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Referring to Moral Terms: A Defense of Moral Naturalism

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Abstract

The project of realist moral naturalism is desirable for many philosophers. Proponents of realist moral naturalism believe that ordinary commonsense assumptions about moral claims are cognitively truth-apt. Realist moral naturalism, in this context, is shown to have developed through the works of Moore, Kripke, Putnam, Boyd, Horgans, and Timmons. Some raised objections and some sought solutions to justify the theory. In this paper, the author argues that the current formulation of Horgan and Timmons's argument cannot rule out the application of causal semantic theory to moral terms. In addition, the author illustrates that Boyd's project works well, and the causal semantic theory is applicable to moral terms.

Keywords: Realist moral naturalism, Moore, Boyd, Kripke, Putnam, causal semantic theory

Introduction

Moral naturalism as a philosophical thought has been discussed in fields ranging from metaphysics to semantics. Moral realists acknowledge that the claim that the statement "torturing innocent children is morally wrong" is true. In addition, realist moral naturalism is expected to remain a parsimonious theory, which means that this theory does not posit non-natural moral entities to make moral claims truth-apt.[1] Indeed, the success of this theory depends on the existence of an appropriate semantic theory upon which one can make moral claims true without positing non-natural moral entities. In the early half of the twentieth century, while

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finding identical relations between moral and natural terms, some philosophers attempted to build up such a semantic apparatus. This project, however, faced serious difficulty because of the objections raised by G. E. Moore. Appealing to the causal semantic theory developed by Kripke and Putnam in the second half of the twentieth century, Richard Boyd developed a new version of realist moral naturalism that is expected to be immune from Moore's objection. Recently, Horgan and Timmons appealed to the idea of a moral twin-earth and argued that Boyd's project fails too. The initial part of this article is a review of the development of moral semantic naturalism in the twentieth century and explains the moral twin-earth argument against it. Another aspect examined is how Boyd's moral naturalistic semantics is a version of causal semantic theory, despite Horgan and Timmons's claim.

Why is Moral Naturalism Desirable?

It is generally believed that an ideal plausible metaethical theory is one that has the following elements. Firstly, such a theory ought to maintain the ordinary and common-sense presumptions about moral discourse and practice, such as the idea that moral statements are genuinely truth-apt, or there are right answers to many moral questions. Secondly, a desirable theory should be metaphysically parsimonious, that is, this theory does not posit non-natural entities that are not introduced by natural sciences. Thirdly, such a theory is epistemologically innocent, that is, the theory does not posit entities that are far from our epistemic access, and finally, such a theory should be congenial with plausible general views and assumptions. If a metaethical theory can satisfy these conditions, it will be highly regarded by many philosophers.

For some, realist moral naturalism is purported to meet the mentioned conditions. It is not easy to define moral naturalism in a way that covers all the theories defending this doctrine, but in general, it is part of the broader project, that is, metaphysical naturalism.[2] Roughly speaking, based on this view, all facts are natural facts. Natural facts are understood as facts in the natural world. In other words, our best guide to metaphysical truth is

natural science. Simon Blackburn clearly describes the ambition of moral naturalism in the following sense:

> To ask no more of the world than we already know is there—the ordinary features of things on the basis of which we make decisions about them, like or dislike them, fear them and avoid them, desire them and seek them out. It asks no more than this: a natural world, and patterns of reaction to it (Blackburn, 1984, p.182).

Moral naturalism encompasses a diverse family of metaethical views, including expressivist, constructivist, error theoretic, and relativist understandings.[3] But in the narrow sense "moral naturalism" often is defined as a view that stands in contrast to all these "anti-realist" views. According to moral naturalism in the narrow sense, there are objective moral facts and properties, which are natural. Throughout this paper, this sense of moral naturalism is employed.

