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WHAT DOES BONJOUR'S EMPIRICAL FOUNDATIONALISM (UNWITTINGLY) INHERIT FROM CARNAP'S AND SCHLICK'S VERIFICATIONISM?

Abstract

I compare and contrast BonJour's account of empirical foundationalism with Carnap's and Schlick's accounts of verificationism, the debate over which was a hallmark of the logical empiricist movement. I argue that the essential aspects of BonJour's account bear a close resemblance to different aspects of Carnap's and Schlick's accounts, while there are important differences among these accounts. As I show, these aspects concern the kind of relation that exists between a basic empirical belief and the corresponding sensory experience, and the way in which the former is justified by appeal to the latter. The present paper thus illustrates how the debates that took place within the logical empiricist movement are still relevant to contemporary issues in epistemology.

Keywords: Laurence BonJour, Rudolf Carnap, Moritz Schlick, foundationalism, verificationism

According to the basic tenet of *empirical foundationalism*, in our belief system concerning the external world there exist empirical beliefs, called *basic* or *foundational* beliefs, that serve to justify other empirical beliefs, while they are themselves justified by appeal to sensory experience alone, i.e., in a way that does not require any inference from any other beliefs. In recent years, the debate concerning empirical foundationalism has centered around Laurence BonJour's account (BonJour 2000, 2003) concerning *internalist* foundationalism. According to this version of foundationalism, the factors that confer epistemic justification on one's belief-system are available in one's conscious states of mind, so that one

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has internal access to them. The *externalist* version of foundationalism does not require one to have such access.

In this paper, I will trace BonJour's account of internalist foundationalism back to logical empiricist *verificationism*, which is roughly the view that the truth value of each *synthetic*[1] sentence solely depends upon whether or not its experiential consequences in the form of observation sentences hold true.[2] Different versions of verificationism were advanced and advocated by the logical empiricist philosophers Rudolf Carnap and Moritz Schlick, who were two of the prominent figures within the logical empiricist movement.[3] I will argue that BonJour's account inherits some of its essential aspects from Carnap's and Schlick's versions of verificationism, while there are important differences among these accounts. To this end, in Section 1, I will unpack and highlight the essential aspects of BonJour's account.[4] In Section 2, I will compare and contrast Carnap's and Schlick's accounts of verificationism. In Sections 3 and 4, I will discuss the respects in which BonJour's internalist foundationalism bears a resemblance to Carnap's and Schlick's verificationism, and the respects in which these accounts differ from each other.

1. BONJOUR'S EMPIRICAL FOUNDATIONALISM

BonJour develops his account of internalist foundationalism[5] as a solution to what is often referred to as the *Sellarsian dilemma* (Sellars 1963), which is concerned

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[1] Since logical empiricist verificationism concerns synthetic sentences rather than analytic sentences, all future occurrences of the word *sentence* in this paper in relation to verificationism will be assumed to be only about synthetic sentences, unless otherwise stated.

[2] For a recent comprehensive discussion, see, e.g., (Uebel 2019).

[3] See (Creath 2020) for a comprehensive review of this philosophical movement.

[4] In this section, I shall draw upon (Karaca 2023).

[5] It is worth mentioning that in his earlier career, BonJour criticized foundationalism and developed a coherence theory of empirical knowledge based on the Sellersian dilemma (BonJour 1985). This is a "holistic or systematic conception of inferential justification (and hence of empirical justification in general . . .): beliefs are justified by being inferentially related to other beliefs in the overall context of a coherent system" (BonJour 1976: 286). In the late 1990s, he renounced this theory and shifted towards foundationalism. The reasons for this renunciation are discussed in (BonJour 1999b). In a recent interview, BonJour said: "I now think that there is no plausible way within a coherentist view to either identify genuinely observational beliefs or account for their justification in a way that gives their 'cognitively spontaneous' status any justificatory role. I now think that whatever plausibility my earlier attempt might have seemed to have in fact derived (illicitly) from intuitions about the nature and occurrence of observations that simply don't fit in (don't cohere with) a coherentist view" (Giaconi 2022: 21–27).

with whether or not the grasp of sensory (or experiential) content is propositional, and thus conceptual. Briefly, this dilemma can be stated as follows. If we assume that our grasp of experiential content is propositional, then the proposition containing our grasp of a particular sensory experience, if it is itself justified, can confer (epistemic) justification on another empirical belief. However, in this case, we face the problem of explaining how the proposition that is supposed to confer justification does not itself need justification. On the other hand, if we acknowledge that our grasp of sensory content is non-propositional (i.e., non-conceptual), then no justification seems necessary because what we grasp in this case does not involve any conceptual claim concerning the character of our sensory experience. However, in the latter case, we face the problem of explaining how anything non-propositional can serve to justify beliefs that are propositional.

