual scheme, idiosyncratic, and impervious to objective, rational deliberation.

Such epistemic relativism is thought to exist within the boundaries of psychology. It has been argued that psychological science is a social enterprise like any other human endeavor, and that the results of psychological research will depend largely on the socio-historical context in which they are produced (e.g., Danziger, 1990, pp. 1–16; Kvale, 1992; Staats, 1996, p. 2). This means that the accounts we render of physical or psychological reality — based in our own context and stemming from our own epistemological and metaphysical assumptions — may vary radically from the accounts produced by those working in different contexts and under different assumptions. No single account of reality then exists to be “converged on” through scientific

research, because the very metaphysic we invoke — our understanding of what reality is — will differ from those invoked in other discourse communities (cf. Feyerabend, 1975, p. 21).

Preliminary evidence for incommensurability within psychology, beyond historical and philosophical analysis, stems from the lack of a common vocabulary for discussing theoretical perspectives and research findings. As Staats (1983) has observed, psychological phenomena are termed differently in different discourse and research communities; and embedded within different terminologies come different, perhaps subtly different meanings. George Miller (1985) apparently concurs, and argues that such equivocation ushers in a state where competing discourse communities do not speak the same theoretical language and cannot engage in meaningful communication across theoretical lines (see also Krantz, 1987; Yanchar and Slife, 1997a).

What are the consequences of incommensurability in psychology? If it is true that the assumptive groundings of different discourse communities resist attempts at comparison, contrast, and evaluation, then there can be no way to evaluate the work that psychologists do and no way to monitor progress within the discipline (Hoshmand and Martin, 1994). The already diverging subdisciplines and specialties of psychology will continue to fragment and drift from the core discipline because there is no reason for them to remain within its boundaries; no commonality binds the discipline's sub-areas — not even communication. And without an ability to communicate and evaluate, there is no hope that any unifying principle can be identified as the most heuristic, the most appropriate, or true (even in certain contexts). A scientific discipline existing under such a state of epistemic relativism would surely give way to dissolution.

Three Essential Questions

Thus psychology finds itself in a precarious position. The logical positivist notion of progress and unity — which has traditionally been upheld as an ideal toward which psychologists must strive — is now widely viewed as untenable. The formulation of a neutral observation language and a purely objective, theory-free method — both of which are necessitated by the positivist program — seems patently impossible. The alternative to logical positivism, on the other hand (liberalism, pluralism, and perhaps scientific anarchy), has raised many difficult questions about the very rationality of science — including, as we have seen, the rationality of psychological science. The difficulty of translating theoretical languages, and the difficulty in comparing and evaluating theoretical positions, has suggested to some that there can be no rational basis for adjudicating or even adopting a given theory. At bottom, there is a concern that science, once freed from the confines of posi-

tivism or positivist-like investigation (and its focus on objective, unified knowledge), operates under a relativism that precludes rationality of any kind. It is in this sense that psychology faces the perennial dilemma of objectivism and relativism: when the foundation for objective and unified knowledge is undermined, the apparent antithesis of such foundationalism — a complete lack of any reasonable basis for knowledge or understanding — is easily assumed (see Bernstein, 1983; Sayer, 1992; Yanchar and Slife, 1997b).

However, this assumption need not be taken for granted. Several authors have explicitly cautioned that claims of incommensurability must be carefully examined before they are taken seriously (e.g., Bernstein, 1983; Davidson, 1984; Fowers and Richardson, 1996; Manicas and Secord, 1983; Sayer, 1992), and that this important issue must be resolved before unification efforts within psychology can proceed fruitfully (Yanchar and Slife, 1997a). Furthermore, a careful examination of the problem of incommensurability might resolve other vexing concerns. For example, if we conclude that incommensurability does not obtain in the research and discourse communities of psychology, we might *ipso facto* identify the common, though perhaps contextual, ground that does obtain — that is, we might uncover some underlying commonality (Yanchar and Slife, 1997a).

Three questions, as set out by Yanchar and Slife (1997a), seem key to this possibility, the first is straightforward: Are the various theoretical languages, research programs, and philosophical assumptions within psychology in fact incommensurable — that is, are they impervious to comparison, contrast, and evaluation? A thorough logical analysis, coupled with an historical examination, could provide a preliminary answer to this question. If this question is answered in the affirmative, then the possibility of unification is effectively closed. However, if this question is answered in the negative, then a second (perhaps more challenging) question arises: At what level are theories, methods, unification proposals, and guiding principles to be compared, contrasted, and evaluated? That is, at what level does commensurability obtain? To secure a basis for commensurability is to gain an understanding of where psychology should begin its deliberations over a unifying conception in psychology — even if such a unifying conception allows for a flexible, pluralistic science.

