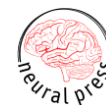


Case Study

Putnam and Dennett on instrumentalism and the intentional



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Abstract

This paper examines Dennett's conceptions of intentionality and consciousness—focused on his concept of the intentional stance (Dennett, 1987,1991b). It chiefly proceeds from a series of critical remarks due to Putnam (Putnam, 1999). Dennett has written extensively on the philosophy of mind; his work includes many scholarly and scientific contributions. He has attracted much attention to the philosophy of mind, cognitive psychology, and computer science; and he is an important critic of alternative views and theorists in related fields. The present paper draws on critical departures from Quine's physicalism in publications of Putnam and Davidson (Davidson, 1963,1997); and it examines criticism brought against Dennett's work on grounds of forms of instrumentalism and antirealism in the intentional stance. Evaluating Dennett's positions and Putnam's critical perspectives turn largely on understanding the relation of Dennett on intentionality, consciousness and the mental to formative and controversial theses of his acknowledged mentor, Quine (Quine, 1960). It will be argued that Dennett's version of functionalism is best understood as a sophisticated physicalism, antirealism, and quasi-behaviorism in cognitive science.

Keywords: Intentionality, instrumentalism, intentional stance, functionalism, behaviorism, philosophy of mind, antirealism.

1. Introduction: Putnam, Dennett and the absence of phenomenology

The claim that Dennett's philosophy of mind is an anti-realist instrumentalism regarding mental states and processes is a recurrent criticism, though he resists the charge (Dennett, 1987, p.347; cf. Fodor 1985; Fodor & Lepore 1992, pp. 148-149). Dennett holds that the distinction between realism and instrumentalism is too vague to capture his actual position. "Am I an instrumentalist?" he asked in *Consciousness Explained*, answering "I think I have shown why that is a poorly conceived question" (Dennett, 1991b, p.460; cf. Dennett, 1993, p.210). But presumably, he must either hold that content and consciousness, *qua* mental, are psychologically real and exist or *not* hold that they do; and whether they are psychologically real and exist would seem to be a question to be answered in psychological theory.

An example of the criticism can be found in Putnam (1999). Putnam references Dennett's paper, "The Absence of Phenomenology," to underscore and emphasize his own position that "phenomenal consciousness, subjective experience with all its sensual richness, exists" (Putnam, 1999, p.20; cf. Dennett, 1979). Dennett argued that consciousness, in his estimation, departs so thoroughly from our ordinary conception of it that we do well to abandon the concept. "The view I wish to defend," he wrote, "is that our privileged access extends to no images, sensations, impressions, raw feels, or phenomenal properties at all" (Dennett, 1979, p.94). Compare Block on Dennett: "Dennett used to be an eliminativist (in "On the Absence of Phenomenology") In recent years, especially since Dennett (1991), he has shifted gears, saying he is a realist about consciousness and at the same time saying that his position is not all that different from what it used to be. . . . and [his] theory is supposed to be true of some deflated version of consciousness or something consciousness is reduced to" (Dennett, 1979, p.94; Block, 1995, p. 283).

Accordingly, what remains of the mental according to Dennett might, then, be viewed as a matter of Quinean, dispositions to verbal (and other) behavior, though Dennett does emphasize that cognitive science extends to “dispositions to ‘behave’ internally;” and “This ‘internal behavior;’” according to Dennett, extends “Quine’s indeterminacy” thesis beyond his “peripheralism or behaviorism” (Dennett, 1987, p.40). In a recent paper, Dennett equates his version of functionalism with a very broad conception of behaviorism: “Functionalism is, after all, a *species* of behaviorism,” he says, echoing Watson (1913) and what is perhaps one of the oldest claims for behaviorism, *viz.*, that behaviorism “is the only consistent and logical functionalism” (Watson, 1913, p. 166); Dennett continues in the same passage, claiming that behaviorism is “the conservative default position of all the physical sciences: once you’ve explained all the external and internal behavior of something . . . there is nothing left to explain” (Dennett, 2021, p.168; Watson 1913, p. 166).¹ Elsewhere, however, Dennett claims, in reply to critics (Churchland & Ramachandran, 1993; Dalhombom, 1993), that “My anti-behaviorist credentials are impeccable” (Dennett, 1993, p.210). This, however, is merely to say that he agrees with and sponsored cognitivist criticisms of Ryle (1949) and rejection of Skinner’s (Skinner, 1957) behaviorism.