BonJour's proposed solution to the Sellersian dilemma is based on a distinction that he makes between two kinds of beliefs, namely *occurrent beliefs* and *meta-beliefs*. While an occurrent belief is a first-order belief, e.g., "Foundationalism is more defensible than most philosophers think," a *meta-belief* is a second-order belief about the existence and content of an occurrent belief, e.g., "I believe that foundationalism is more defensible than most philosophers think" (BonJour 2003: 61). BonJour regards an occurrent belief as "a conscious state" and thereby suggests that being aware of its propositional content and its assertive, rather than questioning or doubting, character are two aspects that are constitutive to having such a belief (BonJour 2003: 62). He calls this kind of awareness – induced in one's mind while developing a first-order belief – *constitutive* or *built-in awareness*, and he suggests that it is strictly infallible. In BonJour's words:

> Since it is in virtue of this constitutive or "built-in" awareness of content that the belief is the particular belief that it is with the specific content that it has, rather than some other belief or some other sort of state, there is apparently no way in which this awareness of content could be mistaken – simply because there is no independent fact or situation for it to be mistaken about. (BonJour 2003: 64)

Note that in BonJour's account it is not the first-order occurrent belief that is infallible and that does not stand in need of justification. Rather, the believer needs a reason as to why he has developed the first-order belief in question, whereas he does not need any reason to justify why he has a built-in awareness due to having the first-order belief that he has developed.

BonJour takes a meta-belief to be "a *description* of the very content involved in the constitutive awareness of content." He also suggests that "by consciously having that constitutive awareness, [one is] in an ideal position to judge whether or not this description is true." However, it is important to note that in BonJour's account, what counts as a basic belief is a non-inferentially justified first-order belief and "constitutive awareness of content [is] the ultimate source of justification" in that it enables justifying a first-order belief in the way required by internalist foundationalism, as one has direct internal access to his own built-in awareness (BonJour 2003: 64).

BonJour holds that his foregoing characterization of the nature of an occurrent belief and of its relation to a second-order meta-belief provides an escape route from the horns of the Sellarsian dilemma. To this end, he extends the foregoing account concerning occurrent and meta-beliefs to the justification of empirical beliefs, i.e., beliefs about sensory experiences, by drawing a parallel between an occurrent sensory experience and an occurrent belief. In BonJour's view, for example, one's having the visual experience of seeing a physical object, which exemplifies an occurrent sensory experience, is a conscious state like an occurrent belief. It thus brings a built-in awareness of its sensory content. BonJour suggests that "since it is this awareness of sensory content that gives [one's] experiential state the specific character that it has . . ., there is simply no logical room for this awareness to be mistaken about the content in question" (BonJour 2003: 70). In his view, built-in awareness associated with an occurrent sensory experience – like built-in awareness associated with a first-order belief – is *infallible* in the sense that it does not stand in need of justification.

BonJour acknowledges that the content of sensory experience is non-conceptual and that sensory experience "seems far too specific, detailed, and variegated to be adequately captured in any conceptual or propositional formulation" (BonJour 2003: 71). However, he suggests that:

> Even if we grant and indeed insist that the specific content of a sensory experience is itself nonconceptual . . ., this provides no reason at all to deny that such non-conceptual content, like the various other kinds of non-conceptual phenomena, can still be conceptually *described* with various degrees of detail and precision. (BonJour 2003: 72)

Therefore, in BonJour's view, an empirical belief contains a conceptual description of the sensory experience which this belief is about. By virtue of having an infallible awareness of the sensory content of one's belief, one is "in a good, indeed an ideal,

position to judge directly whether the conceptual description [contained in an empirical belief] is accurate as far as it goes, and if so, to be thereby justified in accepting the belief" (BonJour 2003: 73).[6] This in turn means that:

> [Having] an [infallible] awareness of [the non-conceptual content of a sensory experience] can seemingly constitute a kind of reason for thinking that the description [contained in an empirical belief] is true or correct (or equally, of course, untrue or incorrect) – thus apparently providing a basis for the justification of [that belief]."
> (BonJour 2003: 72)

Therefore, since the justifying reason here is internally and directly accessible to the believer in a way that does not depend on any further beliefs, an empirical belief can be basic in the sense required by internalist foundationalism.

As the above discussion shows, an essential aspect of BonJour's account is that it posits "a *descriptive* relation [that has] to do with the accuracy or inaccuracy of fit between a conceptual description and a non-conceptual object that the description purports to describe" (BonJour 2003: 72). For the justification of empirical beliefs, one also requires a direct comparison of this descriptive content with the content of sensory experience, so that by virtue of one's built-in awareness of the latter, one can ascertain and recognize the accuracy of the descriptive relation between an empirical belief which one seeks to justify and the corresponding sensory experience. In BonJour's words:

> If the foregoing account is correct, we seem to have found a case of exactly the sort of direct comparison or "confrontation" between a conceptual description and the non-conceptual element or chunk of reality that it purports to describe which seems intuitively to be essential if our conceptual descriptions are ever to capture reality in an ascertainable way. Such a comparison can only take place, to be sure, where the reality in question is itself a conscious state and where the description in question pertains to the conscious content of that very state, but in that very specific case it seems to be

