

KARL POPPER'S THREE WORLDS

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The Three Worlds.—According to Karl Popper's thesis, the "first world" is composed of all material entities, while the "second world" is composed of conscious experiences (including such phenomena as feelings, sensations, intentions, memories, beliefs or subjective knowledge, emotions, and mental states).¹ The third world is not mere psychological belief, but rather is content (i.e., theoretical systems, problems, problem situations, critical arguments, the state of a discussion or the state of a critical argument). The third world is superhuman only in the sense that "its contents are virtual rather than actual objects of thought, and in the sense that only a finite number of the infinity of virtual objects can ever become actual objects of thought."²

The Objective Reality of Culture.—It is fruitful to compare the entities of Popper's third world with what the culturologist Leslie White calls "mathematical reality." White writes:

We can see now how the belief that mathematical truths and realities lie outside the human mind arose and flourished. They *do* lie outside the mind of each individual organism. They enter the mind, as Durkheim says, from the outside. They impinge upon his organism, again to quote Durkheim, just as cosmic forces do.³

Yet, like Popper, Professor White rejects the view that there is some eternal heaven or Consciousness to serve as "the locus of mathematical realities." But if these realities exist neither inside the human mind nor in some realm outside the human mind, then what is their locus? White's reply is that they exist in, or as a part of, culture, which is a part of the "mind" of the human species. Reasoning very much the way that Popper will reason later, Professor White writes: "To understand the mind one must understand culture as well; human 'mental processes' are but the psychosomatic forms of expression of an extra-somatic progress."⁴ Popper says it this way: "My central thesis. . . is that the self or ego is anchored in the third world [White's culture], and that it cannot exist without the third world."⁵ White rejects the notion of a "group mind," but he is prepared to acknowledge "the role of culture in the minding of man." Popper goes so far as to say that we operate with the objects of the third world "as if they were physical things."⁶ Apparently, neither Popper nor White had read the other, which makes even more remarkable the similarity of their views on culture or the third world. Strictly in agreement with Popper's view of the independence of third world objects, White argues that

culture may be treated as if it had an existence of its own, independently of the human species. The "as if" factor does not render explanations made on the basis of this assumption fictitious or nonscientific. The science of linguistics proceeds upon this assumption. . . . Man, the human species or human organism, is irrelevant to the science of linguistics. . . . "Science must abstract some elements and neglect others," says Morris Cohen, "because not all things that exist together are relevant together."⁷

Virtual Objects.—Speaking of "structural unities," Popper uses the term *intelligibles*, by which he means "possible (or virtual) objects" of World 3.⁸ Sometimes Popper will emphasize the *discovery* side of the movement from *virtual* objects of World 3 to *actual* objects of World 3. At other times he will emphasize the *creative* side. When he emphasizes the discovery side, he insists that often it is as if the trained explorer has stumbled onto something in his search.⁹

And furthermore, whereas Plato thinks that in the world of Forms falsity has no place, Popper admits that World 3 is riddled with falsified or contradicted theories. White is prepared to say that culture in general, or even a particular culture, tends to maintain an equilibrium as a *moving* equilibrium.¹⁰ Yet, in an abstract way, he can think of culture as if it were an eternal Platonic system. "We may view the culture of mankind as a whole, or any distinguishable portion thereof, as a nontemporal system; i.e., we may consider it merely as an organization of cultural elements without regard to chronological sequence."¹¹ But, unlike Plato, White regards this perspective, not as the highest truth, but only as a slice of a broader perspective. White concludes: "The culture of mankind as a whole may be considered temporally as a flowing stream, or nontemporally as a system, i.e., as a *system in a temporal continuum*."¹² In the chapter "Epistemology Without a Knowing Subject," Popper says that even though the third world is a human product, it contains numerous theories, arguments, and problem situations which have not yet been, and may *never* be, produced or understood.¹³ So the fundamental question to be attacked now is this: How can this potentiality exist (and Popper says plainly that it does exist) if it is not, and might *never* be, realized or actualized? Popper would agree with Leslie White's claim that thoughts have "a life of their own" and that once they are born, they obey laws of their own.