Moral naturalism is supposed to satisfy the desirable mentioned conditions. As it is a form of realism, it keeps the robust sense of moral objectivity and moral knowledge, allowing moral utterances to be truth-apt in straightforward ways and for some of them to be true. Additionally, as a form of naturalism, this theory is committed to entities that are accepted in natural sciences, and one can have causal epistemic access to them. Indeed, the success of moral naturalism depends on a semantic theory that properly ties moral terms to natural terms. So, the question is which semantics is appropriate work for moral naturalism.

The Classical Conception of Semantic Naturalism

With the rise of analytic philosophy in the first half of the twentieth century, the question of meaning became the most important philosophical question. Following this tradition, most of the metaethical inquiries focused on questions like: what is the meaning or definition of ethical terms or concepts like 'right,' 'wrong,' 'good,' and 'bad'? Or, what is the nature, meaning, or function of judgments in which these and similar terms or concepts occur? Or, what are the rules for the use of such terms and sentences? How are moral uses of such terms to be distinguished from non-moral ones? What is the

meaning of the "moral" when in contrast with the "non-moral"? (Frankena, 1963, pp. 78-79).

Although during this period, there were different theories of meaning, and philosophers who dealt with metaethics had different views about meaning; a certain conception of semantic analysis was commonly accepted by them. Timmons calls this view the classical conception of semantic analysis:

> According to the classical conception of semantic analysis, to analyze the meaning of a term or expression involved associating with that term or expression some other term or expression that was *synonymous* with the analysandum term or expression. Sentences expressing synonymy relations thus represented a class of sentences -*analytic sentences*- whose truth was solely a matter of the meanings of the constituent terms. Analyzing the meaning of a term or expression, then, was supposed to yield an *analytic definition* of the term or expression. But not just any analytically true sentence expressing a synonymy relation between a moral term or expression and some other term or expression would count as an *analysis* of the analysandum term or expression After all, moral terms like 'right', 'wrong', 'obligatory', and 'forbidden' are interdefinable. For example, 'right', as applied to actions, can be defined as the 'not wrong'. Finding synonyms for moral terms is easy if one picks from among the moral vocabulary (Timmons, 1999, p 28).

Based on this classical semantic view, moral naturalists have to find synonymous relations between moral terms and expressions on the one hand and non-moral terms and expressions on the other hand. Then, they would search for reductive analytic definitions of moral language. Thus, for them, semantic analysis of moral discourse means providing reductive analytic definitions of moral terms and expressions. So, moral terms like 'good,' 'wrong,' etc., were supposed to be analytically reducible to psychological, sociological, or biological terms. For example, roughly speaking,

based on this semantic view and evolutionary biology, a moral sentence like 'X is good' is synonymous with a biological sentence like 'X is useful for the survival of humans', and consequently, the term 'good', in moral language, is analytically defined in terms of what is useful for the survival of humans.

Nevertheless, this classical semantic project faces a difficulty— G. E. Moore (1903) raises a strong objection against the form of semantic naturalism, arguing that moral naturalism falls into the trap of what he calls 'the naturalistic fallacy' (p.9). Moore's argument, known as 'the open question argument,' seriously casts doubt on the main idea of semantic realism, according to which moral terms and expressions are synonymous with natural (or any other non-moral) terms and expressions. Moore's open-question argument is designed to show that there is no analytic definition of a moral term. So, he refutes this idea that fundamental moral terms like 'good' have analytically true naturalistic definitions (p. 10).

Moore holds that if 'good' is identical to a natural property, e.g. pleasure, then asking whether it is true that 'good' is identical to 'pleasure' is an odd question because that would be asking whether a tautology is true (p.13). If good was analytically identical to pleasure, the sentence, 'good is pleasure,' is tautological, like the sentence 'an unmarried man is a bachelor.' Any competent speaker (anyone who understands the sentence and the meanings of the terms it contains) will know *a priori*, based on the meaning of the terms contained in the sentence, that the sentence is true. If a sentence is analytically true, there is no open question about it for the competent speaker. The question is open if, and only if, it is possible for someone to completely understand the question yet not know its answer; otherwise, the question is closed (Moore, p16).

