

BRAINS IN VATS AND SEMANTIC EXTERNALISM: NEW HOPE FOR THE SKEPTIC*

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ABSTRACT

Different thought experiments have been offered to argue for the skeptical claim that sound empirical knowledge is impossible. One of these thought experiments assumes that we are eternal brains in a vat with systematically delusory experiences. In (Putnam 1981), Putnam responds to the skeptical challenge that contrary to our initial assumption we can know a priori, i.e. independent from experience, that we aren't eternal brains in a vat. Putnam argues that the skeptical hypothesis that we are eternal brains in a vat is inconsistent with the received view regarding reference and truth, semantic externalism, which says that a referential expression e refers to an object o if and only if e is appropriately causally related to o . There are different versions of Putnam's argument. In this paper, I will discuss the three main versions of the argument; i.e. a reconstruction of Putnam's original argument in (Putnam 1981), Brueckner's simple argument (Brueckner 2003; 2016, Section 3 and 4), and a reconstruction of Brueckner's disjunctive argument (Brueckner 2016, Section 4). It is generally assumed that Putnam's original argument does not show that the skeptical hypothesis that we are eternal brains in a vat is inconsistent with semantic externalism. In this paper, I will argue that the same is true of Brueckner's simple argument and of Brueckner's disjunctive argument. Although from this it won't follow that semantic externalism is consistent with the skeptical hypothesis, it will show that it is also not yet decided that it is not.

Keywords: *Brain-in-a-vat Scenario, Skeptical Challenge, Semantic Externalism, Hilary Putnam*

1. Introduction

Different thought experiments have been offered to argue for the skeptical claim that sound empirical knowledge is impossible. For example, it has been argued that since the experiences of a brain in a vat whose sensory impressions are generated by a supercomputer are qualitatively indistinguishable from the experiences of a normal perceiver, we cannot rule out that we are *eternal* brains in a vat¹ with systematically delusory experiences. Moreover, it seems that if we are eternal brains in a vat with systematically delusory experiences, our beliefs concerning the external world are false. Since fallible knowledge, knowledge despite uneliminated possibilities of error, seems to be a contradiction in terms, the skeptic concludes that sound empirical knowledge is impossible. This is also known as the skeptical challenge or the skeptical argument.

In (Putnam 1981), Putnam responds to the skeptical challenge that the hypothesis that we are eternal brains in a vat is inconsistent with the received view regarding reference and truth; i.e. semantic externalism. According to semantic externalism, a referential expression *e* refers to an object/kind *o* if and only if *e* is appropriately causally related to *o*. This means that there is a causal relation of the right kind between *e* and *o*; e.g. a Kripkean chain of communication. Since we can know a priori that semantic externalism is true, Putnam's argument goes, we can know a priori that we aren't eternal brains in a vat.

There are different versions of Putnam's argument. In this paper, I will discuss the three main versions of the argument; i.e. a reconstruction of Putnam's original argument in (Putnam 1981), Brueckner's simple argument (Brueckner 2003; 2016, Section 3 and 4), and a reconstruction of Brueckner's disjunctive argument in (Brueckner 2016, Section 4). It is generally assumed that Putnam's original argument does not show that the skeptical argument is not sound; i.e. that one of its premises is false. In this paper, I will argue that the same is true of Brueckner's simple argument and of Brueckner's disjunctive argument. Although from this it won't follow that semantic externalism is consistent with the premises of the skeptical argument, it will show that it is also not yet decided that it is not.

¹ Eternal brains in a vat are brains that have been envatted for their entire life. The alternative to an eternal brain in a vat is a recently envatted brain in a vat. In this paper, I will concentrate on the eternal-envatment scenario. First of all, the recent-envatment scenario lacks the skeptical power of the eternal-envatment scenario, since as a recently envatted brain in a vat I still have true beliefs concerning the external world like my belief that I was born in Italy (Brueckner 2016, Section 4). Second of all, in this paper, I will concentrate on Putnam's argument against the skeptical challenge, and Putnam's argument is only an argument against the claim that we are eternal brains in a vat.

