Simulations, Skepticisms, and Transcendental Arguments[1]

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Abstract

I have developed transcendental arguments to refute several versions of Nick Bostrom's simulation hypothesis. I called some of these arguments the SIM-style argument. In this paper, I have four main aims. First, I employ the SIM-style argument to remedy a defect in Hilary Putnam's Brain-in-vat argument. Second, I show that the most radical skepticism, which Tim Button called the nightmarish Cartesian skepticism, can be refuted by the SIM-style argument or by another transcendental argument I develop here. Third, I compare my approach to radical skepticisms with Donald Davidson's, as it is often regarded as an exemplar of transcendental arguments. Fourth, I explain how the prominent objections, mainly developed by Barry Stroud, to transcendental arguments can incur two undesirable results: psychologism and Kantian skepticism.

Keywords:

Simulation, Brain-in-vat scenario, SIM-style argument, BIV argument, Kantian skepticism, Transcendental argument

[1] This is the manuscript of the paper published on The International Journal for the Study of Skepticism.

1. An Overview: Two kinds of Approach to the Simulation Hypothesis

This present work is the sequel to the paper titled *Why we are not living in a computer simulation*[2], WNS for short. In WNS, I discussed several kinds of simulation and offered, in my opinion, strong arguments refuting the ideas of us living in certain kinds of simulation. The idea that we are *always* living in some simulation is widely known as the *simulation hypothesis*. It has given rise to countless discussions and debates that can date back at least to the release of the classic movie *The Matrix* in 1999 as well as Nick Bostrom's 2003 paper *Are you living in a computer simulation?*[3] The study of this hypothesis is no doubt fascinating, and seems increasingly relevant, mainly because the technology for creating and exploring simulations or virtual realities has become increasingly practical and realistic.

One popular approach to this hypothesis is to view it as a scientific hypothesis. Bostrom was one of the very first philosophers who approached it in this manner. He provided some physical evidences to support his claim that under certain relatively uncontentious conditions, the probability of this hypothesis is high. Since then, there have been many theorists following in Bostrom's footstep to provide further or different physical evidences to support

[2] Lim (2022).

[3] Bostrom (2003, 2008). The scenario in the Matrix are in some ways different from the kind of simulations mostly discussed in the literature. In that movie, those who are deluded have bio-physical bodies. And they can be divided into two categories: those who have been deluded right at the start of their births, and those who were made to be deluded sometimes after their births. Unless stated otherwise, my focus is on those who are always simulated, and therefore deluded all the time, and can hardly be said to have bio-physical bodies. Most discussions about simulation hypothesis, including Bostrom's, focus on these simulated beings.

it. On the other hand, it is also not an uncommon practice to invoke physical evidences to repudiate the hypothesis.

In my view, the use of physical evidences or well-established physical theory, which must in turn be well-supported by physical evidences, to support the simulation hypothesis is a bewildering move. As I indicated in WNS, one must think of oneself having lived in the reality in order to invoke physical evidences or theory to support one's thought that she is always living in a simulation. This move is then obviously incoherent and confusing. The caveat here is, if one thinks the simulation hypothesis is plausible, then this plausibility cannot be supported by any physical evidence or physical theory.

It is equally incoherent and confusing to repudiate the simulation hypothesis by invoking physical evidence or physical theory. The thought of being in the reality is fundamentally, conceptually prior to the use of physical evidence or theory, and is already presupposed in the invocation of physical evidence or theory to support certain ideas. In view of this, to invoke physical evidence or theory to repudiate the simulation hypothesis is to confuse some kind of conceptual or metaphysical order. And if we do not in the first place think of ourselves living in the reality, then the whole enterprise of invoking physical evidence or physical theory to support any idea cannot even make sense, much less take off.[4]

Thus, the simulation hypothesis can neither be supported nor repudiated by the invocation of any physical evidence or physical theory. And this hypothesis is emphatically not a scientific hypothesis, and cannot coherently be treated as one.

Since, at the first pass, we seem to be unable to determine whether the simulation hypothesis is true, namely, whether we are actually living in some simulation, and it is

[4] Similar ideas can also be found in Wittgenstein (1969).

illegitimate to use physical evidence or physical theory to verify or refute it, it would be more natural and proper to approach the simulation hypothesis as a variety of *radical skepticism*.[5] The study of simulation hypothesis is therefore first and foremost the study of radical skepticism.

In WNS, I have distinguished between three versions of simulation in Bostrom's works, and studied the ideas that we might be living in any of these three versions. Very broadly speaking, approaching each of them as radical skepticism has guided me into developing some interesting and fruitful results, namely into constructing what are known as the *transcendental arguments* that refute the ideas of us living in any of these three simulations. I called two of these transcendental arguments the *SIM-style arguments*. Both radical skepticisms and transcendental arguments constitute the two main themes of this present paper.

There are four main aims in this paper. First, I show that the SIM-style argument can remedy a defect in the *brain-in-vat argument*, first proposed and later sharpened by Hilary Putnam and Tim Button, respectively. This remedy comprises sections 2, 3, 4, and 5. Second, in section 6, I show that the most radical skepticism can be refuted either by the SIM-style argument or by another new transcendental argument I develop here in this paper.

Third, in section 7, I compare my approach to radical skepticism with Donald Davidson's as the latter is often regarded as an exemplar of transcendental argument. Fourth, in sections 8 and 9, I show that the prominent objections, developed by Barry Stroud, to transcendental arguments are deeply problematic as they can incur two undesirable consequences: psychologism and Kantian skepticism.

[5] Bostrom, for one, resisted this construal. See Bostrom (2008).

In section 10, I briefly attempt to highlight the peculiar phenomenology of Kantian skepticism by exploring the Encounter simulation. I point out that this phenomenology could be an indicator of the vicinity of a successful transcendental argument.

2. Radical Skepticism and Transcendental Arguments

Radical skepticism is the idea that many of our beliefs might be false. The idea that we might be in some simulation is usually, very naturally, taken to exemplify radical skepticism. Indeed, it is natural for us to think that if we are living in some simulation, then quite a lot of our beliefs about the reality are presumably false.[6]

But how 'radical' could a radical skepticism be? When we at first bring up and study the doubt raised by a radical skeptic, it is often unclear how encompassing different authors take the radical skeptic's doubt to be. There must be a limit to this doubt. The radical skeptic cannot call everything into doubt. For one thing, at the very beginning of the study of radical skepticism, we must already agree that the radical skeptic cannot doubt that she is doubting, or perhaps weaker, that there is doubting, and therefore there is thinking as well. Further, she does not doubt mathematical or logical certainties such as the product of both zero and any real number is again zero. She also does not doubt that there exist some 'inner' or mental states such as painful sensation, or the sensation as of reading this sentence. But at the initial stage of her radical skepticism, she surely doubts all her contingent beliefs about the external world.