Earlier in *The Many Faces of Realism*, Putnam took Dennett’s *Content and Consciousness* to task for “. . . claiming that intentionality itself is something we *project* by taking a ‘stance’ to some parts of the world (as if ‘taking a stance’ were not itself an intentional notion)” (Putnam, 1987, pp.15-16). If “taking a stance” is an intentional idiom, then Dennett appears to accept at least one intentional idiom and a version of intentional realism, since he does employ the intentional stance, thereby making reference to various intentional systems, biological and artificial; however paradoxically, since adopting the intentional stance is merely to project other intentional idioms (such as belief and desires) onto various systems, there is apparently no commitment to the psychological reality of the intentional or the mental in Dennett’s views.

A related criticism appears in Putnam’s 1995 book, *Pragmatism* (Putnam, 1995, pp.18-19). In that work Putnam takes aim at Dennett’s paper, “Real Patterns” (Dennett, 1991a); and Putnam’s brief critical argument

is that prediction and interpretation “depend on one another” and that “interpretation cannot be reduced simply to prediction.” In effect, prediction already involves interpretation. Prediction relates more theoretical concepts to initial conditions of a system under study and prediction of subsequent observation. Dennett’s intentional stance,” according to Putnam, would need to attend to the role of interpretation in prediction and also attend to interpretation arising in light of predictions. In accordance with Putnam’s scientific realism, our account of the intentional and the mental cannot be a matter of predictive success alone.

The emphasis on interpretation, presupposed by and arising from prediction not only suggests a more realistic conception of the intentional (including the lack of this in Dennett’s intentional stance), but re-interpretation in consequence of successful prediction is usually understood in semantic terms—involving refinements of our accounts of meaning and reference. For example, successful predictions, resulting in adoption of Newton’s theory of gravity implied the need of a distinction between the definitions of “mass” and “weight.” (Though your mass remains the same, you will weigh less walking on Mars or the Moon.) There is no successful prediction without interpretation relating theoretical generalizations to initial conditions of a system under study and to observational consequences. We make sense of the *success or failure* of predictions only by interpreting predictions *as consequences* of some particular theory. For example, Eddington’s famed 1919 astronomical observations of the displacement of the positions of stars in the vicinity of the sun during an eclipse where at once a success of Einstein’s theory of gravity and a failure of the prior Newtonian theory (Eddington, 2014).² Lacking attention to the relations of prediction and interpretation, Dennett’s intentional stance seems to amount to a variety of instrumentalism and anti-realism.

2. Dennett’s intentional stance as a thinking tool

Given that Dennett’s intentional stance is sometimes a useful heuristic in cognitive science and computer science, say, leading researchers from purposes of a system to design specifications of machine (or neurophysiological) architecture and programming, he seems to have over-generalized the idea. If, contrary to

¹ Watson (1913) famously claimed that “we can write a psychology,” and “never use the terms consciousness, mental states, mind, content, introspectively verifiable, imagery, and the like.”

² In 1919 Eddington led a famous expedition to the island of Principe off the west-African coast, and made observations credited with confirming Einstein’s quantitative prediction of the gravitational curvature of the path of star-light in the vicinity of the sun during an eclipse—while disconfirming the corresponding prediction of Newtonian theory.

Fodor's arguments in Fodor (1976), some or many psychological processes do not require the psychological reality of computations over representations (Contrast the discussion of a "*lingua franca*" of the mind in Baars (1988, pp. 66-67)), it does not follow that there are no psychologically real computations over distinctively individuated representations. Dennett disputed and rejected Fodor's thesis that *all* computation requires a representational, language-like vehicle, but even if this is so, it does not suffice to show that computations over semantically evaluable representations never occur (Dennett, 1997, p.273; Fodor, 1976, p. 36). Studies of mental arithmetic provide evidence against the stronger claim (Dehaene, 2011).