The paper is structured as follows. In section 1, I will present the skeptical argument in more detail. In section 2, I will discuss Putnam's original argument and Brueckner's objection to Putnam's argument that the argument is epistemically circular (Brueckner 1986). Following this (section 3), I will present Brueckner's simplification of Putnam's argument, and I will argue that neither Brueckner's simple argument nor Putnam's original argument is epistemically circular.

In section 4, I will argue that although neither Putnam's argument nor Brueckner's simple argument is epistemically circular, neither Putnam's argument nor Brueckner's simple argument shows that the skeptical hypothesis that we are eternal brains in a vat is inconsistent with semantic externalism. For example, following (Brueckner 2016, Section 4), I will argue that both Brueckner's simple argument and Putnam's argument contain a premise whose truth can only be known via experience. Since an argument against the skeptical claim that sound empirical knowledge is impossible should not contain premises whose truth can only be known via experience, it will follow that neither Putnam's argument nor Brueckner's simple argument shows that the skeptical hypothesis that we are eternal brains in a vat is inconsistent with semantic externalism. I will call this 'the problem of a posteriori truths'.

To avoid the problem of a posteriori truths, following the simple argument, Brueckner (2016, Section 4) presents a disjunctive argument. In section 5, I will try to reconstruct Brueckner's disjunctive argument. Following this (section 6), I will argue that although Brueckner's disjunctive argument avoids the problem of a posteriori truths, just like Putnam's argument and Brueckner's simple argument, it does not show that one of the premises of the skeptical argument is false. This will question the claim that semantic externalism is not consistent with the premises of the skeptical argument.

2. The Skeptical Challenge

The brain-in-a-vat thought experiment assumes that we are *eternal* brains in a vat whose sensory impressions are generated by a supercomputer; i.e. the supercomputer produces electrical impulses that stimulate the brain just like normal brains are stimulated as a result of perceiving external objects. Therefore, we can assume that the experiences of an eternal brain in a vat are qualitatively indistinguishable from the experiences of a normal perceiver. For example, the computer-generated experiences of trees are qualitatively indistinguishable from the experiences of trees of a normal perceiver. Following this, the skeptic argues as follows for the claim that sound empirical knowledge is impossible.

If the experiences of an eternal brain in a vat are qualitatively indistinguishable from the experiences of a normal perceiver, then,

according to the skeptic, we cannot rule out that we are eternal brains in a vat *with systematically delusory experiences*.

(A1) I don't know that I am not an eternal brain in a vat with systematically delusory experiences.

For example, the computer program features would have us believe that we have hands, can walk etc. I will call an eternal brain in a vat with systematically delusory experiences a '*BIV*', and I will call the claim that I am an eternal brain in a vat with systematically delusory experiences 'the skeptical hypothesis'.

(SH) I am an eternal brain in a vat with systematically delusory experiences.

If I am a *BIV*, the skeptic continues, then the propositions concerning the external world which I think I know to be true are false.

(A2) For an arbitrary proposition *p* concerning the external world which I think I know to be true: If I am a *BIV*, then *p* is false.

Take, for example, my belief that I have hands. If based on the computer-generated experiences I come to believe the proposition that I have hands, then, according to the skeptic, I am sadly mistaken. Since, according to (A1), I cannot rule out that I am a *BIV*, it would follow that I cannot rule out that the propositions concerning the external world which I think I know to be true are false. Since fallible knowledge, knowledge despite uneliminated possibilities of error, seems to be a contradiction in terms, the skeptic concludes that sound empirical knowledge is impossible.

There are several possible responses to the above argument. For example, Lewis (1979) modifies the claim that knowledge implies that all possibilities of error have been ruled out by replacing (A3) with (A3*).

(A3) An agent *A* knows a proposition *p* if and only if *p* holds in every (epistemic) possibility left uneliminated by *A*'s evidence.

