

## INTENTIONALITY AND PROPOSITIONAL ATTITUDES

For a thing to be intentional is for it to be “directed upon” or *about* something. Paradigmatically, mental states and events are intentional in this technical sense (which originated with the scholastics and was reintroduced in modern times by Brentano). E.g., **propositional attitudes** such as beliefs and desires and regrets are about things, or have “intentional objects”: I have beliefs about Vladimir Putin, I want a beer and world peace, and I regret agreeing to review the tedious book I have just finished reading.

A mental state can have as intentional object an individual (John loves *Marsha*), a state of affairs (*Marsha thinks that it’s going to be a long day*) or both at once (John wishes *Marsha were happier*). Perception is intentional: I see John, and that John is writing *Marsha’s* name in his copy of Armstrong’s *A Materialist Theory of the Mind*. I’ve been known to see little frogs and toads that aren’t there. Many emotional states are about things too (“sad about...,” “jealous of...”).

The computational states and representations posited by cognitive psychology and other cognitive sciences are intentional also, since in the course of computation, something gets computed and something gets represented.

What is at once most distinctive and most philosophically troublesome about intentionality is its *indifference to reality*. An intentional object need not actually exist or obtain: the Greeks worshipped Zeus; a friend of mine believes that corks grow on trees as in *Ferdinand the Bull*; and even if I get the beer, my desire for world peace is probably going to go unfulfilled. An intentional state is the state it is and has the content it does quite regardless of whether that content corresponds to anything real.

Brentano argued both (A) that this reality-neutral feature of intentionality makes it the distinguishing mark of the mental, in that all and only mental things are intentional in that sense, and (B) that purely physical or material objects cannot have intentional properties--for how could any purely physical entity or state have the property of being “directed upon” or about a nonexistent state of affairs? (A) and (B) together imply the Cartesian dualist thesis that no mental thing is also physical. And each is controversial in its own right.

Thesis (A) is controversial because it is hardly obvious that every mental state has a possibly nonexistent intentional object. What about pains? Other bodily sensations such as itches and tickles? Moods, such as general depression or free-floating anxiety?

Also, there seem to be things other than mental states and events that “aim at” possibly nonexistent objects. Linguistic items such as the name “Santa Claus” or the description “the Easter Bunny” are an obvious example; paintings and statues portray fictional characters; and one might ignorantly build a unicorn trap.

More significantly, *behavior* as usually described is intentional also: I reach for the beer; John sends a letter to Marsha; Marsha throws the letter at the cat; Macbeth tries to clutch the dagger he sees.

Finally, some natural phenomena sometimes seem to aim at real or nonexistent outcomes (human digestion, or think of heliotropic plants)—but here it may be replied that to anthropomorphize in that way is to think *as if* the relevant natural phenomenon has mental states.

The standard Brentanoist reply to the points about linguistic expressions and goal-directed behavior is to maintain that the aboutness of such nonmental things is second-rate because it invariably *derives from* the more fundamental intentionality of someone’s mental state. Linguistic expressions refer only because language users have intentions (in the action sense now) directed upon those expressions. Behavior is intentional (in our sense) only because it expresses the corresponding intention (in the action sense). Thus, we distinguish **derived** intentionality or aboutness from intrinsic or **original** intentionality; theses (A) and (B) apply only to the latter.

And together they continue to entail that materialism is false. Thus, **Brentano’s Problem**: How can a purely physical thing be in intrinsically intentional states? (Of course Descartes and Brentano himself saw no *problem* or even explanandum here; they meant the question only rhetorically and their answer was simply “It can’t.” The problem is for the materialist. And it’s a nasty one.)

### The Representationalist or “language of thought” theory

Many theorists, especially those influenced by cognitive science, join Jerry Fodor in believing that not only the intentionality of cognitive computational states but also that of everyday intentional attitudes such as beliefs and desires inhere in states of the brain. On this view (originated in the 20<sup>th</sup> century by Wilfrid Sellars), all intentionality is at bottom *mental representation* (depiction, portrayal), and propositional attitudes have Brentano’s feature because the internal physical states and events that realize them represent actual or possible states of affairs. The existent-or-nonexistent states of affairs that are their objects are just representational contents, akin to the meanings of sentences. It is thought that the brain contains a whole representational system. And that solves Brentano’s Problem.

