The open-endedness objection against sophisticated dispositionalism

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Resumo

O disposicionalismo sofisticado propõe uma redução naturalista do conteúdo mental sustentando que o conteúdo semântico de um símbolo mental é determinado a partir das causas da ocorrência deste símbolo sob condições ideais, i.e., condições sob as quais apenas o referente do símbolo pode causar a sua ocorrência. Contudo, Paul Boghossian desenvolveu a objeção da não-limitação para demonstrar que não é possível especificar estas condições ideais em termos não-semânticos, o que invibiliazaria a redução naturalista do conteúdo proposta pelo disposicionalismo sofisticado. Meu objetivo neste artigo é argumentar que a objeção da não-limitação é falha.

Abstract

Sophisticated dispositionalism proposes a naturalist reduction of mental content by claiming that the semantic content of a mental symbol is determined by the causes of the occurrence of this symbol under ideal conditions, i.e., conditions under which only the referent of a symbol can cause its tokening. However, Paul Boghossian developed the open-endedness objection in order to show that it is not possible to specify these ideal conditions in non-semantic terms, entailing that the naturalist reduction of mental content proposed by sophisticated dispositionalism is not viable. My goal in this paper is to argue that the open-endedness objection is flawed.

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John believes that this is a horse. This is a case in which a mental state has a determinate content, i.e., the belief that this is a horse. But in virtue of what does a mental state have a certain content? This is the problem of content determination. A naturalist response to it consists in specifying a natural fact in virtue of which a mental state has a determinate content. Among naturalist theories of content, causal theories try to solve this problem by appealing to the causes of a token of a mental representation. The starting point of causal theories is that the content of a mental representation is *dog* because dogs cause its tokening. Thus, the content of John's belief is *this is a horse* because a horse caused its tokening. Causal theories of content state that a mental state has a determinate content in virtue of causal links between this state and what it represents.

Although attractive, causal theories are threatened by a serious problem. Consider the content of a given mental symbol tokened in John, HORSE. The crude causal theory states that **(CCT)** The content of HORSE is *horse* if and only if it is a law that horses cause tokenings of HORSE.[2]

Another way of stating it is saying that the content of HORSE is *horse* iff the agent is disposed to apply HORSE only to horses. To say that sugar is disposed to dissolve in water is basically to say that it is a law that if sugar is placed in water, it will dissolve. Thus, (CCT) is a variation of a dispositionalist theory of content. But is (CCT) viable?

The problem is that (CCT) excludes the possibility of error. It doesn't allow John to have a tokening of a symbol with content *horse* that was not caused by a horse. If it is a law that horses cause a tokening of HORSE, then horses cannot fail to cause tokenings of HORSE. But the possibility of representation of a horse presupposes the possibility of its false representation. Under certain adverse conditions it is certainly a law that John would have a tokening of this symbol inspite of not being presented with a horse. There are always conditions sufficiently unfavorable that would make John misidentify a given item.

Assume that it is a law that horses in sunny days cause John to token HORSE. But it is also a law that cows in dark nights cause John to token HORSE. In cases like these, we are prone to say that the content of HORSE is *horse* and that what happened in the first case was a true representation and in the second case was a false representation. However, (CCT) implies that no is representation has occurred. Since both horses in sunny days and

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[2]In general, proponents of a causal theory of content assume the Language of Thought Hypothesis. Thus, the tokening of HORSE is assumed to be a token of an item in the Language of Thought.

cows in dark nights cause the tokening of HORSE, (CCT) entails that the content of HORSE is *horse or cow*. (CCT) implies that cows in dark nights and horses in sunny days do belong to the extension of HORSE because there is a nomic regularity between the tokening of HORSE and the presence of horses in sunny days as well as between the tokening of HORSE and the presence of cows in dark nights. (CCT) is unacceptable because it doesn't determine the correct extension of a mental symbol, it entails that insofar as there is a nomic regularity between an item and the tokening of a mental symbol, this item is included in the extension of that symbol. But the false representation occurs precisely when a symbolis applied to an item that is not included in its extension. This is the problem of misrepresentation: how is it possible for a causal theory of content not to exclude the possibility of false representation? A common strategy is to refine (CCT) in such a way that the content of a symbol is determined by the causes of its tokening in ideal conditions, i.e., conditions under which only the referent of a symbol can cause its tokening. However, when the conditions are not ideal, the tokening of a symbol can be caused by something that is not itsreferent and so the possibility of a false representation is open. In an ideal situation, the tokening ofa symbol covaries with the presence of its referent. I will call this theory "sophisticated dispositionalism"[3].

(SD) The content of HORSE is *horse* if and only if it is a law that under ideal conditions *C* horses cause tokenings of HORSE.

