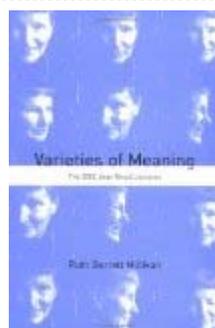




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Review - Varieties of Meaning

The 2002 Jean Nicod Lectures
 by Ruth Garrett Millikan
 MIT Press, 2004
 Review by Nick Trakakis
 Feb 1st 2005

This is the sixth installment in MIT's series of Jean Nicod Lectures, a series that is based on the lectures delivered annually in Paris by a leading philosopher of mind or philosophically oriented cognitive scientist, with past participants including Jerry Fodor, Donald Davidson, John Searle, and Daniel Dennett. Millikan's lectures were presented in 2002 and address the problem: "What are the varieties of meaning? And what do they have in common, so as to be treated together under one cover?" (ix). Millikan's answer, briefly put, is that there are various forms of meaning -- as is evidenced by the fact that we say that James meant to harm his sister, that a chainsaw is meant for cutting wood, that the word 'evil' means 'wicked or highly immoral', that black clouds mean rain, etc. -- and although there is no single thing that all

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these varieties of meaning have in common, they cannot properly be understood without grasping their many interconnections.

I. Purposes and Cross-Purposes

The book is divided into four parts, the first of which consists of two chapters in which Millikan concentrates on the notion of 'purpose'. She begins (in Chapter 1: "Purposes and Cross-Purposes of Humans") by dismantling the commonsense view that a principled distinction can be drawn between 'real' purposes and merely metaphorical purposes (or between a person's purposes and merely biological or natural purposes), as when we say that a person's consciously formed intention not to blink is a genuine purpose, whereas the purpose of the eye-blink reflex (to prevent foreign objects from entering the eye) is a purpose only by analogy or metaphorically. Millikan argues, instead, that consciously formed purposes and biological purposes are on an equal footing, and purposes of all kinds are entirely natural insofar as all "have their origin in adaptation by some form of selection" (13). Millikan then (in Chapter 2: "Purposes and Cross-Purposes of Memes") turns to 'memes' (i.e., cultural artifacts that are reproduced by imitation rather than genetically -- e.g., dress fashions, ideas, values, and forms of expression), arguing that the underlying purpose or function of memes is to facilitate social coordination.

II. Natural Signs and Intentional Signs

The second part of the book begins with a discussion (in Chapter 3: "Local Natural Signs and Information") of 'natural signs', signs which cannot be false or unsatisfied (unlike 'intentional signs', which can). For example, red spots all over Tommy's face mean (or naturally signify) that Tommy has the measles, but only if he does in fact have the measles. Natural signs, obviously, carry 'natural information', that is to say, information about a segment of the natural world, and they do so -- in Millikan's view -- because in each case "it is possible for a true belief to be reached about one thing [e.g., Tommy's health] from knowledge of the other [e.g., red spots]...", where the truth of the belief reached will not be accidental because the connection in thought correctly and nonaccidentally tracks a

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dependency in nature" (p.37). For a correlation between *As* and *Bs* to be nonaccidental, Millikan adds, there must be a reason why the correlation persists or replicates itself over other domains of time and space.

Millikan then proceeds (in Chapter 4: "Productivity and Embedding in Natural Signs") to discuss two features of natural signs: their productivity, that is, their capacity to say new things or provide new information; and their embeddedness, that is, the capacity of one natural sign to be embedded within another, as when tracks in the woods are a sign of the presence of quail, while a photo of these tracks would be a sign of that sign of quail.