World 3 Content and Language.—It is important to understand that Popper wants to distinguish the physical marks and lines of a book (World 1) from the information, arguments, conjectures, and knowledge content (World 3) coded in the book. He accepts Brouwer's "sharp distinction between *mathematics as such* and *its linguistic* expressions and communications. But we are still left asking where—if anywhere—are the thought

contents and the art contents themselves (stripped of material and physical expressions)! Unfortunately, Popper leaves us stranded at this point. He does say that "linguistic formulation" is to be distinguished from "intuitive constructions."¹⁴ We are left asking about the status of those contents that are not yet coded symbolically in actual material structures. Where do they abide? Furthermore, can World 3 objects that are not yet coded interact directly with one another (to press Popper's doctrine of interactionism still further)? This is no pointless question, for it might be quite useful to know how to go about stimulating those World 3 objects to interact more creatively and effectively with one another.

The "World 1 Only" Thesis.—I find it not surprising that Popper would be led to say of third-world objects that "we operate with these objects almost as if they were physical objects."¹⁵ While he says that meanings have a non-physical reality, he claims also that they remain as potentiality unless formulated in actual sentences or symbols. But I argue that there is no meaning over and above sentences interacting with other sentences and with the incredibly complex physical interchanges that eventually bring forth sentences.¹⁶

Popper claims that the non-material World 3 has a profound impact on the physical entities of World 1. But when asked to show how this transpires, he is forced to invoke still another non-physical world—the subjective mental states. But when asked how these non-material states affect the physical World 1, he again has no answer. Feyerabend is altogether justified in charging that Popper's account of mind-body dualism is "weak and evasive."¹⁷

My point here is that the physical world is not just bare materiality, but is material events and entities characterized by *processes, shapes, relationships, patterns, sequences, directions, structures, and novelty*. There is no reason why we cannot write sentences about, and talk about, say, relationships or patterns without speaking everytime of all the other physical characteristics. But this does not mean that relationships and patterns somehow, by epistemological transubstantiation, can be turned into *non-material realities or contents*. The formula that expresses lawful relationships of a physical series belongs itself to World 1.

My claim is that World 1 can give Popper just about all that he thinks World 3 and World 2 give him. If human brains and bodies are physical and are dynamically interactive with some of the wider physical environment (and therefore are not a closed, self-contained system), there is no need for the materialist to deny that mathematics, literature, art, music, and all the entities of culture might never have come about without the mediating function of the brain (and the other supportive physical creations that

belong to either society or culture). Popper himself admits that before human beings arrived on the scene, *there was change, growth, and novelty even in what he regards as World 1*. The evolution of trees did not, even on Popper's hypothesis, have to draw from World 2 or World 3. Indeed, Popper's whole approach to the theory of evolution makes it quite clear that his World 1 is an *open*, not a closed, physical system!

The difficult time that Popper had with his "virtual objects"—when and where they existed before they became actual—would have been unnecessary had he stayed completely with World 1 and appreciated its richness and complexity. The laws and facts of the physical world that have yet to be discovered do not exist now in some mysterious abode of World 3. All we need to say in general is that given the present physical conditions, states and processes, we can to some degree predict other physical states. To be sure, as Popper would be the first to note, our predictions may turn out to be wrong, or we may be *surprised* by what eventuates. In short, our conjectures may be falsified. But that is because most of the physical world is autonomous, that is, independent of our own (World 1) wishes or predictions. The autonomy that Popper gave to World 3 belongs to World 1 in the sense that the various areas and dimensions of this physical world, while interacting with one another, are not simply identical with one another. And this is in keeping with Popper's own view that science should concern itself with *relational* properties instead of essences or *substance* properties. In short, modern materialism may be thoroughly pluralistic in any meaningful sense of the word. Why Popper should presume that modern materialism must be void of pluralism, diversity, and interactionism is unclear.¹⁸