(A3*) An agent *A* knows a proposition *p* if and only if *p* holds in every (epistemic) possibility left uneliminated by *A*'s evidence – Psst! – except for those possibilities that we are properly ignoring.

Here an epistemic possibility with respect to *A*'s evidence is a (metaphysically) possible world *w* such that *A*'s evidence does not rule out that *w* is actual. Following this, Lewis notes that unless we deal with epistemology and skeptical scenarios we usually ignore the possibility that we are eternal brains in a vat. According to such a solution, 'know' is context-dependent. For example, with an utterance of 'I know that I have hands' I would say something true as long as my interlocutors and I ignore skeptical scenarios like the brain-in-a-vat scenario.

However, following (Putnam 1981), the standard response to the skeptical argument is that we can rule out a priori that we are *BIVs*. As said above, Putnam argues that the skeptical hypothesis that we are *BIVs* is inconsistent with the received view regarding reference and truth; i.e. semantic externalism. Since, according to Putnam, semantic externalism is a priori true, Putnam concludes that we can rule out a priori that we are *BIVs*. In the next section, I will examine Putnam's argument in more detail.

3. Putnam's Argument

The claim that a referential expression *e* refers to an object/kind *o* if and only if *e* is appropriately causally related to *o* goes back to Putnam (1975), Kripke (1980) and Donnellan (1970). For example, Kripke and Donnellan argue that the referent of an ordinary name like 'Napoleon' is not determined by the properties that the speaker associates with the name, but by a so-called chain of communication. Kripke extends this claim to natural kind terms like 'tiger', 'water' and 'brain'. Since, in this paper, I will examine the question *whether the skeptical hypothesis that I am a BIV is not consistent with semantic externalism*, in what follows I will simply assume that semantic externalism (*SE*) is true.

(*SE*) My utterances of a referential expression *e* refer to an object/kind *o* if and only if they are appropriately causally related to *o*.

Following (*SE*), Putnam (1981) argues as follows for the claim that the skeptical hypothesis that I am a *BIV* is false. Assume that I am a *BIV*. Then my utterances of 'brain' are not appropriately causally related to brains, but to one of the following candidates (Brueckner 1986, cf. 2012, 11):

- (i) to the succession of experiences had by the *BIV* which are comparable to the experiences of brains of a normal perceiver,
- (ii) to the electrical impulses that stimulate the brain and thereby cause it to have experiences just like those described in (i), or
- (iii) to the computer program features that are causally responsible for the stimuli described in (ii).

Lets say that 'brain*' stands for one of the three candidates. Together with semantic externalism, it follows that my utterances of 'I am not a *BIV*' are true if and only if it is not the case that I am a *BIV**. Since, if I am a *BIV*, it is not the case that I am a *BIV**, it follows that as a *BIV* I say something true with my utterances of 'I am not a *BIV*'.

According to Putnam (1981, 7-8), the above argument has the following logical structure:

- (1.) I am a *BIV*. (Assumption, Conditional Proof (CP))
- (n.) I am not a *BIV*.
- (n+1) If I am a *BIV*, then I am not a *BIV*. (1–(n+1), CP)
- (∴) I am not a *BIV*. (from (n+1))

However, this presupposes that (*DW*) is true.

(*DW*) My utterances of ‘I am not a *BIV*’ are true if and only if I am not a *BIV*.

If (*DW*) is true, then we get the following argument for the claim that I am not a *BIV* (*PA*):

- (1.) I am a *BIV*. (Assumption, CP)
- (2.) If I am a *BIV*, then my utterances of ‘I am not a *BIV*’ are true if and only if I am not a *BIV**. (from (SE) and the Skeptical Scenario)
- (3.) If I am a *BIV*, then I am not a *BIV**.
- (4.) If I am a *BIV*, then my utterances of ‘I am not a *BIV*’ are true. (from 2 and 3)
- (5.) My utterances of ‘I am not a *BIV*’ are true. (from 1 and 4)
- (6.) My utterances of ‘I am not a *BIV*’ are true if and only if I am not a *BIV*. (from (*DW*))
- (7.) I am not a *BIV*. (from 5 and 6)
- (8.) If I am a *BIV*, then I am not a *BIV*. (1–7, CP)
- (∴) I am not a *BIV*. (from 8)

PA is logically valid. However, Brueckner (1986, cf. 2012, 24-5) objects to *PA* that in order to know that (*DW*) is the correct statement of the truth-conditions of my utterances of ‘I am not a *BIV*’, and not (*DW**), I need to know that I am not a *BIV* (speaking English).