The subject of discussion then turns from natural signs to intentional signs, beginning with Chapter 5: "Teleosemantic Theories". Millikan first points out that intentionality (or how a representation could be *of* or *about* something) is not explained by a teleological theory, which only aims to explain how representations can be false. What account, then, do teleological theories offer of misrepresentation? According to such theories, notes Millikan, "false representations are representations, yet they fail to represent," just as "something can be a can opener but be too dull and hence fail to open cans" (64). The strategy here is to avoid the reification of special 'intentional objects': in cases of false representation, the subject is not representing something that doesn't exist, but rather fails to represent anything at all. In short, Millikan's view is that "teleosemantic theories are piggyback theories" (66). In other words, such theories do not seek to provide an account of intentional representation, but instead ride on some basic theory of representation (e.g., a causal theory, an informational theory), to which is added: (i) the teleologist's claim that for a representation to be an *intentional* representation it must be a function or purpose of the system that produced it, and (ii) the teleosemanticist's account of what a false representation is, given the underlying theory of representation. "That is all teleosemantics amounts to," writes Millikan (67).

Millikan, therefore, next considers (in Chapter 6: "Intentionality") what base theory of the representing relation the teleologist could offer on which to build an account of intentional representation. In particular, she examines Dretske's proposal of placing natural signs and the natural information they carry at the base of a theory of intentionality -- on this proposal, natural signs whose function it is to carry natural information come to represent intentionally, they become intentional representations. But Millikan finds fault with such a proposal, on the grounds that it wrongly assumes that the intentional representation-producers have as their purpose to produce natural signs; rather, on Millikan's view, "when they [intentional sign-producers] perform their functions by their normal mechanisms they produce natural signs" (76). Millikan then proceeds to outline her theory of intentional representation, identifying in the process three kinds of intentional representations: descriptive (which represent or describe what is the case), directive (which represent or direct what is to be done), and pushmi-pullyu (which are both descriptive and directive).

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Millikan closes Part II with a discussion (in Chapter 7) of intensionality, with particular reference to intensional contexts. Customarily, intensional contexts are described as contexts in which coreferential expressions are not substitutable *salva veritate*. Millikan, however, holds that there is a more illuminating way of thinking about intensional contexts: "The phenomenon here is not that one cannot substitute coreferential terms without change of truth-value, but that the grammar alone does not prove that one can. Whether one can or not is a pragmatic matter" (95).

III. Outer Intentional Signs

The underlying thesis of Part III is the claim that "conventional signs used for their conventional purposes usually are read in exactly the same way that natural signs are read" (109). The opening chapter (Chapter 8: "Linguistic Signs Emerge from Natural Signs") kicks off the project of highlighting the similarities between the two kinds of signs by outlining how conventional language signs evolve from natural signs without losing their character of being also natural signs. This is followed by one of the more provocative parts of the book (Chapter 9: "Direct Perception through Language), where Millikan advances the claim that understanding language is at root another form of direct perception of the world. She hopes that this claim, when conjoined to the view that perception is a way of understanding natural signs, will help support the view that understanding language is very much like understanding natural signs.

Millikan begins by rejecting the traditional notions of 'direct perception' (according to which sense impressions are directly and infallibly represented by the mind) and 'indirect perception' (according to which representations of the outer world are derived by the use of inference). She nevertheless retains the distinction between direct and indirect perception, but reconceives it in terms of translation rather than inference, so that a representation of the outer world that is derived by a series of fallible translations from one sign into another counts as an indirect perception. Millikan then proceeds to her central thesis, that "coming to believe something by being told it is so, in the typical case, is the formation of a direct perceptual belief" (120). Suppose, for example, that I come to believe that my son, Johnny, has just arrived home from school. A number of factors may compel me to adopt this belief -- e.g., I could simply observe Johnny coming through the door, or I could hear him shout, "Dad, I'm home!", or I could hear my wife say to me, "Johnny's home". On Millikan's view, each of these ways of forming the belief, 'Johnny has arrived home', are equivalent in *directness* of psychological processing. This may or may not be the case -- I leave that for psychologists to decide. The problem, however, is whether 'perception through language' (e.g., hearing what is going on in the world through the medium of other people's speech transmission systems) can plausibly be assimilated to 'ordinary perception' (i.e., seeing what is going on in the world through the medium of normally surrounding light). For one thing, the reliability of the latter form of perception is often greater than the reliability of the



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former kind (though Millikan does try to meet this objection on pp.124-25).