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[6]John Pollock (2001: 54) disagrees with this assertion. He suggests that BonJour's account is based on an analogy, namely that the introspection of a percept is analogous to the ordinary perception of the external world. His consideration is that "the case in which I have an apperceptive belief about my percept is not a normal case of perception. This is a case in which I have focused my attention on the percept instead of the state of the world it represents. In such a case I become aware of the percept itself by introspecting it." As a result, "the kind of awareness you have of the percept is quite different from the kind of awareness the percept itself provides in a normal perceptual situation." This aspect of BonJour's account was also criticized by Alvin Plantinga on the ground that one's "awareness is not *itself* something with respect to which a proposition can be probable, because it is not itself a proposition" (Plantinga 2001: 62). For BonJour's replies to both of these critics, see (BonJour 2001).

entirely unproblematic and perfectly genuine. Thus contrary to many recent critics of foundationalism, the idea that reality is in some circumstances simply *given* to the mind in a way that makes the truth of claims about it directly and unproblematically apparent is, after all, not a myth! (BonJour 2003: 74–75)

Note that the requirement of direct, rather than indirect, comparison is crucial for BonJour's account, as an indirect comparison would necessitate other beliefs for the justification of basic beliefs. Michael Bergmann criticizes this requirement in the following way:

> In addition to the belief B and the experience E, another act of judging required in order for B to be justified? BonJour's answer is that a *direct comparison* of B's content and E's content is required. But can there be a direct comparison of those two contents without there being, in addition to B and E, another act of judging (or of conceiving of E in a certain way)? It seems clear that the answer is "No." For comparison (whether direct or not) involves noting similarities and differences. But that can't be done if one isn't aware *that* the items in question have certain features. And that requires one to *judge* that they have the features in question or to *conceive* of them as having those features. But again, such acts of judging or conceiving are precisely the sorts of things that can be correct or not and, hence, justified or not. And this is what leads immediately to the regress problems . . . (Bergmann 2006: 685–686)

BonJour denies Bergmann's criticism as follows:

> I do not need some sort of further, independent justification for thinking that the propositional claim fits my experience and so is true. On the contrary, my justification grows out of my awareness of the content of the claim and of the corresponding experience. To be sure, I must recognize the fit between the two, but this recognition is not a further, cognitively independent judgment, which would then require further independent justification, but is instead *cognitively* guided by and based on those experiences themselves. (BonJour 2006: 745–746)

BonJour's requirement of a direct comparison between the content of an empirical belief and the corresponding sensory experience, as well as his above response to Bergmann's objection, suggests that BonJour's internalist foundationalist account is also verificationist in the sense that whether the empirical belief in question is basic, i.e., non-inferentially justified, can be determined only by verifying the accuracy of its content by appeal to the corresponding sensory experience, via the built-in awareness of the content of this experience. In the remainder of this paper, I will argue that some essential aspects of BonJour's foundationalism derive from Carnap's and Schlick's accounts of verificationism.

2. CARNAP AND SCHLICK ON VERIFICATIONISM

In this section, I will discuss Carnap's and Schlick's accounts of verificationism. Before I proceed, a disclaimer is necessary. In this paper, I shall restrict my discussion of Carnap's verificationism to his early work because only his early account of verificationism is relevant to the argument of the present paper. His view on this subject later changed significantly over the years (for details, see Uebel 1992, 1996).

Carnap and Schlick offered different accounts of verificationism[7] that are based on their different conceptions of *meaning*. Carnap's (early) account of verificationism is based on the following conception of meaning:

> The meaning of a statement lies in the fact that it expresses a (conceivable, not necessarily existing) state of affairs. If an (ostensible) statement does not express a (conceivable) state of affairs, then it has no meaning; it is only apparently a statement. If the statement expresses a state of affairs then it is in any event meaningful; it is true if this state of affairs exists, false if it does not exist. One can know that a statement is meaningful even before one knows whether it is true or false. (Carnap 1928/2003: 325)

In Carnap's account, the truth value of a sentence whose meaning is understood in the aforementioned sense can only be ascertained by means of what he calls "experimental verification" (Carnap 1932a/1995: 42), which he describes as follows:

> If a state of affairs described by p can be reduced to facts about given, i.e. direct, experience of A, A has in theory the possibility of verifying p. A then knows the 'sense' of p, for the 'sense' of p, or what is expressed by p, consists of the method of verification, i.e. in the reduction to the given. If some statement p is not in this inferential relation to statements concerning the given, p cannot be understood by A, i.e. p is nonsense. (Carnap 1932a/1995: 50)

The crucial ingredient of Carnap's account is the notion of "the given," which he characterizes as corresponding to what he calls "protocol statements" (Carnap

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[7]Logical empiricist verificationism is often referred to as the *verification theory of meaning*, indicating the intimate connection between meaning and the verification underlying this kind of verificationism. However, the use of the term "theory" here is misleading as Schlick states: "This view has been called the 'experimental theory of meaning'; but it certainly is no theory at all, for the term 'theory' is used for a set of hypotheses about a certain subject-matter, and there are no hypotheses involved in our view, which proposes to be nothing but a simple statement of the way in which meaning is *actually* assigned to propositions, both in everyday life and in science" (Schlick 1936: 342).