For example, if a competent speaker of English acknowledges that John is an unmarried man, it is a stupid question if he asks whether John is a bachelor. This question is closed based on Moore's terminology. Similarly, if good is analytically identical to a natural

property P, it would be a close question to ask whether an entity that has natural property P is good or not.

In addition, if the two properties, e.g., good and pleasure, are synonymously identical, then the sentence 'pleasure is good.' is a tautology. Then, one can be equally certain that this sentence is as true as the statement, 'pleasure is pleasant.' Moore holds that the certain truth of these claims is far from equal: "Whoever will attentively consider with himself what is actually before his mind when he asks the question 'Is pleasure (or whatever it may be) after all good?' can easily satisfy himself that he is not merely wondering whether pleasure is pleasant" (1903, p.16). For Moore, this confirmed that 'good' could have meaning while not being reducible to a natural property. Therefore, the classical version of moral semantic naturalism, moral terms, like 'good,' have analytically true naturalistic definitions) came across a serious obstacle in Moore's open-question argument that led many philosophers to give up this idea.

New Wave Semantic Naturalism

Moore's argument refuted the classical semantic project according to which moral terms are analytically reducible to naturalistic terms (the terms used in natural sciences). The works of Kripke (1980) and Putnam (1973, 1975) in the philosophy of language, however, brought new hope for the revival of naturalistic moral semantics. Kripke and Putnam argue against a pair of related views about proper names and natural kind terms: the descriptivist semantics according to which the meaning of a proper name and natural kind term is a description, or a bundle of descriptions, satisfied by all and only members of the kind. They also reject the internalist view about meaning that holds that the meaning of such a natural kind term, the relevant description, is fully grasped by competent users of the term so that what fixes the extension of the term supervenes what is internal to the user (Hashemi, 2022, pp. 961-963).

Putnam mainly rejects internalism and its central claim by saying that "meaning ain't in the head" while Kripke tries to show that natural kind terms are much like proper names, and he argues

that the descriptivist semantics cannot be applied in the case of natural kind terms as well as proper names (Hashemi, 2022, p. 960). Kripke and Putnam designed a new semantic theory for names and natural kind terms which is known as the causal theory of reference. As per this theory, there is a causal connection between speakers' uses of a term and the thing to which the term refers. The theory explains how the reference of a term is determined through, for example, baptism or a kind of naming ceremony, and how the speakers have causal access to the thing that the terms refer to via a causal chain (there are causal interactions between speakers and the world).

The works of Putnam and Kripke explicitly show that there are identical sentences that are not obviously and a priori knowable. For instance, the property of being water is identical to the property of being composed of H_2O molecules. Heat is identical to molecular motion. Temperature is identical to molecular kinetic energy, and so on. So, it is possible to have *a posteriori* identities which are discovered through scientific inquiries. In addition, according to Kripke and Putnam, names and natural kind terms are rigid designators. Such expressions refer to the same entity within every possible world in which that entity exists. So according to this idea, identity sentences like 'Water = H_2O' are necessarily true without being analytic. Also, we can have informative definitions, not analytic definitions, which are known *a priori* through conceptual analysis, but rather synthetic definitions, which represent the essence of the entity, property, or kind referred to by a certain term.[4]

The developments of the philosophy of language and new semantics, especially (the works of Putnam and Kripke), were motivations for the reconstruction of moral naturalistic realism in the 1980s in the form of the non-reductive naturalism posited by Cornell realists[5] such as David Brink (1989) and Richard Boyd (1988).[6] According to Cornell realism, moral properties are constituted by, or multiply realized by, or supervene upon non-moral properties, but they are not reduced to non-moral properties like the classical view. Miller explains the difference between this

naturalistic approach and the mentioned reductive one in this example. Consider the moral property of rightness:

> We can imagine an indefinite number of ways in which actions can be morally right. Non-reductionist naturalistic cognitivists think that, in any one example of moral rightness, the rightness can be identified with non-moral properties (e.g. the handing over of money, the opening of a door for someone else, etc.). But they claim that, across all morally right actions, there is no one non-moral property or set of non-moral properties that all such situations have in common and to which moral rightness can be reduced (Miller, 2003, p.139).