On the one hand, there are certain limits to the doubt raised by the radical skeptic; on the other hand, this radical doubt is still quite extensive since every contingent fact about the

[6] Chalmers, for one, would not agree with this presumption. See Chalmers (2005; 2022: Part 4).

external world is deemed by it as not entirely certain. I will follow Tim Button to call this kind of radical skepticism the *nightmarish Cartesian skepticism*.[7] And this is the broadest and the most radical doubt the radical skeptic can apparently coherently raise at the initial stage of the study of skepticism. During the course of this study, we will see that the radical skeptic must successively narrow the range of her doubt.

Some skeptical scenarios can be construed as some kind of vehicles that the radical skeptic can employ to represent, or exemplify nightmarish Cartesian skepticism. For example, Button took the idea that we might be in the famous *brain in vat scenario* (BIV scenario) to exemplify nightmarish Cartesian skepticism. The BIV scenario is as follows:[8]

The Brain in Vat Scenario. All sentient creatures are eternally envatted brains. That is, for the entire duration of their lives, they were, are, and will always be brains in vats. However, everyone is wired into an infernal machine, which subjects them all to electronic neural stimulations, so that everything appears normal.

I will present the refutation of the idea that we might be in the BIV scenario. This refutation is known as the *brain-in-vat argument* (hereafter BIV argument). It was first proposed by Hilary Putnam, and later reformulated by Tim Button. I will discuss how it remains slightly unsatisfactory, and how it can be remedied by drawing on the ideas from the SIM-style

[7] See Button (2013:117). Button seemed unsure whether to include physical law as something the radical skepticism can cast doubt on. I think it can be included. But our difference is not very crucial to the present discussion.

[8] Button (2013: 117), Putnam (1981: Ch 1).

argument, which I developed to refute Bostrom's simulation hypothesis. As a result, this remedied BIV argument exemplifies the SIM-style argument.

The SIM-style argument can be regarded as a *transcendental argument*. Among many characterizations of transcendental arguments offered by different philosophers[9], I find the following one most instructive:

> The idea [of transcendental argument] is to demonstrate on purely a priori grounds that there is a necessary condition for one even thinking a contentful thought—viz., that most of one's beliefs must be true. Since even the skeptic is committed to the possibility of there being contentful thought (as otherwise we could not even make sense of the skeptical enterprise, still less the specific skeptical appeal to radical error-possibilities, such as the scenario that one might be a BIV), so even the skeptic must accept the anti-skeptical consequences of this transcendental argument if it is sound. Indeed, if this transcendental argument is sound, then one can never even coherently expound radical skepticism.[10]

In a nutshell, transcendental arguments demonstrate to the radical skeptic on purely a priori grounds that she cannot coherently expound certain doubts. Perhaps, to avoid the dispute over the nature of the a priori, we can put it this way:

> **Transcendental argument**:
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> This type of arguments aims to demonstrate, purely on grounds that the radical skeptic takes to be certain, that she cannot coherently expound certain doubts.

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[9] See for examples, Stroud (1968), Putnam (1981:16), Button & Walsh (2018: Ch 9), Stern & Cheng (2023).

[10] Coliva and Pritchard (2022: 40).

This pretty much encapsulates most characterizations of transcendental arguments. In the next section, I introduce the BIV argument to see if it qualifies as a transcendental argument.

3. The BIV argument and its Defect

Call a sentient creature in the BIV scenario a BIV. Then the BIV argument is as follows:

(1) A BIV's word 'brain' does not refer to brains.

(2) My word 'brain' refers to brains.

(3) So: I am not a BIV.[11]

The argument is obviously valid. It remains to justify the premises. Let us start with (2). (2) is undeniable. I am going to show why it is so by trying to deny it. That is, let us assert: "my word 'brain' does not refer to brains." To meaningfully assert this denial of (2), I must presuppose that the last word in the assertion does refer to brains. This shows that when asserting the denial of (2), I must presuppose (2) itself. Thus, denying (2) is self-refuting and therefore, (2) is not to be denied.

Note that no empirical fact, including any fact about what a brain is, is invoked in showing that the denial of (2) is self-refuting.[12]

We next justify (1). Let Brian be a brain in a vat (or a BIV) in the BIV scenario. I am going to show that Brian's word 'brain' does not refer to brains.

[11] Button (2013: 118).

[12] See van Fraassen (1997, 2008: 229-235), Button (2013: 123-127, 2016: 136-138).

The straightforward way for Brian's word 'brain' to refer to brains would be for Brian to be a brain scientist. But this is prohibited by his being a BIV. He cannot conduct any empirical research when he is a BIV.

An alternative way for his term 'brain' to refer to brains would be by interacting with scientists or science teachers who have some experience of studying brains and thereby have some understanding about brains. But since everyone in the BIV scenario is a BIV, none of them can be a scientist or a science teacher, and therefore none of them can gain the experience of interacting with brains, let alone the experience of studying brains.[13]

In sum, by the stricture of BIV scenario, none of the BIVs can ever interact with the reality. And without any interaction with the reality, the BIV's word 'brain' cannot refer to brains. This implies (1). Having justified (1) and (2), we have shown that we are not the BIVs.

However, in order to sustain the idea that we might be in the BIV scenario, or more simply, BIV skepticism, the radical skeptic might challenge (1) by simply pointing out that there could be some other way, some mysterious power, which we do not know of and is not based on those two fundamental ways, that can enable the BIV's word 'brain' to refer to brains. And if there could exist such a mysterious or magical power, then it might further enable the BIV to conceive of the idea that she might be a BIV. But if it could be the case, then we cannot rule out BIV skepticism. Here is what Button said:

> The sceptic might contest (1) by making the following suggestion:

[13] Button considered several other possible ways for Brian's word 'brain' to refer to brains, and showed why they failed as well. These failures are still effectively due to what I have presented here, namely, the total insulation of BIVs from the reality. For more details, see Button (2013: 118-120).

> *Perhaps there is an intrinsic connection between certain narrow mental contents and certain objects, such that anyone (anywhere, anywhen) with that mental content thereby automatically referred to those objects. Then the envatted and the embodied can refer to exactly the same things.*
>
> The sceptic's suggestion is obviously not logically inconsistent, in the narrow sense that we cannot force the sceptic to contradict herself. Moreover, if there is an intrinsic connection of the sort the sceptic suggests, then the BIV argument fails.
>
> It is worth emphasizing that the suggested intrinsic connection is precisely a 'noetic ray' between narrow mental contents and external objects. It demands that objects *cry out* to be named in certain ways. It is a magical theory of reference[.][14]

Button showed at some length why we are justified to ignore this challenge posed by the radical skeptic. I will not rehearse the justification here. While I agree with Button that at some point of our dialectic with the radical skeptic we are justified to ignore her, I think we have not reached this point yet, and thus I find Button's use of this justification a bit too early, which therefore rendered the BIV argument slightly unsatisfactory.[15]

In my view, the SIM-style argument that I developed before can be a powerful tool that allows us to show, purely on grounds the radical skeptic must not doubt, that she would 'contradict herself' in making the suggestion that there could be some magical power that both enables the BIV's word 'brain' to refer to brains, and thereby further enables the BIV to conceive of the idea that he might be a BIV.

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[14] Button (2013:121), Button's italics.

[15] However, the justification is highly sophisticated and worth exploring. It involves Hilary Putnam's model-theoretic arguments. See Button (2013: Ch 1- 7, 121-123).