(*DW**) My utterances of ‘I am not a *BIV*’ are true if and only if I am not a *BIV**.

Therefore, following (Alston 1989), Brueckner (2016, Section 2) calls Putnam’s argument *epistemically circular*; knowledge of one of its premises requires knowledge of its conclusion.

Before I will discuss Brueckner’s objection to Putnam’s argument in more detail, I will briefly present Brueckner’s version of Putnam’s argument. Following this, I will argue that neither Brueckner’s argument nor Putnam’s argument is epistemically circular.

4. The Simple Argument

In (Brueckner 2003) and (Brueckner 2016, Section 3), Brueckner proposes the following simplification (*SA*) of Putnam's argument:²

- (1.) My word 'tree' refers to trees.
- (2.) If I am a *BIV*, then it is not the case that my word 'tree' refers to trees.
- (∴) I am not a *BIV*. (from 1 and 2)

For premise (2) we can argue again with semantic externalism:

- (1.) If I am a *BIV*, then my word 'tree' is not causally related to trees. (from the Skeptical Scenario)
- (2.) If my word 'tree' is not causally related to trees, then my word 'tree' does not refer to trees. (from (*SE*))
- (∴) If I am a *BIV*, then it is not the case that my word 'tree' refers to trees. (from 1 and 2)

Premise (1) follows from the description of the skeptical scenario. If I am a *BIV*, then my word 'tree' is not causally related to trees, but only to trees*. Premise (2), on the other hand, follows again from semantic externalism.

What about premise (1) of *SA*? Prima facie, premise (1) of *SA* leads to the same problem as premise (6) of *PA*. It seems that in order to know that my word 'tree' refers to trees, and not to trees*, I need to know that I am not a *BIV* (speaking English).

(*DR*) My word 'tree' refers to trees.

(*DR**) My word 'tree' refers to trees*.

However, Brueckner (2016, Section 4) notes that in order to know that (*DR*) is true I only need to know the meaning of 'refer' and the meaning of quotation marks. Then, I can know (a priori) that disquotation can be correctly applied to any referring term of my language, and that sentences like (*DR*) are true. Moreover, since disquotational principles like (*DR*) are metaphysically neutral, (*DR*) does not exclude that (*DR**) is true. Therefore, in order to know that (*DR*) is true, I don't need to know that I am not a *BIV*.

However, the same seems to be true of (*DW*). For example, following the above argument, an advocate of *PA* could argue that since we know the meaning of 'true' and the meaning of quotation marks, we can know (a

² The simple argument goes back to (Wright 1992). It is also Putnam's favourite version of his argument (Putnam 1994).

priori) that disquotation can be correctly applied to any truth-bearing sentence of our language, and that sentences like *(DW)* are true. Moreover, since, just like *(DR)*, *(DW)* is metaphysically neutral, *(DW)* does not exclude that *(DW*)* is true. It follows that in order to know that *(DW)* is true I don't need to know that I am not a *BIV*.

We see that contrary to Brueckner's assumption neither Brueckner's argument nor Putnam's argument seems to be epistemically circular. However, if I know the meaning of 'refer' and the meaning of quotation marks, then I only know that disquotation can be correctly applied to any *successfully referring* term of my language. Therefore, strictly speaking, a priori, I can only know that *(1*)* is true.

(1)* If my word 'tree' refers, then it refers to trees.