1932a/1995). These are the simplest observation sentences that "refer to the given, and describe directly given experience or phenomena, i.e. the simplest states of which knowledge can be had" (Carnap 1932a/1995: 45). In Carnap's view, the presence of protocol sentences in one's protocol language is a necessary condition for the verifiability of other sentences in the sense that protocol sentences themselves need "no justification and [serve] as foundation for all the remaining statements of science" (Carnap 1932a/1995: 45). Therefore, the basic tenet of Carnap's account of verificationism is that sentences about the external world could be reduced to sense data, or observations, which in turn come from sentences of immediate sense experience, namely, *protocol sentences* such as "here now pointer at 5, simultaneously spark and explosion, then smell of ozone there" (Carnap 1932a/1995: 44).[8]

As the above discussion suggests, Carnap ascribes the meaning of a sentence entirely to its empirical content, i.e., its content that can only be experientially ascertained. For him, the meaning of such a sentence consists in the method of empirical verification, and this means that what makes a sentence meaningful is the reducibility of its empirical content to propositional content that is expressible by a set of protocol sentences. That is to say that the meaning of a sentence solely depends on how its content is reduced to protocol sentences. If the necessary reduction cannot be carried out, then it is not possible to verify the sentence and thus determine its truth value, meaning that the sentence in question has no truth value; hence, it is meaningless.

Like Carnap, Schlick ascribes the meaning of a sentence entirely to its empirical content. However, unlike Carnap, he does not think of the reducibility of experiential content to observation sentences, such as protocol sentences, as a requirement for a sentence to be meaningful. Rather, he suggests that "the

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[8]Carnap revised his account concerning protocol sentences (Carnap 1932a/1995) as a response to Otto Neurath's criticism. In an article he published in the same year (Carnap 1932b/1987), Carnap defines two different procedures regarding the use and function of protocol sentences as follows: "In the first procedure [defined in (Carnap 1932a/1995)] protocol sentences lie outside the system language; here the form of the protocol sentences is arbitrary. Special rules will be constructed for translating protocol sentences into system sentences. In the second procedure (Neurath) protocol sentences are found inside the language of our system; here the form of protocol sentences is not arbitrary, but rather bound to the syntax of our system language. There are no special translation rules here" (Carnap 1932b/1987: 458). It is important to note that both procedures defined by Carnap (1932b/1987) are still reductionist, i.e., based on the reduction of sentences of science to protocol sentences.

meaning of a proposition can be given only by giving the rules of its verification in experience" (Schlick 1936: 342) in the following sense:

> What is a proposition, after all? In my opinion it is a series of sounds or other symbols (a 'sentence') *together with the logical rules belonging to them*, i.e. certain prescriptions as to how the sentence is to be *used*. These rules, culminating in 'deictic' definitions, constitute the 'meaning' of the proposition. In order to verify the proposition I have to ascertain whether those rules have actually been obeyed – why should that be impossible? (Schlick 1935b/1979: 67)

Again, like Carnap, Schlick thinks that the "meaning of a proposition is the method of its verification" (Schlick 1936: 341). However, unlike Carnap, he thereby means that what makes a sentence meaningful is the (empirical) verifiability of the rules governing the *deictic* definitions used in forming this sentence. Therefore, in Schlick's conception, the meaning of a sentence wholly depends on how the foregoing rules are experientially verified, and the sentence is meaningful if these rules can be thus verified.

What Schlick calls *Konstatierungen*, translated from German into English as *affirmations*, are the particular observation sentences that are about the "immediately perceived" (Schlick 1934/1979: 381) and that thereby constitute "the only ultimate basis of [one's] beliefs" (Schlick 1935b/1979: 70). In Schlick's view, the grammar of affirmations "requires an act, as it were, of direct ostension, without any mediating series of definitions" (Schlick 1935a: 413). They "always, in fact, contain ostensive words or their equivalents ('here', 'now'; the verb is always in the present tense)" (Schlick 1935a: 413), such as "Here now two black points coincide," or "Here yellow borders on blue," or also "Here now pain" (Schlick 1934/1979: 385). In addition, unlike Carnap's protocol sentences, affirmations do not include indications of time and place.[9] For, according to Schlick, they are valid at the very moment they are uttered, signaling the perception of some sensory experience relevant to the verification of a sentence.

Schlick views protocol sentences as being unable to provide the necessary foundation for science, as the following passage suggests:

> Protocol statements . . . are in principle exactly the same in character as all other statements of science: they are hypotheses and nothing else. They are anything but irrefutable and can be employed in the construction of the knowledge-system only

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[9]Schlick says that affirmations cannot "be replaced by an indication of time and place, for as soon as this is attempted, the observation statement is unavoidably replaced . . . by a protocol statement which as such has an altogether different nature" (Schlick 1934/1979: 386).

so long as they are supported, or at least not contradicted, by other hypotheses. We therefore reserve the right to make protocol statements subject to make corrections at any time to protocol propositions, and such corrections are often enough made, indeed, whenever we eliminate certain protocol data and maintain afterwards that they must have been due to some kind of error. (Schlick 1934/1979: 373)

In Schlick's account, affirmations "are the only synthetic propositions *which are not hypotheses*" (Schlick 1934/1979: 387). And, unlike the latter, affirmations are "the 'immediately perceived' " (Schlick 1934/1979: 381) and thus "final, indubitable and incorrigible" (Schlick 1935a: 412) in that, unlike hypotheses, they are free from errors. They can thereby serve to verify (and falsify) all other sentences in science. But how does this verification take place? Unfortunately, what Schlick says about the role of affirmations in the process of verification is less than clear. In Schlick's words:

Science makes prophecies that are tested by "experience." It is in making predictions that its essential function lies. It says, for example: "If, at such and such a time, you look through a telescope focused in such and such a manner, you will see a speck of light (a star) coinciding with a black line (cross wires)." Let us assume that on following these instructions the event prophesied actually occurs; this means, of course, that we make an affirmation for which we are prepared; we pass an observational judgment that we *expected*, and have in doing so a sense of *fulfilment*, a wholly characteristic satisfaction; we are *content*. It is quite proper to say that the affirmations or observation statements have fulfilled their true mission, as soon as this peculiar satisfaction is obtained.[10] (Schlick 1934/1979: 382)

As the above passage shows, rather than explaining how this process actually takes place, Schlick makes use of psychological elements such as "sense of fulfilment" and "satisfaction" to characterize the process of verification. While it is hard to make sense of how verification takes place in his account, a charitable interpretation of the above passage suggests that the act of verification requires the perception of a relevant sensory experience by the agent (e.g., a scientist) who is in charge of verification, thus making Schlick's account empiricist. In this account, an affirmation is conceived of as being about a particular sensory experience, and its utterance signals the agent's perception of the particular experience that is essential to the verification process. That is to say that at the moment of verification, the agent discovers and perceives the sensory experience that is

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[10]As this quote illustrates, Schlick sometimes uses the terms "confirmation" or "observation" statements interchangeably with affirmations.

necessary to verify the particular sentence that he seeks to verify. This in turn prompts him to utter a relevant affirmation, thereby verification proceeds from observation sentences containing scientific predictions towards affirmations that represent the final point in the process of verification, as the following passage suggests:

> *Finality* is a very suitable word to describe the significance of observation statements. They are an absolute end, and in them the task of knowledge is fulfilled. That the joy in which they culminate, and the hypothesis they leave behind, are then the beginning of a new task, is no longer their affair. Science does not rest on them, but leads to them, and they show that it has led aright. They are really the absolutely fixed points; we are glad to reach them, even if we cannot rest there.[11] (Schlick 1934/1979: 383)

In order for a sensory experience to serve to verify a sentence, there should be some kind of compatibility between the empirical content of the sentence in question and the content of the corresponding sensory experience embodied in the relevant affirmation. In this sense, affirmations can be regarded as indicators of the attainment of this compatibility in instances of verification. In Schlick's words:

> The *only ultimate* reason why I accept any proposition as true is to be found in those simple experiences which may be regarded as the final steps of a comparison between a statement and a fact, and which I have spoken of as [affirmations]. (Schlick 1935b/1979: 70)

However, Schlick's account is unclear regarding the required compatibility between the empirical contents of sentences and those of sensory experiences, as embodied in affirmations. It is also not clear how and to what extent affirmations, which are linguistic entities, capture the contents of sensory experiences. Note that since sensory experience is non-propositional and thus non-conceptual in nature, the kind of comparison that Schlick requires for verification constitutes one of the horns of the Sellersian dilemma. Carl Hempel criticized this comparison as follows:

> Science is a system of statements which are of one kind. Each statement may be combined or compared with each other statement, e.g. in order to draw conclusions from the combined statements, or to see if they are compatible with each other or not. But statements are never compared with a "reality," with "facts." (Hempel 1935: 50)

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[11] Here again, Schlick takes observation statements to mean affirmations.

Schlick rejects Hempel's criticism and sees no problem with the foregoing comparison. He says:

> You insist that a statement cannot or must not be compared to anything but statements. But why? It is my humble opinion that we can compare anything to anything if we choose. (Schlick 1935b/1979: 66)

Why Schlick thinks so is related to his conception of meaning, according to which the rules governing the definitions of deictic words appearing in sentences of science should be empirically ascertainable in order for these sentences to be empirically meaningful. Therefore, the only way to verify these sentences is to ascertain whether the rules contained in them are obeyed in reality. For instance, the sentence "This cathedral has two spires [can be verified] by looking at the cathedral and at the sentence in the book and by stating that the symbol 'two' is used in connection with the symbol 'spires'" (Schlick 1935b/1979: 66–67). Therefore, according to Schlick's account, affirmations can be seen as acquired sensory experiences that serve to verify whether definitions appearing in sentences have corresponding sensory contents. In this sense, affirmations are indications that the rules governing the meaning of a sentence are obeyed in actuality.

