

## Naturalism and Subjectivism: Philosophy for the Future?\*

I take my title from Marvin Farber. And because the occasion is a celebration of Peter Hare's efforts in behalf of philosophy and of the University of Buffalo, before I engage the main argument (but not utterly irrelevant to it!), a few remarks on my relation to the University of Buffalo and to Peter.

When I arrived at UB, the department consisted of Marvin Farber, William T. Parry, Shia Moser and Neal Gilbert. I did not know that Bill Parry, who taught me to be suspicious of material implication and of Hume, was a managing editor and a founder of *Science and Society* and that Marvin had gone to bat against the efforts of HUAC to keep America's universities "American." Marvin was my mentor. From him, I got a left-wing Hegel, Dewey, a keen awareness of the importance of concrete history (everyone in the Department encouraged this), an introduction to the philosophy of the social sciences—and relentless criticism of Husserl and Heidegger, but especially Heidegger. All of this remains very much with me. No one taught Marx.<sup>1</sup> I wanted to work on American socialism. He would not let me on grounds that I would then be unemployable. I did a dissertation on the concept of the individual in James, Royce, Lester Ward, and William Graham Sumner. There probably was no other Phd program in philosophy at that time (or now!) which would have considered this an appropriate topic. When Marvin rejected my wish to follow him to Pennsylvania—he thought that I would be eaten alive there, the dissertation was completed under Rollo Handy. John Anton, Newton Garver and Peter Hare had recently joined the faculty. I took two seminars with Newton (to fill in some gaps in the Oxonian style), but never had a course with Peter. John Anton convinced Loyd Easton at Ohio Wesleyan to take me on there—to teach logic and the philosophy of science (!)—something which also remains. Loyd was then working on his new translations (with Kurt Guddat) of the writings of "the young Marx." I was by then some sort of Marxist. Perhaps getting jerked from my class in 314 Crosby Hall to join my reserve squadron for the invasion of Cuba did that. (While I was donning Air Force blue, Newton Garver was demonstrating on Main Street.)

Four degrees of separation link me and Peter philosophically. He collaborated with Ed Madden (*Evil and the Concept of God*), Ed Madden collaborated with Rom Harré (*Causal Powers*), Rom Harré collaborated with Paul Second (*The Explanation of Social Behavior*), and Paul and I wrote a programmatic essay for the *American Psychologist* which argued that critical realist theory of science had important implications for inquiry in psychology.

So I am some sort of "naturalist" (both some sort of Deweyan and some sort Marxist which, given Hegel's influence on both, coheres), and some sort of realist as well. But what do these confessions entail?

---

\* Presented at the Conference, "The Future of Realism in the American Tradition of Pragmatic Naturalism," University of Buffalo, October 20-21, 2000.

## **Philosophy and the Philosophy of the Recent Past**

In order, eventually, to make some claims about realism and naturalism, I begin with a view of philosophy and with a very brief sketch of “the philosophy of the recent past.” For me, philosophical labels, like the term “philosophy” itself, do not discriminate natural kinds. Accordingly, with Jonathan Ree, I think of philosophy as part of literature and general history.<sup>2</sup> And with Rorty, I think that we need to appeal to “contingent arrangements” to explain both what counts as philosophy and its “problems” and to understand the meaning of philosophical terms of art in use at any given time and place.<sup>3</sup> Even given some historical continuities in the use of some terms, this implies that what counts a philosophical problem in one period need not be one in some other. The present period owes directly to “contingent arrangements” in the late nineteenth century—as I shall argue, and it is important to acknowledge this if we are to understand philosophy’s current situation. Rorty comments: “We need to realize that the questions which ‘the contingent arrangements’ of the present time lead us to regard as the questions are questions “which may be better than whose which our ancestors asked, but need not be the *same*.” Of course, they *may* be better, but they may also be worse.

I would not go so far as to say that there are no perennial philosophical problems, but they are ethical and political. Dewey had something like this mind, I would guess, in urging philosophers to forego struggle with “problems of philosophers” for struggle with the problems of humans.

Many who are not recognized by anybody’s canon as “philosophers” have spoken, sometimes wisely, to my two perennial problems. But those traditionally deemed philosophers have tended to provide a *ground* for their views on questions in ethics and politics, generally a metaphysics and sometimes an epistemology. Two further observations: First, recent philosophy has tended to be anti-metaphysical, and much more interested in epistemology than in ethics or politics. In the limiting case characteristic of much “analytic” philosophy, ethical and political claims are deemed, on epistemological grounds, “non-cognitive.” I am especially interested in denying this, but here I only assume that the arguments of “naturalists” like Dewey, Abe Edel and Marvin Farber can be sustained. Second, by virtue of this, it is not implausible to follow Farber and assert that the only serious alternatives for philosophy are “naturalism” –or alternatively, “materialism,” and “subjectivism”—in his special senses.<sup>4</sup>

Farber used materialism and naturalism interchangeably, “having the advantage of flexibility” and acknowledged, of course, that there are alternative versions of both. He included as “subjectivisms,” all forms of idealism, including absolute idealism, and phenomenology, and various types of existential philosophy. But what is most striking about his dichotomy is the absence of reference to positivism. We need some history.

## **Idealism**

Mandelbaum argued that during the nineteenth century, there were “only two main streams of philosophical thought, each of which possessed a relatively high degree of continuity, and each of which tended to deal with similar problems, although from opposed points of view.”<sup>5</sup> The problems regarded “knowledge” but especially the nature

and role of “science.” The two positions were “metaphysical idealism and positivism.” His definition of idealism is useful: “metaphysical idealism holds that within natural human experience one can find the clue to an understanding of the ultimate nature of reality, and this clue is revealed through those traits which distinguish man as a spiritual being” (p. 6). Epistemology, a new philosophical discipline which derived from Kant, was the critical feature of *the forms of argument* of idealism but as Mandelbaum argues, the movement was “part of a more general rebellion against the conceptions of man and nature which characterized the Enlightenment” (p. 7). As in Kant, idealism was motivated by distress that God, freedom and immortality were being undermined by the new “science.” Neither the forms of argument nor “the general rebellion” have gone away, even while, especially as regards the “rebellion,” there are now at least two important anti-Enlightenment postures, pre-modern theisms which, for the most part, are not defended by academic philosophers and ethical nihilisms, aided and abetted both by positivist epistemology and subjectivist “post-modernisms,” very much academic positions. But we need to fill in positivism, and to get back to Farber, to define materialism and naturalism.

