

Embodied Cognition and Correspondence Truth: A

Reply to Lakoff and Johnson

To say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, and of what is not that it is not, is true.

Aristotle

Metaphysics Bk. IV: Ch. 7 (1011b26-28)

Aristotle tells us that "what is" and "what is not" determine the truth or falsity of what we "say". Many take this to be an early, perhaps somewhat cryptic, expression of the correspondence theory of truth. Many, this author included, also think that Aristotle's approach to the issue of truth and falsity is essentially correct. True things are true because the world is as they say. False things are false because the world is not as they say. John Searle nicely characterizes the intuitive appeal of truth as correspondence:

In general, statements are attempts to describe how things are in the world, which exists independently of the statement. The statement will be true or false depending on whether things in the world really are the way the statement says they are. (1995: p. 200)

Many, however, remain unconvinced that truth or falsity could, upon careful analysis, prove to be such a simple matter. The world is a complicated place, and our attempts to accurately represent it are fraught with all sorts of peril and complexity.

In this paper, I will consider one of the latest attempts to cast doubt on the legitimacy of the correspondence theory of truth. The authors of *Philosophy In The Flesh: The Embodied Mind and Its Challenge to Western Thought* reject the correspondence theory as an oversimplification resulting from our insufficient appreciation of the complexities of embodied cognition. Truth, they claim, is not so simple after all. Fascinating and insightful as their account of human cognition may be, I will argue that it ultimately provides us with no reason to renounce the correspondence theory of truth. Though defending the conviction that truth is a matter of correspondence between truth-bearers and truth-makers, I will make no attempt to provide a satisfactory account of the correspondence relation or to make a case for truth-bearers or truth-makers of any particular type. Such projects are notoriously difficult and are not relevant to the particular business at hand. My fundamental conviction, and the central intuition that I seek to defend, is essentially the same as Aristotle's: true things say it like it is, and false things do not.

Correspondence and Embodiment

George Lakoff and Mark Johnson claim that the "simplest form" of the correspondence theory of truth is as follows:

A statement is true when it fits the way things are in the world. It is false when it fails to fit the way things are in the world. (1999: p. 98)

This theory of truth will not suffice, they claim, because the embodiment of cognition and concepts precludes the possibility of any correspondence relation obtaining between truth-bearers (e.g. statements) and truth-makers (e.g. facts, conditions, states of affairs) - "the way things are in the world". Our embodied conceptualizations of the meanings of truth-bearers, and the multifaceted relational nature of many truth-makers cannot be made to fit into the correspondence theorist's account of truth and falsity.

Lakoff and Johnson claim that statements (or other truth-bearers) are imbued with particular meanings, in part, by their relations to our understanding of the concepts involved in them. But our understanding of concepts depends upon three distinct levels of cognition, due to the complexities of our embodied experience of the world. They claim that the multiplicity of these levels of cognition leads to an insoluble inconsistency for

correspondence theorists of truth. A truth-bearer may be true relative to one level of embodied cognition while false relative to another. Hence, truth cannot be a simple matter of correspondence between a statement and some objective, cognition-independent fact. Not all facts are objective, cognition-independent, or uniform across all levels of embodied understanding. So, there may be multiple levels of "truth" due to the existence of multiple levels of fact, and these levels of truth cannot peacefully coexist within the correspondence theorist's oversimplified alethic framework.

According to Lakoff and Johnson, concepts are embodied at the *neural level*, the *phenomenological level*, and the *cognitive unconscious level*. This takes a bit of explaining, but the authors do an admirable job of it. I will now present a brief, somewhat simplified, rendering of their account of these three levels of conceptual embodiment.

The neural embodiment of concepts refers to the physical "circuitry" underlying cognition and the link between concepts, language, sensorimotor experience and the world. For example, the neurophysiological events involved in physically grasping and manipulating an object with one's hand often come to be intimately associated with our

development of the concept of comprehending something. We often begin to understand the world around us by literally grasping physical things. Hence we have come to use metaphors such as, "He has no grasp of this problem," to express a failure of comprehension. Our concepts are deeply and inseparably linked to our neurophysiology and our sensorimotor experience of the world around us.

The phenomenological embodiment of concepts refers to our conscious experience of the "feel" of cognitive states. We are aware of the way that things look, sound, smell, and other qualitative aspects of our experience. Our qualia are deeply dependent upon the peculiar character of our embodiment. The nature of our sensory apparatus largely determines the qualitative aspects of our experience and concepts develop through our conscious interaction with the world. For example, the phenomenology of our color experiences is, in large part, a consequence of the neurophysiology of our particular visual apparatus and of the relevant interpretive functions in the brain. Had our rods, cones, optic nerves, or the visual center of our brains developed in significantly different ways, the world would appear very different with respect to the colors we perceive.

