Handout #11: Dretske

1. A Pragmatic/Reductionistic Conception of Understanding the Understanding

<u>Philosophical naturalism as applied to the mind</u>: "If you want to know what intelligence is, you need a recipe for creating it out of parts you already understand" (491).

<u>Example</u>: (a) To understand what a cake is you need to know how to make a cake. (b) To know how to bake a cake, you need to be able to make a cake from ingredients that do not include cakes among them.

<u>Against Dennett</u>: The same is true of minds: "Recipes for thought can't have interpretive attitudes or explanatory stances among the ingredients—not even the attitudes and stances of others. That is like making candy out of candy—in this case, one person's fudge out of another person's caramels. You can do it, but you still won't know what candy is" (492).

<u>Questions</u>: Does Dretske's point undermine Dennett's analysis of belief by showing that it is circular or empty? Can we give a satisfactory "analysis" or theory of belief that takes for granted our attributions of beliefs to one another? What is an attribution of belief other than a **belief** about what people believe? And if Dennett's account of belief assumes the existence of beliefs about what other people believe, can it really provide us with the kind of "constructive understanding" Dretske demands?

A Proposal: Perhaps Dretske is right on the following point: Dennett is wrong to **define** belief in terms of those psychological attributions we make from the intentional stance. But maybe Dennett is nevertheless right that **beliefs are wildly indeterminate in content until they are interpreted from that stance**. The most basic beliefs are representations of the sort Dretske describes in his essay. But when organisms with beliefs of this basic sort begin to interpret each other, they represent each other's beliefs in a way that lends those representations a level of precision they would otherwise lack.

<u>A Further Question</u>: What can we assume or adopt as "parts" if we're to construct a mind in such a way as to demonstrate our knowledge of how a mind works? Must we start with neurological or biochemical or chemical elements and show how a mind might be constructed out of these?

Dennett's Homuncular Functionalism: Mental functions as complexes of simpler functions. If you want to know how a human understands language or sails a boat or proves a theorem, you need to decompose that task—accomplished, as it is, by the human using her mind as a whole (or significant parts of it) — into simpler tasks—each one of which is accomplished by a simpler or less complex part of her mind. By in turn decomposing those tasks into simpler ones we may arrive at a level at which the component tasks do not require any intelligence because they are so simple. Perhaps we will need to explain the mechanical details of how these simple tasks are executed at the neurological or biochemical level. But either way we will have explained how people execute the complex tasks with which we began.

Dretske's Alternative: We don't need to be able to explain thought in terms of things that have no intentional or representational properties of any kind. "What we are trying to understand…is not intentionality, per se, but the mind. Thought may be intentional. But that isn't the property we

are seeking a recipe to understand. As long as the intentionality we use is not itself mental, then we are free to use intentionality in our recipe for making a mind" (492).

Examples of things that are intentional but not themselves mental: photographs, maps, diagrams, charts, utterances, inscriptions, displays, etc.

2. Natural Representations and their Relational Natures

"Some objects are constituted by their relationships to other objects."

Analytic examples: Rembrandts, $100 bills, cousins

"Some recipes require a special cook," If a painting wasn't created by Rembrandt it isn't a Rembrandt even if it is qualitatively identical to one. If a bill wasn't printed by the US mint, it isn't a $100 bill, even if it is qualitatively identical to one. "This is why you can't build my cousin in your basement while my aunt and uncle can" (492).

An example: The compass. It tracks the north pole not the polar bears even though the polar bears only live at the north pole. The fact that it doesn't track polar bears is verified by varying the locations of the bears and observing that the compass needle is not sensitive to this variation (493).

"Talk about what instruments and gauges indicate or measure creates the same kind of intensional (with an "s") context as does talk about what a person knows or believes. Knowing or believing that that is the north pole is not the same as believing that that is the habitat of the polar bears even though the north pole is the habitat of the polar bears…What one is describing with these intentional terms [e.g. indicating the north pole], is, therefore, in this sense, an intentional state of the instrument" (493).

(Note that Dretske is here joining Fodor in taking Frege's observations as criterial for the mind. Failures of substitutions of co-referential expressions within the scope of "believes" and "knows" and "tracks" without change in truth value of the sentences that result is diagnostic for these terms expressing psychological concepts.