The Cornell realists state that moral properties were higher-order functional properties, such that they were not reducible to lower-order properties, but were nevertheless properties of the natural world, like the properties of the social sciences, and were thus natural properties. For example, one might argue that certain natural kinds like 'gene, organism' are not reducible to natural kinds in biology and that mental types like being in pain are not necessarily reducible to neurological types like being in a state of C-fibre simulation, and yet these things play a role in successful scientific explanations. Similarly, it might be thought that moral properties like 'rightness' are not clearly reducible to natural kinds in physics, and yet there are natural properties that can play a role in scientific explanations (Miller, 2003, p.139).

Moral properties are thus realized by and hence supervene on natural properties. So, they are supposed to be treated like natural properties. Consequently, there should be an appropriate semantic that allows moral terms and expressions to pick out certain functional properties. These functional properties have their essence revealed by the generalizations of some normative moral theory that best fits with our beliefs, both moral and non-moral. So, there was a need for a new semantic, like the causal theory of reference for moral terms. Richard Boyd (1988) tried to bridge this gap among the Cornell realists. He started the new wave of moral semantics with

the view of trying to apply the mentioned semantic developments in the philosophy of language to moral language.

Considering Kripke and Putnam's semantic theory, Boyd holds that moral terms such as 'good' are like many other terms, have natural definitions representing the essence of the property that term expresses. So, the property goodness is identical with a natural property, even though the term 'good' is not analytically synonymous with any naturalistic term or phrase designating the relevant natural property (Boyd, 1988, pp. 194-195). He also claims that moral terms have synthetic definitions that require that such terms be rigid. Like natural terms, moral terms allegedly rigidly designate the properties (natural properties for the ethical naturalist) to which they refer. It is the rigidity of moral terms that underlies the necessity possessed by synthetic definitions (Boyd, 1988, pp.209-212).

Boyd points out that, similar to proper names and natural kind terms, there are causal connections between a moral term and relevant natural properties. He says that reference is a matter of there being certain causal connections between the use of moral terms and the relevant natural properties. According to the general view of the causal chain semantic theory by Kripke and Putnam, once the reference of a name has been fixed, it retains its reference as long as its user intends it to refer to the same object/kind as it did when s/he acquired the name. For example, once the reference of 'water' has been fixed, 'water' refers to water in all possible worlds, and whenever I use the term 'water', intending the term to have its customary reference, it refers to water. In Boyd's account of this theory, reference is essentially an epistemic notion, and so the relevant causal relations constituting reference are those causal connections involved in knowledge-gathering activities:

> *Roughly,* and for nondegenerate cases, a term *t* refers to a kind (property, relation, etc.) *k* just in case there exist causal mechanisms whose tendency is to bring it about, over time, that what is predicated of the term *t* will be approximately true of *k* (excuse the blurring of the use-mention distinction). Such mechanisms will typically

> include the existence of procedures which are approximately accurate for recognizing members or instances of *k* (at least for easy cases) and which relevantly govern the use of *t,* the social transmission of certain relevantly approximately true beliefs regarding *k,* formulated as claims about t. (again excuse the slight to the use-mention distinction), a pattern of deference to experts on *k* with respect to the use of t, etc. . . . When relations of this sort obtain, we may think of the properties of *k* as regulating the use of *t* (via such causal relations) (Boyd, 1998, p. 195).

There are elaborations on Boyd's view, but Horgan and Timmons formulate his view as the "Causal semantic naturalism (CSN) thesis": "CSN: Each moral term t rigidly designates the natural property *N* that uniquely causally regulates the use of t by humans" (Horgan and Timmons, 1992, p.159).

Thus, based on CSN, each moral term *t* should have a synthetically true natural definition whose definiens characterizes, in purely natural terms, the natural property that uniquely regulates the use of *t* by humans (Timmons, 1992).