Finally, concepts are embodied at the cognitive unconscious level. The cognitive unconscious refers to all non-conscious cognitive operations that underlie and make possible our conscious experience and our successful performance of various conscious tasks. The cognitive unconscious lies "between" (as it were) the neural level and the phenomenological level. It is, in part, a repository of our fundamental concepts of categories, types, frameworks, etc. There are, for example, various basic linguistic categories of which we are not consciously aware while constructing and uttering grammatical sentences. We do not, in general, consciously identify nouns, verbs, and other basic items of grammatical significance while conversing with others. Yet we somehow manage to express ourselves in grammatically correct fashion (for the most part). The cognitive unconscious must be hypothesized if we are to adequately explain our conscious behavior within contexts that require constant non-conscious resort to "background" information and concepts.

The result of the existence of these three distinct levels of embodied cognition is this: "Truth claims at one level may be inconsistent with those at another" (p. 105).

As an illustration of the difficulty, Lakoff and Johnson explore statements involving color attributions.

Here is what the correspondence theory would say about sentences like "Grass is green." The word *grass* names things (or stuff) in the world. The word *green* names a property that inheres in things in the world. If the green-property inheres in the grass-things, then the sentence "Grass is green" is true. (p. 105)

The authors of *Philosophy In the Flesh* then argue that the statement "Grass is green," though true at the phenomenological level, is false at the level of neural embodiment. Colors do not simply inhere in physical objects. Color is rather a fairly complicated, many-place relational phenomenon involving physical objects, local light conditions, and neural facts about the perceptual apparatus of the observing organism. So, here is the alleged inconsistency:

At the neural level, green is a multiplace interactional property, while at the phenomenological level, green is a one-place predicate characterizing a property that inheres in an object. Here is the dilemma: A scientific truth claim based on knowledge about the neural level is contradicting a truth claim at the phenomenological level.

The dilemma arises because the philosophical theory of truth as correspondence does not distinguish such levels and assumes that all truths can be stated at once from a neutral perspective. (p. 105)

It is in this last claim that, I argue, Lakoff and Johnson commit two crucial errors in characterizing the correspondence theory of truth. First, theories of *truth* need not also function as theories of *meaning*. Whatever it

is that fixes the meaning of a truth-bearer, this function need not be performed by the theory that assigns a truth-value to that truth-bearer. It is not the business of the correspondence theory of truth to determine the meaning of "Grass is green" across every context or every level of conceptualization. A theory of truth need not also serve as a theory of trans-contextual meaning. Secondly, there is nothing about the correspondence theory of truth that requires the existence or availability of a "neutral perspective" from which "all truths can be stated at once". This kind of *uniqueness* hypothesis is not a requisite feature of the correspondence theory of truth (however commonly it may be assumed). Once these misunderstandings about the correspondence theory of truth are rectified, it should be clear that the "embodiment of concepts," as characterized by Lakoff and Johnson, poses no special threat to the correspondence theory of truth and no insoluble difficulty for its defenders.

Correspondence Truth: The Bare Essence

The correspondence theory of truth requires only that a truth-bearer (statement, belief, etc.) is true if and only if it corresponds (however "correspondence" is to be worked out) to some truth-maker (typically designated a

fact, condition, or state of affairs). Richard Kirkham, in *Theories of Truth*, presents the following schema as the "essence of the correspondence theory":

(C): $(t)\{t \text{ is true iff } (\exists x)[(tRx) \& (x \text{ obtains})]\}$ (p. 132)

In other words, any truth-bearer (t) is true if and only if there is some truth-maker (x), such that t bears the correspondence relation (R) to x and x obtains.

There may be a variety of competing theories about the sorts of things that are eligible to be truth-bearers, and an array of theories concerning what sorts of things can or must obtain as truth-maker, and there may be competing theories about the nature of the correspondence relation. But the bare "essence" (as Kirkham puts it) of the correspondence theory is captured by schema (C). Any truth-bearer is true if and only if it corresponds to some truth-maker. The essence of the correspondence theory in no way conflicts with the multifaceted, multi-layered, embodiment of cognition as characterized by Lakoff and Johnson.

To illustrate why this is so, let us return to the "Grass is green" example proffered by Lakoff and Johnson as an illustration of the correspondence theory's inability to accommodate the complexities of embodied cognition. The correspondence theory of truth entails that the truth-

bearer "Grass is green" is true if and only if the truth-maker *grass is green* obtains. The fact, condition, or state of affairs of *grass being green* can obtain as a two-place relation involving only grass and greenness, or it can obtain in the form of a "multiplace interactional property" involving physical objects, electromagnetic radiation, the perceptual apparatus of various perceivers, and anything else at all. All that the correspondence theory requires for "Grass is green" to be true, is the greenness of grass (whatever that amounts to). "Grass is green" is true if and only if *grass is green* (whatever fact, condition, or state of affairs is thus signified). The correspondence theory of truth, in its bare essential form, requires nothing more than this.