3. BONJOUR'S FOUNDATIONALISM VIS-À-VIS CARNAP'S AND SCHLICK'S VERIFICATIONISM

Notwithstanding the differences between Carnap's and Schlick's accounts of verificationism, in both accounts the process of verification aims to determine whether a given sentence is true or not by ascertaining whether there is a match between the experiential content of the sentence and the content of the corresponding sensory experience. In order to make this process possible, it is taken for granted in both accounts that individual sentences have experiential contents when taken singly.[12] This in turn makes it possible to compare the experiential contents of individual sentences with those of what are considered to be basic beliefs or sentences. Remember that basic sentences are protocol sentences and affirmations in Carnap's and Schlick's accounts, respectively. Carnap's account is reductionist in the sense that sentences get verified if their experiential contents are reducible

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[12]This aspect of Carnap's account was famously criticized by Willard Van Orman Quine (1951), who argued for a holistic account of experiential testing according to which appeal to sensory experience can confer epistemic justification on a belief system when the latter is taken as a whole.

to (i.e., shown to be equivalent to) those of protocol sentences that are already established and agreed upon (the very reason to call them protocols) at the beginning of the process of verification. Schlick's account is not reductionist in the sense of the reductionism that underlies Carnap's account. This is because affirmations whose utterance signals the end of the process of verification are established once the experiential implications of sentences are discovered in actuality.[13]

Both Carnap's and Schlick's accounts of verificationism are (empirical) foundationalist in that basic sentences exist in both of them, namely protocol sentences and affirmations, respectively; these serve to justify other sentences that are themselves justified not by virtue of their inferential relations to other sentences, but rather by virtue of their relations to sensory experiences.[14] In Carnap's account, there exists a descriptive relation between a protocol sentence and the corresponding sensory experience, in the sense that a protocol sentence directly describes the content of the corresponding sensory experience in such a way that does not require any inferences from other sentences. On the other hand, Schlick thinks that "*ostensive* definitions [contained in affirmations] are not replaceable by any description" (Schlick 1935a: 413).[15] This characterization of affirmations suggests that there exists an ostensive relation – rather than a descriptive relation, as in Carnap's account – between an affirmation and the corresponding sensory experience.

As I discussed in Section 1, basic beliefs are non-inferentially justified empirical beliefs in BonJour's empirical foundationalist account. In the same vein as Carnap and Schlick, BonJour takes it for granted that empirical beliefs, when taken singly, have experiential contents that can be ascertained by appeal to sensory experiences. This leads BonJour, like Carnap, to conceive of the relation between the content of an empirical belief and the corresponding sensory experi-

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[13] In this regard, elsewhere Schlick says: "In order to understand a proposition we must be able exactly to indicate those particular circumstances that would make it true and those other particular circumstances that would make it false. 'Circumstances' means facts of experience; and so experience decides about the truth or falsity of propositions, experience 'verifies' propositions, and therefore the criterion of the solubility of a problem is its reducibility to possible experience" (Schlick 1932/1979: 231).

[14] Contrary to the common understanding, Thomas Uebel (1996) regards both Carnap and Schlick as not advocating foundationalism. Thomas Oberdan (1998) criticized Uebel's interpretation of Schlick's work, and Uebel (1999) replied to this criticism.

[15] Schlick's conceptions of affirmations and meaning are heavily influenced by Ludwig Wittgenstein's work concerning ostensive definitions; see, e.g., (Uebel 2020).

ence as a descriptive relation. In BonJour's account, since an empirical belief has its own experiential content, the accuracy of its descriptive relation to the corresponding sensory experience can be empirically ascertained. Therefore, a basic empirical belief is justified solely by virtue of the accuracy of this relationship, thus making BonJour's account empirical foundationalist. BonJour's assumption that empirical beliefs have experiential contents (when taken singly) that can be ascertained in isolation from other beliefs is essential to his foundationalist account. By virtue of this assumption, BonJour avoids the need to appeal to other beliefs for the justification of empirical beliefs. It is obvious that such an appeal would go against the basic tenet of foundationalism, namely that basic beliefs are non-inferentially justified.

Remember that BonJour takes built-in awareness of sensory content to be strictly infallible and thus the ultimate source of justification for basic empirical beliefs, in the sense that the accuracy of the descriptive relation posited between an empirical basic belief and the corresponding sensory experience can only be ascertained by appeal to the built-in awareness of sensory content. Therefore, in BonJour's account there exists an epistemic layer, namely built-in awareness, between a basic belief and the corresponding sensory experience that serves to avoid the difficulty posed by the Sellarsian dilemma. However, in Carnap's account there exists no such layer between a protocol sentence and the corresponding sensory experience. As a result, it is not clear how a protocol sentence, which is propositional and thus conceptual, is justified by virtue of its descriptive relation to sensory experience, whose content is non-propositional and thus non-conceptual. This means that Carnap's account is not equipped to safeguard against the difficulty posed by the Sellarsian dilemma.

This difficulty can be understood as concerning an inference gap between the two kinds of content, namely the conceptual content represented by sentences, and the non-conceptual content of sensory experience. According to the basic tenet of empirical foundationalism, the only inference that can justify a basic empirical belief is the inference drawn to the accuracy of the content of this belief from the content of the corresponding sensory experience. This means that the foregoing inference gap must be bridged without appeal to any other beliefs, i.e., it needs to be shown to be direct in order for an empirical belief to be considered basic in the sense previously defined. The difficulty posed by the Sellarsian dilemma is exactly that the inference required for (empirical) justification does not seem to be direct as it takes place between two different kinds of content,

namely conceptual and non-conceptual. Carnap does not deal with the problem of the inference gap that I have described above. In what follows, I shall argue that Schlick's account attends to this problem through an internalist strategy that is similar to the one used by BonJour in some important respects.