Though the intentional stance is, for Dennett, a "thinking tool" Dennett (2013, pp.77-85), his employing it in this fashion does not alone suffice to exclude all intentional or semantic realism. We may suppose, for example, that conscious thought of human beings is serial and wedded to specifiable contents, though it is causally dependent on unconscious mental processes which are massively parallel and comparatively vague. This kind of approach parallels the distinction between dictionary definitions and the evidence of usage—on the basis of which definitions are formulated. Though massively parallel AI language learning devices are trained on the basis of "big data" of usage (or usage relevant to their purposes), they might still generate or be made to simulate serial processes at a higher level. Dennett has himself sponsored a similar view: "The brain is a massively parallel processor, millions of channels wide," he says, "but its normal operation creates something rather like the 'von Neumann bottleneck'," and this we might think of as approximating to pre-connectionist conception of AI: "a temporary dedication of large parts of the hardware to tightly focused serial processing on specific topics of current importance, the 'stream of consciousness' that confronts any theorist" (Dennett, 2021, p.169; Dehaene, 2009, pp. 41-44; Dehaene 2014, p. 14). Note that Dehaene appeals to Dennett's slogan of "fame in the brain".³ However, lacking scientific commitment to consciousness and the mental, this will apparently be an exclusively neurophysiological theory of (inner) behavior.

Compare Heil 2004, *Philosophy of Mind* (Heil, 2004, p. 155f.) on Dennett's "deliberately instrumentalist approach to the mind;" and Elton's *Daniel Dennett* on Dennett's "sophisticated version" of behaviorism. (Elton, 2003, p. 274).

In the philosophy of science, instrumentalists hold that scientific concepts and theories need not be regarded as true or be put forward as accounts of reality. They may be properly accepted because they facilitate accurate predictions and avoid conceptual problems. Instrumentalism so understood stands in explicit opposition to scientific realism—according to which the aim of scientific theories is accurate description of the world or of some particular domain. Part of the problem with Dennett's characterization of his position as a "mild realism," in answering the charge of instrumentalism, is that he endorses W.V. Quine's "principle of the indeterminacy of translation," as Dennett terms it in his book, *Intuition Pumps* (Dennett, 2013, p.175), and this is standardly understood to be an antirealism concerning the concepts of linguistic meaning and synonymy or sameness of content. As Lycan has put the point, "Quine denies our 'meaning facts' . . . and urges an eliminativism or nihilism about meaning in the form of his doctrine of the 'indeterminacy of translation'" (Lycan, 2000, p. 126). According to Dennett's "Real Patterns," the intentional stance, and *ascription* of beliefs and desires involves "conflicting patterns superimposed on the same [behavioral] data" for the sake of ease of prediction (Dennett, 1991a, p.46,51).

In *The Intentional Stance*, Dennett (1987) aligns his position with Quine, claiming the support of Quine's arguments for indeterminacy of translation and meaning. Expanding on Quine's remarks in his paper "On the Reasons for the Indeterminacy of Translation" (Quine, 1970, pp. 180-181), Dennett argues that it is an "error" to expect "to find something in the head to settle the cases Quine's peripheralism left indeterminate," for, "exactly the same considerations applied to the translation of any 'language of thought' one might discover once one abandoned behaviorism for cognitive science" (Dennett, 1987, p.40); see also the criticism of behaviorism in *Kinds of Minds* (Dennett,

³. Dehaene (2009), however, also writes of "mental dictionaries," and "semantic features" which specify word meanings and the "pandemonium" metaphor of massively parallel processing.

1996, pp.85-93, p.155).⁴ If the attribution of determinate meanings to linguistic expressions of public language and discourse is a scientific error (a view that seems to condemn empirical lexicography and dictionary writing to futility), then it follows that the attribution of determinate meanings or contents to corresponding internal psychological phenomena (thoughts) is also an error (Dennett, 2013, pp. 175-177; p. 179).

However, Quine directed his critical view of linguistic meaning against philosophical views linked to the analytic-synthetic distinction. Once the distinction is abandoned, the theoretical option opens up to formulate empirical theories of linguistic meaning on an alternative basis. Davidson's work on the theory of meaning represents one such approach. See, for instance, Davidson's *Inquiries into Truth and Interpretation* (Davidson, 1984) and Davidson's lectures on *The Structure of Truth* (Davidson, 2020, pp. 27-28). In addition, though it is plausible that problems of interpretation arise for the contents of mental representations, or for any mental "*lingua franca*," in accordance with the typical hypotheses of cognitive psychology, the causal and semantic relations of internal representations will further constrain their interpretation. We would not expect that where "input" and "output" are assumed to be constant, any internal mediation or mental process, yielding the same behavioral output from the same sensory input, will be equivalent or equally adequate on empirical grounds. This is a good part of the point of the departure from behaviorism in cognitive psychology.