What are the perspectives of (SD) to solve the problem of misrepresentation? Since we are looking for a naturalist reduction of content, the ideal conditions *C* have to be specifiable in non semantic terms. There are various proposals of naturalistic specification of *C* available, in particular teleological ones. Teleological specifications of *C* identify the ideal situation with the situation where the producer system of the mental symbol is performing its function, i.e., is functioning properly. For instance, Dretske proposed a teleological specification of *C* in terms of the functions acquired by the producer system of the mental symbol through a learning process[4]. But is it really possible to make a specification of *C* without use of any semantic notion? Boghossian maintains that it is not[5]. He argues not only that the available proposals of naturalist specification of *C* are flawed, but that there are principled reasons to conclude that no form of sophisticated dispositionalism could

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[3] This theory is also called "type 1 theory".
[4] Cf. DRETSKE, 1986.
[5] Cf. BOGHOSSIAN, 1989; 1991.

ever specify in non semantic terms a situation in which only the referent of a mental symbol can cause its tokening.

Boghossian's objection to sophisticated dispositionalism focuses on the holistic character of the process which fixes beliefs, "belief-holism". According to belief-holism, under normal circumstances belief fixation is mediated by background theory, i.e., by the beliefs that the agent has. What contents an agent is prepared to assent to depends upon on what other contents that agent is prepared to assent to. Boghossian maintains that this dependence is arbitrarily robust – "just about any stimulus can cause just about any belief, given a suitably mediating set of background assumptions"[6]. In light of this, consider these examples. John may come to believe "this is a horse" as a result of seeing a cow because he believes in the belief Bel^1 = "the only animals in the vicinity are horses". John may also come to believe "this is a horse" although he is in front of a cow because he believes in the beliefs contained in the cluster of beliefs Bel^2 = {"whatever the Pope says is true", "the Pope said that this is a horse"}. And so on, where Bel^i = {Bel1, Bel2, Bel3...} is the cluster of background beliefs capable of mediating the transition from a stimulus of a non-horse to the fixation of the belief "this is a horse". Thus, this belief can be caused by a cow in any of an indefinite number of ways, corresponding to the potentially indefinite number of beliefs which could mediate this transition.

Belief-holism, thus, seems uncontentious. But what are the implications of it to the viability of a naturalist specification of the ideal situation? The sophisticated dispositionalist has to specify, without use of any semantic notion, a situation under which it is a law that the tokening of a mental symbol covaries with the presence of its referent. But belief-holism implies that the agent will be disposed to believe *this is a horse* in respect of an indefinite number of non horses, provided that the appropriate background beliefs are present. In light of this, Boghossiandefends that a naturalist specification of this situation is *in principle* impossible. But for whatreasons? Exactly how many reasons Boghossian provides for it is controversial. Nonetheless, in what follows I will evaluate the plausibility of one of these reasons which I will call, following Alexander Miller, "the open-endedness objection"[7]. My purpose on this essay is to argue that thisobjection fails to demonstrate the impossibility of a naturalist specification of the ideal situation.

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[6]Cf. BOGHHOSSIAN, 1989, pp. 539.
[7]Cf.MILLER, 2003.

There is a potential infinity of beliefs Bel^i that could mediate the transition from a non horse to the fixation of the belief "this is a horse". Thus, in order to guarantee the co variation between the token of HORSE and the presence of its referent in the ideal situation C, the naturalistic specification of C should exclude in this situation all beliefs Bel^i. The core of the open-enededness objection is that no naturalist specification of the ideal situation can guarantee the absence of a potentially infinite number of beliefs because only a specification that appeals to semantic notions can guarantee the absence of a potentially infinite number of items in virtue of their propositional content. The open-enededness objection simply takes it to be evident that any naturalistic specification of C lacks this capacity. The assessment of its plausibility should be made, therefore, through this question: can the naturalist specification of a situation assure the exclusion of each belief included in a potentially infinite set of beliefs? I will defend that there is no principled reason to determine that no naturalistic specification can have this consequence. At most, we can determine whether or not a particular proposal of a naturalist specification of C achieves this result. Only through an individual assessment of each proposal is it possible to determine if there is an available naturalists pecification which assures the absence of the potentially infinite number of beliefs Bel^i.

Let's begin this investigation taking as point of departure this simple question: is the naturalist specification of C capable of assuring the exclusion of the beliefs included in the finite set $Bel^A = \{Bel1, Bel2\}$? Suppose that in order to exist a covariation between HORSE and horses, it is enough to exclude the cluster of beliefs in Bel^A. Thus, how is it possible to guarantee in a naturalist way that both Bel1 and Bel2 will be absent in C? Obviously, it can't be done through conditions like "S should not believe that the only animals in the vicinity are horses" (in order to exclude Bel1) or "S should not believe in everything that the pope says" (in order to exclude Bel2), since both conditions appeal to semantics notions. So the only way to achieve this result is to guarantee that C doesn't satisfy the natural conditions under which the agent is capable of acquiringBel^1 or Bel^2. But how can it be done?