Dretske's Relational Realism About Mental Representation: "The mind, I think, is like that….To say that the compass indicates the direction of the arctic pole is to say that the position of the pointer depends on the whereabouts of the pole. This dependency exists whether or not we know it exists, whether or not anyone ever exploits this fact to build and use compasses. The intentionality of the device is not like the intentionality of words and maps, borrowed or derived from the intentionality (purposes, attitudes, knowledge) of its users. The power of this instrument to indicate north to or for us may depend on our taking it to be a reliable indicator (and, this, on what we believe or know about it), but its *being* a reliable indicator does not depend on us" (493).

Dretske's Naturalistic Attitude toward Aboutness: There is no need to naturalize the notion of aboutness or intentionality. It is already a naturalistic notion we can use to establish a physicalist understanding of the mind. "It exists wherever you find dark clouds, smoke, tree rings, shadows, tracks, lightning, flowing water, and countless other natural conditions that *indicate* something about how the rest of the world is constituted" (emphasis added, 493).

Questions: Do you share Dretske's realist intuitions? Does x only supply the information that p if we use x to indicate that p or was there already information in the world before minds evolved to

use this information? Can we use an unreduced or unanalyzed notion of information (so understood) to supply a truly reductive theory of mind or must we reduce the notion of information to something (e.g.) fully mechanical or biochemical?

Further questions: If naturalist theorists of mind can just help themselves to an unanalyzed or undefined notion of indication or representation or aboutness, how are they to distinguish the kind of representation or information involved in thinking about something or having a belief about someone from the kind of information that exists as tree rings, smoke and the like? What is the relationship between **mental representation** and these non-mental forms of representation?

Let us say that a tree's rings contain information about the age of that tree in a <u>thin sense</u> that does not entail any awareness or knowledge.

Question: Does mental representation distinguish itself from other forms of representation by the kinds of use to which information is put by the organism whose mind "contains" that information in the thin sense at issue?

3. Misrepresentation

According to Dretske, what we need to build (or know how to build) if we are to understand the mind is something that can not only **represent states of itself** (as a tree's rings represent its age) and **represent things outside itself** (as a smoke represents the fire or combustion at its source) but something which **can <u>misrepresent</u> things** or <u>incorrectly</u> **represent things** by indicating that things are such and such or so and so when they are not.

"For meaning or content, the what-it-is one thinks, is…independent of the truth of what one thinks" (494).

Fodor's Disjunction Problem: Lots of things cause an animal's nervous system to assume a structure R. "How can something's being R mean that something is F, when something's being F is only one of the things that cause R?"

Fodor's challenge as applied to perception and thought: Which of the many events involved in the generation of a neural token which we describe as an experience of a red surface is the object represented by that experience? Which of the many events involved in the generation of a thought we describe as a thought about Paris is the object represented by that thought?

Dretske: "Anything that can misrepresent something as being F is, of necessity, something whose meaning is independent of its causes, something that can mean cow even when it is caused by a horse on a dark night. It is therefore something whose meaning is less than the disjunction of conditions capable of causing it" (494).

The ability of compasses, thermometers and the like to misrepresent is explained by the functions for which we use them. We use the compass to indicate the North Pole so we can orient around that direction in order to navigate. That's why the compass is misrepresenting if it indicates N when pointed south. Dretske says we have given the device the job of indicating north, just as we give the mercury in a thermometer "the job" of indicating the temperature. "This is why thermometers can, while paper clips cannot, 'say' something false about temperature" (494).

Question: Is it possible that organisms give aspects of their own neurological responses to events the function of representing aspects of those events by using these representations to modify their

behavioral responses in order to meet their needs?[1] Is it possible that animals and their adaptive behaviors evolved before these animals imbued states of their nervous systems with representational properties?

4. Natural Functions

Question: Can something (e.g. a state of an organism's mind) have a **representational job** (in the sense in which the mercury in a thermometer has the job of indicating temperature) even if no one has given it that job?

Dretske: "If an information-carrying element in a system could somehow acquire the function of carrying information, and acquire this function in a way that that did not depend on our intentions, purposes and attitudes, then it would thereby acquire…the power to misrepresent the conditions it had the function of informing about" (495)

Phylogenetic or Evolved Function: Might the fitness enhancing function of a trait establish its natural representational function?