### **Positivism**

The 19<sup>th</sup> century battleground was over science and what it had to say about man and nature. Positivism and materialism both stood on “science”—critically, a very much contested concept until very late in the century. And both positivism and materialism were opposed to traditional theologies. But it would be wrong to suppose that nineteenth century positivism were all materialism.<sup>6</sup> Engels and then Lenin, who had an anti-positivist conception of science, was closer to the truth in asserting that positivists were each covert idealists.

Farber’s dichotomy, of course, follows Engels who had argued that there are but “two great camps” in philosophy: idealists and materialists. “Those who asserted the primacy of spirit to nature and, therefore, in the last instance, assumed world creation in some form...comprised the camp of idealism. The others, who regarded nature as primary, belong to the various schools of materialism.”<sup>7</sup> For Engels, “the great basic question of all philosophy, especially of modern philosophy, is that concerning the relation of thinking to being.” Engels’s dichotomy was Lenin’s point of departure against the Machists, and the entire cast of “empiricist” philosophers of science of the period. In his infrequently read *Materialism and Empirio-criticism* (1908), Lenin defended Engels’s materialism against those “bold warriors, who proudly allude to the ‘modern theory of knowledge’, ‘recent philosophy’ (or ‘recent positivism’), the ‘philosophy of the natural sciences’ or even more boldly, ‘the philosophy of natural science of the twentieth century.’” Lenin was quite correct to identify positivist theory of science as hegemonic, to link it with “modern theory of knowledge,” and to see that it rejected the realism of materialism, of which more in a moment.<sup>8</sup>

### **Positivism**

Positivists put forward a distinct and amazingly influential conception of science. They accept Kant’s claim that science is restricted to “phenomena” and assert also that it is a mistake to think that metaphysics can provide knowledge of some deeper or ultimate

reality. Some, like Kant, assume a reality that is not knowable, some deny this and some, perhaps more consistently, reject all discussion of the question as useless. Mandelbaum well summarized the distinct feature of positive philosophy. “Since positivism confines all human knowledge to what has been experienced or can be experienced, it claims that a science which has freed itself from metaphysical preconceptions will restrict itself to discovering reliable correlations within experience...According to this view, a scientific explanation does not involve appeal to any immanent forces nor to any transcendent entities; to explain a phenomena is to be able subsume it under one or more laws of which it is an instance.”<sup>9</sup>

Positivists are manifestly empiricists, and it is easy enough to see how, as Mandelbaum put it, the positivist interpretation of science “even came to be absorbed into the idealist tradition” (p. 11). As he notes in another place, common to all forms of idealism and phenomenalism is “subjectivism,” understood as the idea that all we can know are the contents of consciousness (what Rorty later referred to as the “veil of ideas”). If, then, reference to “transcendent reality” is to be rejected and all knowledge is restricted to what is “in experience,” then what is to be gained by holding that “the objects” of experience exist independently of it? As Farber well said: “the methodological restriction of the objects of reality to a relationship with an experiencing subject—the subject-object limitation—serves as a wheelhorse for idealistic arguments at critical points.”<sup>10</sup>

It is very critical to see also that causality figures hugely in the positivist vision. What is rejected as causation, of course, is any sort of “metaphysical” notion of causes as productive powers. Instead, we have a Humean conception of causality as an empirically available constant conjunction. Hence even in the “transfigured realism” of Spencer, reality was “unknowable” exactly because, on his empiricist premises, there was no way to get from “objective reality” to “experience.” As Mandelbaum summarizes:

Science would be transcended and metaphysics would set in if one tried to form any conception of how motions in the nerves “produce” sensations, or how complex associations of ideas can lead to those efferent nerve-impulses which eventuate in action. To attempt to go beyond the verifiable correlations between these utterly different types of concept would be to introduce notions which it is not in any way possible to verify within experience.<sup>11</sup>

Accordingly, despite large differences between them, British empiricists, e.g., Mill, and Spencer, Kirchoff, Mach, Avenarius, Duhem and Poincaré, and, of course, the “logical positivists,” “logical empiricists,” “neo-positivists” and “anti-realists” of today are all “positivist” (in Comte’s sense). Indeed, since their conception of science is perfectly comfortable with the extensionalist logic of Whitehead and Russell, it came to define “logical positivism;” and *despite fatal challenges, remains the unquestioned assumption of both most current discussions in epistemology and the philosophy of science.* “Naturalists” takes their stand with science, but the critical point then is precisely how science is to be understood. To anticipate, the naturalism (and realism) which I will defend follows Rom Harré and Ed Madden’s groundbreaking, *Causal Powers* and

Harré's revolutionary assault on "deductivism" in the philosophy of science.<sup>12</sup> But before pursuing this idea, we need to comment on the third nineteenth century contender, materialism.

### **Materialism**

Although materialism was a widely held view in the 18<sup>th</sup> century, Mandelbaum notes that despite some confusion on this issue, there were very few materialists in the 19<sup>th</sup> century, and most of them were German. The obvious materialism, and from the point of view of later global philosophy, is, of course, Marxism. We can usefully begin with Mandelbaum's definition:

Taken in its broadest sense, materialism is only committed to holding that the nature of that which is self-existent is material in character, there being no entities which exists independently of matter. Thus, in this sense, we would class as a materialist anyone who accepts all of the following propositions: that there is an independently existing world; that human beings, like all other objects, are material entities; that the human mind does not exist as an entity distinct from the human body; and that there is no God (nor any other non-human being) whose mode of existence is not that of material entities (p. 22).

This is plainly Farber's sense and explains why naturalism and materialism are usefully interchangeable. Thus, "reductionist" forms of materialism, as in Ernest Haeckel, or Moleschott and Büchner, are easily distinguished from Engels's "dialectical" reading of science—and even more important from the present point of view from the non-reductionist naturalisms of Marx and Dewey.

As important, the definition leaves open questions about the nature or character of the material world, including whether "matter" is a "substance" (as per Descartes) or an underlying "substratum" (as per Locke). As is well-known, these positions are subject to Berkeleyan criticisms. But the nature or character of the "material world" may be understood as *an entirely scientific question*. If so, a "realist" and anti-positivist theory of science will be required, of which more below. Materialisms, of course, are realisms in the first important sense that, in contrast to "idealisms" which make "reality" mind-dependent, for the materialist, the world exists independently of minds, God's included.

### **Residual Problems of the Debate over Idealism**

As the twentieth century began, positivism had won the battle over the character of the *physical* sciences.<sup>13</sup> But the existential status of "the external world" had not been resolved. It informs, of course, the problem articulation of Moore and Russell, James and Dewey, and all the American realists (in their several varieties), with variant forms of positivism confounding matters further. I shall not attempt a review of the often puerile debates which characterize this battle and why it has been so difficult to be clear about the pertinent issues.