The essence of the SIM-style argument is to investigate the thoughts any inhabitant of a given skeptical scenario could have when the inhabitant contemplates the idea that he himself is in that scenario, and to detect any potential incoherence that arises from this contemplation.[16] Once it is established that the inhabitant must land in incoherence, it is not difficult to show conclusively that we are not the inhabitants in that skeptical scenario, a conclusion even the radical skeptic must accept.

4. What the BIV cannot think and what we cannot be

Suppose we concede to the radical skeptic that there could be some magical power that enables the BIV's word 'brain' to refer to brains. More precisely:

Magical Power (MG):

The kind of power, unnoticeable by BIVs, that enables the BIVs to use the language the normal individuals would use, and, in particular, that enables the BIVs' word 'brain' to refer to brains.

I am going to show, even if MG can occur in the BIV scenario, no BIV can succeed to coherently articulate or coherently conceive of the idea that he might be a BIV.

[16] Lim (2022). The original SIM-style argument investigated the thoughts an inhabitant of some version of the
simulation could have while this inhabitant contemplated the idea that she is in that simulation. See section 5 for more discussion.

Suppose MG occurs in the BIV scenario. And suppose Brian, like us, is investigating if he might be a BIV. We can unfold the following thought process that arises in Brian's mind concerning the idea that he himself might be a BIV:

The Thought Process (TP)

Brian has this thought:

(i) "I might be a BIV."

Since Brian, like us, has been contemplating the idea that he might be a BIV, and has been thinking through this matter up to this point, it is natural for him to wonder: "what does my word 'brain' refer to?"

Brian reasons: "independently of whether I am a BIV, I must concede:

(ii) My word 'brain' refers to brains."

As Brian has contemplated BIV scenario as much as we do, he must concede: "If I am a BIV,

(iii) I can never gain any bit of understanding about the word 'brain' by interacting either with some brain or with my fellow inhabitants, it is thus entirely and solely due to MG that I understand the word 'brain'."

Let us call this thought process TP. In the end of TP, Brian, by thinking (iii), has put himself into an extraordinary circumstance, under which his thinking has already become incoherent. The explication of Brian's thinking (iii) will explain why it is so.

When thinking (iii), the problem Brian is faced with is that he is implicitly committed to the view that every instance of his application of the word ‘brain’ has never relied on his exercise of reason or use of reason.

For example, Brian may recall that his teacher showed the students a brain from a donor in a high school biology class, and he got to use or exercise his reason to understand the brain, namely the item the word ‘brain’ refers to. But Brian must concede that if he is a BIV, then he actually has never been in any such occasion where he can interact either directly with an actual brain or directly with someone who can teach him about brains. In other words, Brian must concede that if he is a BIV, then all the occasions where he can exercise his reason to understand the referent of the word ‘brain’ and thereby to be able to apply the word ‘brain’ have never actually taken place, and he has never had the experience of exercising reason to gain both the understanding of the word ‘brain’ and the ability to use the word ‘brain’.

(iii) must therefore lead Brian to concede that if he is a BIV, then, given that he has never been in any occasion where he can exercise or use his reason to understand and apply the word ‘brain’,[17] his understanding and application of the word ‘brain’ has never relied on or resulted from his use of reason. Most crucially, in thinking (iii), Brian must concede that his thinking (iii), which itself contains the word ‘brain’, is the very instance where his understanding and application of the word ‘brain’ does not rely on his use of reason.

[17] Understanding the word ‘brain’ must consist in understanding the referent of the word ‘brain’.

But one becomes incoherent in denying the use or the efficacy of reason for thinking. Thus, when thinking (iii), Brian, by denying the use or the efficacy of reason for thinking (iii), has become deeply incoherent.[18]

TP begins with Brian's holding the idea that he might be a BIV. The ending of TP gives rise to a circumstance under which Brian is being incoherent. What TP has demonstrated is, Brian cannot coherently articulate or conceive of the idea that he might be a BIV. And since Brian is any BIV, the key observation we are to draw from the ending of TP is that, in order for a BIV to avoid being incoherent, she must reject the idea that she might be a BIV and must concede that she is not a BIV. That is,

> **Rejection Move (RM)**:
>
> If one is a BIV, she must reject the idea that she might be a BIV and must concede that she is not a BIV.

Given RM, we must eventually concede that we are not BIVs. I present two ways to argue for this.

[18] One reviewer questioned that since MG is an account of how words refer to objects, which apparently says nothing about the exercise of reason, why must MG preclude the reliance on the exercise of reason? This question may arise from overlooking a slightly subtle point. The crucial point I want to make here is not that MG must preclude the reliance of the exercise of reason. Instead, the crucial point is that if one were to concede that MG is the right account of how her words refer to object, then she must further concede that her understanding of these words does not rely on her exercise of reason, which is incoherent.

The first way. Brian's situation is, by definition, the BIV scenario. But, by RM, Brian must concede that he is not in the BIV scenario. This implies that he can never correctly comprehend his own situation, namely, the BIV scenario. We thus obtain:

(1) BIVs cannot comprehend the BIV scenario.

Self-evidently, I can comprehend the BIV scenario. This is especially true of the radical skeptic, who otherwise cannot impress upon us with the idea or worry that we might be in the BIV scenario. Hence, the following premise obtains:

(2) I can comprehend the BIV scenario.

In conclusion,

(3) I am not a BIV.

The second way. Suppose I hold the idea that I might be a BIV. That is,

(*) I might be a BIV.

Holding (*) simply means that I am unsure of whether or not I am a BIV. Now assume that,

(i) I am a BIV.

By (i) and RM, I obtain

(ii) I must reject the idea that I might be a BIV and must concede that I am not a BIV.

However, I cannot coherently maintain both (i) and (ii).[19] I must therefore refute the assumption (i). That is, I must concede,

[19] I have pointed out in WNS that some philosopher may have the sentiment that we might still be BIVs, or at least be as deluded as BIVs, even though we cannot coherently maintain (i) and (ii). See Lim (2022: 347 n. 14). This sentiment is expressed in Nagel (1986:73), Folina (2016: 172), Pritchard

(1) It is not the case that I am a BIV.

In classical logic, (1) is equivalent to

(2) I am not a BIV.[20]

And either (1) or (2) compels me to drop (*) as well.

With these two sub-arguments, it is established that we are not the BIVs.

The argument just presented contains three parts. The first part shows that there is no way for the BIV's word 'brain' to refer to brains except perhaps by some magical power. The second part concedes to the radical skeptic that there could be some magical power that enables the BIVs' word 'brain' to refer to brains, but concludes with the observation that, even given this concession, the BIV still cannot coherently articulate or conceive of the idea that she might be a BIV. The final part of the argument shows with two parallel sub-arguments that, given the observation from the second part, we cannot be the BIVs.

Since the radical skeptic can hardly question any reasoning employed in it, this remedied BIV argument qualifies as a transcendental argument and succeeds to defeat BIV skepticism.

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and Ranalli (2016: 88-89). Here in this paper, I side with Button that this sentiment is incoherent, see Button (2013: 13.3, 13.4, 13.5, 14.4). See also section 6 and 9 in this paper for more discussions of this sentiment.