Once we specify precisely what we mean by a given tokening of "Grass is green," we will find that the appropriate truth-maker either does or does not obtain. The truth or falsity of any truth-bearer will be a function of whether the relevant truth-making fact, condition, or state of affairs (i.e. the relevant way-that-things-are) obtains. It is irrelevant that the greenness of grass (if it is green) is either a relatively complex or simple matter. It is irrelevant that, in some contexts, "Grass is green" means something involving only grass and the inherence of

greenness (whatever that is), while in other contexts "Grass is green" means something that irreducibly involves the perceptual apparatus of human-like cognizers. It is also irrelevant that "Grass is green" is true in some contexts but false in others. The correspondence theory of truth can accommodate all such complexities and variations.

If, at one level of understanding (the neural level), "Grass is green" means that greenness objectively inheres in grass (irrespective of the perceptual apparatus of the observer), then it is false (assuming that Lakoff and Johnson have correctly characterized the physics and phenomenology of color). If, at another level of understanding (the phenomenological level), "Grass is green" means that cognizers with human-like perceptual apparatus, viewing grass under "normal" conditions (under white light, etc.) will tend to have a certain kind of phenomenological experience, then it is true. Once the meaning of "Grass is green," as tokened on a particular occasion is specified, its truth or falsity follows readily from its correspondence (or lack thereof) to the relevant fact, condition, state of affairs, or way-that-things-are. The relevant truth-maker need not be cognition-independent, and need not obtain "objectively," neutrally, or uniformly across all conceptual or perceptual perspectives. Indeed,

if our truth-bearer makes reference to something inherently cognition-dependent, then we should not expect to find it corresponding to a cognition-independent truth-maker.

It is not at all surprising that perception-dependent or cognition-dependent facts will obtain against one type of perceptual or conceptual backdrop but not another. Obviously, a statement such as "Thirty degrees Celsius is uncomfortably hot" will be true relative to some organisms, but false relative to others. For one organism, it may be true relative to some interests (e.g. sleeping), but false relative to others (e.g. swimming). This is not a problem for the correspondence theorist of truth. For any given entity (and/or interest), it either is or is not a fact that thirty degrees Celsius is uncomfortably hot. Of course, the truth-maker in this case will ineliminably involve complex facts about the neurology of the organism in question. Perhaps the embodiment of our concept of discomfort could render that statement true at the neural level but false at the phenomenological level (or vice-versa) for one organism. If so, it will be true if intended in the former sense, but false if intended in the latter. Fixing the meaning of a statement is often a complex and difficult matter. But this function must be performed *before* truth or falsity can be determined.

If there is a sense in which color is, in fact, a multiplace interactional property irreducibly involving a particular kind of perceptual apparatus, then we should not be surprised if it turns out that some objects are green "for" some observers but not for others. Nor should we be surprised or distressed if "Grass is green" turns out to be true at one conceptual level but false at another. More importantly, there is no need for the correspondence theorist of truth to be troubled by this complexity or by the relationality of facts involving color.

Conclusion

The correspondence theorist need not (and probably should not) insist that all truth-bearers are made true or false by cognition-independent facts that obtain in some perceptually neutral, cognition-independently-describable world-in-itself. Some truth-bearers will correspond to neutral, objective facts and others will correspond to facts that irreducibly involve cognizers or perceivers in various ways. So long as truth is a function of correspondence (whatever that amounts to) between a truth-bearer and *some* truth-maker, the correspondence theory of truth remains (on that score) unproblematic.

The business of fixing the meaning or the content of statements such as "Grass is green" may be a much more difficult and complex matter than had been previously realized. If so, Lakoff and Johnson deserve significant credit for their efforts to elucidate such difficulties and to point out the importance of the embodied nature of our concepts. The fixation of meaning is not, however, a challenge that the correspondence theory of truth is required (or intended) to meet. The correspondence theory of truth is supposed to tell us what it is that makes a truth-bearer true or false. Whether a truth-bearer is true or false can only be determined once the meaning or content of the truth-bearer is fixed and identified. Any theory of truth depends upon the fixation of meaning, but that fixation does not need to be accomplished by the theory of truth. "Grass is green" may mean different things in different contexts. Its meaning may be enormously complex and multifaceted. But on any given tokening, it means *something*. Once its meaning is fixed, it can then be entered into the *t* position in schema (C). If the relevant *x* obtains and is appropriately related (by R) to "Grass is green," then "Grass is green" is true.

Lakoff and Johnson are not entitled to build gratuitous uniqueness and bivalence requirements into the

correspondence theory of truth and then complain that such requirements make the theory untenable. One need not assume or accept any uniqueness or bivalence hypothesis in order to accept the correspondence theory of truth. Perhaps some overly naive assumptions tend to be commonly made about the nature of truth-bearers and truth-makers because of an insufficient appreciation of the complexities of embodied cognition. If so, then we should jettison those naive assumptions. This hardly constitutes an objection against the correspondence theory of truth. If there are truth-bearers, and if the true ones are made true by their correspondence (however characterized) to some truth-maker (however complex), then the correspondence theory of truth is vindicated - and Aristotle is right. True things are true because the world is as they say.

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