3. The physical, design and intentional stances

As a practical matter, we are unable to predict all of what human beings and animals (or computers) will do on the basis of physical theory alone. Viewed as physical objects in a physical environment, what human beings, other biological organisms (and computers) do is much too complicated. The amount of physical information that would be needed is vast and plausibly too extensive to ever be collected. However, we understand that physical damage to the brain will disrupt normal psychological functions and processes. Similarly, physical damage to computer hardware will

disrupt its designed and program functions. As Dennett puts a related point, "physical-stance predictions trump design-stance predictions, which trump intentional-stance predictions—but one pays for the power with a loss of portability and a (usually unbearable) computational cost" (Dennett, 1991, p.51n). Presumably, given that a general approach to psychological phenomena, employing the vocabulary and laws of physics *alone* is at best an unattainable ideal, for similar reasons, neither will the functional "design stance" ever fully replace the "intentional stance." Dennett (1991, p.43) says of the design stance that,

These intermediate regularities are those which are preserved under selection pressure: the regularities dictated by principles of good design and hence homed in on by self-designing systems. That is, a "rule of thought" may be much more than a mere regularity; it may be a wise rule, a rule one would design a system by if one were a system designer, and hence a rule one would expect self-designing systems to "discover" in the course of settling into their patterns of activity.

Like explanations in physics, explanations in terms of functional designs—which are "preserved under selection pressure"—such as factual design patterns in evolutionary biology and engineering (or reverse engineering)—rest on science; and the science of greatest interest regarding functional design of biological organisms is surely biology itself—including evolutionary biology, anatomy and neurophysiology. Organisms and machines often have functional designs so complicated that no one fully understands them, and in consequence, prediction and explanation in terms of functional design becomes unavailable. That leaves the theorist with the intentional stance.

However, if prediction drawing on physics and biology are scientific, then we may question why explanation or prediction by means of Dennett's "intentional stance" is merely "projective" and a methodological "stance." Common-sense psychology would seem to be a somewhat rustic or underdeveloped version of (or model for) cognitive psychology. But as Putnam has

⁴ Dennett (2001) sometimes appears to advocate a more realistic form of functionalism concerning content: "Mental contents become conscious not by entering some special chamber in the brain, not by being transduced into some privileged and mysterious medium, but by winning the competitions against other mental contents for domination in the control of behavior, and hence for

achieving long-lasting effects—or as we misleadingly say, 'entering into memory.' And since we are talkers, and since talking to ourselves is one of our most influential activities, one of the most effective ways for a mental content to become influential is for it to get into position to drive the language-using parts of the controls." Contrast, however, "The Absence of Phenomenology."

remarked, Dennett and others, “have come to the conclusion that talk of ‘meanings’ beliefs and desires are just ‘folk psychology’,” and they share with Quine “. . . a common belief in physicalism and a common distrust of whatever cannot be reduced to [the] physical” (Putnam, 1990).

Dennett repudiates flat-footed instrumentalism in favor of a “mild realism” (Dennett, 1991a, p.30), but readers may be left in doubt about how Dennett’s professed “mild realism” of the intentional stance differs from an attenuated or distinctive version of *instrumentalism*. Even in physics, the hardest of hard sciences, acceptable results depend on agreed and acceptable interpretation of physical theory and experimental results. Duplication of experimental results, for instance, requires mutual understanding, agreement on what is being claimed and exclusion of disruptive ambiguities. It sometimes seems, however, that Dennett is not interested in excluding the disruptive ambiguities which frequently plague the philosophy of mind and the philosophy of psychology. Instead, he unfortunately tends to acquiesce in the ambiguities arising from the contrasts of contending theories in cognitive science and in the philosophy of mind—arguing, wherever the option is more plausible, for a retreat of cognitive science to the design stance.

Dennett draws on similarities of his positions to views of Davidson: “Quineans (such as Donald Davidson and I) could almost agree: the pattern [relevant for predictions in the intentional stance] is discernible in agents’ (observable) behavior when we subject it to ‘radical interpretation’ (Davidson) ‘from the intentional stance’ (Dennett)” (Dennett, 1991a, p.30; see also Davidson’s “What is Present to the Mind?” (Davidson, 1991, pp. 210-211). This point from Dennett, by the way, suggests that the intentional stance does indeed involve some theoretical interpretation of behavior—and not prediction alone.