Following this, we have to reformulate Brueckner's simple argument as follows (Brueckner 2003; 2016, Section 4):

- (1.*)* If my word 'tree' refers, then it refers to trees. (Disquotation)
- (2.*)* If I am a *BIV*, then it is not the case that if my word 'tree' refers, then it refers to trees. (from *(SE)* and the Skeptical Scenario)
- (.)* I am not a *BIV*. (from *1** and *2**)

A similar problem arises in connection with Putnam's original argument. If I know the meaning of 'true' and the meaning of quotation marks, then I only know that disquotation can be correctly applied to any truth-bearing sentence of my language. This means that strictly speaking, a priori, I can only know that *(6*)* is true.

(6)* If my utterances of 'I am not a *BIV*' are truth-bearing, then they are true if and only if I am not a *BIV*.

Following this, we have to reformulate Putnam's argument as follows:

- (1.)* I am a *BIV*. (Assumption, CP)
- (2.)* If I am a *BIV*, then my utterances of 'I am not a *BIV*' are true if and only if I am not a *BIV**. (from *(SE)* and the Skeptical Scenario)
- (3.)* If I am a *BIV*, then I am not a *BIV**.
- (4.)* If I am a *BIV*, then my utterances of 'I am not a *BIV*' are true. (from 2 and 3)
- (5.)* My utterances of 'I am not a *BIV*' are true. (from 1 and 4)
- (6.*)* If my utterances of 'I am not a *BIV*' are truth-bearing, then my utterances of 'I am not a *BIV*' are true if and only if I am not a *BIV*. (Disquotation)

- (7) If my utterances of 'I am not a *BIV*' are true, then they are truth-bearing.
- (8.) I am not a *BIV*. (from 5, 6* and 7)
- (9.) If I am a *BIV*, then I am not a *BIV*. (1–8, CP)
- (.:) I am not a *BIV*. (from 9)

We see that both Brueckner's simple argument and Putnam's argument are still logically valid if we replace premise (1) with premise (1*) and if we replace premise (6) with premise (6*) (respectively). Moreover, since both (*DR*) and (*DW*) are simply instances of Tarski's disquotational principles for reference and truth, neither Putnam's argument nor Brueckner's argument seems to be epistemically circular. Nevertheless, in the next section, we will see that neither Putnam's argument nor Brueckner's argument shows that I am not a *BIV*. For example, we will see that both Putnam's argument and Brueckner's argument contain a premise whose truth can only be known a posteriori; i.e via experience.

5. The Problem of A Posteriori Truths

As we have seen above, we have to reformulate Brueckner's simple argument as follows:

- (1.*) If my word 'tree' refers, then it refers to trees. (Disquotation)
- (2.*) If I am a *BIV*, then it is not the case that if my word 'tree' refers, then it refers to trees. (from (*SE*) and the Skeptical Scenario)
- (.:) I am not a *BIV*. (from 1* and 2*)

Premise (2*) is logically equivalent to (*T*):

- (*T*) If I am a *BIV*, then my word 'tree' refers, and it is not the case that my word 'tree' refers to trees.

This leads to the question, how an advocate of semantic externalism could argue for premise (2*). For example, the following won't do.

- (1.) If I am a *BIV*, then my word 'tree' is not causally related trees. (from the Skeptical Scenario)
- (2.) If my word 'tree' is not causally related to trees, then my word 'tree' refers, and it is not the case that my word 'tree' refers to trees.
- (. :) If I am a *BIV*, then my word 'tree' refers, and it is not the case that my word 'tree' refers to trees. (from 1 and 2)

From the fact that my word ‘tree’ is not causally related to trees, it does not follow together with semantic externalism that my word ‘tree’ refers. Therefore, premise (2) does not follow from semantic externalism.