But I would insist that this debate is a philosopher's problem in the sense that first, "the things that we see, hear, and touch—and to a significant degree also what we

taste or smell—appear as independent of our seeing, hearing, or touching them.”<sup>14</sup> Only a philosopher could raise questions about this. Second, we cannot doubt that we can learn from experiences in this world, even if philosophy *and* science remain puzzled as to just how this occurs. Thus, in no human community, however different, have persons failed to make judgments about the resources and dangers of this world. Papaya was identified as nourishing before there was any understanding of metabolism and cold was avoided before we understood the mechanisms. But even more than this, only a philosopher could doubt that the modern natural sciences produce genuine knowledge of this world. I take it as fundamental not merely that nature exists independently of at least human experience, but that it is structured in some way independent of human inquiry and that we can have some knowledge of it.<sup>15</sup>

But this does not mean that debate between idealists and their opponents left no residual problems. I find two, the one which motivates Farber and the other, the paradigmatic philosopher’s problem (or nest of philosophers’s problems). I begin with the latter.

### **Epistemology: The Philosopher’s Problem Par Excellence**

Epistemological problems, either in traditional “foundationalist” or in more recent non-foundationalist, “analytic” variations, are philosopher’s problems. The “discipline” is of recent vintage, achieving self-consciousness only after Kant, indeed, as part and parcel of the emergence of metaphysical idealism. Since eighteenth century thinkers did not distinguish science and philosophy, in the Enlightenment vision of man and nature, metaphysics and physics were not distinguishable. Thus Newton, Boyle and Locke could assume that scientific inference could offer evidence that there were non-perceivable, independently existing objects which could be known.<sup>16</sup> And since they worked prior to the development of empiricist criticisms of causality, they could also seek *causal explanations of experience*. Evidently, these *could not* be understood as “correlations” of directly observed sequences.

After Kant, claims about knowing would pre-empt claims about being (what Roy Bhaskar called “the epistemic fallacy”) leaving room only for an idealistic metaphysics or a positivism, including forms of Kantianism, phenomenalism, naïve realism, or doctrines of “pure experience.” And, as part of this, despite struggles by Helmholtz, Spencer and James (in his *Principles*), “science” could offer nothing of interest about knowing. The question, “How is our knowledge possible? was, thereafter, nothing like the question: “How are telephones possible.” As a *philosophical* problem, it could be answered in either one of two ways: Either by taking a “transcendental turn” (phenomenology) or in terms of evidential relations between basic and non-basic propositions.<sup>17</sup>

### **Dewey and the Epistemology Problem**

There have been some modern philosophers who tried to avoid this regressive pursuit. Indeed, one can argue that this is what is most distinctive about American pragmatism, from Peirce to Dewey.<sup>18</sup> But none, including Dewey, entirely escaped the Kantian epistemological problematic. This explains the odd character of Peirce’s philosophy, James’s shift to “radical empiricism,” the frustrating debates that Dewey had

with the American realists of various sorts, his frustration with them, on grounds that he was not offering but another “epistemology,” and the failure to see also that he was not offering just another “scientism.”<sup>19</sup>

Dewey was surely correct to reject “the spectator theory of knowledge” and to deny the idea that truth was to be determined by its relation to the independently existing reality—the assumption of at least some “realisms,” and he was correct in his effort to displace epistemology for “inquiry into inquiry,” comprehended as a practical, social activity which made science continuous with common sense. But his “naturalism” was burdened by his commitment to “experience.”<sup>20</sup> The problem was not, however, his defense of “naïve realism” or even his “postulate or criterion of immediate empiricism” (properly understood). Rather the problem was his unwillingness to accept a strong version of scientific realism, necessary if I am correct, to carry out the program of his ground-breaking and little understood *Logic: The Theory of Inquiry*. And this amounts to saying that he could find no grounds on which to assert that the “thing-in-itself” was knowable and causally pertinent.

“Experience” had been corrupted by the tradition which gave us epistemology. As John Shook points out, by the time he was ninety-one years old, Dewey saw this. As a good empiricist, he had intended “to liberate philosophy from desiccated abstractions” (a task also set by Marx.) But “experience” “had become effectively identified with experiencing in the sense of the psychological, and the psychological had become established as that which is intrinsically psychical, mental, private.” Accordingly, his insistence that “‘experience’ also designates that what is experienced was a mere ideological thundering in the Index for it ignored the ironical twist which made this use of ‘experience’ strange and incomprehensible” (LW 1: 362). If indeed instrumentalism was an epistemology, then this move was “strange and incomprehensible” exactly because it denied the starting point of “the epistemological problem.” Either Dewey, like Moore in his famous refutation of idealism, missed the point or he was a covert idealist, perhaps a Hegelian of some sort.<sup>21</sup>

There is nothing fatal about the “postulate of immediate empiricism,” that “things—anything, everything, in the ordinary or non-technical use of the term ‘thing’—are what they are experienced as” (MW: 3: 159). The postulate not only allowed for, but required that we recognize that the experiences of individual’s may well differ, so “if it is a horse which is to be described, or the *equus* which is to be defined, then must the horse-trader, or the jockey, or ...the paleontologist tell us what the horse is which is experienced.”” These accounts may differ, but none is privileged as “real” against others which are deemed “phenomenal.” For Dewey, it is clear that each account is from *some* point of view and that the conditions necessary for understanding the differences as well as the agreements can be provided. This plainly will be problem for psychology and the sociology of knowledge—an inquiry demanded by Dewey’s theory of knowledge and welcomed by me. But, presumably, there is *something* independent of each of these experiences which is causally pertinent to the having of them—and, if so, why not independent of anybody’s? And if not, why was this not an idealism? Indeed, on

Dewey's own naturalistic premises, cats, bats, and beetles each have "worlds" which are enabled and constrained by their particular sensory (and "mental") capacities.<sup>22</sup>

Indeed, not only was Dewey's use of experience to denote what was experienced peculiar, but so too was his entirely sound effort to deny that experience was equivalent to *cognitive* experience, that experiencing was the same as knowing. R.B. Perry got this right and was happy, as am I, to accept the view that knowings, including the "subject-object" relation, and the relations of truth and meaning, are "arrangements into which experiences fall owing to certain practical exigencies, such as the interruption of habit, of the insufficiency of immediate knowledge."<sup>23</sup> But this only raised another question. Perry continued: "It would appear that while Dewey...rescues reality from dependence on intellect, he is satisfied to leave it in the grasp of more universal experience which is 'a matter of functions and habits, of active adjustments and re-adjustments, of coordinations and activities, rather than of states of consciousness.'" (p. 315). Some defenders of Dewey would, I think, also be satisfied. Perry was not, of course, since he persisted that "a thoroughgoing realism must assert independence not only of thought, but any variety of whatsoever of *experience*, whether it be perception, feeling, or even the instinctive response of the organism to its environment" (*ibid.*).<sup>24</sup>

### **Naturalistic Epistemology and Scientific Realism**

Tom Burke is quite correct, I think, to argue that the naturalism of Dewey's *Logic* joins with the ecological psychology of J.J. Gibson.<sup>25</sup> Burke summarizes:

In contrast with a classical empiricist view of perception (involving so-called, sense data, sense impression, stimulations or nerve endings, irritations of body surfaces, and so forth), ecological psychology emphasizes a different array of theoretical concepts; one being the concept of "invariants" and another the concept of affordances...