However, Dennett (1991a) seems to recognize (note the “almost agree”) that Davidson does not endorse Quine’s indeterminacy of translation and meaning in the sense of there being no “fact to the matter” about sameness and differences of meanings. For Davidson (1997) “Indeterminacy and Antirealism,” it is more that there are different ways of reporting the same facts. He writes “the empirically equivalent theories [Quine] accepts as equally good for understanding an agent are not incompatible any more than the measurement of weight in pounds and kilos involves incompatible theories of weight.” Davidson also says in his “Indeterminism and Antirealism,” that “I do not, like

Quine, see the internal structure of the simplest sentences [or the devices of quantification and cross-reference] as indeterminate” (Davidson, 1997). Davidson (1997) modifies Quine’s indeterminacy thesis. Moreover, Davidson’s attribution of propositional attitudes and their contents rests not on observed *behavior*, as Dennett has it, but instead on interpreted *action*. Actions are multiply realizable in behavior; and the variability of actions (including acts of speech) in pursuit of a goal is a standard mark of intelligence.

According to Davidson’s early paper “Actions, Reasons and Causes,” for example, explanation in terms of reasons for action is a kind of causal explanation of human action in terms of reasons given—understood in terms of beliefs and desires (Davidson, 1963). This position will have little appeal for the reductive physicalist or in accordance with the Quinean view that beliefs and desires have no genuine scientific standing or psychological reality. While Davidson proposes no science of rationality and he stipulates the normative character of rationality, much of Davidson on interpretation, truth, “holding true” and the attribution of belief and desires demonstrates a deep concern with the factual basis of meaning and interpretation and their relation to Tarski-style truth theories. “In any case,” writes Davidson (1997), “whether or not Quine’s views entail that there is something unreal about the propositional attitudes.” Davidson (1997) writes:

it is an idea common to a number of philosophers that indeterminism does undermine the reality of mental states. Fodor and others have thought this constitutes a reductio of [Quinean] indeterminism. Daniel Dennett, on the other hand, endorses indeterminism, but agrees that it subtracts from the reality of mental states. I argue against the inference. I see no way around indeterminism, but think it leaves the reality of the mental untouched.

The way in which Davidson distances himself from Dennett in this passage suggests that on Davidson’s view, “indeterminacy of meaning” is merely a matter of vagueness. In any case, it does not subtract “from the reality of mental states.”

Regarding reference, Quine has held in his book, *Pursuit of Truth*, that there is “no fact to the matter on whether the word ‘Tabitha’ refers to his housecat or instead to the entire universe minus the cat” (Quine, 1990, p. 33). For Quine, there is no reality of meanings, reference or “mentalistic semantics,” psychological or otherwise; “All in all,” wrote Quine (1975), in his

article, “Mind and Verbal Dispositions,” “the propositional attitudes are in a bad way. These are the idioms most stubbornly at variance with scientific patterns” (Quine, 1975). Davidson offered this quotation in his paper, “Could There Be a Science of Rationality?” as evidence that Quine agreed with the behaviorists Watson and Skinner (Davidson, 1995). Mere acquiescence in ordinary language and the language of common-sense psychology, for Quine, has little or no theoretical or scientific significance, beyond the public character of language,—except as it may lead us eventually to the physical, that is, the neurophysiological (or biochemical) mechanisms of behavioral dispositions. In contrast to such views, however, a scientific approach to intentional psychology need not be regarded as inconsistent with the aims of neurophysiological or biochemical research.

In *The Intentional Stance*, Dennett has also drawn on a 1983 paper of Putnam’s, “Computational Psychology and Interpretation Theory,” and Dennett there enlists Putnam among the Quineans and the advocates of the indeterminacy of translation and meaning (Dennett, 1987, p. 345; Putnam, 1983, pp. 139-154). In Putnam’s paper, he disputed a claim of Pylyshyn’s viz. (in Putnam’s words), that “cognitive psychology is impossible if there is not a well-defined notion of sameness of content for mental representations” (quoted in Dennett (1987, p. 345)). Compare the discussions in Changeux and Dehaene, “Neuronal Models of Cognitive Functions” (Changeux & Dehaene, 1989, pp. 63-102) and in Fodor and Pylyshyn “Connectionism and Cognitive Architecture” (Fodor & Pylyshyn, 1988). However, the chief point of present interest is that Putnam has since distanced himself from Dennett’s views, and he proposed an elaborate theory of meaning in “The Meaning of ‘Meaning’,” (Putnam, 1975). Putnam is definitely not a semantic or intentional antirealist.