Moral Twin-Earth Argument against Boyd's Semantics

Considering Putnam's twin-earth scenario, Horgan and Timmons oppose Boyd's moral semantics by constructing similar thought experiments about moral terms. In order to defend externalism about meaning, Putnam draws a fictional scenario that there is a twin-earth which is identical to planet in all respects except that the clear liquid filling oceans, rivers, and lakes on the twin-earth has a different molecular structure than that of the water found in our planet, namely XYZ instead of H_2O. Nevertheless, they have the same phenomenal properties. On this earth twin, there is a twin equivalent of every person and thing here on the actual earth. The twin- earthlings who refer to their language as 'English' call XYZ 'water' as we call H_2O water. Now the question is raised that when an earthling and her twin say 'water' do they mean the same thing? Putnam's reply is that we intuitively say No because the earthling

refers to a substance which is H_2O by 'water', while the twin-earthling refers to a substance which is XYZ by the same term. So, our intuitive judgment is that the referent, i.e., the semantic meaning of 'water', is different on the earth and twin-earth (Putnam, 1975, pp.222-227). Additionally, once they have a conversation about a phenomenally similar liquid and use the same term, 'water,' there is no genuine disagreement over the meaning of water between them; rather, they are talking past each other.

Horgan and Timmons argue that if CSN is true, a similar scenario should be applied to moral terms as well, so they draw a moral twin-earth scenario as follows. Moral twin-earth is similar to the earth in most respects. Twin-earthlings behave like earthlings, speak twin English, and they make moral judgments in this language. If earthlings visited this twin-earth they would think that twin-earthlings use moral terms like earthlings. The only difference between the earth and the twin-earth is in the process of causal regulation of moral properties. When earthlings use moral terms, such as 'good' and 'right', their uses of the terms are causally regulated by functional properties whose essence is captured by the consequentialist normative theory, while twin-earthlings' use of moral terms is causally regulated by functional properties whose essence is captured by the deontological theory (Horgan and Timmons, 1991, pp.457-461).

Suppose a group of earthlings travel to the twin-earth and meet their twins, and at some point, a moral dilemma (e.g., the trolley problem) occurs. In this situation, the earthlings judge an action as moral and permissible based on their accepted normative view, that is, consequentialism, while their twins argue that the action is immoral and impermissible according to consequentialism. So, a moral disagreement arises between the two groups. Horgan and Timmons ask what the nature of this disagreement is. The natural disagreement between the earthlings and their twins can be interpreted in two distinct ways. One is to say that the differences are analogous to those between the earth and twin-earth in Putnam's example. It implies that moral terms used by earthlings rigidly

designate the natural properties that causally regulate their use, while the moral terms used by twin-earthlings rigidly designate the natural properties that causally regulate their use. So, the terms refer to different properties on the earth and the twin-earth. If that is so, then the moral terms used by earthlings and twin earthlings differ in meaning and are not inter-translatable, and earthlings and twin-earthlings are talking past each other in their discussions. The second option is to say that they have a genuine moral disagreement. They are discussing the same things, and they refer to the same properties in their moral disagreement, as the moral disagreement might happen between two groups of earthlings (Horgan and Timmons, 1991, p.460).

Horgan and Timmons believe that if the causal theory of reference were appropriately applicable to moral terms like Putnam's twin-earth thought experiment on water, the earthlings and their twins would really talk past each other when they engage in this moral disagreement. But the moral twin-earth thought experiment does not yield this intuition for the competent speakers of the language who have substantial intuitive mastery of the syntactic and semantic norms governing the proper use of terms in their language; rather, the intuition is that the earthlings and twin-earthlings have a genuine disagreement about what is morally right. Therefore, according to Horgan and Timmons, causal semantic theory is not applicable to moral terms, and Boyd's theory, namely CSN, is not successful.

Why Boyd's Semantics is Defensible

Before assessing the moral twin-earth argument, it is worth mentioning that one important factor is neglected by Horgan and Timmons in describing Boyd's semantic theory. As we already mentioned, Boyd explicitly puts emphasis on the role of epistemology in his semantic theory:

> The connection between causal theories of reference and naturalistic theories of knowledge and of definitions is quite intimate: reference itself is an epistemic notion and the sorts of causal connections

> which are relevant to the reference are just those which are involved in the reliable regulation of belief (Boyd, 1988, p.195).