So, to (e.g.) believe that P is to bear the belief relation to an internal representation whose semantic content is that P. As Sellars put it, the grammatical complements of propositional-attitude ascriptions are “sentences used in a special way.” What makes the belief that P a *belief* rather than a desire that P or a hope or a regret or a fear, and what makes the belief relation the belief relation, is taken to be functional, a matter of the role being played by the representation in question. What makes the state the belief *that P* is its representational content.

Main arguments for the Representational theory:

1. “Productivity”: Thinking is unbounded, in the sense that there is no clear limit to the length or complexity of a novel thought we might have. This unboundedness of thinking is just like the unboundedness of sentential meaning, our ability to understand long novel sentences at first hearing. Chomsky argues almost irrefutably that we understand sentences by knowing the meanings of their parts and projecting those meanings through grammatical composition to get the meanings of the whole sentences. So, too, presumably we are able to think long novel thoughts because we have the concepts of which they are made and the grammar or syntax by which they are composed and those two things determine their propositional contents.

2. As in 1, the objects of propositional attitudes are conceptual; they have the same sort of *parts* that sentences do. And they have logical form. More to the point, they have clearly semantical properties: truth-value, entailments, and of course aboutness. They depend for their truth on a match between their internal structures and the way the world is; so it is natural to regard their aboutness as a matter of mental referring or designation.

3. Fodor notes “Vendler’s Condition”: There is a striking parallel between verbs of thinking and verbs of saying. Also, to “say to yourself” that P is to think that P, and to “think out loud” is to voice one’s thought without any communicative purpose.

(Also, the Representational theory solves various semantical puzzles about belief *ascriptions*, though that is not our business here.)

4. The theory “meshes with” (Fodor), and also but merely builds upon, our best current empirical accounts of mental processes. Cognitive psychology already posits internal representations, so we have excellent reason to believe there are such. So why not token-identify our propositional attitudes with some of those representations? [Not a strong argument.]

Also, let’s get the caricatures out of the way. What the Representational theory says is only this: Propositional attitudes are like sentences in that (i) they

have conceptual parts, (ii) they have semantical properties such as truth-values and entailments, (iii) they have a grammar or syntax by which their conceptual parts are compounded into whole propositional contents, and (iv) they are physically realized in the brain (though probably in a distributed, not morphologically salient fashion).

### Objections

1. (Dennett) Tacit propositional attitudes (the belief that New York is not on the moon, the desire that one not be beaten to death by angry insurance adjusters from northern Tibet, the hope that one will be alive 30 seconds from now). Reply: The Representational theory applies only to “occurrent” states, not to tacit attitudes. Rejoinder: But what *about* the tacit attitudes? You said the Representational theory is a theory of the propositional attitudes, but now you’re saying it’s a theory of only a few of them.

Standard move: Tacit attitudes are only dispositions to be in the corresponding occurrent states. (Occurrent beliefs in particular are what Dennett calls “judgements,” and he’s willing to believe that those are representational brain events, but he complains that we can’t infallibly read beliefs off of judgements.) Suggestion: We may not need to solve that problem. How about letting the tacit beliefs be those logical consequences of “occurrent beliefs” or judgements, that are not themselves occurrent? (The idea would be that you tacitly believe that I am less than 35 feet tall because you have judged that I am only about *so* tall, which entails that I am less than 35 feet tall.) The tacit beliefs are implicit in judgements, by being logically contained in them.