4. Dennett as Quinean antirealist

Of particular relevance to the theme of intentionality and Dennett’s intentional stance, is a classic passage from Quine’s *Word and Object* (1960). This book has been closely studied by generations of philosophers and students of philosophy over the intervening decades; and it includes a statement of Quine’s arguments for his thesis of the indeterminacy of translation (Quine, 1960, pp. 26-79). In related passages, Quine briefly discusses Brentano (1973). The word “intentionality” he says was “. . . revived by Brentano in connection with the

with the verbs of propositional attitude,” and “it is intimately related to the division between behaviorism and mentalism, between literal theory and dramatic portrayal.” Quine remarked that “Brentano’s thesis of the irreducibility of intentional idioms is of a piece with the thesis of the indeterminacy of translation.” Quine (1960, pp. 219, p. 221) continues:

One may accept the Brentano thesis either as showing the indispensability of intentional idioms and the importance of an autonomous science of intention, or as showing the baselessness of intentional idioms and the emptiness of a science of intention. My attitude, unlike Brentano’s, is the second. To accept intentional usage at face value is, we saw, to postulate translation relations as somehow objectively valid though indeterminate in principle relative to the totality of speech dispositions. Such postulation promises little gain in scientific insight if there is no better ground for it than that the supposed translation relations are presupposed by the vernacular of semantics and intention.

According to Quine, then, to accept—any—intentional realism in psychology (or in cognitive science) amounts to rejecting his thesis of the indeterminacy of translation and meaning; and what is lacking, according to Quine, is some cogent account of the identity conditions of meanings. “There is no entity without identity,” says Quine in “On the Individuation of Attributes” (Quine, 1975b). However, Quine’s rejection of intentional psychology as science appears to rest on a conflation of the intentional with the intensional. In this connection, it is useful to compare Searle’s helpful discussion and contrast of the two concepts (Searle, 1983, pp. 24-26).

Accepting Quine’s indeterminacy thesis, as Dennett does, implies an instrumental view of intentional, mentalistic psychology and a variety of antirealism in Dennett’s “intentional stance.” Internal “behavior,” conceived in terms of the intentional stance, though a departure from Quine’s “peripheral” behaviorism, remains equally indeterminate. For Dennett, this antirealism is only modified by the practical or pragmatic and predictive use of intentional idiom. In agreement with Quine, and “strictly, ontologically speaking” Dennett (1987) sympathizes with the claim that, “there are no such things as beliefs, desires, or other intentional phenomena. But the intentional idioms are ‘practically indispensable,’ and” Dennett writes, “we should see what we can do to make sense of their employment in what Quine called an ‘essentially dramatic idiom’” (Quine, 1960, p. 219; Dennett, 1987, p. 342).

5. Conclusion

Going back to Dennett's 1971 paper, "Intentional Systems," one finds there a definition: "an intentional system" is, he says, "... a system whose behavior can be (at least sometimes) explained and predicted by relying on ascriptions to the system of beliefs and desires (and hopes, fears intentions, hunches . . .)" (Dennett, 1971, p.87). Regarding the illustrative example of a chess-playing computer, which is best predicted from the intentional stance, Dennett remarks that "Lingering doubts about whether" it "really has beliefs and desires are misplaced; for the definition of intentional systems I have given does not say that intentional systems *really* have beliefs and desires, but that one can explain and predict their behavior by *ascribing* beliefs and desires to them. . . ."; and moreover, "The decision to adopt the strategy is pragmatic, and is not intrinsically right or wrong" (Dennett, 1971, p.91); see also Dennett (2017, pp. 96-97). If Dennett's position is not to fall from his professed "mild realism" into a flat-footed instrumentalism of the intentional stance, then, apparently, he would have to hold there are cases in which intentionality is not merely projected or ascribed. But Dennett wrote: "Those who want to be 'realists about beliefs'—in opposition to my instrumentalism . . . often respond to my arguments about the inexhaustible supply of beliefs by saying that they are realists about the core beliefs only" (Dennett, 1987, p.70). Attribution of beliefs and desires to human beings is a paradigm of intentional description. We want to know what the language of the intentional idioms is *about*, where it is not merely instrumental and heuristic. See Putnam's discussion of instrumentalism and the "Shut up and calculate" attitude toward interpretation in his "Quantum Mechanics and Ontology" (Putnam, 2011). If our paradigms for description in intentional and semantic terms are merely "projected" and instrumental on Dennett's account, then this is no intentional or semantic realism of the mental (*qua* mental), "mild" or otherwise. The only realism is that of the physical and design stances.

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