Ecological psychology treats the perceiving agent as a dynamic organism/environment system, continually engaged in various sorts of actions designed for exploring the world and utilizing its resources. Controlled sampling of the world gives evidence of possible uses of things (and of ways to orchestrate subsequent actions) by virtue of the agent's being attuned to lawlike relations which involve stable associations of different sorts of possible experiences (p. 84).

Now, my point is just this: the idea of "invariants"—lawlike relations, and the concept of "affordances"—possibilities as determined by invariants *require* a realist theory of causal powers.

Affordances are dispositional properties of things which refer to a things powers construed as per Harré and Madden (1974) and Bunge (1970). It is to assert a categorical referring to the nature (structure) of the thing and to "tendencies" true of the thing by virtue of its nature. Dispositions manifest themselves (minimally) in pairs: salt dissolves in water, clay is molded with the hands. Affordances are dispositions in an organism-populated world. As Turvey *et al* write: "Possibilities for action, or more precisely, things



with possibilities for action, are among the kinds of things that populate an animal's niche and are, contrary to received wisdom, things to be heard, or smelt, etc." This is most easily seen with an example:

Sharks electrically detect things to eat and things that impede locomotion...An edible thing such as flatfish differs in ionic composition from the surrounding water, producing a bioelectric field partially modulated in the rhythm of the living thing's respiratory movements. A flatfish that has buried in the sand will be detectable by a shark swimming just above it. Reproducing the bioelectric field of the flatfish artificially, by passing a current between two electrodes buried in the sand, invites the same behavior. The shark digs tenaciously at the source of the field departing from the site when the act fails to reveal an edible thing... Now there is no intelligible sense in which it can be claimed that the source ought to have appeared *edible* if the shark's perception of affordances were direct. In the niche of the shark, 'edible thing' and 'electric field of, say, type F' are nomically related. To predicate of the shark (a) 'detects electrical field of type F' and (b) 'takes to be an edible thing' is not to refer to two different states of affairs, one (viz. (b)) that is reached from the other (viz. (a)) by an inference. Rather, it is to make reference to a single state of affairs of the shark-niche system. The linking of (a) and (b) is not something that goes on in the "mind" of the shark, as the Establishment would have it. The linking of (a) and (b) is in the physics of an ecological world...<sup>26</sup>

Dewey would, I think, strongly agree that ecological psychology picks up on themes that he articulated, especially, in the *Logic*.<sup>27</sup> And it is perfectly clear that for Dewey, even perception is profoundly affected by the fact that humans are social beings, a fact which raises immense problems for empirical psychology.<sup>28</sup> But we need to ask: How did Dewey stand on what is now termed "scientific realism?" Unfortunately, as with earlier "realism" debates, it is not perfectly clear what this implies. A large part of the problem, moreover, turns on whether the claims mean to provide an account of the actual practices of the physical sciences, especially physics, chemistry, biochemistry, and whether if they do, the accounts are constrained by traditional epistemological assumptions, for example, as in Quine, whose understanding of "empirical" and of "logic" (as extensional and providing the canonical form of scientific sentences) gives his understanding of "scientific realism" a most distinctive "empiricist" caste.<sup>29</sup> So as to be as clear as possible on my position, let me merely assert one of Margolis's conclusions (as I understand them.)

Margolis has argued convincingly, I think, that a strong form of scientific realism need not be either "foundationist" or "cognitivist" as he explicates these. To do this, one needs to assert "*ontic externalism*, the view that 'the world consists of some fixed totality of mind-independent objects,' that "the question the way the world is" makes sense "relative to one conceptual theme or another," and finally, that "objectivity in the cognitive sense is only '*objectivity for us*.'"<sup>30</sup> Dewey would, I think, agree with all three, even while taking what amounts to an anti-realist position regarding unobservables and even if he denies that causality is an ontological category.

We can notice, first, that Dewey's prose leaves us with some questions on the pertinent issues. This results, in part at least, from his willingness to incorporate into his own highly idiosyncratic theory of science, elements from competing historical traditions, but especially "empiricism" and "rationalism." Thus, it is clear enough that he was not a Humean (although Mill is usually his target), that he joined "nominalism" and "realism," and that he supposed that one could settle most of the questions about inquiry, and, accordingly, about science, by paying close attention to the *function* of propositions in use in science.

He clearly rejected the "regularity determinist" ontology of events so characteristic of Hume and positivism. For him, "there are no such things as uniform sequences of events" (LW 12:445) and hence "scientific laws" could not be "formulations of uniform and unconditional sequences of events" (LW 12: 437. This would seem to encourage the view that, for him, science assumed an ontology of "things." Similarly, in *Experience and Nature*, he held that "atoms and molecules show a selective bias in their indifferences, affinities and repulsions...to other events" (LW 1: 162). "Selective biases" are surely "tendencies" in the sense of Harre and Madden, and "atoms," if not molecules, are not "observable"—at least as ordinarily understood.

On the other hand, he denies explicitly that causality is an ontological category; for him, it is a "logical category" (in his special sense) and "the term 'causal laws' is, ...in spite of its general use, a figure of speech," "a case of metonymy" (LW 12: 440). Indeed, he gave an account of what he took to be the "confusion" regarding causality. There is, upon reflection, "a qualitative gap" between "gross qualitative objects (which are the objects of direct perception)," e. g., the lighted match and the burning of the paper. "'Forces' were introduced to get over this difficulty. Thus, 'the match was supposed to have a certain calorific power' (LW 12: 445). But 'the time came when it was seen that forces by definition are such as to be incapable of scientific observation. They were then ruled out of science...' <sup>31</sup> 'Then there grew up the hybrid notion which took from common sense the idea of succession and from science the idea of invariability of conjunction' (*ibid.*). If Dewey is not a Humean, neither, it seems, would he accept the idea "things" have causal powers.

