

LUIS FERNÁNDEZ MORENO. 2016. *The Reference of Natural Kind Terms*. Bern: Peter Lang.

Reference is a central topic in contemporary philosophy of language. The discussion surrounding natural kind terms (NKT), beginning with Mill, can already be regarded as a classic topic in philosophy. The concern of language philosophers with regard to NKT not only relates to their semantics but also to *determining their reference*. The reference of NKT is at the center of debate since the appearance of Kripke's and Putnam's causal theories, emerging in reaction to descriptivist theories of reference. The principal actors in the discussion on the reference of NKT have been philosophers such as Kripke, Putnam, Donnellan, Searle and Strawson and, more recently, Jackson, Devitt, Sterelny, Soames, LaPorte and Wikforss, among others. This new book by Luis Fernández Moreno (FM) emerges within this context, having previously dealt with the problem of the reference of proper names (2006 *The Reference of Proper Names*); as well as the reference of NKT in numerous papers. In *The Reference of Natural Kind Terms*, FM discusses the problem of determining the reference of NKT by analyzing the most relevant versions of the main types of theories in the matter: *causal* (or historical-causal) and *descriptivist* theories of reference for NKT. This detailed and conceptually demanding analysis is carried out displaying a clear predilection for descriptivist theories, but stating that the differences between both types of theories are not as great as usually considered.

The book consists of eight chapters. The first is devoted to Locke's theory of NKT. FM explains the types of ideas contained in this theory, including the types of ideas of substances, and develops the criteria for evaluating them according to their clarity, distinction, reality, adequacy and truth. Locke uses the first two criteria together, and FM maintains that the last three also fail to be independent of one other (understanding the true criterion as being *conformity*). FM maintains that, considering that the adequacy of an idea of substance adds the degree of conformity to its reality but its truth adds nothing to its reality, we should claim that if an idea of substance is real or adequate, then it will be true.

In the second chapter, FM addresses the theory of general terms proposed by Mill, when applied to NKT. He maintains that Mill's generic theory for general terms does not coincide with his theory on NKT and that, therefore, Kripke's objections based on the latter's main thesis would not affect Mill's theory. This would not be a descriptive theory, as Kripke asserts, who must have misinterpreted Mill, probably due to an inconsistency committed by Mill that results in the principle according to which connotation determines denotation not applying to NKT (which should apply if we consider them as general terms and therefore connotative, according to Mill).

In the third chapter FM deals with Frege's and Russell's theories of singular terms, of proper names and also of general terms. He compares the two theories with Mill's and accepts Kripke's interpretation of them as descriptivist theories.

The fourth and fifth chapters are devoted to the Kripke and Putnam theories, respectively. In chapter four, FM argues that *ostensive reference fixing* in Kripke's theory must be descriptive-causal, discusses the role of essentialism in the thesis of the necessity for theoretical identities, and deals with Kripke's explanation of reference change, concluding that it is compatible with descriptivism. In the fifth chapter, FM maintains that the ostensive reference fixing in Putnam's theory must be descriptive-causal too and develops in a final appendix a view about the semantics of *artifactual kind terms* (like "chair" or "pencil") consisting of an extension of the Putnam's semantics for NKT to artifactual kind terms.

Chapter six poses whether it is possible for Locke's theory to adopt the basic principles of causal theories, the contribution of society, and the contribution of the environment for the determination of reference. It concludes that Locke's position is incompatible with this last notion.

In the seventh chapter, FM analyzes the main contemporary versions of the descriptivist theories (Searle, Strawson, Jackson) and pays close attention to Jackson's proposal, for whose causal descriptivism he does not conceal his sympathy. He also deals with Lewis' and Kroon's descriptivist theories.

In the eighth and final chapter, FM deals with the *qua* problem, develops Devitt and Sterelny's vision regarding ostensive reference fixing, allowing us to solve it, and asserts that Putnam's theory also provides resources for doing so. FM also argues that the theory of *reference borrowing* in Kripke and Putnam must be descriptive-causal and rejects the essentialism present in Kripke's theory. Finally, he presents the advances in experimental semantics (Machery *et al.*, Malt) and the discussion that remains in philosophy of chemistry on macroscopic and microscopic properties in the individuation of chemical substances. The book concludes that the descriptive-causal theory is the most appropriate for both the ostensive reference fixing and reference borrowing of natural kind terms.