[20] Even if, in view of some other kind of logic, it is not legitimate to conclude from (1) to (2), what is at least established here is that to avoid being incoherent, one must restrain from thinking the idea that she herself is a BIV. See Lim (2022: 347 n. 15) for a similar observation with respect to the Hard simulation, which will be briefly discussed in section 5 in this paper. See also sections 8 and 9 for more discussions on this generic observation.

5. The Hard Simulation and the SIM-style argument

In this section, I explain why the whole argument presented in sections 3 and 4 exemplifies the SIM-style argument I previously developed in WNS.

I was aiming to refute Bostrom's simulation hypothesis. I distinguished between three versions of simulation. I present the *Hard simulation* here as this was my main target:

The Hard Simulation. Simulated beings are eternally simulated by some civilization using advanced technology that is based on some physical law unknown to the simulated beings. And no simulated being has ever had any conscious communication with the unsimulated beings or has ever noticed any influence exerted by the latter.

By developing the SIM-style argument, I aimed to show that we cannot be in the Hard simulation. The first part of the SIM-style argument is to show, just like the BIVs, no simulated beings can interact either with any brain or anyone who has the experience of interacting with any brain. Of course, this would not deter the radical skeptic from postulating the following:

> **Manipulation (MA):**
>
> The kind of manipulation, unnoticeable by the simulated beings, produced by the simulators utilizing the physical law, that enables the simulated beings to use the language the normal individuals use, and that enables the simulated beings' word 'brain' to refer to brains.

I said:

> The idea of MA is specifically designed to be the potentially maximal interaction that could take place between the simulated beings and the reality without them being aware of the influence from the world outside the simulation. MA therefore conforms to the stricture of the Hard simulation. If MA is feasible, then [the simulated being]'s word 'brain' can eventually refer to brains.[21]

In the second part of the SIM-style argument, I went on to show that even if MA is feasible, and the simulated beings' word 'brain' are therefore enabled to refer to brains, the simulated beings still become incoherent in conceiving of the idea that they might be in the Hard simulation.

Very roughly, the basis idea is this. Suppose Simon is in the simulation, and he entertains the idea that he is in the simulation. And he thinks about the word 'brain'. But since he is always in the simulation, he has never interacted with an actual brain, which he takes the word 'brain' to refer to.

Then Simon must think, "if I am in the simulation, then I never interact with an actual brain, and it is solely due to MA that I gain the understanding of the word 'brain'. And this means I never get to use or exercise my reason to gain the understanding of the word 'brain', and thereby never get to exercise my reason to apply the word 'brain'. Consequently, since what I am thinking right now (namely, this entire thought within the double quotation marks) involves the word 'brain', I am not using or exercising reason to think what I am thinking."

By denying he is using reason to think, Simon is being incoherent in thinking the preceding thought. To avoid being incoherent, Simon must reject the idea that he is in the simulation.

[21] See Lim (2022: 343).

Once it is recognized that Simon must reject the idea that he is in the simulation, it is very easy to show, in the third part of the argument, that we are not in the simulation.

It is not difficult to see, the second part of the SIM-style argument employed to refute the Hard simulation, namely the investigation of Simon's thought process, is the most crucial part of it. What I have described here is just a sketch, with many subtle details being glossed over.

In any case, the structure of the remedied BIV argument presented in the previous sections is to a great extent the same as that of the SIM-style argument. Particularly, the investigation of Brian's thought process is conducted in the fashion of the investigation of Simon's thought process. I therefore take the remedied BIV argument to be an exemplification of the SIM-style argument.[22] And since BIV skepticism, or the idea that we might be in the BIV scenario, can be defeated solely by the SIM-style argument, Button's justification for ignoring the radical skeptic is not required.

6. The Refutations of Nightmarish Cartesian Skepticism

Having refuted the BIV skepticism, can we refute nightmarish Cartesian skepticism itself? As noted, the BIV skepticism is the vehicle that can represent or exemplify nightmarish Cartesian skepticism. But refuting the representation is apparently not the same as refuting the represented idea itself. And there may be many more skeptical scenarios that can

[22] The investigation of Simon's thought process is somewhat more intricate than the investigation of Brian's thought process. The existence of normal individuals in the Hard simulation is the complication the refutation of BIV skepticism does not need to address. See Lim (2022: section 7).

represent nightmarish Cartesian skepticism. The challenge for us here is to discover a way to refute this skepticism itself.[23]

A straightforward way is to observe that if someone is in the situation described by the nightmarish Cartesian skepticism, she is no less semantically impoverished than a BIV. And if her word 'brain' were to refer to brains, then there must be something like MG that enables her to do so. Easily, we can then run a SIM-style argument to show that we cannot be in this situation described by the nightmarish Cartesian skepticism.

Another argument is also very similar to, or can even be regarded as an example of, the SIM-style argument. The nightmarish Cartesian skepticism is the worry that we might have gotten every aspect of the external world totally wrong. If we are in this situation, then we have never correctly represented any aspect of the external world, that is, we are always or *completely deluded*. And let us call someone who is not completely deluded *normal*.

Let Del be a completely deluded person. That is, Del is not a normal person. Suppose Del investigates the idea that she might be completely deluded. That is,

[23] In Thorpe and Wright (2022), the nightmarish Cartesian skepticism is known as the *Abstract scenario*. Thorpe and Wright contend that certain constraints must be met for a skeptical scenario to be defensible. One of them is the requirement that any skeptical scenario must offer some explanation as to why, if we are in that skeptical scenario, we are having the delusion of undergoing those experiences which we take to be real. They reckon that nightmarish Cartesian skepticism cannot offer such an explanation, and is therefore to be rejected. See Thorpe and Wright (2022:83). But from the radical skeptic's viewpoint, if a given skeptical scenario by itself is coherent, then whether it meets this constraint is an gratuitous matter, and is therefore irrelevant to the dialectics of skepticism.

The Thought Process (TP)

Del has this thought:

(i) "I might be completely deluded."

Del further thinks: "If I am completely deluded, then I am not a normal person. And in order to think what I am thinking, I must correctly represent the idea of normal person. But if there exists some normal person in the external world where I live, then I can correctly represent some aspect of the external world. I must therefore conclude that

(ii) no normal person exists in the external world where I live."

Yet (ii) is precisely about some aspect of the external world where Del lives. Thus, by definition, no completely deluded being can take (ii) to be true. But, since Del, by assuming that she herself is completely deluded, must take (ii) to be true, she is being incoherent. What this shows is, to avoid being incoherent, Del must concede that she herself is not completely deluded, and must reject the idea that she might be completely deluded.

Since Del is any completely deluded person, the key observation we can draw is:

Rejection Move (RM):

If one is a completely deluded person, she must concede that she is not completely deluded, and must reject the idea that she might be completely deluded.