Popper holds that World 3 is relatively autonomous, since there is interaction among the three worlds. But a modern materialist like Feyerabend can hold with less difficulty the thesis that the members of the physical world interact with one another in various ways and patterns. (This is literal interactionism.) The question now becomes an empirical one of discovering the actual effects that human beings and the various aspects of the physical environment have on one another. (In his latest book, Popper defines as 'real' whatever is "able to exert a causal influence on the *prima facie* real things; that is, upon material things of an ordinary size.")¹⁹

The reason that Popper is driven to conclude that "virtual" and "potential" content exists in World 3 is that he believes that scientists and philosophers contribute to the *discovery* of something. There is something transcending our subjective, non-material states. He writes:

My main argument is that World 3, though the product of human minds, develops its own autonomous problems. The series of natural numbers may be diagnosed as an invention of the human mind, or the human brain. Yet *prime numbers are not things that anybody invented*; they were discovered. This shows that our inventions may have unexpected and unwanted objective consequences.²⁰

But what Popper seems at times to forget is that until these objective consequences are *actualized in time*, they exist only implicitly, which is to say they do not literally exist at all. Hence, by postulating this World 3—with its existing virtual objects—Popper in effect goes counter to his own arguments against a *closed* universe.

Modern materialism can speak of virtual reality in a more parsimonious way than can Popper. For example, each of us is virtually dead. That is, a detailed examination of our bodies in light of what we know about biochemical and other physical processes (somatic and extrasomatic) will indicate that we are already in the process of dying. But this does not mean that our “virtual death” exists already in some non-physical world. Rather, what exists are the physical conditions and processes that will eventually lead to a physical state which will be classified as death.

Culture as a Physical Tradition and System.—White sees no contradiction in accepting culture as both a *physical reality* and an *open system*. This is not to say that, for White, cultural realities such as mathematical traditions, moral codes, rules of grammar, scientific schemes, and developing standards of art can all be studied adequately by physics and chemistry. Rather it is to say that they can be studied by use of the observations and theories appropriate to their own physical behavior, interactions, and processes.²¹

For modern materialism, mathematics is not located in a non-physical World 3 but rather is located in a particular tradition of physical culture. This tradition—with its own regulations, codes, prohibitions, tacts, mandates, and reinforced guidelines—did not develop in a few centuries, but over a period of thousands upon thousands of years.

A Note on World 2.—In one very misleading passage, Popper attempts to make the materialists appear to be pathetically simplistic. He asks us to imagine that “a physicist who is completely deaf and who has never heard any music could write all the symphonies and concertos written by Mozart or Beethoven, by the simple method of studying the precise states of their bodies and predicting where they would put down black marks on their lined paper.”²² Of course, Popper knows that this deaf physicist could not do this. But he thinks that the materialist is saying, or at least implying, that he can do it.

I will make a few comments on this deaf physicist. First, I know of no twentieth-century philosopher of a physicalistic or materialistic orientation who has claimed that a study of body-behavior alone is sufficient to the understanding of that behavior. Such would be a closed system with a vengeance. Second, the point of my drawing from Leslie White’s works is to show that as a materialist he had, before Popper’s World 2 and World 3 projections, developed one of the most important hypotheses on the impact of culture on the human nervous system and organism that has ever been set forth for philosophical scrutiny. Third, White also has a view of “mind” that in many ways outflanks Popper’s World 2 conjecture.