(a) Suppose X carries the information that p in the thin sense in which tree rings carry information about the age of trees.
(b) Suppose X is an adaptation insofar as X persists in a population because organisms with X had a fitness advantage over organisms without X and X therefore comes to predominate in the phenotypes of members of that population over time (i.e. it becomes "the norm" in that population).
(c) Suppose, moreover, that X wouldn't have bestowed a fitness advantage on organisms who had it unless it was the case that p, when X indicated as much.

If (a)-(c) obtain, is that enough to conclude that indicating that p is the function of X? Is this enough to identify X with the thought that p? Should we say that because snails have states or structures of the relevant sort that snails have thoughts? (See Dretske, p. 497 on snails.)

Dretske: "If the heart has the function of pumping blood, if that is why it is there, then by parity of reasoning, the senses….might have an information-providing function, the job of "telling" the animal in whom they occur what it needs to know in order to find food and mates and avoid danger. If this were so, then, the natural function of sensory systems would be to provide information about an organism's optical, acoustic, and chemical surroundings" (495).

Ontogenetic or Learned Function: Suppose X tokens pursuit/avoidance of Y because this is necessary for the survival of organisms in which X occurs but it does not do so in an instinctive way but as a result of learning. (E.g. an animal's avoiding a species of mushroom that made it sick in the past)

Question: Is this sufficient to conclude that X represents Y as good/bad for the organisms in question? Has Dretske given us a naturalized analysis of representations of value?

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[1] Dreteske claims that needs can be defined without bringing in thoughts or representations so that we can assume the existence of needs when giving a "recipe" for thought of the kind that provides us with constructive knowledge of thought. "All that is meant by a need (for a system of type S) is some condition or result without which the system could (or would) not exist as a system of type S" (fn 12, 499).

The Importance of Learning: Dretske says that only information that acquires its representational functions via learning is "real thought." Information that acquires its representational function via natural selection is mere pseudo-thought.

Assess Dretske's argument for this claim on pp. 497-8.

Critique: Dretske argues that if an animal assigns a representational role to some information by utilizing it as a representation to meet its needs, the actions it takes it light of that information will be reasonable or intelligent. If this is right, this suggests that information that acquires its representational properties via learning will be "real thought" in a sense. But even if this is right, **it just shows that learning of the requisite sort is sufficient for thought, not that it is necessary**.

5. Dretske's rejection of Artificial Intelligence

Dretske's Organic Relationalism: "If the only natural functions are those provided by evolutionary history and learning, then, no one is going to be able to build a thinker of thoughts, much less a mind, in a laboratory. This would be like building a heart, a real one, in your basement" (496).

Questions: Why shouldn't we instead say that things can get their functions in a number of ways including the intentions of a creator or the purposes of a possessor? On this understanding, an artificial heart is a "real" heart because it is created to pump blood and/or it in fact pumps blood for the patient who has had that heart surgically installed. Might the minds of robots or computers have a similar reality someday?

6. Dretske's Limited View of Evolved Functions

Dretske makes a distinction between (a) the kinds of representations involved in automatic or instinctive behaviors (like the blink reflex) and (b) the kinds of representations (beliefs, desires, plans etc.) that shape our intentional actions.

According to Dretske natural selection only explains representations in class (a) because these are "genetically determined." Representations in class (b) are the only genuine thoughts and they require a different treatment.

"There are probably internal representations (of objects approaching the eye) involved in the blink reflex, representations that have an evolutionary origin, but these are not the sort of representations (beliefs, purposes, and intentions) at work in explaining why we wink at a friend or pack for a trip….Darwin won't help us because Darwin is concerned with precisely those behaviors the explanatory mechanisms for which are genetically determined—precisely those behaviors that are not voluntary" (496).

Two criticisms: (1) This is anachronistic. Darwin didn't know anything about genetics. Mendel was a contemporary, but Darwin didn't know of his work. (2) Darwin didn't limit his theories to automatic or non-voluntary behaviors and it is not clear why there cannot be an accurate theory of how a particular kind of belief or knowledge or goal-setting mechanism evolved. Perhaps Dretske's idea is that voluntary behavior is itself not the product of a specific mechanism or module and is therefore non-modular. But the outputs of modules (like perceptions and memories) can guide behavior and they might be said to constitute belief in central cases. The

same goes for relatively modular mechanisms that generate "appetites" and the desires or goals they typically constitute.

Developmental theories of content applied to the disjunction problem: "A developmental theory of content identifies what R has the function of indicating – hence what R represents – with that particular piece of information that was causally relevant to the selectional process by means of which R was recruited for causal duties" (496).