As before, we can easily conclude from RM that we are not completely deluded. That is to say, we are not in the situation described by nightmarish Cartesian skepticism.[24] Since nothing in this argument can be doubted by the radical skeptic, we have established another transcendental argument that refutes nightmarish Cartesian skepticism itself.[25]

7. Davidsonian Approach to Nightmarish Cartesian Skepticism

Another approach that also aims to refute nightmarish Cartesian skepticism was developed by Donald Davidson. This approach is often associated with the view known as *interpretationism*. This view has prominent roles in many areas, like philosophy of mind and of language. But my present focus is on its connection to skepticism. Davidson's interpretationism leads him to make the significant claim:

> **Davidsonian Conditional (DC)**:
>
> If one is to qualify as a thinker, then most of one's beliefs must be true.[26]

Now suppose we accept DC. Then, very easily and remarkably, it can defeat nightmarish Cartesian skepticism. For no doubt I am a thinker, therefore, by DC, most of my beliefs must

[24] This argument is also inspired by the reasoning given by Button also against nightmarish Cartesian skepticism. However, these two lines of reasoning still have some substantial difference. For example, Button's reasoning involves the notion of causation, which my argument obviously does not use. See Button (135-136).

[25] For the discussion of the objection that we could still be in Del's situation even though we cannot think we are in Del's situation, see sections 8 and 9 of this present paper.

[26] Similar associations of this claim with Davidson's interpretationism can be found in Bernecker (2013: 444) and Button (2013: 141-142).

be true, which must include many beliefs about the external world. To quote Button: *I think, therefore I am mostly right*. Button called this *Davidson's Cogito*.[27]

Davidson justified DC by invoking his own account of interpretation, namely the account of how we are to understand another individual deemed by us to be capable of having belief or thought. One core tenet of this account of interpretation is: to correctly understand someone requires one to take most of the former's beliefs to be true.

The problem Davidson faced is how this core tenet can overcome nightmarish Cartesian skepticism. Specifically, even if taking most of the beliefs owned by others to be true would also presumably require myself to take most of my own beliefs to be true, this does not mean that most of my beliefs are actually true. Davidson himself is aware of this concern,

> Suppose I am right that an interpreter must so interpret as to make a speaker or agent largely correct about the world. How does this help the person himself who wonders what reason he has to think his beliefs are mostly true?[28]

Davidson almost always aimed to show that the tenet can refute nightmarish Cartesian skepticism. That is, Davidson aimed to show that the tenet implies Davidson's Cogito. He developed several interrelated lines of reasoning.[29] Each of them is highly contentious in its

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[27] See Button (2013: Ch 14). Nagel (1999) also used this phrase, though in a way slightly different from Button. Nagel took the implication of Davidson's interpretationism to be "je pense, donc je sais", or "I think,

therefore I know".

[28] Davidson (1983: 152).

[29] See for example, Davidson (1983; 1987; 1989; 1990; 1991).

own way.[30] The one line I find most convincing in overcoming nightmarish Cartesian skepticism has, it seems to me, a rather weak connection to that core tenet. This line of reasoning consists in analyzing the nature of belief itself. Crucially, Davidson observed that the idea of belief implies the conception of the world whose character is independent of how I think about it. That is, since belief is something that is capable of being true or false, the idea of belief carries with it the idea of objective truth.[31] Davidson wrote,

> In order to doubt or wonder about the provenance of his beliefs, an agent must know what belief is. This brings with it the concept of objective truth, for the notion of a belief is the notion of a state that may or may not jibe with reality.[32]

Davidson further pointed out that without communications with other agents capable of thoughts, I cannot possess the concept of objectivity:

> The source of the concept of objective truth is interpersonal communication. Thought depends on communication. This follows at once if we suppose that language is essential to thought and we agree with Wittgenstein that there cannot be a private language … We have no grounds for crediting a creature with the distinction between

[30] There are at least two main discernible lines of reasoning in Davidson's writings, which are a thought experiment known as omniscient interpreter and a view called triangular externalism. As many have observed, Pritchard (2013) for example, the former is not very persuasive. On the other hand, the latter is quite a convoluted or opaque view and is in some ways circular. See Bernecker (2013: 450-453), Verheggen (2013).

[31] Verheggen (2013: 762) said that Davidson used interchangeably the concept of belief, the concept of objective truth, and the concept of objectivity. In what follows, I shall accordingly not differentiate between these concepts.

[32] Davidson (1983: 153-154).

> what is thought to be the case and what is the case unless the creature has the standard provided by a shared language; and without this distinction there is nothing that can clearly be called thought…[33]

> Communication, and the knowledge of other minds that it presupposes, is the basis of our concept of objectivity, our recognition of a distinction between false and true belief. There is no going outside this standard to check whether we have things right … It makes no sense to question the adequacy of this measure, or to seek a more ultimate standard.[34]

Clearly, what is said about thought in these passages equally applies to belief. Recall that the nightmarish Cartesian skeptic doubts all her contingent beliefs about the external world, which naturally include beliefs about other minds. Now, either other minds exist or do not exist. What is suggested in the passages above is this. Assume it is not true that other minds exist. This assumption implies the denial of the occurrence of any communication.

Since, Davidson contended, communication is the necessary condition that constitutes the standard by which one can check whether her belief or thought get things right or wrong, the denial of the occurrences of communication thus implies the denial of the existence of this standard. In Davidson's view, the denial of this standard would render unintelligible the idea of having thought or belief, and it is incoherent to think that the idea of having thought or belief is unintelligible, we therefore cannot deny that standard.

Thus, to retain the intelligibility of the idea of having thought, we are required to drop the assumption that it is not true that other minds exist. That is, we are required to concede the

[33] Davidson (1991:209-210).

[34] Davidson (1991: 217-218).

existence of other minds, or of agents capable of thoughts, which, arguably we must further concede, must be accompanied by the existence of the external environment with objects and events that surround these agents. What all of this shows is, to retain the intelligibility of the idea of having thought, we must reject nightmarish Cartesian skepticism.

I am not going to claim that this line of reasoning is flawless. My aim here is not to defend it, but to show why Davidsonian approach qualifies as a transcendental argument. In what follows, I will simply assume both DC and Davidson's cogito are defensible.

It is no surprise that Davidsonian approach is sometimes understood as a kind of transcendental argument.[35] As can be seen from the line of reasoning I extract above, the Davidsonian approach requires one to reflect on the nature of thought, which would lead one to realize that nightmarish Cartesian skepticism cannot be sustained. Since from the radical skeptic's standpoint, such a reflection does not appeal to what the external world is like, on the characterization I provide earlier, Davidsonian approach qualifies as a transcendental argument.

Davidsonian approach's explicit invocation of or kinship with Wittgenstein's *private language argument* is what constitutes the crucial difference between it and the refutations presented in section 6. Roughly speaking, according to the private language argument, if one were to think that most of one's beliefs are false, then one must also think that her language has never been used by anyone other than herself. But such a conception of language is incoherent, thus one must not think that most of her beliefs are false.

[35] See Stern & Cheng (2023), Pritchard (2013: 527). Davidson himself did not call his approach a transcendental argument, but he certainly took it to be the kind of argument that "runs from thought to objective reality", which is the qualifying feature of transcendental arguments. See Davidson (1999).