But if so, his alternative is anything but clear. It turns, I think, on his critical distinction between "generic propositions" and "universal propositions." Generic propositions, e.g., "sugar is sweet," "iron rusts," are "existential" and (as with singular propositions, e.g., "this is sweet") "predicates represent potentialities which *will be actualized* when certain further operations are performed..." (LW 12: 251). "Universal propositions" e.g., "if a particle at rest is acted upon by a single moving particle, then..." (LW 12: 254), and, ambiguously, sentences of the form, "All A is B" (rendered as in modern logic as conditionals) lack existential import. They are "valid, if valid at all," because they express "a necessary relation of abstract characters" (LW 12: 255).

Ernest Nagel was correct, it seems, in saying that the "function" of generic propositions "is to organize perceptual materials..." (LW 12: xvi). They are, accordingly,

the heart of our commonsense understanding of nature. The formulation just quoted suggests a reading of them as dispositions, non-realistically analyzed: If X is tasted, then if X is sugar, X will taste sweet. But “*will be actualized*” (even *ceteris paribus*) suggests also that there is some sort of necessity attached to them. If so, this is an odd mix. It is easy to see how one could have “natural necessity” if generic propositions are analyzed realistically.<sup>32</sup>

“Universal propositions,” by contrast, formulate “necessary relations” between “abstract characters” and “their function in inquiry is to propose possible operations which, if carried out, might solve the problem under inquiry” (LW 12: xvi). This, of course, grapples with the medieval problem of realism/nominalism. Nagel quite understandably is puzzled by the putative “necessity” in such “laws.” Such necessity surely is not *a priori* for Dewey, even while he terms the relation “logical” and “definitional,” nor does it seem to square with standard “logicist” efforts (unsuccessful!) to discriminate between “accidental generalizations” and “laws.” But neither does it represent what Harré and Madden termed “natural necessity,” for this is ontological.<sup>33</sup>

Dewey seems to think that the pertinent issues are resolved once we accept that “conceptual subject-matter is [to be] interpreted solely and wholly on the ground of the function it performs on the conduct of inquiry” (12: 462). We can, he says, then reject as spurious an exclusive dichotomy between “conceptions [as] mere devices of practical convenience,” or as “descriptive of something actually existing in the material dealt with” (*ibid.*). The former is an “instrumentalist” reading; the latter, realist. And, of course, depending on what they are “devices” *for*, they may be *both* “descriptive” *and* “of practical convenience,” perhaps useful *also* as guides to inquiry. But are these conceptions “descriptions”? And if so, what are they descriptions of?

Dewey sees rightly that the notion of “abstraction” is part of the problem. As he sees it, if conceptions are “descriptions,” “abstract characters” are “abstracted” from “existents” in the sense of “selective discrimination.” But, he insists, this is quite impossible as regards an abstract character as a “scientific conception.” He gives an example: “smoothness, as an instance of a scientific conception, is not capable of observation and hence of selective discrimination” (*ibid.*) Hence, as *scientific* conceptions, such “abstract characters” are not descriptions.

But the scientific realist, not bound by positivist predilections, will agree that while “abstraction” is part of the problem, we should not be looking at “abstract characters” at all, but at *models* of “things” as abstractions from the real, concrete. We experience water as fluid and clear and capable of many sorts of transactions. H<sub>2</sub>O, an abstraction, identifies the model for a molecule of water, and molecular chemistry develops the theory which *explains* these powers. *The model is not a fiction, but an abstracted real structure.* Experienced water *is* H<sub>2</sub>O but it is not *only* H<sub>2</sub>O. The water of immediate experience does what it does by virtue of being H<sub>2</sub>O. Hence, *ceteris paribus*, because it *is* NaCl, ordinary (experienced) table salt *must* dissolve in the water in my boiling pot.<sup>34</sup>

Perhaps Dewey's account can be rescued, and perhaps it is sound as it stands. John Shook<sup>35</sup> seems to bite the bullet. He has argued that while Dewey allowed that "the sciences should be permitted to postulate unexperienceable, transcendent entities that permit scientific explanation of experienced events," he also "refuses to take a realistic stand towards such 'objects,' while Quine [e.g.,] encourages realism here." But if as he says, "scientific theories are used to guide inferences toward predictions," and universal propositions "function in science regardless of whether their terms actually refer to anything at all," then as Mach, Poincare and Duhem each insisted, why cling to the idea that science seeks to *explain*? It is the core of realist theories of science that science explains and could not unless we accept that inquiry gives us knowledge of the causal powers of the things which exist independently of us.

### **Human Problems**

I noted that there were two residual problems of the idealism/realism debate. The second regards not philosopher's problems, but problems of how we should live. I want to support Dewey's theory of inquiry as a naturalism because, as Farber insisted, there are *only* two ways to address these problems. One is either a naturalist who holds that naturalist inquiry can answer these questions or one is anti-naturalist and denies this. Today, anti-naturalism has two main forms: the appeals to authority of traditional theology, and the subjectivisms of positivism and post-modernist theory.

Our daily papers are filled with examples of the first.<sup>36</sup> But a central issue is provided by Hare and Madden in their little book, *Evil and the Concept of God*.<sup>37</sup> They argue that, however understood, evils should be eliminated as far as humanly possible; but if indeed, they are not remediable, and if, worse, they serve some theological values not obvious to us, then why make the effort? Or as Parry writes in his short rejoinder to Father Clark's defense of theism:

There is no need to blame Jupiter for the lightening, nor a jealous god for natural death. Violent homicide is indeed blameworthy, especially wholesale slaughter. Though "the system" is undoubtedly faulty, yet it operates only through individuals, who must be held morally responsible. The rulers of the world, on my view, must be held primarily responsible for such horrors as burning civilians by gas chambers, atom bombs, and napalm; and all of us are jointly responsible to the extent that we support our rulers.<sup>38</sup>

That this needs saying is, itself, shameful.