4. SCHLICK'S INTERNALISM

Remember that in Schlick's account there exists an ostensive relation between an affirmation and the corresponding sensory experience. This relation requires an affirmation to be simultaneous with the perception of the corresponding sensory experience because, in Schlick's characterization of affirmations, "their rules of use stipulate that in making the statement in which they occur, an experience occurs, attention is directed to something observed" (Schlick 1934/1979: 385). He further asserts that this ostensive relation cannot be mistaken:

> "There's yellow now in the visual field," this can be a lie under certain circumstances but in no case an error. That there is yellow in my visual field is something I know for certain (whether it be due to a yellow object, or an after-image, or be a hallucination); it is impossible that I should not know it. Or, to put it more correctly, the two sentences "Yellow here" and "I know there's yellow here" have the same *meaning*, and are merely different sets of words for the same statement. (Schlick 1935a: 410)

Therefore, according to Schlick, the utterance of an affirmation involves a particular kind of *knowing*. Given that affirmations in Schlick's view are the "ultimate ground of all knowledge," the kind of knowledge he refers to in the above passage cannot be due to our empirical judgments or beliefs (sentences) about sensory experiences, which he takes to be hypotheses that are yet to be verified. In an earlier work, Schlick makes the following distinction between two kinds of knowing, which helps to clarify the kind of knowledge which, he thinks, is imparted by affirmations:

> By knowing we do not always mean the possession of true judgments; we can also mean by it something that precedes all passing of judgments: an immediate awareness, the having of a content-of-consciousness, in short, a knowing *of* something, not a knowing *about* it. Now the proposition: "In order to be able to conform in judging to what is, we must already know what is," is manifestly correct only if we here understand by knowing immediate awareness, the knowing *of* something. (Schlick 1910/1979: 50)

Schlick's distinction between the two kinds of knowing mentioned above, when applied to empirical states of affairs (the external world), suggests that the kind

of knowledge in the sense of *knowing about* is due to one's true beliefs that are obtained through judging the features of the observed states of affairs, while knowledge in the sense of *knowing of* is due to one's immediate awareness of the contents of those empirical states of affairs. Therefore, in Schlick's view, an affirmation, taken singly, imparts the knowledge of an empirical state of affairs, and as discussed earlier, it also serves to impart knowledge in the sense of knowing about this empirical state of affairs. This is because affirmations are necessary to verify beliefs (judgments) about empirical states of affairs.

As the previous discussion shows, the incontrovertibility of affirmations is key to Schlick's empirical foundationalism in that it is precisely by virtue of this feature that affirmations are considered to be basic. However, in Schlick's writings (see, Schlick 1934/1979, 1935a), this feature of affirmations largely remains obscure. The incontrovertibility of affirmations is closely connected to his following conception of sensory experience in terms of consciousness:

> Experiences are realities. If we use the word "experience" in its usual sense . . . then "something is experienced" means the same as "something is a content of consciousness." Experiencing is not an act. It is not an activity of consciousness that is somehow directed to an object and that seeks to bring it to consciousness, to make it its own, just as we pick up a coin and make it our own by the act of grasping it with our hands. When I say "I experience this," I am only using a verbally different expression for the judgment "This is a datum of my consciousness." Thus experience cannot be distinguished from experiencing and from what is experienced; it is all one and the same. (Schlick 1925/1974: 137)

Therefore, in Schlick's view, "to experience something is to have it as a content of consciousness" (Schlick 1926/1979: 108), meaning that a sensory experience is itself a content of consciousness. Also, in Schlick's view, "the knowing of a state-of-affairs-in-consciousness is simultaneous with the latter's existence" (Schlick 1910/1979: 50). Given that for Schlick knowledge in the sense of knowing of something amounts to immediate awareness of that thing, one can conclude that in his view a person who experiences some sensory experience is at the same time immediately and consciously aware of the content of this experience. As a result, when one undergoes a sensory experience, one is in a reliable position (due to one being aware of the content of the conscious state associated with one's sensory experience) to utter an affirmation whose experiential content is compatible with the content of one's conscious state due to one having undergone a sensory experience. This means that having a sensory experience and uttering a relevant

affirmation occur simultaneously because of the person's immediate awareness of the former. It is exactly for this reason that Schlick suggests that "in order . . . to understand the meaning of . . . an affirmation one must simultaneously execute the gesture, one must in some way point to reality" (Schlick 1934/1979: 385). Therefore, in Schlick's view, an affirmation is never dubitable in that it is free of "error or deception" (Schlick 1935a: 409), implying that "a false affirmation is always a *lie*" (Schlick 1935a: 410). It is worth noting that Schlick views immediate awareness (about the content of one's conscious state associated with one's sensory experience) as the sole reason regarding the incontrovertibility of affirmations, and thus for their status as basic beliefs. Since this reason is within the cognitive grasp of the person who utters an affirmation, it is accessible by the person. This in turn means that like BonJour's account, Schlick's foundationalist account is internalist.[16]

Another important parallel between BonJour's and Schlick's accounts concerns the way in which basic beliefs are justified, even though what are considered to be basic beliefs – namely, basic empirical beliefs and affirmations, respectively – differ significantly in these accounts. I have shown that both BonJour and Schlick view the sensory experience as a conscious state. Based on this, they go on to suggest that one's awareness of sensory content is the sole justifier for what they consider to be basic beliefs.