The construction of the SIM-style argument may at some point evoke private language argument. The former nevertheless does not really rely on the latter to take off.[36] The central idea that is required for the SIM-style argument to take off is the idea that we must concede that we essentially rely on the exercise of reason both to understand words and to apply them. The connection between this idea and that of private language, if any, is definitely not an obvious one.

A curious difference between Davidsonian approach and the SIM-style argument is their perceived efficacies. We have seen that the nightmarish Cartesian skepticism itself and the BIV skepticism can be refuted by the SIM-style argument. And, as discussed before, I used the same kind of argument refutes the idea that we might be in the Hard simulation.[37] It is natural for us to wonder whether Davidsonian approach, like the SIM-style argument, can refute any particular skeptical scenario. I myself reckon that, if Davidsonian approach is correct, then we at least cannot be in the BIV scenario. For the BIV scenario is an exemplification of nightmarish Cartesian skepticism, and, by Davidsonian approach, we cannot be in any situation that exemplifies nightmarish Cartesian skepticism.

[36] This non-reliance of private language argument may not be obvious when the SIM-style argument is deployed to refute the BIV skepticism, but it is especially essential and therefore obvious when the SIM-style argument is deployed to refute the idea that we might be in the Hard simulation. For more details, see Lim (2022).

[37] In Lim (2022), I also refuted, with the same argument, the ideas that we are in the Vat earth scenario, which was discussed in Button (2013: 156-157), and the Encounter simulation, which will be briefly explored in section 10 of this paper.

However, some philosophers do not share my verdict.[38] Their sentiment is that it can still be the case that most of our beliefs are true even if we are in the BIV scenario. If they are right, then it is hard to see how Davidsonian approach can defeat any specific skeptical scenario. But at the moment I will not discuss this issue any further.

In any case, Davidsonian approach remains very insightful for the study of radical skepticism since it focuses on the nature of belief when confronting the challenge posed by radical skeptic. In section 9, I will discuss an interesting consequence that results from an objection raised by Thomas Nagel to this approach.

8. The Stroudian Responses to Transcendental Arguments

I have discussed several related arguments to refute several related radical skepticisms. All of them qualify as transcendental arguments on the characterization given in section 2.[39]

An influential objection to transcendental arguments against radical skepticism was developed by Barry Stroud. It has been widely discussed, sharpened, and is sometimes called the *Stroudian objection* in the literature.[40] The Stroudian objection consists in three main points. First, a transcendental argument can at most show what we cannot think, but falls short of showing that we are indeed not in the situation described by the radical skepticism at

[38] For more elaboration, see Button (2013: 142-143). And also, Chalmers (2005; 2022: Part 4). Interestingly, even Davidson himself had this sentiment, see Davidson (1990: 201).

[39] Whether each of them succeeds in refuting its target skepticism is another issue.

[40] See for examples Stroud (1968; 1994), Stern & Cheng (2023), Pritchard (2013), Coliva & Pritchard (2022).

issue. The second point is, to argue from what we can or cannot think[41] to the claim that we are not in the situation described by some radical skepticism is to invoke idealism or verificationism, and such an invocation would render redundant the whole project of transcendental argument. Third, the commitment to idealism or verificationism is already a concession to radical skepticism.

Some general, but important caveats are in order. It is important to note, an argument is not necessarily subject to the Stroudian objection just because it is a transcendental argument.[42] If an argument can infer an aspect of the external world purely from what we can or cannot think, and yet it is also sound, then there is nothing we can complain about. On the contrary, we are to appreciate the remarkable philosophical feat that it has astoundingly achieved.

Philosophers who think that any transcendental argument must be subject to the Stroudian objection without examining its soundness seem to think that in principle no radical skepticism can be refuted. For, on the one hand, radical skepticism in principle cannot be refuted by appealing to what the radical skeptic does not take to be certain; on the other hand, on these philosophers' view, radical skepticism is also not supposed to be refuted by appealing to what the radical skeptic takes to be certain. And these exhausts all the resources available to us. On this view, radical skepticism is then irrefutable.

This view is too hasty, to say the least. If a transcendental argument happens to be sound, but we dismiss it as problematic, we will then unwittingly miss a very important philosophical insight as well as the potential implications that it may carry. The point here is,

[41] This simply amounts to the thought content we can have, which is identical to what the radical skeptic takes to be certain.

[42] There seems to be this tendency in literature.

again, not every transcendental argument must be subject to the Stroudian objection. Whether they incur this objection must be handled with scrutiny on a case-by-case basis.

Let us turn to deeper issues. I will first address the second main point of the Stroudian objection in this section, and will turn to its first main point in the next.[43] One of the most common forms transcendental arguments take is something like the following:

> For some sentence P,
>
> (1) I cannot think that P.
>
> Hence,
>
> (2) It is not the case that P.

In the context of the study of radical skepticism, P is usually a skeptical speculation about the ontological situation we might be in, such as "I am in the BIV scenario", "I am in the Hard simulation". Suppose there exists a sound argument for (1). Let us call this argument *AR*. The Stroudian objection crucially points out that without any additional premise, (2) is still not validly deduced from AR, simply because (2), without any additional premise, is not validly deduced from (1). And if it is insisted that (2) can be validly deduced from (1), then some variety of idealism[44] must be snuck in as the additional premise to complete the argument for (2). In one occasion, commenting on the efficacy of transcendental argument, Stroud wrote:

> Even if we allow that we can come to see how our thinking in certain ways necessarily requires that we also think in certain other ways, and so perhaps in certain further ways as well, and we can appreciate how rich and complicated the relations

[43] Once these two points are neutralized, there is no need to address the third.

[44] I omit verificationism from here on. But what I will say about idealism in this context equally applies to verificationism.

> among those ways of thinking must be, how can truths about the world which appear to say or imply nothing about human thought or experience be shown to be genuinely necessary conditions of such psychological facts as that we think and experience things in certain ways, from which the [transcendental arguments] begin?[45]

As can be seen from this passage, the reason for thinking that idealistic element must be introduced to validly deduce (2) from (1) is that (1) is taken by the Stroudian objection to convey some psychological fact, while (2) is taken to convey some ontological fact, and nothing about ontology can be inferred from psychological statements unless one holds some kind of idealism.

The problem with this reason is this. If the Stroudian objection concedes that transcendental arguments demonstrate that in order to think in certain ways, we are necessarily required to think in certain other ways, then the Stroudian objection must also concede that the facts the arguments discover are not something about psychology, but about logic. For, as long as AR that concludes (1) is sound, which means whatever is validly deduced from AR is indisputable, what (1) really concerns is not just how some particular thinker is to think, but how every thinker would be to think, which is the very subject matter logic tackles. As a consequence, by taking (1) to be conveying some psychological fact, rather than some logical fact, the Stroudian objection has made a category mistake.

The conflation between what is logical and what is psychological is the view known as *psychologism*, which many take to be problematic. Relatedly, some philosophers may argue that even if (1) conveys some logical fact, this does not mean that it is not possible that there exists a kind of thinkers who think in a way radically different from us and can therefore think that P. These philosophers thereby further contend that if this possibility is not ruled

[45] Stroud (1994: 158-159).

out, then (1) might not convey a ‘universally’ logical fact, but a logical fact only applicable to our thinking.

