

Appearance in Reality

More than fifty years ago, Wilfrid Sellars set out an updated formulation of the venerable problem of the relation appearance bears to reality. Sellars' reformulation invoked what he called the 'manifest' and 'scientific' images:

The philosopher is confronted not by one complex many-dimensional picture, the unity of which, such as it is, he must come to appreciate; but by *two* pictures of essentially the same order of complexity, each of which purports to be a complete picture of man-in-the-world, and which, after separate scrutiny, he must fuse into one vision. Let me refer to these two perspectives, respectively, as the *manifest* and the *scientific* images of man-in-the-world. (*Science, Perception and Reality*, 1963: 5)

The manifest image includes everyday ways of thinking about ourselves and the universe we inhabit, supplemented by what is uncovered in the special sciences – biology, psychology, economics, and meteorology, for instance. The scientific image arises from the 'hard sciences', most notably fundamental physics. The special sciences extend and refine everyday experience, while physics – as exemplified by quantum mechanics and general relativity – advances a picture apparently at odds with the picture afforded by the manifest image.

The tension between the manifest and scientific images was memorably captured by physicist A. E. Eddington who, some three decades earlier, had set out to write his 1927 Gifford Lectures by, in his words, drawing up 'my chairs to my two tables'.

Two tables! Yes; there are duplicates of every object about me – two tables, two chairs, two pens.

[Table No. 1] has been familiar to me from earliest years. It is a commonplace object of that environment which I call the world. How shall I describe it? It has extension; it is comparatively permanent; it is coloured; above all it is substantial.

Table No. 2 is my scientific table. It is a more recent acquaintance and I do not feel so familiar with it...My scientific table is mostly emptiness. Sparsely scattered in that emptiness are numerous electric charges rushing about with great speed; but their combined bulk amounts to less than a billionth of the bulk of the table itself. (*The Nature of the Physical World*, 1928: ix-x)

Heil's project centers on the problem of reconciling the manifest and scientific images.

The reconciliation problem, in one form or another, has occupied philosophers in the West at least since the pre-Socratics. Indeed, the problem is a mainstay of virtually every philosophical tradition. Attempts at reconciliation typically fall into one of three camps:

- (i) Truths about the universe reside exclusively in the scientific image. The manifest image is an illusion – 'fake news' – promoted by philosophers, social commentators, theologians, and romantics disdainful of science.

- (2) The manifest image presents reality as it is; the scientific image serves merely to facilitate our travails in the lived-universe.
- (3) The manifest image brings to light 'levels' of reality dependent on but distinct from the fundamental physical level characterized by physics.

Each of these options enjoys impressive historical support. Applied to Eddington's two tables, the idea behind (1) would be that 'table No. 1', the everyday table, is a 'mere' appearance, something to be 'eliminated' or in some fashion 'reduced' to the scientific table. In contrast, (2) regards the scientific table as a construct, something 'instrumentally useful', perhaps, but not to be taken as a competitor to the familiar experienced table. Option (3), especially popular today, treats the two tables as equals: in addition to 'numerous electric charges rushing about with great speed' the universe includes tables, items in some way dependent on, yet distinct from, jostling electric charges.

Heil advances a fourth option:

- (4) The scientific image provides an account of what the manifest image is an image *of*.

One way to put this is in terms of truthmaking: the scientific image discloses the nature of the truthmakers for truths – including truths about ordinary tables – occupying the manifest image. This route to reconciliation is best approached by means of examples.

Imagine a cursor's moving across the screen of your laptop computer in response to your fingering a trackpad. The cursor moves. Who could doubt it? The phenomenon has all sorts of causal consequences: you track the cursor's motions with your eyes; it could be filmed. Yet we know that the deep story about the cursor's motion includes nothing that moves. The deep story about the cursor's motion is that immobile pixels turn on and off in an orderly sequential pattern. Does this mean that, really, the cursor does not move? Is the cursor's movement an illusion? No, this is just what it is for a cursor to move.

Albert Pujols hits a baseball over the left field fence into the bleachers. It is an open question in physics what the deep story is in this case. One live possibility is that the motion of the ball is analogous to your cursor's motion: a succession of thickenings in space, a kind of wave motion. Suppose that were so. Would it be false that Pujols hit the ball over the left field fence? Is the flight of the ball illusory?

To describe the baseball's flight under such circumstances as illusory would be to misuse the expression. The baseball's sailing over the fence might, after all, have been observed by thousands of onlookers and recorded on scores of iPhones; a spectator might have been knocked silly after being struck by the ball on its descent. An accounting of what it is for a baseball to move from the vicinity of home plate to the left field bleachers, the deep story about a baseball's manifest motion, is what is to be found, if it is to be found anywhere, in fundamental physics.

This, Heil thinks, is the attitude we should have toward the relation between the scientific and manifest images generally. The two images are not in competition, nor is either

reducible to or replaceable by the other. The scientific image reveals the deep story about the nature of truthmakers for truths at home in the manifest image.

Understanding how this could be so calls for a foray into the domain of traditional metaphysics and, in particular, into ontology. Far from being a lofty enterprise pursued from an ivory tower, ontology is a defeasible endeavor, endlessly adjustable in light of empirical discoveries. Ontology aims at disclosing what constrains the sciences, but not *ex cathedra*. Heil believes that this is how ontological questions have traditionally been approached and in that regard his project is continuous with ancient and modern philosophical practices in both the East and West.