That’s as good an idea as I know. But it faces two difficulties. First difficulty: Intuitively, we don’t want to count *every* proposition that’s entailed by one of my judgements as a tacit belief of mine. To take the most extreme case, every logical tautology is entailed by every judgement I make, but it seems wrong to say that I even tacitly believe that blah-blah, where “blah-blah” abbreviates a gigantic tautology that would take fifteen years to write down. Second difficulty: It would not always be easy to identify the particular judgement of which a given tacit belief is supposed to be a logical consequence. Until I voiced it a short while ago, I only tacitly believed that Chillicothe, OH, was not vaporized in a nuclear holocaust in 1972. But what is the relevant judgement? That there has never been a nuclear holocaust *in the USA*? I doubt that I have ever explicitly judged that. That the only two nuclear holocausts in history took place in Japan? Well, maybe I have judged that. But notice that we need a further premise to get the entailment: that Chillicothe, OH, is not in Japan—and I have not ever judged *that* (until now).

2. (Dennett) What about languageless creatures? Higher animals and preverbal children surely have propositional attitudes, but no language. Reply:

They do not have a *public, social* language. But the Representational theorists did not say they do. We need not doubt that their brains represent things. Remember, the Representationalist (except for Sellars himself) does not explicate thinking in terms of a public, social language, but rather in terms of internal representations. Representationalism does not mention public natural languages at all. It is entirely compatible with the thesis that public-linguistic aboutness derives from the intentionality of thought.

4. Paul Churchland and Patricia Churchland contend that the “language of thought” idea is distinctly *unbiological*. When one recalls that human beings are card-carrying members of the animal kingdom and that we have evolved in the usual way by natural selection, our linguistic abilities, and our cognitive functions on any highly linguisticized account of them, seem to be an evolutionary afterthought at best, and a tiny fragment of the psychology that actually gets us around in the world. Churchland and Churchland compellingly depict a brain that works by entirely distributed, holistic “connectionist” networking and by physically hard-wired vector coding and coordinate transformation, not by digital-computer-like inferential computation over syntactically structured sentences or logical formulas. First reply: We *produce* meaningful sentences (out loud), and that’s a vitally important and valuable ability of ours. Where does the sentential structure come from if there hadn’t been any sentential structure in the brain? Second reply: The neurosemanticist would be looking at an inappropriately low level of organization. Perhaps the brain’s neural net architecture is *implementing* or realizing sentence-like internal representations; any argument for Representationalism is an argument for that hypothesis. And obviously we wouldn’t expect to look at a brain from a neurophysiological point of view and tell whether or not it is implementing higher-level representations.

5. (The **BIG ONE**.) Public-linguistic meaning is (obviously) social and conventional, but the same cannot be true of the alleged internal representations. The main difficulty for the Representational account is that of saying exactly how a physical item’s representational content is determined; in virtue of what does a neurophysiological state represent precisely that the Republican candidate will win, or that we will open a can of Heinz’ baked beans next Tuesday? An answer to that general question is what Fodor has called a “psychosemantics.” Several attempts have been made on it, all of them pretty pathetic.

Now, philosophers influenced by W.V. Quine or by continental hermeneuticists maintain that what a subject believes or desires is entirely a matter of how that person is interpreted or translated into someone else’s preferred idiom for one purpose or another, there being no antecedent *or inner* fact of the matter. A distinctive though slightly weaker version of this view is that of Dennett.

### Dennett's instrumentalism

The Identity Theorists and the Functionalists joined common sense and current cognitive psychology in understanding mental states and events both as internal to human subjects and as causes. Beliefs and desires in particular are thought to be caused by perceptual or other cognitive events, and as in turn conspiring from within to cause behavior.

In rallying to the inner-causal story, of course the Identity Theorists and Functionalists broke with the Behaviorists, for Behaviorists did not think of mental items as entities, as inner, or as causes. Behaviorists paraphrased mental ascriptions in terms of putative responses to hypothetical stimuli. More recently (though under the direct influence of Ryle), Dennett denies that beliefs and desires are causally active inner states of people, and maintains instead that belief- and desire-ascriptions are merely calculational devices, that happen to have predictive usefulness. Such ascriptions are often objectively true, but not in virtue of describing inner mechanisms.

Thus Dennett is an instrumentalist about propositional attitudes such as belief and desire. (An “instrumentalist” about Xs is a theorist who claims that although sentences about ‘Xs’ are often true, they do not really describe entities of a special kind, but only serve to systematize more familiar phenomena. E.g., we are all instrumentalists about “the average American homeowner,” who has exactly 2.3 children.) To ascribe a “belief” or a “desire” is not to describe some segment of physical reality, Dennett says, but is more like moving a group of beads in an abacus or doing vector sums by parallelogram of forces in kinematics.

