

Taxonomy: Psychological and Biological

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A Review of Jerry Fodor, *The Elm and the Expert*, Cambridge, Mass: MIT Press, 1994. xii + 129 pp. \$21.00 hb.

This book contains something for the inveterate Fodor-watcher as well as the part-time dabbler in the philosophy of psychology. The rift that has sundered philosophical theorizing about the mind for the past couple of decades (the seismic event being the 1975 publication of Hilary Putnam's "The Meaning of 'Meaning'") has pitted advocates of "narrow" mental content against those of "wide" content. The divisive issue is whether an agent's mental states should be individuated purely by reference to their intrinsic causal powers, or whether they should be picked out according to their etiology or causal history. Anyone who still thinks of Fodor as the archetypal "methodological solipsist" in the philosophy of mind is in for a surprise, since his express aim here is to cast doubt on the narrow mode of individuation and to vindicate the opposing position. Fodor's evolution has not taken place overnight; he has come gradually to subscribe to "informational semantics", which picks out mental states according to their extrinsic causes, actual or possible. For readers who are already familiar with this gradual about-face, there are other surprises in store here in the various ingenious and audacious moves that Fodor makes on behalf of the wide mode of individuation.

Fodor begins this brief monograph, which is based on a series of inaugural Jean Nicod Lectures delivered in Paris in 1993, by posing a problem for himself. The problem arises because of a certain tension between two ideas to which he is committed and which he takes to be central to the effort to putting psychology on a solid scientific footing, complete with intentional laws. The first is that intentional content reduces to information (which is a bona fide scientific or naturalized notion), and the second is that psychological laws are implemented by computational processes. The tension exists because the process of computation merely transforms one symbol into another based on the intrinsic *causal powers* of those symbols, whereas the information carried by a thought is a function of its (actual or possible) *causal history*. It seems mysterious how these two things could remain "in phase" in such a way

that precisely the right intrinsic causal relations are preserved between those thoughts that have the right causal histories. In Fodor's inimitable phrase: "It's as though one's having ears should somehow guarantee that one has siblings" (14).¹

Of course, this is not the first time that this quandary has been posed, nor has it always been seen as a quandary. In response, some philosophers of mind have simply insisted that narrow content (causal power) is the only kind of content relevant to psychology. Other philosophers have tended to appeal to two notions of content, a narrow one which would be most efficacious in explaining an agent's behavior and a wide one which would pertain most directly to the truth of the agent's utterances and to the success of the agent's actions. As Fodor admits, this problem explains "[t]he continuing flirtation that a number of philosophers, myself included, have been having with the notion of 'narrow' content over the last decade or so . . ." (17). By contrast, Fodor's contention in these lectures is that one only needs the *wide* notion of content in grounding the science of psychology. Accordingly, he sets himself the task of finding a mechanism that would keep the wide content of mental states in phase with their computational properties. To illustrate the nature of the task, he tells a story about two properties, *being a dollar bill* and *being dollar-looking*. The first property depends on etiology, since something's being a dollar bill depends on where it was printed, by whose authority, according to which method, and so on; it is therefore "wide". The second property is a "narrow" one, since it is a matter of intrinsic causal properties or appearance. Fodor observes that the two properties are for the most part coinstantiated in the world, since there is a mechanism which guarantees this: "The mechanism, in case you were wondering, is the intervention of the cops" (19). Just as the security forces make sure that counterfeit dollars are blocked, Fodor needs to find a kind of semantic Interpol that would stamp out any missteps between wide content and computational role.