Positivisms accept science, but on its understanding of knowledge, science becomes irrelevant to questions of morals and politics. So, for example, the eminent Harvard zoologist, Stephen Jay Gould, argues that "religion" and "science" are complementary: "Science tries to document the factual character of the natural world...Religion, on the other hand, operates in the equally important, *but utterly different* (my emphasis) realm of human purposes, meanings and values..."<sup>39</sup>

Postmodernisms deny nature and hold that “science”—generally misunderstood—is but one among many “discourses,” including, then, the “discourses” of multiplied “communities,” “faith,” “ethnic” and otherwise. Like the “New Age” quest for a new “inwardness” with its “metaphysical dissolvent,” “Transcendental Individualism,”<sup>40</sup> the postmodernist obliterates “objectivity” and licenses *equally* whatever beliefs are shared by these self-defined communities, however belief gets fixed. Moreover, positivism and postmodernism are consistent with and propelled by “capitalist ambiance,” “flexible accumulation” and consumerism.<sup>41</sup> Marvin Farber had it right:

The philosophical Pandora’s box [of subjectivism] is one more fairy tale...It is, however, a fairy tale with sociohistorical linkage and consequences, for it is an ingenious philosophy of renunciation that leaves the *status quo* unexamined and unchallenged and that may even be accommodated to reactionary ideas.<sup>42</sup>

Dewey is pertinent here. But bringing me full circle back to Marvin Farber, the naturalism of Marx is even more pertinent:

The great thing in Hegel's *Phenomenology*...is simply that Hegel grasps the self-creation of man as a process, objectification as loss of the object, as alienation and transcendence of this alienation; that he thus grasps the nature of *work*, and comprehends objective man, authentic because actual, as the result of his *own work*. The *actual*, active relation of man to himself as a species-being or the confirmation of his species being as an actual, that is, human, being is only possible so far as he really brings forth all his *species-powers*--which in turn is only possible through the collective effort of mankind, only as the result of history....

We see here how a consistent naturalism or humanism is distinguished from both idealism and materialism, as well and at the same time the unifying truth of both. We also see that only naturalism is able to comprehend the act of world history...<sup>43</sup>

Evidently, although I would need at least another paper to elaborate these most pregnant insights and to demonstrate their connection to alienation, the problem of democracy and the analysis of capitalist society, nothing that I am likely to say would add much to what is, by now, a rich and still relevant literature.

Peter T. Manicas  
Professor of Sociology, University of Hawai`i at Manoa  
Director, Liberal Studies, University of Hawai`i at Manoa

## ENDNOTES

<sup>1</sup> In his marvelous lecture course, “the Philosophy of the Recent Past” (modeled, as I remember him saying, on a course given by Ralph Barton Perry at Harvard), we read August Cornu’s brief but excellent, *The Origins of Marxian Thought*, published in 1957 by Charles Thomas in the series, “American Lectures in Philosophy,” edited by Farber. Cornu was one of the first writers to study carefully the “young Marx.” The manuscripts were not then available in English translation. I also read with Farber, Dewey’s *Logic*, and Felix Kaufman’s *Methodology of the Social Sciences*. We read *no* Husserl or Heidegger.

<sup>2</sup> “History, Philosophy, and Interpretation: Some Reactions to Jonathan Bennett’s Study of Spinoza’s Ethics,” in Peter H. Hare (ed.), *Doing Philosophy Historically* (Buffalo: Prometheus Books, 1988). In his review of multi-volume *Dictionary of Eighteenth Century British Philosophers*, James Harris remarks: “just as it is usually hard to distinguish “philosophy” from science in the eighteenth century, then so also it is difficult to hold apart science and theology for long. That is why, if the character and significance of their work is to be properly understood, men such as Hume and Reid have to be surrounded by so many relatively obscure figures from disciplines which today have little or nothing to do with philosophy. For the truth is that there are no ‘purely philosophical’ questions in eighteenth century Britain” (*Times Literary Supplement*, May 5, 2000). See below as regards Locke, Boyle and Newton.

<sup>3</sup> Richard Rorty, “The Historiography of Philosophy: Four Genres,” in Rorty, J.B. Schneewind and Quentin Skinner (eds.), *Philosophy in History* (Cambridge: Cambridge University Press, 1984).

<sup>4</sup> Especially, Marvin Farber, *Naturalism and Subjectivism* (Springfield, IL.: C.C. Thomas, 1959); *The Search for an Alternative* (Philadelphia: University of Pennsylvania Press, 1984). The extraordinary volume, *Philosophy for the Future* (New York: Macmillan Co., 1949) edited by Roy Wood Sellars, McGill and Farber, was also on Farber’s reading list. A defense of materialism, the essays, many authored by the distinguished list who contributed regularly to *Science and Society*, are remarkably pertinent.

<sup>5</sup> Maurice Mandelbaum, *History, Man and Reason: A Study in Nineteenth Century Thought* (Baltimore: Johns Hopkins Press, 1971), p. 5.

<sup>6</sup> Mandelbaum notes that the confusion persists despite explicit disavowals on the part of Comte, Spencer, Bernard, Huxley, and Mach—and the positivists of the very recent past.

<sup>7</sup> Frederick Engels, *Ludwig Feuerbach and the Outcome of Classical German Philosophy*. New York: International Publishers, 1935, p. 31.

<sup>8</sup> V.I. Lenin, *Materialism and Empirio-criticism* (Moscow: Progress Publishers, 1970), p. 7. Farber and I would agree with Lenin’s attack on the Machists, but it seems clear that neither Engels nor Lenin provided a plausible answer to the question of the relation of thought to being: the “reflection theory” surely will not do. Nor, tragically in my view, did either Engels or Lenin provide a convincing alternative philosophy of science. I have discussed this, along with Engels’s relation to competing materialisms, in my “Engels’s Philosophy of Science,” in Terrell Carver and Manfred Steger (eds.), *Engels After Marx* (College Station: Pennsylvania State University Press, 2000).

For a beautifully wrought criticism of logical positivism—from a Marxist perspective, see V. J. McGill, “An Evaluation of Logical Positivism,” in the Volume 1, Number 1 of *Science and Society: A Marxian Quarterly* (Fall, 1936). Parry and Albert Blumberg are thanked by McGill who was, of course, a close associate of Farber’s. See also Lewis Feuer’s excellent account, “The Development of Logical Empiricism,” Vol. 5, No. 3 (Summer, 1941).

<sup>9</sup> Mandelbaum, *History, Man and Reason*, p. 11. Comte had put matters squarely. For the “positivist,”

---

the mind have given over the vain search for Absolute notions...and the causes of phenomena, and applies itself only to the study of their laws,, --that is, their invariable relations of succession and resemblance... What is now understood when we speak of an explanation of facts is simply the establishment of a connection between single phenomena and some general facts..." (Comte, 1875, Vol. 1, p. 2).

<sup>10</sup> *The Search for an Alternative*, p. 130.