There are three “stances” from which we can predict the behavior of some behavior—device, creature or human being: The physical stance (physics or other low-level science), the design stance (program or otherwise functional), and the **intentional stance**. Behavior prediction from the intentional stance is most fundamentally a matter of extrapolating rationally from what a subject *ought* to believe and *ought to* want in his/her circumstances; we then presume that the subject does believe and want those things, and predict the appropriate behavior. This is exactly what we do with laptops and pocket calculators, and even with thermostats (when we don't know how the thermostat works). And this epistemological strategy works astoundingly well.

A thing S is a believer, Dennett says, just in case (i) S's behavior is reliably predictable from the intentional stance, and (ii) the intentional stance is indispensable. S believes *that P* just in case to attribute that particular belief to S would indispensably result in good behavioral predictions. And likewise for

desires. Notice that Dennett does not assume that anyone actually does do any attributing.

People often slip into reading Dennett as really denying the existence of propositional attitudes, his theory really being a pretense or ‘as if’ theory. But he stoutly rejects that interpretation. It’s important to him that people really do have beliefs, desires, intentions etc. And our interpretive practices are based on real, objective patterns in the macroscopic world, the kind that would be missed by the Laplacean Martians (the famous housewife example).

His case for his view:

1. He argues from the foregoing epistemology of the intentional stance, i.e., of belief- and desire-ascriptions. Notice that it is normative; it relies constantly and ineliminably on assumptions of *rationality*, beliefs and desires the creature *ought* to have, inferences it *should* make, the *best* means to an end, etc. That is not anything like the epistemology we apply when we are seeking inner causes. The epistemology of inner causes is well known and standard, and it does not include normative assumptions about the object of study.

2. Dennett thinks it quite unlikely that any science will ever turn up any distinctive brain state or inner-causal mechanism that would be shared by all the possible subjects that had a particular belief. E.g., four very different people with different backgrounds and assumptions and perspectives might each believe that a Frenchman has been assassinated in Trafalgar Square. And for that matter, never mind science; he can see no reason why anyone would suppose that some brain feature is common to all four of the very different believers. There are no “Frenchman” neurons or “assassination” neurons.

3. Dennett’s instrumentalism requires no psychosemantics, and so avoids the biggest obstacle to the Representational theory. (He adds the foregoing arguments against the “language of thought,” as well as some other bad ones that rely on caricatures.)

### Objections

1. *Indispensable* attributability of propositional attitudes depends, for Dennett, on unavailability of the design and physical stances. But in theory a stance may be available to one kind of creature but not to another. You and I cannot predict each other’s behavior except by the intentional stance, but a Laplacean Martian could predict it from the physical stance. So a relativism ensues: You and I have beliefs and desires modulo us crude and feckless humans, but modulo a Martian we have no propositional attitudes at all. So it looks as

though our attitude ascriptions aren't *really* true after all; they're only true-for-us. Probable reply: Truth-for-us is truth enough in this case, *de facto* just plain true. There aren't any Laplacean Martians or other creatures who can apply the physical or design stance to human beings, and probably there couldn't be. And the propositional-attitude concepts are our concepts, made by us for ourselves.

2. Dennett's epistemology is too liberal. Even if pocket calculators have "beliefs" and "desires," thermostats and lightning rods simply do not. Reply: Oh, yeah? Then how do you think we relevantly differ from thermostats and calculators? We're just more complicated and sophisticated, that's all.

3. As against Ryle's Behaviorism, it is complained that we can just plain introspect propositional-attitude episodes; they're real and inner and they feel like something to us, and they're not just a matter of someone else's interpretive practices. Reply: It's actually not obvious that we can introspect beliefs or desires, which are merely dispositional states. Rejoinder: But we can introspect judgements, as Dennett seems to admit, and judgements have propositional content.