Much of this work consists in showing that the main varieties of misstep between wide and narrow content that have been brought up in the literature can be ruled to be either exceptional or irrelevant. These include Twin Earth cases, Elm-Beech cases, Morning Star-Evening Star cases, Oedipus cases, and the case of the inscrutability of reference. A number of important points emerge from Fodor's treatment of these well-known cases. In dealing with Twin Earth, Fodor distinguishes instances in which creatures are nomologically unable to discriminate H₂O from XYZ and those in which creatures can but have yet to. In the first case, he says that such creatures are assigned disjunctive concepts whether on Earth or Twin Earth (something like the concept of a colorless, odorless, potable liquid), so the case is irrelevant. The second case he declares to be accidental, and hence, an exception to any intentional

generalization that one might want to frame. As for Elm-Beech cases, he declares them irrelevant to the semantics of one's concepts and relevant only to the epistemology of belief-formation. Informational semantics individuates concepts according not to what one *does* distinguish but to what one *would* distinguish if one wanted to, which explains why a neophyte's Elm-concept is different from that person's Beech-concept. When it comes to the Morning Star and Oedipus, Fodor also rules them to be exceptional. In Oedipus' case one can continue to frame a psychological law which says that people *by and large* try to avoid marrying their mothers. If someone protests that we still need to explain Oedipus' behavior and to say why he did what he did, Fodor appeals to the different *modes of presentation* which attach to his beliefs about Jocasta and his beliefs about his mother, despite the fact that they have the same *semantic content*. This latter move has become almost standard among advocates of wide content interested in explaining behavior (or in solving Frege's puzzle about the Morning Star and Evening Star). Fodor's particular brand of this position identifies the mode of presentation of a content with its syntax in the language of thought, *Mentalese*.

The treatments of various familiar philosophical puzzles occupy most of Lecture 2, but Fodor leaves what he considers to be the most difficult puzzle, the inscrutability of reference, for Lecture 3. Quine's famous claim of inscrutability of reference is that it is impossible to determine whether aliens refer to rabbits or to undetached rabbit parts when they use the term 'gavagai'. Fodor regards this as the toughest challenge for a pure informational semantics, since unlike the cases already discussed, the inscrutability claim suggests that wide content or informational value cross-classifies narrow content or causal power (58). The response that he gives cannot be examined in detail here. Suffice it to say that the example he uses to refute inscrutability crucially involves an artificial geometric example and rests on the semantic phenomenon of conjunction reduction. From Fodor's point of view, the chief drawback of his purported solution to the Quinean puzzle is that it assumes that the language being translated has a certain amount of logical vocabulary. This means that a pure atomistic, informational semantic cannot be strictly upheld, because such a semantic would have it that every concept that an agent has is independent of *every* other (including the purely logical concepts) and is dependent only on its causal history. But Fodor is forced to admit that one cannot determinately have the concept *rabbit* unless one also has a certain number of logical concepts, for example *and*. This he takes to be but a minor weakening of atomism and informational semantics.

Fodor's treatment of various longstanding philosophical puzzles holds much interest, but the question with which he started remains: What is the mechanism which holds the two kinds of content in phase? Before supplying

his answer, it is important to take note of an answer which he explicitly rejects. It may be thought that the obvious mechanism is natural selection. The Oedipuses of the world are surely maladapted, and Mother Nature would have arranged matters such that anyone whose contentful states were not reliable indicators of the information they carried would have perished. Since such cases are freaks of nature, natural selection may be thought to be the mechanism which keeps causal powers in step with etiology. But Fodor adamantly rejects this friendly intervention with a curt, “please, spare me; no Darwin” (20). His reason is that the mechanism being sought must be a synchronic one which keeps the two things in step as they are instantiated. While Darwinian processes may work to explain the origin of the mechanism, they are not of the right form to serve as the mechanism itself.

Rather, Fodor’s answer is that the world itself is the mechanism sought: “the world . . . arranges things so that *the syntactic structure of a mode of presentation reliably carries information about its causal history*” (54; original emphasis). It does so contingently, by ensuring that Oedipus et al. are the exception rather than the rule. After all, “Sophocles, who was no slouch, needs fifteen hundred lines or so of exposition to make the story sound remotely plausible” (45). And since psychology is a special science, we should fully expect its laws to be prone to exceptions. Thus, Fodor rescues psychological laws by ruling Oedipus to be an exception who falls outside psychological generalizations.