He explicitly ties the theory of reference to naturalistic epistemology in order to bridge the gap between language and the physical external world. He articulates that our knowledge of natural entities helps us to regulate and determine the reference and the use of terms.

Nonetheless, Boyd allows fallibility in our natural epistemology, and whenever the reference of a term is determined, users of the terms can refer to it through a causal chain.

> The notion of reference is fundamentally an epistemological notion. *Semantic Theory - insofar as it is a branch of Philosophy - is a branch of epistemology.* […] In deciding issues in the theory of reference it is, therefore, appropriate to make use of the best available epistemological theories. *The true theory of reference will be a special case of the true theory of knowledge: the true theory of reference for theoretical terms in science will be a special case of the true theory of the epistemology of science* (Boyd, 1993, p. 503).

As we already mentioned, Horgan and Timmons formulate Boyd's semantic theory in a form, which is similar to Kripke and Putnam's causal semantic theory about natural terms. They describe Boyd's view as the CSN thesis. According to CSN, there is a single natural property, *P*, that causally regulates the use of each moral term by humans, whereas Boyd mentions in his paper that there are homeostatic clusters of properties that causally regulate the use of a moral term (Boyd, 1988, p 195). So, instead of a single natural property, there are several different properties that regulate the use of the term. So, Boyd's theory should be reformulated in a way to keep cluster properties: Each moral term, *t*, rigidly designates a natural entity in a way that homeostatic clusters of properties uniquely and causally regulate the use of *t* by humans.

Consider the mentioned difference between Boyd's theory and Kripke and Putnam's theory. Only a single property regulates

the use of natural kind terms like 'water.' Only this essential property should be changed in the twin-earth scenario, while according to Boyd's theory, clusters of properties are involved in the regulation of the use of moral terms. In the case of Putnam's thought-experiment, only one property (H_2O in the earth, and XYZ in the twin-earth) causally regulates the use of the term, 'water' by the residents. According to Boyd's semantic theory, homeostatic clusters of properties must be involved in the process of regulation of the use of moral terms in both the earth and its twin. It is very likely that some of these properties might be similar in both the earth and its twin, which leads us to a genuine moral disagreement when we engage in moral discussion with our twins in the twin-earth instead of talking past each other in Putnam's scenario.

In addition, our relationship with moral terms is not as neutral as our relation with natural kind terms or other natural properties. It is not true to say that when we are naturalists, all the natural properties should be treated in the same manner in all respects. It is possible that our intuitions, in the twin-earth test, about moral, psychological, and social properties are different from our intuitions about other natural properties, which are totally independent of us.[7] As Geirsson explains, it is not as easy as natural properties, to have a good and hard objective look at our intuitive judgment regarding moral properties. The reason is that moral properties are an integral part of our social and individual lives (Geirsson, 2003, p.121).[8] It seems to me that Horgan and Timmons simplify the scenario in favor of their argument, while if it is possible to extend the twin-earth scenario for Boyd's theory and moral terms, the mentioned and many other unmentioned differences, that make the situation more complicated, should be taken into consideration.

The author does not claim that if one considers these differences, one can easily apply the twin-earth scenario, the same way one can apply natural kind terms, to Boyd's semantics, and the same result would be achieved. This means earthlings and their twins talk past each other when they use the same moral terms in their discussions. The author simply means that the current formulation of the moral

twin-earth argument is not a knock-down argument against Boyd's semantic theory. Horgan and Timmons simplify Boyd's theory and consider it like Kripke and Putnam's theory, while Boyd's theory is a more sophisticated version of causal semantic theory.