An advocate of Brueckner’s simple argument seems to be left with the following option:

- (1.) If I am a *BIV*, then my word ‘tree’ is only appropriately causally related to trees*. (from the Skeptical Scenario)
- (2.) If my word ‘tree’ is only appropriately causally related to trees*, then it is not appropriately causally related to trees.
- (3.) If my word ‘tree’ is appropriately causally related to trees*, then my word ‘tree’ refers. (from *SE*)
- (4.) If my word ‘tree’ is not appropriately causally related to trees, then it is not the case that my word ‘tree’ refers to trees. (from *SE*)
- (. :) If I am a *BIV*, then my word ‘tree’ refers, and it is not the case that my word ‘tree’ refers to trees. (from 1, 2, 3 and 4)

Both premise (3) and premise (4) follow from semantic externalism. However, premise (2) is problematic.

As Brueckner (2016, Section 4) rightly points out, premise (2) presupposes that (*G1*) is true.

(*G1*) Trees \neq trees*.

Prima facie, this seems to be unproblematic, since it seems to be obvious that trees* are not trees. However, Brueckner notes that we can only know via experience that trees are not computer program features. Therefore, we can only know via experience that trees* are not trees. Since an argument against the skeptical claim that sound empirical knowledge is impossible should not contain premises whose truth can only be known via experience, it follows that Brueckner’s simple argument does not show that I am not a *BIV*.

A similar problem also arises in connection with *PA*. As we have seen above, *PA* contains the following premise:

- (3.) If I am a *BIV*, then I am not a *BIV**.

This presupposes that (*G2*) is true.

(*G2*) *BIV*s \neq *BIV*s*.

However, since we can only know via experience that *BIV*s are not computer program features, also (*G2*) is a posteriori true if true. I will call this ‘the problem of a posteriori truths’.

To avoid the problem of a posteriori truths, following the simple argument, Brueckner (2016, Section 4) presents a disjunctive argument. Therefore, next, I will try to reconstruct Brueckner's disjunctive argument, and I will show how it avoids the problem of a posteriori truths.

6. Brueckner's Disjunctive Argument

In (Brueckner 2016, Section 4), Brueckner addresses the problem of a posteriori truths by drawing our attention to (A2).

(A2) For an arbitrary proposition p concerning the external world which I think I know to be true: If I am a *BIV*, then p is false.

For example, Brueckner argues that if (GI) is true, then (A2*) is true.

(A2*) There is a proposition p concerning the external world which I think I know to be true such that if I am a *BIV*, then p is true.

It would follow that (GI) is not consistent with (A2).

Brueckner's argument runs as follows. Assume that trees are trees*. Together with (DG), it would follow that (DG*) is true.

(DG) The proposition that I am in the presence of trees is true if and only if I am in the presence of trees.

(DG*) The proposition that I am in the presence of trees is true if and only if I am in the presence of trees*.

Moreover, if (DG*) is true, then the proposition that I am in the presence of trees is true if I am a *BIV*, since, as a *BIV*, I am in the presence of trees*. It would follow that in order to know the proposition that I am in the presence of trees I don't have to rule out that I am a *BIV*.

Following this, Brueckner (2016, Section 4) proposes a disjunctive argument which can be reconstructed as follows:

- (1.) Either trees = trees*, or trees \neq trees*.
- (2) Trees \neq trees*. (Assumption, Disjunctive Proof (DP))
 - (2.1) If my word 'tree' refers, then it refers to trees. (Disquotation)
 - (2.2) If I am a *BIV*, then my word 'tree' is only appropriately causally related to trees*. (from the Skeptical Scenario)
 - (2.3) If my word 'tree' is only appropriately causally related to trees*, then it is not appropriately causally related to trees. (from 2)