Notwithstanding this important similarity, BonJour's and Schlick's accounts differ markedly from each other in terms of how basic empirical beliefs relate to sensory experience. In BonJour's account, there exists a descriptive relation between empirical beliefs and sensory experience, in the sense that these beliefs are considered to be descriptions of corresponding sensory contents. On the other hand, in Schlick's account there exists an ostensive relation between affirmations and sensory contents, in the sense that affirmations solely consist of ostensive definitions. The reason why Schlick requires the foregoing relation to be an ostensive relation lies in his conception of meaning, where ostensive definitions are ascribed a special status, as the following passage indicates:

> It is clear that in order to understand a verbal definition we must know the signification of the explaining words beforehand, and that the only explanation which can work without any previous knowledge is the ostensive definition. We conclude that there is no way of understanding any meaning without ultimate reference to ostensive defini-

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[16]This *internalist* foundationalist interpretation of Schlick's epistemology differs from the available literature that interprets it as foundationalist; see (Lewis 1996) and (Oberdan 1998).

tions, and this means, in an obvious sense, reference to "experience" or "possibility of verification." (Schlick 1936: 342)

Therefore, Schlick's account of verificationism is reductionist in the sense that in order for a sentence (about empirical states of affairs) to have a (empirical) meaning, its content must reduce to ostensive definitions, as only these directly relate to empirical states of affairs. In other words, according to his account there is a gap between observation sentences (including protocol sentences) of a (natural) language and sensory experiences, and this gap can only be bridged through the reduction of observation sentences to those sentences, namely affirmations, that consist of ostensive definitions. Only in this way can observation sentences get verified and thus have meaning.

Unlike Schlick's account, no such reduction is necessary in BonJour's account. Bonjour does not require the contents of basic empirical beliefs to fit certain definitions. Rather, he conceives of a basic (empirical) belief as a description of the content of its sensory experience, whose accuracy can be verified by appeal to what he calls the built-in awareness of this sensory content. In this sense, what BonJour calls basic empirical beliefs (i.e., non-inferentially justified empirical beliefs) illustrates what Schlick calls hypotheses, meaning that they do not count as basic beliefs according to Schlick's account. Because empirical beliefs are synthetic sentences, all synthetic sentences, except affirmations, are hypotheses and thus dubitable in Schlick's account.

CONCLUSION

The previous discussion shows that BonJour's account of internalist empirical foundationalism has two main aspects. The first is to posit a descriptive relation between the conceptual content of a basic empirical belief to be justified and the non-conceptual content of the corresponding sensory experience. The second main aspect is to ascertain whether this descriptive relation is accurate by means of the built-in awareness of sensory content that is taken to be infallible. The first aspect above gives BonJour's foundationalist account its empirical character. Like BonJour, Carnap posits a descriptive relation between what he considers a basic belief, namely a protocol sentence, and the corresponding sensory experience. In this regard, another important parallel between BonJour's account and those of Carnap and Schlick is that what are considered to be basic beliefs in these accounts – basic empirical beliefs, protocol sentences, and affirmations,

respectively – have experiential contents when taken singly. It is worth noting that this is an important supposition in BonJour's account that enables the direct comparison he requires between the description contained in an empirical belief and its corresponding sensory experience. If an empirical belief has experiential implications only when considered together with other beliefs in one's belief-system, then empirical beliefs can only be inferentially justified, contrary to the basic tenet of empirical foundationalism. As I argued in the previous section, the second above-mentioned aspect of BonJour's account gives it its internalist character and closely resembles Schlick's appeal to consciousness and awareness of sensory content to account for the incontrovertibility of affirmations.

The foregoing considerations suggest that the two main aspects of BonJour's account bear a close resemblance to different aspects of Schlick's and Carnap's accounts of verificationism. It is worth noting that in BonJour's writings (BonJour 1999a, BonJour 1999b, BonJour 2000, BonJour 2003) concerning his account of foundationalism, there is no reference to Carnap's and Schlick's work on verificationism. Therefore, the aforementioned resemblance does not signify an inheritance of an earlier work in the sense of deliberately drawing upon it to develop a novel account. Rather, it signifies an unwitting inheritance, as the title of this paper intends to convey.

Lastly, a great deal of anachronism is involved in some parts of the present paper, such as the discussion of Carnap's and Schlick's accounts in relation to the Sellarsian dilemma, and the discussion of Schlick's account in terms of internalist epistemic justification. The debates concerning these epistemological issues were not yet part of the philosophical literature in the time period (circa 1920–1930) when Carnap and Schlick developed their accounts of verificationism. However, this anachronism is unavoidable as it is necessary to look back at the logical empiricist debate on verificationism from the perspective of contemporary epistemology. In this regard, the present paper also shows that the debate within the logical positivist movement over what verification in science should consist in and how it should work bears on contemporary epistemological issues.

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