In addition, there is a set of tests to determine whether a semantic theory is a version of the causal semantic theory or not, and Putnam's twin-earth scenario is one of them. Horgan and Timmons try to show that the expansion of causal semantic theory to moral terms is not tenable due to the fact that in the case of the thought-experiments based on the twin-earth, our intuitions about the semantics of natural terms are significantly different from our intuitions regarding moral terms. It has been argued that there are good reasons explaining why our intuitions about moral terms might be different from the natural term cases in the scenario that Horgan and Timmons draw. So, the current form of their argument does not reject this idea that moral terms cannot be treated via a causal semantic theory like Boyd's theory. There is still a pair of tests that help us to examine whether Boyd's theory is a version of causal semantic theory. Since the current form of the moral twin-earth argument is not able to completely refute Boyd's semantics,[9] one can show that Boyd's semantic theory explains the problem of error and the problem of ignorance of moral terms. Thus, it can be concluded that the causal semantic theory is applicable to moral terms, and Boyd's theory is a version of causal semantic theory.

The original causal semantic theory intended to remove the difficulties that appeared in the descriptivist theory in explaining the problem of ignorance and the problem of error. It is natural that both problems occur in the process of referring to objects, either individuals or properties, but the descriptivist theory rules out the occurrence of both. The problem of ignorance takes place because it is possible for competent users of terms (both singular and general terms) to succeed in referring to objects even though they do not have any knowledge about the non-trivial descriptions of those objects. It is possible to refer to objects without having any unique description about them. Consider Putnam's well-known example of

beeches and elms (Putnam, 1975, pp.226-227). We might not know anything about the difference between these two disparate trees, but whenever we use the term 'beech,' we successfully refer to beeches, and by the term 'elm,' we successfully refer to elms too. The example clearly shows that despite the main thesis of the descriptive theory, ignorance about objects is not a serious obstacle in the way of referring to them.

Likewise, the Problem of Error might emerge due to the fact that competent users of terms associate erroneous and incorrect attributes about objects with the objects' names or terms. Butut they are still able to successfully refer to the objects. Kripke asks us to imagine that gold might really be blue, but owing to some optical illusion, it appears to us yellow, or tigers do not truly have four legs, but we perceive them as four-legged animals. However, whenever we become aware of these facts, we confess that we have false beliefs about gold or tigers. Having false beliefs about objects does not rule out our ability to pick them out by terms (Kripke, 1980, pp.118-119).

As in the causal theory of reference or direct theory of reference, the pivotal idea underpinning this theory is that (the use of) a name refers to whatever is linked to it in the appropriate way, a way that does not require speakers to associate any identifying descriptive content whatsoever with the name (Reimer and Michaelson, 2014). This theory has two components: the first part focuses on the explanation of names or terms, introductions, or baptism and how referents are fixed, and the second part tries to deal with the aspect of names or term transmission. According to the first component, referents are initially fixed by dubbing, in this part some descriptions might be involved in this process, and the second component of this theory explains that after this initial referent-fixing, the speakers and users of names or terms can successfully refer to objects through the causal changes stretching back to the dubbing of the objects with those names or terms (Reimer and Michaelson, 2014).[10]

Subsequent users of those names and terms are able to refer to the objects just by hearing the names and terms without any need for

association of some descriptions of objects with the names and terms. Thus, if Mary hears water from someone else, she can successfully refer to this substance just by using the term 'water.' She just needs to intend to refer to what that person referred to by using this term without considering any description of water. So, this new theory is compatible with the plausibility and occurrence of the Problem of Ignorance. Moreover, Mary might have a false belief about water. Again, as her knowledge about the attributes of water does not play any role in the mechanism of reference, there is no conflict between this theory and the Problem of Error. So, if this theory is a causal semantic theory, it has to be capable of explaining the occurrence of the problem of ignorance and the problem of error.