Postulating this possibility amounts to saying that the logic applicable to us does not govern what constitutes *thinking*, simpliciter, but only governs what constitutes *our thinking*.[46] In effect, this postulation countenances the contention that what is logical depends on what kind of mind one has, and this contention still commits to the conflation between logic and psychology, namely, to psychologism.

The problems psychologism can incur are deep and intricate, and James Conant has conducted a very stimulating and insightful study of them.[47] At the moment, I only want to highlight that, the proponents of Stroudian objection mistakes what is logical for what is psychological, by accusing the proponents of transcendental argument with a sound AR of mistaking what is psychological for what is ontological.[48]

In view of all this, (1) is to be correctly understood as pertaining to logic rather than to psychology. Admittedly, all of this by itself may not justify the inference from (1) to (2). However, although there is no known logical law that warrants this inference, there is also nothing that should prohibit us from elevating the way of thinking behind this inference to a logical law, certainly not the worry of committing to idealism. For, as explained, it is not correct to understand any inference from (1) to (2) as implying or suggesting a commitment to idealism.

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[46] See Stern & Cheng (2023).

[47] Conant (1992).

[48] Thus, the Stroudian objection would only have its force restored if AR were not sound, but merely plausible.

Here is a motivation we can consider for regarding as valid the inference from (1) to (2). If the *principle of excluded middle* (PEM) is universally held,[49] then the inference from (1) to (2) is not too controversial. PEM states that for every sentence S, either S or its negation is true. Since (1), deduced from the sound AR, effectively says that we can neither conceive of nor articulate the truth of P, then given PEM, the negation of P is true, which simply amounts to (2).

This motivation may not suffice for regarding the thinking behind the inference from (1) to (2) as some logical law. I merely suggest it here for future explorations. I have, nevertheless, at least refuted a major objection to regarding as valid this inference.

9. Kantian Skepticism

In any case, if the AR of a given transcendental argument is sound, then, even if we concede to the Stroudian objection that we cannot positively infer about what the world we are in is like, namely, we are not allowed to validly infer from (1) to (2), the transcendental argument still suffices to refute its target skepticism. For (1) is the claim that some skeptical speculation is unthinkable, and the radical skeptic thereby can neither coherently conceive of the speculation, nor coherently expound it.

Nevertheless, the first main point of the Stroudian objection may attempt to argue that even if the radical skeptic cannot resist (1) outright, (1) itself still does not establish that we are not in the situation described by the radical skepticism in question. In fact, the Stroudian

[49] Though an intuitive principle, it is not universally held. Intuitionism rejects this principle. See Iemhoff (2020).

objection can go as far as to say that (1) can engender a more radical form of skepticism.[50] I take Thomas Nagel's response to Davidsonian approach to be a case study here as it best illustrates this first main point of the Stroudian objection.

Recall that Davidson argued for DC, which says that if one is to qualify as a thinker, then most of her beliefs must be true. In view of this, when it comes to Davidsonian approach, the sentence that is analogous to (1) would be:

(1D) I cannot think that I am not a thinker.

Then, by DC and some intuitive inferences, we can easily obtain:

(2D) Most of my beliefs must be true.

As noted before, (2D) amounts to the rejection of nightmarish Cartesian skepticism. However, Nagel contended, even if the radical skeptic concedes DC, she may still attempt to resist the claim that she is not in the situation described either by the nightmarish Cartesian skepticism or some other more disturbing skepticism. Instead, the radical skeptic may be pushed by DC to concede an even more radical form of skepticism----the skepticism about her own thinking:

> Skepticism in the face of Davidson's argument would have to take the form of the hypothesis that … I do not have real thoughts at all. But since this is something I cannot think, it can appear only as an unimaginable abyss which is the alternative to continuing to maintain that I have extensive knowledge of the world…which I cannot abandon because I cannot think that I am not thinking…[51]

[50] Stroud (1994: 175-176).

[51] Nagel (1999: 201).

> [A] way of escaping from Davidson's argument would be to admit a form of skepticism about whether one was really capable of significant thought, while at the same time admitting that it is inexpressible and strictly unthinkable, since it is equivalent to saying, "Perhaps the sentence I am uttering right now means nothing at all." ... It would be a genuinely new form of skepticism … Davidson's argument actually points us toward this inexpressible [and strictly unthinkable] form of skepticism.[52]

The putative thought that the radical skeptic, in Nagel's view, would attempt to reach is deeply interesting and profound. Having conceded DC, without further conceding the defeat of nightmarish Cartesian skepticism, the radical skeptic would instead attempt to raise the putative doubt: could it be the case that what DC shows, instead of defeating nightmarish Cartesian skepticism, is that we are actually so deep in the situation described by the nightmarish Cartesian skepticism that we have never actually been thinking at all? Could it be the case that we never actually have thoughts?

This way, rather than narrowing the scope of the radical skeptic's doubt, DC seems to broaden it in a highly peculiar way. The radical skeptic, with the aid of DC, converts her radical skepticism into a more extreme form by raising the idea that we might never be thinking. All of the radical skeptic's own thoughts, initially left intact by her own skepticism, has now become as vulnerable to radical doubt as almost everything else.[53]

The putative doubt that arises from this dialectic concerning radical skepticism that we might never be thinking exemplifies what James Conant calls *Kantian skepticism*. One way to

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[52] Nagel (1999: 205).

[53] Would there remain something that is still invulnerable to such a radical doubt? Sensations, perhaps.

construe Kantian skepticism is that it is the attempt to question one's own ability to think. Conant has offered some very piercing descriptions of what it would be like for the skeptic to embark on this attempt:

> Having worked his way far into a particular philosophical dialectic, the Kantian skeptic comes to an impasse: it suddenly no longer seems to him possible that one should be able so much as to frame thoughts that are about the world (or to experience another's bodily movements as expressions of emotion, or to traffic in forms of words that are replete with meaning, etc.). This sort of skeptic becomes perplexed as to what it is to be experiencing or thinking or meaning things in ways that he also cannot help but take himself to be doing in and through the very act of asking his skeptical question. To move in the direction in which his question leads is apparently to deprive his question (along with the whole of the rest of his "thought") of the capacity to possess determinate content. And yet he is unable to dismiss his question…[54]
>
> The Kantian skeptic finds himself drawn to a question he is both unable to hold stably in his mind and yet unable to dismiss.[55]

On the one hand, I can very much sympathize with the sentiment behind both Nagel's thinking and thereby Kantian skepticism, which is as intriguing as it is faint; on the other hand, I can also understand that one can hardly find any sense in it, which is already shown very clearly from the discussion above.[56] As Conant points out here, some of us, together

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[54] Conant (2012: 31-32).

[55] Conant (2012: 36).

[56] If one were to resist the conclusion of the SIM-style argument by insisting on the idea that we might be in the skeptical scenario at issue, while at the same time still conceding to the argument that we cannot coherently conceive of this idea, then this resistance would also exemplify Kantian skepticism.

with Nagel, may get pulled by these two intuitions in trying to say the unsayable, to think the unthinkable.