- (2.4) If my word 'tree' is appropriately causally related to trees*, then my word 'tree' refers. (from *SE*)
- (2.5) If my word 'tree' is not appropriately causally related to trees, then it is not the case that my word 'tree' refers to trees. (from *SE*)
- (2.6) If I am a *BIV*, then my word 'tree' refers, and it is not the case that my word 'tree' refers to trees. (from 2.2, 2.3, 2.4 and 2.5)
- (2.7) I am not a *BIV*. (from 2.1 and 2.6)
- (3.) Trees = trees*. (Assumption, *DP*)
- (3.1) The proposition that I am in the presence of trees is true if and only if I am in the presence of trees.
- (3.2) The proposition that I am in the presence of trees is true if and only if I am in the presence of trees*. (from 3 and 3.1)
- (3.3) If I am a *BIV*, then I am in the presence of trees*.
- (3.4) If I am a *BIV*, then the proposition that I am in the presence of trees is true. (from 3.2 and 3.3)
- (3.5) I believe the proposition that I am in the presence of trees. (Introspection)
- (3.6) The proposition that I am in the presence of trees is a proposition concerning the external world.
- (3.7) There is a proposition *p* concerning the external world which I think I know to be true such that if I am a *BIV*, then *p* is true. (from 3.4, 3.5 and 3.6)
- (. :) I am not a *BIV*, or there is a proposition *p* concerning the external world which I think I know to be true such that if I am a *BIV*, then *p* is true. (from 2.7 and 3.7, *DP*)

Premise (1) is a priori true, since we can know a priori that either trees = trees*, or trees ≠ trees*. With the above argument, Brueckner infers from this that I am not a *BIV*, or there is a proposition *p* concerning the external world which I think I know to be true such that if I am a *BIV*, then *p* is true. According to Brueckner, the skeptic loses in each case.

Prima facie, the questionable premises of the above reconstruction of Brueckner's disjunctive argument are (3.1) and (3.3). For example, the skeptic could object that (3.1) presupposes that the proposition that I am in the presence of trees is about trees, and not about trees*. Therefore, the objection continues, (3.1) presupposes that I am not a *BIV*. However, just like (*DW*) and (*DR*), (3.1) is metaphysically neutral. This means that (3.1) does not exclude that trees = trees*, and, therefore, (3.1) does not presuppose that I am not a *BIV*.

For premise (3.3), on the other hand, we can argue as follows:

- (1) I have *treeish* experiences. (Introspection)
- (2) If I am a *BIV* and I have *treeish* experiences, then I am in the presence of trees*. (from the Skeptical Scenario)
- (\therefore) If I am a *BIV*, then I am in the presence of trees*. (from 1 and 2)

Premise (2) follows from the description of the skeptical scenario. If I am a *BIV*, then my *treeish* experiences are generated by computer program features. Since these computer program features are trees*, it follows that as a *BIV* I can only have *treeish* experiences if I am in the presence of trees*.

We see that by drawing our attention to the dialectical situation between skeptic and anti-skeptic Brueckner can avoid the problem of a posteriori truths. Nevertheless, next, we will see that Brueckner's disjunctive argument is still problematic in the light of the skeptical challenge presented in section 1.

7. The Skeptical Challenge Again

In section 1, we saw that the skeptic can argue as follows for the claim that sound empirical knowledge is impossible:

- (A1) I don't know that I am not a *BIV*.
- (A2) For an arbitrary proposition p concerning the external world which I think I know to be true: If I am a *BIV*, then p is false.
- (A3) An agent A knows a proposition p if and only if p holds in every (epistemic) possibility left uneliminated by A 's evidence.
- (\therefore) For an arbitrary proposition p concerning the external world which I think I know to be true: I don't know p .

Therefore, if we want to avoid the skeptic's conclusion that sound empirical knowledge is impossible, we have to show that one of the premises of the above argument is false. As we have seen, with Putnam's argument and with Brueckner's simple argument advocates of semantic externalism tried to show that contrary to the skeptic's assumption I can know that I am not a *BIV*. However, since both arguments contain a premise whose truth can only be known a posteriori, i.e. via experience, neither Putnam's argument nor Brueckner's simple argument can be used to argue against the skeptical claim that sound empirical knowledge is impossible.