Boyd's semantic theory can deal with these two common issues, as well as Kripke and Putnam's theory. When the uses of moral terms like 'good' are regulated by homeostatic clusters of properties for refereeing the natural entity, which is *a posteriori* identical to goodness,[11] whenever someone uses this term, she directly refers to that entity. Imagine an ordinary person without any conceptual ignorance who fails to have true beliefs about ethical properties. He does not know even anything about metaethical inquiries and has no metaethical views about the nature of ethical facts at all. But when he uses moral terms in his language and has moral judgments, based on Boyd's semantics, this person directly refers to the true properties that moral terms designate. His metaethical ignorance does not yield to this idea that he is talking about something other than the ones that some form of true metaphysical or metaethical science has discovered or will discover in the future. Therefore, the problem of ignorance is explained based on Boyd's semantics.

Likewise, the problem of error can be justified. It is plausible that a competent speaker, even a philosopher who has his own metaethical theory, without any conceptual confusion and mistake has false beliefs about ethical properties and does not know what ethical discourse is ultimately true. For example, consider Moore's metaethical idea that ethical properties are non-natural properties. Imagine one day it will be shown through a true metaphysical or

metaethical science that Moore's idea is totally wrong about the nature of moral properties, according to Boyd's semantics Moore has a false belief about moral properties; but he does refer to real properties which moral terms designate, and he does not refer to non-natural entities he thinks that they are moral properties. So, the problem of error can be properly explained by Boyd's semantic theory.

Putting emphasis on the role of epistemology in Boyd's theory does not imply that competent speakers should associate certain descriptions with moral terms so that they can refer to the natural properties that the terms designate. The role of epistemology is only in the determination and the regulation of the references of the terms. It does not intervene in the mechanism of reference and, hence, does not pose any obstacle in explaining the occurrence of the problem of ignorance or the problem of error.

Conclusion

It has been argued that it is plausible to think that Horgan and Timmons's moral twin-earth scenario can make different intuitions about the uses of moral terms due to Boyd's reformation of causal semantic theory. In addition, it has been shown that Boyd's theory can maintain the advantages of the original causal semantic theory, that is, it can properly explain the occurrence of the problem of ignorance and error for moral terms. Therefore, this theory helps in applying the causal semantic theory to moral terms despite Hogan and Timmons's claim.

Endnotes

[1] It is qualitatively parsimonious because it does not imply non-natural or supernatural entities for explaining moral properties.

[2] It is not necessary to admit metaphysical naturalism in order to remain a moral naturalist. It is plausible that someone is only naturalistic in ethics while believing in non-natural entities, for example, in mathematics. But if someone commits himself to

metaphysical naturalism, s/he should accept one of the naturalistic theories on ethics.

[3] See Lenman, 2014.

[4] See Hashemi 2013.

[5] It is named Cornell realism because it was developed by philosophers with close connections to Cornell University.

[6] Another important factor that was very influential in the rise of Cornell realism was the theory of functionalism in the philosophy of mind. See Lenman, 2014, and Miller, 2003, pp. 138- 177.

[7] The author does not mean that these properties are mind-dependent, as anti-realists claim because there are no non-natural and supernatural entities according to naturalism. So mental properties are natural as well. It only means that even if we accept that moral, psychological, and social properties are natural, there are considerable differences between them and other natural properties like water, tiger, gold, etc., which would exist if there were no humans on the earth.

[8] Geirsson argues that there are many strong reasons why we should not accept Horgan and Timmons's intuition about moral terms. The author just mentioned some reasons here, but Geirsson articulates at least 6 reasons that show that the moral twin-earth argument fails to derail Boyd's semantic realism. See: Geirsson, 2003, pp. 118- 121.

[9] It might be said that the reformulation of the moral twin-earth argument by considering the mentioned differences yields the same result as the current form. The author is skeptical about this fact, but the burden of proof is the obligation of the proponents of the moral twin-earth argument to show that even if all the differences are taken into account, this argument still maintains its power.

[10] Kripke mentioned the name 'Neptune' was fixed by description, stipulated by the astronomer Le Verrier to refer to whatever was the planetary cause of observed perturbations in the orbit of Uranus. There are no contradictions in rejecting the descriptivist theory because the descriptions that might be associated with this

process do not play any role in the process of referring to objects (Kripke, 1980, footnote 42).

[11] It might be regulated through metaphysical or metaethical inquiries in general.

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