A third important question concerns ways in which evaluation and unification might be successfully carried out in psychology, once a source of commensurability has been identified. This question, of course, would require careful thought and consideration, because the way it is answered would hold serious implications for the eventual nature of institutional psychology. This does not mean, however, that this question cannot be answered in a way that promotes a tolerant pluralism, unified by some well-developed set of underlying commitments. The difficulty of this work simply lies in the fact that

metatheoretical standards for evaluation and organization have been elusive and difficult to thematize in a way that has hitherto overcome disagreement and disputation (see Rorty, 1979).

Conclusion

Answers to these questions do not provide concrete solutions to psychology's disciplinary woes, nor do they lead inexorably toward an ideal picture of what progress in psychology should look like. Indeed, it is still an open question as to whether psychology may be unified in any substantial way; and as we have seen, some skeptics have doubted psychology's status as a legitimate, potentially unified science. Clearly, there is no consensual or obvious answer yet to the question of psychology's future status.

Moreover, the very idea of scientific (and social) progress is in need of clarification, examination and evaluation. Positivistic criteria for progress are not the only ones available, though they seem obvious and undeniable when positivism is presupposed as the correct epistemological basis for human inquiry. But recent trends toward a liberalized view of science demand that new issues regarding scientific progress be addressed — for example, the issue of how diverse, often conflicting, theories and methods be brought under a coherent scientific framework, and the issue of what we mean by *progress* under the liberalized view of science. Indeed, what we ultimately take progress to mean will have important implications for not only the future of psychology, but most likely for all intellectual endeavors.²

In closing it seems important to identify some touchstone for the development of a workable theory of progress in liberal science and psychology. The following points explicate what a preliminary theory of progress might require. First, a theoretical move beyond the dilemma of incommensurability and objectivism seems important. Other treatments of this dilemma have cogently argued that neither position provides a tenable or fruitful approach to the doing of intellectual work (e.g., Bernstein, 1983; Richardson, 1998). Indeed, the very idea of objectivity on the one hand, and the very idea of *conceptual schemes* on the other (as self-contained monads [see Davidson, 1984]), will need to be addressed as we ponder the meaning of progress within a pluralistic science.

An incipient, though entirely important, requirement of progress that follows from the one just mentioned is the development of effective dialogue, taken in the broad sense, which encompasses all forms of social interchange

²The writings of William James may be particularly helpful in addressing these issues related to plurality and progress, since James saw their salience over one hundred years ago (e.g., 1897/1956, 1907/1978). Jamesian pragmatism, and its close relative, philosophical hermeneutics, would seem to provide an able tool for making this ground tractable.

— moral, personal, political, scientific, economic, and so forth (Fowers and Richardson, 1996). As Taylor (1973, 1992), Gadamer (1975), and others have argued, it is dialogue that opens the possibility of a genuine fusion of horizons; that is, a shared perspective that enables the truth claims emerging from many discourse communities to be understood, reflected on, and respected. This also means, as Fowers and Richardson (1996) have stated, that “. . . one’s cultural understanding of what life consists of and what is of worth may become but one possibility among others” (p. 619). Even in a pluralistic science, some common basis for mutual understanding, developed through dialogue, should be possible.

Such progress, however, also consists in the ability to formulate some set of philosophical commitments that provide a starting point not only for further discussion, but also for the *evaluation* of theoretical and metatheoretical alternatives. As illustrated elsewhere, not all commitments can be of equal value, and some evaluative standard should emerge from sustained discussion over and examination of those alternatives (e.g., Fowers and Richardson, 1996; Taylor, 1985; Yanchar, 1997). As William James (1907/1978) suggested, it is possible to look to the moral consequences of such alternatives in formulating a tenable standard of evaluation. But higher human interests — intellectual, moral, or otherwise — can only emerge when discourse or research communities openly bring their deepest commitments to the discussion over the purpose and goals of psychology. In this sense, progress demands that we be aware of what we implicitly assume about human inquiry, what we implicitly assume about the psychological subject, and what we implicitly assume about progress itself. A discussion which occurs at this deeper level has the potential to generate a workable theory of progress, and perhaps even coherence, within a pluralistic science.

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