Taking into account the space for a review, it is impossible to discuss many of the interesting questions appearing in the book here, so I will focus on one of them, relating to one of Soames' criticisms of Jackson's two-dimensionalism.

In chapter 7, FM attempts to defuse some of Soames' main arguments against Jackson's two-dimensionality by claiming that the fact that Soames attributes the synonymy between simple natural terms and rigid descriptions to Jackson (let's call this thesis *T*) is wrong. That is, according to Jackson (a) "water" and the description (b) "the actual watery stuff of our acquaintance" do not have the same meaning. However, FM's allegations against attributing *T* to Jackson and his alternative proposal are weak, or of questionable utility. First, FM admits that Jackson does keep *T* in his work prior to 2004, and that it is only in later works that he seems to abandon that thesis. If we focus on these later works (2004 "Why we need a-intensions"; 2010 *Language, Names and Information*) FM concedes that Jackson does not clarify in them what the difference in meaning is between expressions sharing the same A-intension as (a) and (b) and that, in general, his notion of meaning and synonymy between expressions needs clarification. It seems that attributing the rejection of *T* to Jackson in order to curb Soames' objections goes hand in hand with having to attribute a confused notion of meaning and synonymy to Jackson.

Second, if (a) and (b) are not synonymous, what is the relationship between the two expressions according to Jackson and, above all, according to FM? According to FM, the relationship would consist "only" in the description (b) fixing the reference of the term (a). The affinity of meaning would be reduced to (b) fixing the reference of (a) (See p.241, note 285). Let us call this thesis *R*. According to FM, accepting *R* instead of *T* would lessen some of the forcefulness of Soames' main objections to Jackson, and two-dimensional descriptivism in general, since the semantic affinity between (a) and (b) required by *R* is supposed to be much weaker than that of synonymy. Now, *R* is only misleadingly and superficially weak in terms of the features of meaning it requires to be recognized as shared by (a) and (b); and to that extent, its forcefulness to avoid Soames' objections diminishes considerably. Let us see, according to Jackson and FM, (b) fixes the reference of (a), at least in part, since both have the same A-intension. In fact, they not only have the same A-inten-

sion, but also the same C-intension. In addition, both Jackson and FM acknowledge that competence in the use of (a) requires knowledge (perhaps implicitly) that (a) designates the actual watery stuff of our acquaintance. That is, someone competent in (a) is able to know that water is the substance possessing the property literally expressed by description (b). Given what it is to be competent in (a) and what it is to be competent in (b), it seems that it is not possible to be competent in both and not know that both refer to the same, according to FM and Jackson. They are expressions that would pass a “quasi-Fregean” test of the same cognitive content: a competent English speaker who accepted, under ideal conditions, a sentence Sa would also accept the corresponding sentence Sb . If this is not a feature of strong semantic affinity between (a) and (b), few features will enjoy such a condition. Thus, accepting R implies accepting 1): that (a) and (b) share A-intension, and accept 2) Almost every competent English speaker is supposed to have knowledge (perhaps implicit) that the term “water” designates the actual watery stuff of our acquaintance. If (1) and (2) are true, the semantic features they share, (a) and (b), are not insignificant, but of considerable strength. At this point, one may wonder whether the acceptance of 1) and 2), presupposed by R , will not suffice to revive the full force of Soames’ objections to Jackson.

While FM’s analysis has a systematic character and offers relevant and original contributions in the final chapters of the book, the chapters dedicated to Mill and Locke, as well as chapter six, could perhaps have been included in the chapters devoted to Kripke and Putnam, since their contributions are fundamentally related to their theories and are less relevant to the current debate on NKT reference than those in the other chapters. Notwithstanding the foregoing, this book will interest anyone who is immersed in the discussion surrounding the reference of NKT, and is certainly a relevant contribution.

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