<sup>11</sup> Mandelbaum, *History, Man and Reason*, p. 304. I have discussed these issues in connection with James's *Principles*. See my "Modest Realism, Experience and Evolution," in Roy Bhaskar (ed.), *Harré and His Critics* (Oxford: Basil Blackwell, 1990), pp. 23-40. James was caught in the same dilemma, but could not accept Spencer's "solution" to the problem of "inner" and "outer," that evolution would guarantee a convergence between the two. James argued, rightly, that this was "barren truism," since there was no way to determine whether the experienced world corresponded to the non-experienced world.

Mandelbaum notes, correctly, that having established that science had demonstrated that what we directly experience never gives us the characteristics of what exists independently of us, both Spencer and Helmholtz "reversed themselves and spoke as if it were a *defect* in knowledge that we do not directly experience the world as it exists independently of us" (p. 362). The solution, available to both, was to admit that "transdiction, or inference to what is in principle not experienceable is scientifically justified. McGill gave a very similar argument, briefly that one cannot argue coherently *from* the causal argument that "sensations cannot be regarded as copies or direct representations of ...the material object" (which McGill holds to be true) *to* either "agnosticism" or "phenomenalism." (*op. cit.*, p. 51). See below.

<sup>12</sup> *Causal Powers* (Oxford: Blackwell, 1974) and *Principles of Scientific Thinking* (Chicago: University of Chicago Press, 1970). One should cite here also, Mario Bunge's infrequently noticed, *Causality and Modern Science*, First Edition, 1959 (Dover, 1979) and Michael Scriven's essays in *Minnesota Studies in the Philosophy of Science*. Parry is acknowledged by Harré and Madden. As noted, Bill Parry's critique of extensionalist difficulties with "entails" and the contrary-to-fact conditional was a lasting influence on me, but I do not remember whether he raised this with particular reference to causality. See also Roderick Chisholm, "The Contrary-To-Fact Conditional," (1946), reprinted in Manicas (ed.), *Logic as Philosophy* (New York: D. Van Nostrand, 1971).

<sup>13</sup> The story of the human or social sciences is different and more complicated. See my *A History and Philosophy of the Social Sciences* (Oxford: Basil Blackwell, 1987), and "Nature and Culture," in John Ryder (ed.), *American Philosophical Naturalism* (Amherst, NY: Prometheus Books, 1994).

<sup>14</sup> Maurice Mandelbaum, *Philosophy, Science and Sense Perception* (Baltimore: Johns Hopkins Press, 1964), p. 222. Mandelbaum notes that this, probably, catches the element of truth in Moore's famous refutation. "In direct experience we are all realists and cannot avoid being so." He insists, rightly, that this only the beginning of an argument, for me, a philosopher's argument. Moreover, as part of this, it is not true that "everything we experience exists precisely as we experience it." (*ibid.*). See below.

<sup>15</sup> As Farber many times insisted, "the philosophical problem of existence... arises when a method is adopted that does not proceed from the basic fact of experience" (*Phenomenology and Existence: Toward a Philosophy within Nature* (New York: Harper Torchbooks, 1967), p. 70. It is a "methogenic problem." Indeed, "the fact of nondependent existence is basic of philosophical thought. Not to recognize that fact is to incur the error of illicit ignorance..." (p. 72).

See also another student of Farber's, Wilfred Sellars. But we should not go as far as Sellars's "macho-realism" (Roy Bhaskar's term) and argue that if "the scientific image" is true, then "the manifest image" is false. See *Science, Perception and Reality* (London: Routledge and Kegan Paul, 1963), p. 96. Farber might argue that Sellars's startling conclusion is also a "methogenic" result.

<sup>16</sup> See Mandelbaum, *Philosophy, Science and Sense Perception* and Rom Harré, *Matter and Method* (London: Macmillan, 1964). It is a serious error to read Boyle and Newton as "positivists." Their

---

“corpuscularism” depended on their perfect comfort with “transdictive” inferences: inference to what lies beyond the scope of all possible experience (Mandelbaum, chapter 2. )

<sup>17</sup> Richard Rorty, *Philosophy and the Mirror of Nature*, Princeton: Princeton University Press, 1979, Chapter III. See also his useful footnote on the historiography of philosophy, p. 132.

<sup>18</sup> See my essay, “Pragmatic Philosophy of Science and the Charge of Scientism,” *Transactions of the C. S. Peirce Society*, Spring, 1988, Vol. XXIV, No. 2, pp. 179-222. For me, Peirce recast the epistemological problem by rejecting the transcendental move but by accepting the Kantian “insulation” against skepticism. See also, Murray G. Murphey, *The Development of Peirce’s Philosophy* (Cambridge, Ma: Harvard, 1961) and the essay by my former associate at Buffalo, R.G. Meyers, “Peirce on Cartesian Doubt,” *Transactions of the Charles S. Peirce Society*, Vol. 3 (1967).

I argue also that James’s *Principles* was an ambivalent naturalistic epistemology which did not restrict itself to the “phenomena” of mental life, but aimed to investigate its “conditions,” physiologically and in “the outer world.” But, strapped by empiricist—anti-metaphysical—assumptions about science, he utterly abandoned that goal. If in his *Principles*, knowing was deemed “the most mysterious thing in the world,” with “radical empiricism” knowing was “easily be explained as a particular sort of relation towards one another into which portions of pure experience enter” (p. 202).

<sup>19</sup> Most recently, by Dorothy Ross, *The Origins of American Social Science* (Cambridge: Cambridge University Press, 1991).

<sup>20</sup> This is, of course, an old argument, beautifully confronted by Shook. See John R. Shook, *Dewey’s Empirical Theory of Knowledge and Reality* (Nashville: Vanderbilt University Press, 2000). To anticipate, I think that ultimately Shook is right that Dewey’s is a metaphysics of experience (as held by John McDermott), despite the best efforts of “naturalists,” (e.g., Ralph Sleeper) to hold that it is a metaphysics of existence. Arguments over this issue in the Queens College philosophy department go back many years. I can here add another debt of gratitude.

For a wonderful account of Russian and Soviet efforts at coming to grips with Dewey, see John Ryder’s erudite *Interpreting America* (Nashville: Vanderbilt University Press, 1999). Ryder offers a thoughtful, critical, and frequently persuasive look at the whole of American philosophy, including early American political thought, from the perspective of Soviet scholarship.

<sup>21</sup> See Kenneth R. Westphal’s excellent *Hegel’s Epistemological Realism* (Dordrecht: Kluwer Academic Publishers, 1989).

<sup>22</sup> As Burke notes, we must distinguish “operational perspectivity from subjectivity.” The former is impossible to avoid; the latter in a Deweyan frame is not the starting point, but needs to be explained. See Tom Burke, *Dewey’s New Logic: A Reply to Russell* (Chicago: University of Chicago Press, 1994), and below.