4. There are cases in which it's true of some human being that, were one to ascribe to that person the belief that P, good predictions would ensue, yet the person *does not* believe that P. E.g., the actor in mid-performance, or a spy who for decades plays a role in an enemy nation. The Rylean rebuts this objection by pointing out that actors and other pretenders have dispositions that ordinary people don't, such as the disposition to drop the pretend-behavior when the pretense is no longer needed. But Dennett does not put his view in terms of dispositions, so it is not clear how he could reply.

5. Dennett's formulation, "A person S believes that P iff, were one to ascribe the belief that P to S, one would get good behavioral predictions," is circular! It uses the expression "belief that P" in what is supposed to be an explication of that very concept. Not to mention "ascribe" and "predict," which presuppose belief. Replies: First, Dennett is not *defining the term* "belief that P," but only offering a metaphysical hypothesis as to what believing really is; so he is not offering a circular definition as in "Jejune, adj.: Said of things that are jejune." Second, he does really mean that ascriptions-of-belief (hyphenated) are conceptually prior to so-called "beliefs"; beliefs are second-class items, constructed out of the more concrete, more real ascribings. If you want to know what an ascription-of-belief is, look to our practices in the intentional strategy.

6. In cognitive psychology, beliefs and desires interact closely with the internal representations posited by the psychologist. Commonsense beliefs and desires are referred to in experiments, pretty much interchangeably with the

internal representations. In abnormal psychology, design-stance considerations are brought to bear on the patient's neurotic beliefs and desires. And as Dennett has sometimes admitted, commonsense belief-desire descriptions of people and cognitive psychology sometimes augment or correct each other. How is any of this possible, if belief and desire ascriptions are purely instrumental while the cognitive representations are real inner states of the subjects? And why would the two only polysemously intentional phenomena have anything to do with each other?

7. Dennett's formula makes it look as though we will ascribe only rational beliefs, desires and intentions to others. But of course we're all irrational and stupid much of the time, so how does his methodology allow us to ascribe silly beliefs and fallacious inferences?

He actually doesn't say much about that. What he does say is that when we do know that someone is working badly in some cognitive respect, we work around that, but we can do so only against a general background of further assumptions of rationality. Remember, if we are reliably told that subject X is completely irrational and never believes or desires or infers or plans as he/she ought, we simply have no way of ascribing any propositional attitudes to X at all.

### Eliminativism

**Eliminativism** regarding propositional attitudes is the outrageous thesis that there have never been any: No one has ever believed anything or desired anything or hoped or feared anything, etc., period. Churchland, Churchland and Steve Stich do not firmly maintain that this outlandish doctrine is true, but they contend that it may be true and indeed is a *good bet*.

How might anyone defend such a thing even as a good bet? The defense starts with a pair of claims about mental concepts. First, that mental concepts are *explanatory* concepts; their job is to figure as they do in explanations and predictions of people's behavior. (Notice that this assumption is shared by Fodor, the arch-Representationalist, and by Dennett, the instrumentalist, each of whom is implacably opposed to Eliminativism.)

Second, that mental concepts play this explanatory role by being part of a *folk theory*. The leading example of a folk theory is "folk physics," the commonsense view of physical objects and how they behave that each of us acquires by age 3 and that most people deploy for the rest of their lives. Similarly, mental concepts are ensconced in **folk psychology**, a system of generalizations that we acquire very early and use in dealing with the social world.

This pair of claims, the second of which really entails the first, is called the “‘**Theory’ Theory**” of mental concepts. Churchland goes on to argue that folk psychology is a *bad* theory that is probably *false*.

We get an “eternal triangle” of positions: Churchland and Fodor agree against Dennett that if there are propositional attitudes, then those states are internal causes with semantic contents, much as Fodor says they are. Churchland and Dennett agree against Fodor that there are no such internal causes. Fodor and Dennett agree against Churchland that there are propositional attitudes.

### The defense of Eliminativism

0: Folk physics is radically false and well known to be false. By analogy, so, probably, is folk psychology.

Replies: (1) That’s a very weak form of argument, in the first place—induction from one case alone. (2) We know science has shown that folk physics is false; there’s not the slightest controversy about that. But no science has shown that folk psychology is false, nor is it easy to see how any science could do so. (Dennett: Folk psychology is not an *empirical* theory at all.)