Given the fact that it is problematic to specify natural conditions under which certain beliefs are absent and that what is relevant to the success of the open-enededness objection is that the set of cluster of beliefs capable of interfering in the co variation between the token of a symbol and the presence of its referent is potentially infinite, suppose that it is possible to specify naturalistically the conditions in which Bel^1 and Bel^2

are absent and let's call them *CN*. Would it be possible to specify natural conditions *CN**, extendible from *CN*, that guarantee the absence of all beliefs in the set Bel^B = {Bel1, Bel2, Bel3}? Since the difference between Bel^A and Bel^B is Bel^3, it seems to be possible. But then would it be possible to specify natural conditions *CN*** extendible from *CN**that guarantee the absence of all beliefs of the set Bel^C = {Bel1, Bel2, Bel3, Bel4}? Since the difference between Bel^B and Bel^C is Bel4, it also seems to be possible. What this exercise shows is that given the fact that natural conditions in order to exclude certain beliefs are available, it seems possible to extend these conditions in order to exclude other beliefs and so on. Prima facie, this is a process without a predetermined limit. In light of this, is it possible to extend *CN* enough in order to exclude all beliefs in the potentially infinite set Bel^i = {Bel1, Bel2, Bel3...}? Note that the objection of open-enededness presupposes that an extension of this nature is in principle not possible. But what reasons Boghossian provides to support this claim? None, he simply takes it for granted. Unfortunately this is not a legitimate move.

First of all, at no time does Boghossian clearly maintain that Bel^i is infinite. What he repeatedly claims is that it is potentially infinite, a set that doesn't have a predetermined number of members. But it doesn't follow from the fact that a set doesn't have a predetermined limit that it is an infinite set; to assume that is to incur in a conceptual confusion. A set without a predetermined limit is a set with an indefinitely large number of members and it is possible that we don't know if that set is finite or infinite. In case of Bel^i, apparently what is occurring is that whenever we think we have already conceived all beliefs capable of interfering in the co variation between HORSE and horses, if we persist in our search we will always be able to conceive a belief that previously was not conceived, discovering thereby a new belief that is a member of Bel^i. Nonetheless, it doesn't follow from this that Bel^i is infinite[8]. After all, it is possible that we take this set as potentially infinite in virtue of an epistemic limitation – it is possible that in the course of the investigation we discover that it is a finite and conceivable set or that it is finite but so large that our cognitive system is incapable of grasping it. Furthermore, in order to verify that a given set is infinite, a demonstration of its infinity is required. However, in case of Bel^i not demonstration of this kind is available. In short, we simply don't know if Bel^i is finite or infinite, all that we know is that Bel^i is a set with an indefinitely large number of members.

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[8]It is not because we are always capable of conceiving a new member of a given set that this set is infinite. We arecertainly capable of continuously conceiving a new member of the set of atoms of the sun that until then was notconceived, but obviously this set is finite.

If the open-endedness objection assumes that it is impossible to extend *CN* sufficiently in order to exclude the totality of beliefs in Bel^i in virtue of the fact that this is an infinite set, this is an unjustifiable supposition because we don't know if Bel^i is infinite. However, since what this objection seems to assume is that from the fact that Bel^i is a potentially infinite set it follows that it is impossible to extend sufficiently *CN* in order to exclude all beliefs in Bel^i, what is lacking here is the justification of the supposition that natural conditions are not able to exclude an indefinitely large number of beliefs, a problem aggravated by the fact that it is certainly less plausible that its hould be impossible for natural conditions to exclude an indefinitely large number of beliefs than for them to exclude an infinite number of beliefs. Given that Boghossian doesn't offer any argument to support this assumption, there is no reason to conclude that it is impossible to extend *CN* in order to exclude all beliefs Bel^i in *C*.

We can only know if the natural conditions to exclude the beliefs in the potentially infinite set Bel^i are extendible from the natural conditions to exclude the beliefs in the finite set Bel^A if weal ready know which natural conditions are able to exclude the beliefs in Bel^A. Evidently, an evaluation of this nature can only be made through an analysis of each available proposal regarding the natural conditions that guarantee the absence of Bel^1 and Bel^2. Given that Boghossian doesn't do that, there is no guarantee of the impossibility of this extension. Thus, the objection of open-endedness fails to demonstrate that there is no naturalistically specifiable situation in which the totality of beliefs able to make non horses cause the tokening of horse is absent. Maybe the fact that this set is potentially infinite complicates the implementation of the dispositionalist project, but this difficulty doesn't force us to conclude that in principle this project is doomed to fail.

The comparison with the analysis of other dispositional properties in natural science provides another reason to conclude that the potential infinity of Bel^i do not impose an insuperable problem to the dispositionalist. In many areas of natural science that use *ceteris paribus* clauses, the set of factors that inhibit the manifestation of a given disposition is also potentially infinite. Consider the solubility of water. *X* is soluble in water when in certain circumstances C',X would dissolve if immersed in a sufficient quantity of water. Notwithstanding, as C.B. Martin argues[9],there is a potential infinity of factors able to inhibit the solubility of *x* in water. For instance, common salt is not soluble in water if the water is already saturated or if it is surrounded by a strong electromagnetic field. But

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[9]Cf. MARTIN, 1984.

nobody would claim that the salt isn't water soluble, only that it is not possible to fully carry out an analysis of the dispositional property of solubility. Perhaps Boghossian is right in maintaining that sophisticated dispositionalism is doomed to fail because there is no non semantic specification of a situation in which only the referent of a mental symbol can cause its tokening. But the reason for this failure is not the one indicated by the open-endedness objection.

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