<sup>23</sup> Ralph Barton Perry, *Present Philosophical Tendencies (1912)* (New York: George Braziller, Inc., 1955, p. 314.

<sup>24</sup> Perry’s version of direct realism is, to be sure, untenable. See Shook, *Dewey’s Empirical Theory of Knowledge and Reality*. But see Roy Wood Sellars’s “Materialism and Human Knowing,” in Sellars, McGill and Farber (eds), *Philosophy for the Future*.

<sup>25</sup> Burke, *Dewey’s New Logic*, pp. 83-96.



---

<sup>26</sup> M.T. Turvey, R.E. Shaw, E.S. Reed and W.M. Mace, "Ecological laws of perceiving and acting: In reply to Fodor and Pylyshyn," *Cognition*, Vol. 9 (1981). I have used this example before. For very useful additional discussion of current literature, see Burke, *Dewey's Logic*

<sup>27</sup> We may note, in passing, that this orientation remains a very minority position in current "cognitive" psychology—essentially because it violates fundamental assumptions derived from traditional epistemology. The critique of Fodor and Pylyshyn is a case example. Also see my "John Dewey and the Past and Future of Psychology," forthcoming in *Journal for the Theory of Social Behavior*.

<sup>28</sup> See P.T. Manicas and Paul F. Secord, "Implications for Psychology of the New Philosophy of Science," A Topology for Psychology," *American Psychologist*, Vol. 38, No. 4 (April, 1984), pp. 399-413. and "Modest Realism, Experience and Evolution."

<sup>29</sup> See my "W.V. Quine," forthcoming in John Ryder and Armen Marsoobian (eds.), *American Philosophy* (Oxford: Basil Blackwell).

<sup>30</sup> Joseph Margolis, *Pragmatism Without Foundations* (Oxford: Basil Blackwell, 1986, p. 285-6). Since "nature" exists mind-independently, we are part of it, and *all* claims are critically accessible, "us" for me is 20<sup>th</sup> century *homo sapiens*. Fifty thousand Frenchmen can be wrong. See note 22.

<sup>31</sup> Perhaps it is unnecessary to note here that Dewey endorses this "ruling out," and that it was precisely this move which defines positivism and which burdened Spencer, Helmholtz and James.

<sup>32</sup> A power ascription can be analysed as: "X has the power to A" means X can do A, in the appropriate conditions, *in virtue of its intrinsic nature* (Harré and Madden, p. 86). Empirical investigation is needed to fill in the italicized clause. This will require theory and, as well, construction of a model, perhaps detailing the micro-structure of the "thing." See below. In contrast to non-realist ascription, "things" have powers even if never exercised—as was held by Peirce. See also Everett J. Nelson's powerful "The Category of Substance," in Sellars, McGill and Farber, *Philosophy for the Future*.

<sup>33</sup> See Harré and Madden, pp. 19f.

<sup>34</sup> We need theory to fill in the CP clause, and we experiment to test the model. See Roy Bhaskar, *A Realist Theory of Science* (Sussex: Harvester Press, 1978). If we drop the CP clause, this becomes a "tendency." On models, see Harré, *Principles of Scientific Thinking*, esp. Chapter 2.

Derek Sayer has offered a reconstruction of Marx's theory of science along these lines. Thus, Marx criticizes Ricardo and others as engaging in "violent abstraction." He summarizes:

It conveys the idea of precipitate abstraction from manifest phenomena to their alleged essences, without the mechanisms by means of which the latter cause the former to assume the forms they do being adequately specified; or, to use different terminology, an idea of immediate identification of phenomena as supposed instantiations of general laws, when in fact these laws operate only in mediate fashion through a series of intervening links which the analysis ought to specify .

'True abstract thinking' . . . entails elaborating the mechanisms linking laws and phenomena in such a way that their apparent divergence is consistently explained. (*Marx's Method*, Sussex: Harvester Press, 1979, p. 121, 122).

See also the several essays in Craig Dilworth (ed.), *Idealization IV: Intelligibility in Science* (Amsterdam: Rodopi, 1992.), including my essay, "Intelligibility and Idealization: Marx and Weber" and references therein.

<sup>35</sup> In addition to his book, see the extended discussion in his unpublished paper, "Dewey and Quine on What There Is." The following quotations are from this manuscript, hopefully permitted by Shook.

- 
- <sup>36</sup> Writing in the *New York Times* (19 Jun 2000), the President of the Southern Baptist Theological Seminary held that arguments over creation, women's roles, homosexuality, abortion, etc. are, for his 16 million parishioners, "settled by the word of God."
- <sup>37</sup> Edward H. Madden and Peter H. Hare, *Evil and the Concept of God* (Springfield: Charles Thomas, 1968). The book offers a powerful critique of both theism and "quasi-theism" as regards evil.
- <sup>38</sup> "Comment on Father Clarke's Paper," in E.H. Madden, Rollo Handy and Marvin Farber (eds.), *The Idea of God: Philosophical Perspectives*, Springfield: Charles Thomas, 1968.
- <sup>39</sup> Quoted by Jerry A. Coyne, "Is NOMA a no man's land?" *Times Literary Supplement* 9 June 2000). Gould seems not have noticed that the idea that religion and science "complement" one another is both factually false and founders on the assumption that facts and values can be bifurcated. One may hope that the surveys are flawed, but Coyne notes that "nearly 50 percent of Americans believe that humans were directly created by God within the past 100,000 years, and 40 percent think that creationism should replace [not just be taught!] evolution in the biology classroom. The *New York Times* helps this along when it publishes an essay by Richard Rothstein (7 June 2000), which argues that "facts are only what we observe." Evolution is not a fact: "There could be other theories." Perhaps Rothstein took a course in philosophy at one of our more distinguished institutions?
- <sup>40</sup> The term is Irving Kristol's, an ally here. See his excellent "Faith a' la Carte." *Times Literary Supplement* 26 May 2000.
- <sup>41</sup> The best treatment is David Harvey, *The Condition of Postmodernity* (Oxford: Basil Blackwell, 1987?).
- <sup>42</sup> Marvin Farber, *The Search for an Alternative*, p. 130.
- <sup>43</sup> Karl Marx, "Critique of Hegelian Dialectic and Philosophy in General," edited and translated by Loyd D. Easton and Kurt H. Guddat, *Writings of the Young Marx on Philosophy and Society* (Garden City: Doubleday and Company, 1967, pp. 321, 325.