White claims that the mind is not a substance but a function or activity of the body. It is to the body what cutting is to the knife.²³ In a very insightful footnote, Professor White writes the following about the mind:

‘The unknown man who invented the word *heat*,’ says Henri Poincaré in *The Value of Science*, ‘devoted many generations to error. Heat has been treated as a substance because it was designated by a substantive [noun].’ Substances have weight. But when it was finally discovered that a body weighed no more when hot, i.e., contained little heat, the logical conclusion that heat is *not* a substance was not drawn. On the contrary, so much at the mercy of words is man that he continued to think of heat as a substance, but he concluded that there must be *weightless* substances. It took a long time to realize that *heat* is not a thing but a doing.²⁴

My fourth point is that Popper acknowledges that there is no mental substance; but he insists that there are states of mind, apparently *weightless* states which are located at no *place*, although they may be located in particular *times*. I submit that this is a precarious ontological “state” for the mind to be in. Indeed, Popper denies that he is offering an “ontology” of mind or even dealing with the question of the nature of mind. He further insists that it is a mistake to say “that our perceptions are ‘given,’” and yet his fundamental reason for holding to World 2 as a non-physical reality is that mental events appear as undeniable facts. This goes counter to Popper’s frequent denial of any incorrigible epistemological starting point. Indeed, he takes ‘consciousness’ as known immediately to be non-physical reality.²⁵

Finally, I wish to point out another serious contradiction in Popper’s case for World 2. On the one hand, he argues relentlessly against the doctrine of “potentiality,” which, he rightly shows, tends to obscure the role of time, novelty, change, and genuine process. But, on the other hand, his doctrine of World 3 content *already existing* before it has been “discovered” is, so far as I can tell, a case of treating potentialities as actualities, virtual existence as real existence. If these potential and virtual existences

are real, then how are they detected? Popper resorts to "the mind's eye." Feyerabend is on target in complaining that Popper will not find "meaning' by gazing at some third world."²⁶

NOTES

1. Karl Popper, *Objective Knowledge: An Evolutionary Approach* (New York/Oxford: Oxford University Press, 1972), p. 74.
2. *Ibid.*, 159 n. 8.
3. Leslie A. White, *The Science of Culture: A Study of Man and Civilization* (New York: Farrar, Straus and Giroux, 1949, 1969), p. 286.
4. *Ibid.*, p. 188.
5. Popper, the Emory Lectures. The words in brackets are mine.
6. *Objective Knowledge*, p. 163.
7. Leslie White, *The Evolution of Culture* (New York: McGraw-Hill, 1959), p. 16.
8. *Objective Knowledge*, p. 166.
9. *Ibid.*, p. 118.
10. White, *Evolution of Culture*, p. 27.
11. *Ibid.*, p. 17.
12. *Ibid.* Italics added.
13. See *Objective Knowledge*, p. 116.
14. *Ibid.*, p. 139.
15. *Ibid.*, p. 163. Italics added.
16. See Paul Feyerabend, "Against Method, A Defense of Anarchy," in M. Radner and S. Winokur, eds., *Minnesota Studies in the Philosophy of Science, IV* (Minneapolis: University of Minnesota Press, 1970).
17. See Paul Feyerabend, "Popper's *Objective Knowledge*," *Inquiry*, 17:4 (Winter, 1974), 491.
18. See *Objective Knowledge*, pp. 288-294.
19. Karl Popper and John Eccles, *The Self and Its Brain* (New York: Springer-Verlag, 1977), p. 9.
20. See Popper, "Replies to My Critics," in Paul Arthur Schillp, ed., *The Philosophy of Karl Popper*, 2 books (La Salle, IL: Open Court, 1974), II, 1077.
21. See White, *Science of Culture*, pp. 84, 89, 90, 92.
22. See *Objective Knowledge*, p. 233.
23. See *Science of Culture*, p. 52.
24. *Ibid.*, 51n.*. The word in brackets is White's.
25. See Popper and Eccles, *The Self and Its Brain*, pp. 3, 4, 49, 52f., 500.
26. Paul Feyerabend, "Popper's *Objective Knowledge*," *Inquiry*, 491.

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