In the following chapter (Chapter 10: "Tracking the Domains of Conventional Signs") Millikan argues that, just as you can tell what you are seeing through a pair of binoculars without thinking about what is inside the binoculars and why they work, so you can tell what a speaker's words mean without thinking about the speaker's "insides" (his mind or intentions) -- grasping the speaker's meaning only requires you to think *the same content* that the speaker purposefully communicates.

The remaining chapters of Part III concentrate on different ways of drawing the semantics-pragmatics distinction (with Millikan arguing that this distinction typically supervenes upon another, and necessarily vague, distinction between conventional and non-conventional uses of language) and on the semantics of indexicals, demonstratives, and referential descriptions.

IV. Inner Intentional Signs

In the final section of the book Millikan looks at 'inner representations' and in particular at the question of "how and why, during the evolution of perception and cognition, organisms have acquired inner representations that are more sophisticated than pushmi-pullyu signs" (157).

Much of the opening chapter of this section (Chapter 13) is preoccupied with the various features of pushmi-pullyu signs, or P-Ps, which represent facts and give directions or represent goals, both at once. Bee dances, for example, tell where the nectar is and at the same time tell where the watching bees are to go. Indeed, Millikan conjectures that all intentional signals used between nonhuman animals are P-Ps. One of the disadvantages, however, of being a purely 'pushmi-pullyu animal' is that "such an animal does not represent its goals in a format that enables it to know whether or when it has reached them" (169).

Next (in Chapter 14: "Detaching Representations of Objects"), Millikan focuses on the dorsal and ventral visual systems in order to show how the descriptive part of a P-P (e.g., the ventral system, which detects what objects the animal confronts) may come apart or be detached from the directive part of a P-P (e.g., the dorsal system, which directs the movements of the animal).

After a brief discussion (in Chapter 15) of space and time -- where Millikan marshals experimental support for the view that "just as many animals construct representations of the spatial layouts in which they live, many construct representations of regularities in the temporal layouts in which they live" (187) -- the subject turns to goal state representations. In Chapter 16 ("Detaching Goal State Representations"), Millikan argues that P-Ps can give way to "a *common* system of mental representation...in which projected goal states,

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objectively represented future states, and objectively represented present states can all be expressed" (197). Millikan then investigates (in Chapter 17) how representations of projected goal states are generated.

The last two, and very interesting, chapters delve into the ways in which the representational capacities of humans differ from those of nonhuman animals. In Chapter 18 ("Limitations on Nonhuman Thought"), Millikan observes that, unlike humans, "[nonhuman] animals perceive the world only as a subject of practical concern, not as a subject of theoretical judgment" (219). This is evidenced by the fact that human, but not nonhuman, animals collect facts and develop skills for which they have no practical uses ("we appear to be compulsive collectors of all kinds of representational junk" (215)). However, this ability to represent things far removed from practical activity requires a distinct representational system that is unlike anything found in nonhuman animals. In fact, the kind of representational system that is required, argues Millikan in the final chapter, is one which infuses a subject-predicate structure into representations, where the predicate is sensitive to a negation transformation. And so, Millikan conjectures, it is the development of human language that has allowed for the development of theoretical thought.

This, in brief, is a wide-ranging book, covering a diverse range of issues at the intersection of the philosophy of mind and the philosophy of language, but always bringing the scientific literature in such fields as psychology and biology to bear on the issues at hand. Indeed, one of the great virtues of the book is that it regularly defers to and illuminates recent experimental studies, as well as providing a rich array of examples, images, and analogies drawn, in the main, from the world of biology. Be warned, however, that Millikan's (often compressed) writing style and thinking will be challenging to those not familiar with her work or the current debates in teleosemantics. Challenging, I say, but not impenetrable -- and the rewards in insight repay the outlay in effort.

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