The peculiar experience of trying to capture a putative thought was also described by Button with an analogy:

> [The experience is] more like the feeling that you sometimes have, just before falling asleep, of having just had a tremendously important thought. You might try to stir yourself awake to bring it into focus, but by the time you are sufficiently awake to think about things clearly, the content of the thought has evaporated. If indeed it was ever there. Often, I hazard, there was nothing more than the feeling of having had a thought. Such a feeling certainly need not keep us awake long into the night.[57]

There can still be much more to explore concerning Kantian skepticism than this paper can handle. Although I will still discuss it a bit more in the next section, here in this paper I side with Button's verdict that Kantian skepticism is incoherent[58], and is therefore to be dismissed. This means that if DC is justified, then, rather than taking it to result in an incoherent skepticism, it must follow that I am mostly right.

This is also an important reason why I address Kantian skepticism here. Since, as of the time of writing this paper, the SIM-style argument has not actually met with this kind of resistance, I choose to discuss in the main text the line of reasoning actually put forth against an approach, which is similar in spirit to the SIM-style argument.

[57] Button (2013: 148). Button was addressing what he called the metaphysical skepticism, which I take to be a variety of Kantian skepticism.

[58] Button (2013: 60).

10. The Encounter Simulation and the peculiar Phenomenology arising from Kantian Skepticism

The intriguing experience of capturing a putative thought can be illustrated by contemplating what it is like for one to be in the Encounter simulation:

The Encounter Simulation. Simulated beings were, are, and will be simulated by some civilization, who will make contact with the former, and will explicitly inform them that they are simulated. Prior to that moment, all the simulated beings do not know that they have been simulated.

The idea that we might be in the Encounter simulation is motivated by Bostrom. He contended that whether we are in a simulation is testable:

> There are clearly possible observations that would show that we are in a simulation. For example, the simulators could make a 'window' pop up in front of you with the text "YOU ARE LIVING IN A COMPUTER SIMULATION. CLICK HERE FOR MORE INFORMATION." Or they could uplift you into their level of reality.[59]

For Bostrom or some other, we might live in a simulation, and the idea that the simulator might reveal to us that we are in it is a coherent one. Yet, I have refuted this idea also by mounting the SIM-style argument against it. But, without having to go into the details of the SIM-style argument, we only need to ponder a little deeper to discover the problem of this idea.

[59] Bostrom (2008), the capital texts are originally from it.

If we are in the Encounter simulation, then we have always been in the simulation our whole life, and, in the future, we will be informed that we are in the simulation. This conditional is trivially correct by the definition of the Encounter simulation. And to coherently entertain the antecedent requires to coherently entertain the consequent. Yet it is not difficult to show, it is incoherent to think that we will be informed that we have been in the simulation.

Let us try to imagine what it would be like for one to be informed explicitly and unambiguously, like the way Bostrom described, that one has actually been living in a simulation. To put it in terms of the first-person point of view, the experience of being informed by the simulator that I myself have *always* been in a simulation would for sure be extraordinarily mind-boggling and staggering, so mind-boggling and staggering that not only would I at that very moment begin to doubt everything I believe, to start to question the meaning of my whole life, but also, more thoroughly, to even question whether I have ever existed, whether I have ever thought or experienced anything at all, or whether any of my thoughts or experiences has ever made sense. At the very moment of the 'revelation' that I am in a simulation, my thought, if it had not faded away, would border on Kantian skepticism.

By attempting to contemplate what it is like to be in the situation in which we are informed of being in the simulation, we come to realize that we cannot coherently entertain this situation. As noted earlier, the thought of myself being in the Encounter simulation must contain the thought of myself being informed of living in it. Since I cannot entertain the latter, I cannot entertain the former. That is, it is incoherent to think that we might be in the Encounter simulation.

This mental exercise of imagining what it is like to be in the Encounter simulation may, along with the SIM-style argument, easily serve as a refutation of the idea of us being in it. In any case, my present purpose of carrying out this mental exercise, instead of aiming to refute that idea, is to attempt to illustrate more saliently the peculiar phenomenology of capturing a putative thought. The phenomenology is highly peculiar, as the sense or the intelligibility of a certain thought----the thought of myself being in the Encounter simulation in this case----at some point seems to start fading away as we think through it. “The content of the thought has evaporated. If indeed it was ever there.” As Button put it.

To investigate any skepticism would ultimately, either explicitly or implicitly, require one to imagine what it is like to be in the situation described by the given skepticism. Undergoing that kind of phenomenology while so imagining can give us the indication that some incoherent element is just around or even intrinsic to the target skepticism. If we can identify and formulate this element, we would then come to understand that this skepticism cannot be coherently entertained. This way, a successful transcendental argument may be well within our reach.

11. Conclusion

WNS, my previous paper, mainly focused on the study of simulations, together with their refutations. This present paper is an attempt to embed this study into a larger framework by considering some somewhat pressing issues left mostly unaddressed in the previous one. In this paper, I have highlighted the skeptical nature of the simulation hypotheses proposed by Nick Bostrom, and indicated that, in view of this nature, their refutations would be better understood as transcendental arguments.

Transcendental arguments are intended to refute radical skepticisms by appealing only to premises the radical skeptic does not question. The SIM-style argument developed in my previous paper is an example of transcendental argument. I have shown here that it can also be employed to remedy the BIV argument that is intended by Hilary Putnam and Tim Button to refute the idea that we might be in the BIV scenario, which exemplifies nightmarish Cartesian skepticism.

The SIM-style argument can also be employed to refute nightmarish Cartesian skepticism itself. I have also developed another transcendental argument to refute it. Donald Davidson has another approach to refute this skepticism, which can also be viewed as a transcendental argument. I have compared the differences between my approach and Davidson's.

It is important for a paper that advances some transcendental arguments to address Barry Stroud's well-known objections to this kind of argument. I have shown that the Stroudian objections can incur two very undesirable results. One is psychologism, the view that logical laws are psychological laws. The problem of this view is intensively studied by James Conant.

Another is Kantian skepticism, which is also studied by Conant as well as Button. Kantian skepticism is the attempt to doubt one's own ability to think, which is especially problematic, whoever holds it borders on incoherence. Thomas Nagel's response to Davidson's approach to nightmarish Cartesian Skepticism can be viewed as an example of Kantian skepticism.

Kantian skepticism can bring about the peculiar phenomenology of experiencing some putative thought gradually fading away. I have briefly explored the Encounter simulation to illustrate this phenomenology more concretely.

When well-developed, transcendental arguments become a powerful tool in philosophy, allowing us to investigate and understand how and to what extent our reason might be

susceptible to radical skepticism. More significantly, they show how and to what extent our reason can be free of it.

Because of its dominantly introspective or a priori nature, transcendental arguments, by showing that some radical skepticisms cannot be coherently expounded, provide us with deep philosophical, or even metaphysical insights which we cannot attain by conducting the kind of inquiry typical of empirical sciences. As such, despite the ubiquitous continuity with empirical sciences, philosophy is still set apart from them at least by the project of constructing transcendental arguments, highlighting the distinctive, introspective aspect of philosophical inquiry.

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