The problem with this solution is that there is a bit of Oedipus in all of us: we are constantly going around mistaking one thing for two (“Where is Burma in relation to Myanmar?”) or two things for one (“How does Fodor have the time to compile travel guides as well as write philosophy books?”). Moreover, much of the interesting subject matter of psychology is provided precisely by such cases. It would seem as if Fodor is asking psychologists to abdicate responsibility for all but the cases in which the world is transparent to us, at least in terms of the kinds of things it contains. And since there may be indefinitely many scientific discoveries in our future which will disabuse us of any number of mistakes of this sort, Fodor cannot be cavalier about ruling missteps out as mere exceptions.

To be fair to Fodor, he might say that psychologists can still theorize about such cases; they should just give up on subsuming them under law-like generalizations. He has already said how they are to be handled, namely by invoking modes of presentation. Still, this makes Fodor’s insistence on laws sound somewhat hollow: what good are laws which only apply if an agent is a perfect detector of the kinds of things that exist in the environment? Fodor’s dialectical situation is even more precarious when one considers that few psychologists are interested in uncovering psychological laws in the first

place. Therefore, Fodor is trying to secure laws for psychologists many of whom don't seek laws and he finds that he can only do so if he leaves out some of the most interesting psychological situations. The search for laws is one way in which Fodor, who has always been one of the most empirically-minded of all philosophers of mind, is ironically out of tune with current psychology and cognitive science.

The final lecture serves to remind us of the original appeal of informational semantics and the wide mode of individuating psychological states. In Lecture 4, Fodor turns to a discussion of experimentation and the project of naturalizing epistemology. As he sees it, "An experiment is a device that's designed to cause the state of your mind to correspond to the state of the world" (95). He takes this to support the practice of individuating psychological content with reference to causal history. To know the content of a certain belief is to know what it would take to cause us to have that belief. We accordingly set things up in such a way that we will come to have such a belief if and only if that belief is true. This view of cognitive management is made plausible if the content of our beliefs is constituted by their actual or possible causal histories. Of course, an information-theoretic account of knowledge does not strictly imply an information-theoretic account of meaning, nor does Fodor claim that it does. But this discussion does bring out one strong motivation for the wide-content program in semantics, namely its more natural alliance with an account of the veracity of belief and the reliability of human agents. Narrow content may have the edge in explaining behavior and the agent's conception of the world, but it has a harder time explaining cognitive success and the connection of meaning with truth conditions.

A pure information-theoretic approach to psychology is surely too extreme. A more moderate approach may be inspired by looking at biological taxonomy. The narrow-wide debate bears a resemblance to one that has raged in biological systematics between the phenetic school which proposes to classify organisms according to their synchronic causal features, and the cladistic school, which classifies them in terms of their phylogenetic history or etiology. There are good reasons for not taking the analogy too far. For one thing, most pheneticists advocate a quantitative approach to summing features and calculating overall phenotypic similarity, an approach which does not seem applicable in psychology. For another, evolutionary theory is itself a theory of descent, so classification by causal history is more naturally suggested in biology. Nevertheless, there are instructive parallels between the two disputes which may be used to shed light on the philosophy of psychology. In the biological debate, a compromise position has arisen in the shape of what has been termed "evolutionary" taxonomy, which pays heed to both factors: synchronic similarity and diachronic descent. While an identical

compromise may not be available in the psychological case, the example of biology suggests a more pluralistic and less monistic approach to the classification of mental states. Fodor's insistence on information-theoretic laws of the mind (or bust) is altogether too categorical on both counts: informational semantics and psychological laws.

Note

¹ Strictly speaking, this catchphrase is misleading. The issue is over causal powers vs. causal history, rather than relational properties such as having siblings. A more apt contrast would be, "It's as though someone's having ears should somehow guarantee that one was born on a Tuesday."