Yet the Eliminativists believe that current neuroscience at least suggests that folk psychology is false.

1. Our best neuroscience reveals nothing in the brain that looks like a propositional attitude. Except at the sensory periphery, brains are very homogeneous nets of neurons. Nothing in a brain seems to correspond to the difference between a belief and a desire, or between those and other propositional attitudes. Nor does anything in the brain look like a Fodorian quasi-sentential representation. The brain works, uniformly, by excitation and inhibition of neural pathways, viz., by electrochemistry, which is to say by physics, not by semantic properties.

Reply: This is only current appearances, not proof that there aren’t Fodorian representations interacting somewhere inside the marshmallow. No one thinks that propositional structure would *show* in the brain.

2. (Churchland). Considered as a theory and in comparison to other theories that explain things about the mind, folk psychology is a *terrible* theory. (1) It is stagnant. It has not changed or improved since the ancient Greeks. (2) It applies only within the very narrow range of mentation and behavior that is *normal*, everyday mentation and behavior. As soon as mentation or behavior gets even a bit weird—and the tolerances here are very narrow—folk psychology breaks down, or at least is at a loss. (3) Even within that normal range, folk psychology utterly fails to address some of the most interesting mental phenomena: dreams, for example, or the vagaries of memory.

Now, in general, when a poor theory is overtaken by a better theory of the same phenomena, the better theory *supplants* the poor theory, and the poor theory is rejected. That means rejected as *false*, and the poor theory's characteristic entities are dumped (phlogiston vs. the oxygen theory of combustion, evil spirits vs. viruses and bacteria as causes of infection).

And it looks as though a combination of cognitive psychology and neuroscience will soon be a much better empirical theory of the mind than is folk psychology (*that* wouldn't be hard, Churchland thinks). So, true to form, cognitive psychology and neuroscience will and should supplant folk psychology (as scientific physics supplanted folk physics), and propositional attitudes will and should go the way of phlogiston and evil spirits.

Notice that this argument does not depend on futuristic speculation. Churchland believes we know right now that folk psychology is a terrible theory, and he thinks it's also pretty clear that cognitive psychology and neuroscience will soon be a better one.

Reply: It's not fair to compare a folk theory to a developing scientific theory. *Of course* it's stagnant, etc.; it has to remain accessible to the folk!

Rejoinder: Churchland isn't denying that folk psychology is wonderful, indispensable, great at being a folk theory, and such. But it is, of necessity, severely limited, and that's one reason why it's very probably false.

(There are other arguments for eliminativism, but they presuppose some notions that would require expository digression.)

### Objections

1. "Come on! We know from the inside that we have beliefs and desires. We *introspect* them. (Duh.)" Reply (Churchland): Just as external sense perception is theory-laden, so too is introspection. You're soaked in folk psychology, so naturally you introspect in folk-psychological terms. But in Churchy's Brave New World, our grandchildren will introspect the neurological *as such*, and call brain things by their right names.

2. The "cognitive suicide" charge: The eliminativist is urging us to *believe* that there are no beliefs, haw haw! More basically, the eliminativist is *arguing* and *saying things*, each of which presupposes belief. Replies: First, Churchland offers a parallel argument in defense of vital spirits. Such arguments beg the question. But alternatively, let's grant that in formulating and conveying his view, Churchland is presupposing that he and others have beliefs. So what? That's a ladder to be kicked away. If I assume P along with some other premises, and I'm able to derive not-P, that's a *reductio ad absurdum*, and refutes P.

3. The posited attitudes are indispensable to prediction, reasoning, deliberation and understanding, and/or to the capturing of important macroscopic generalizations, and/or to various less cognitive pursuits. (A deeper version of this denies the “Theory” Theory altogether.)

4. Moore speaks: Numerous common-sense mental ascriptions, such as that Granny wants a beer and believes there is one under the sofa, are individually more plausible, and always will be more plausible, than are the *purely philosophical* premises of any argument designed to convince us to the contrary.