What about Brueckner's disjunctive argument? Does Brueckner's disjunctive argument show that one of the premises of the skeptical argument is false? I will argue that it does not. Brueckner's disjunctive argument only shows that I am not a *BIV*, or that there is a proposition p concerning the external world which I think I know to be true such that p is true if I am a *BIV*. From this it does not follow that I know that I am not a *BIV*, or there is a proposition p concerning the external world which I think I know to be true such that p is true if I am a *BIV*. Therefore, Brueckner's disjunctive argument does not show that (A1) or (A2) is false. Moreover, the argument neither shows that (A2) is false, nor that (A1) is false. For example, following Brueckner's disjunctive argument, I only know (a priori) that I am not a *BIV*, or that there is a proposition p concerning the external world which I think I know to be true such that p is true if I am a *BIV*. Hence, following Brueckner's disjunctive argument, I still cannot rule out (a priori) that I am not a *BIV*.

An advocate of Brueckner's disjunctive argument could respond that Brueckner's disjunctive argument shows that if I am a *BIV*, then there is a proposition p concerning the external world which I think I know to be true such that p is true if I am a *BIV*. In other words, the argument shows that if (A2) is true, then I am not a *BIV*. Following this, an advocate of Brueckner's disjunctive argument could argue as follows against the skeptical argument.

I know a priori that either (A2) is true, or that (A2) is false. Assume that (A2) is false. Then, the skeptical argument is not sound. Next, assume that (A2) is true. Then, it follows together with the conclusion of Brueckner's disjunctive argument that I am not a *BIV*. Therefore, an advocate of Brueckner's disjunctive argument may conclude that Brueckner's disjunctive argument shows that either (A2) is false, or I can rule out that I am a *BIV*. Either way, it would follow that the skeptical argument is not sound.

However, if we look at the argument in more detail, we see that it does not show that the skeptical argument is not sound, but that it only shows that either the skeptical argument is not sound, or I am not a *BIV*.

- (1) Either (A2) is true, or (A2) is false.
- (2) (A2) is false. (Assumption, *DP*)
 - (2.1) If (A2) is false, the skeptical argument is not sound.
 - (2.2) The skeptical argument is not sound. (from 2 and 2.1)
- (3) (A2) is true. (Assumption, *DP*)
 - (3.1) If (A2) is true, then I am not a *BIV*. (Brueckner's Disjunctive Argument)
 - (3.2) I am not a *BIV*. (from 3 and 3.1)

- (. ∴) Either the skeptical argument is not sound, or I am not a *BIV*.
(from 2.2 and 3.2, *DP*)

From this it does not follow that either the skeptical argument is not sound, or *I know* that I am not a *BIV*. This was to be expected, since also Brueckner's disjunctive argument only shows that (*A2*) is false, or I am not a *BIV*. As said above, from this it does not follow that (*A2*) is false, or I know that I am not a *BIV*.

Let us recap: Brueckner's disjunctive argument neither shows that (*A1*) is false, nor that (*A2*) is false, nor that (*A1*) or (*A2*) is false. It follows that just like Putnam's argument and Brueckner's simple argument Brueckner's disjunctive argument does not show that one of the premises of the skeptical argument is false. Therefore, also Brueckner's disjunctive argument does not avoid the skeptic's conclusion that sound empirical knowledge is impossible.

8. Conclusion

Although neither Brueckner's simple argument nor Putnam's argument seems to be epistemically circular, neither Brueckner's simple argument nor Putnam's argument shows that the skeptical hypothesis that I am a *BIV* is inconsistent with semantic externalism. For example, both Brueckner's simple argument and Putnam's argument contain a premise whose truth can only be known via experience. Since an argument against the skeptical claim that sound empirical knowledge is impossible should not contain premises whose truth can only be known via experience, it follows that neither Brueckner's simple argument nor Putnam's argument shows that (*A1*) is false.

Following this, Brueckner argues for the weaker claim that if semantic externalism is true, then I don't have to rule out that I am a *BIV* in order to possess sound empirical knowledge, or I am not a *BIV*. According to Brueckner, the skeptic loses in each case. However, as we have seen above, just like Putnam's argument and Brueckner's simple argument, Brueckner's disjunctive argument does not show that one of the premises of the skeptical argument is false. Although from this it does not follow that semantic externalism is consistent with the premises of the skeptical argument, it shows that it is also not yet decided that it is not.

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