Sellars, Analyticity, and a Dynamic Picture of Language

Takaaki Matsui

Hitotsubashi University / Japan Society for the Promotion of Science

matsui.t.m.takaaki@gmail.com

Abstract

Even after Quine's critique of the analytic-synthetic distinction in "Two Dogmas of Empiricism," Wilfrid Sellars maintained some forms of analyticity or truth in virtue of meaning. This paper aims to reconstruct his neglected account of the analytic-synthetic distinction and the revisability of analytic sentences, its connection to his inferentialist account of meaning, and his response to Quine. While Sellars's account of how analytic sentences can be revised bears certain similarities with Carnap's and Grice and Strawson's accounts, it is still striking in that it is part of his broader picture of how our language develops dynamically in our ongoing inquiry. I aim to show how it relates within his broader picture to his account of how the diachronic continuity in meaning, language, or conceptual framework can be preserved through a revision of analytic sentences, and to his evolutionary account of the development of our language or conceptual framework.

1. Introduction

Even after Quine criticized the analytic-synthetic distinction in "Two Dogmas of Empiricism" (Quine 1951), Wilfrid Sellars maintained some forms of analyticity or truth in virtue of meaning. He believed that analyticity could be explained in terms of inference rules, discussing these topics in various places (see especially Sellars 1953b; 1963a). His discussions of analyticity and inference rules are embedded in his broader picture of our language as dynamically developing and contain several unique insights that are not found in the discussions of other more famous advocates of analyticity of the time, such as Carnap (1963; 1990) and Grice and Strawson (1956), or even in those

of more recent advocates such as Paul Boghossian (2017) and Gillian Russell (2008). Unlike these authors, however, Sellars did not write a single article dedicated to the issue of analyticity, nor did he systematically respond to Quine's critique. Rather, his discussions of analyticity are scattered in his various writings and often made only in passing. Even where he discusses it at some greater length, he does not discuss it on its own but only in connection with other philosophical issues.[1] As a result, despite its several unique insights, it is not clear exactly what Sellars's account of analyticity is nor what response he could make to Quine's critique.[2]

The aim of this paper is to reconstruct Sellars's account of analyticity and his response to Quine, paying particular attention to how they are embedded in his broader picture of our language as dynamically developing.[3] As I will argue, that his account of

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[1] For example, when he discusses analyticity in "Empiricism and Abstract Entities" (Sellars 1963a), which is about the debate between Carnap and Quine, he discusses it in relation to the ontology of abstract entities and our talk about them, and his main focus lies not so much on analyticity as on abstract entities and our talk about them. And in "Is There a Synthetic A Priori?" (Sellars 1953b), he discusses truth in virtue of meaning at some length, but he uses it as a means of defending a form of the synthetic *a priori* rather than analyticity.

[2] While Morton White also criticizes the analytic-synthetic distinction in his "The Analytic and the Synthetic: An Untenable Dualism" (White 1949), Sellars does not even mention him in his defense of analyticity. However, as Carl Sachs (2015, 57) points out, Sellars would have been aware of White's essay, since it appears in the same volume as (and indeed immediately after) Sellars's "Language, Rules, and Behavior" (Sellars 1949).

[3] By Sellars's account of analyticity, I mean his account of truth in virtue of meaning. I should note, however, that Sellars's own terminology is more nuanced and varies depending on the context. For example, in the context of discussing the Carnap-Quine

analyticity is part of his dynamic picture of language is crucial to his defense of analyticity and makes it unique and interesting. To show this, I will try to clarify the connection between his discussions of such topics as analyticity, the revision of inference rules, conceptual change, and the evolution of conceptual frameworks. At the same time, I will try to disentangle his discussions of analyticity from those of other topics that are somehow related to them but are irrelevant for our purposes, such as those of the synthetic *a priori*, the ontology of abstract entities and our talk about them, and the myth of the given. The connection between Sellars's view of analyticity and his views on these topics has already been explored in Brandt (2017), Rosenberg (2007, ch. 2), and Westphal (2015). These studies make clear the broader implications Sellars's account of analyticity and his response to Quine might have, but they do not examine them in detail on their own nor his dynamic picture of language behind them.[4] This

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debate, he distinguishes between truth in virtue of meaning *in general* and *formal* truth in virtue of meaning, calling the former *analyticity in the broad sense* and the latter *analyticity in the narrow sense* (Sellars 1963a, 438). In the context of defending the synthetic *a priori*, on the other hand, he calls formal truth in virtue of meaning *analyticity* and truth in virtue of meaning in general the *a priori*, which opens up the space for the synthetic *a priori* as *material* (i.e., *non*-formal) truth in virtue of meaning. Since my interest in this paper is in Sellars's response to Quine's criticism of analyticity, I follow the former terminology and leave aside the issue of the synthetic *a priori*. It should be noted, however, that the Sellarsian synthetic *a priori* is a form of truth in virtue of meaning, and thus relies on an account of truth in virtue of meaning. For Sellars's view of the synthetic *a priori*, see deVries (2005, 61–64) and O'Shea (2018, 211–17).

[4] As I will note below, deVries (2005) and O'Shea (2007, ch. 6) shed important light on Sellars's dynamic picture of language. This paper aims to add to these studies by showing its potential significance in the context of Sellars's account of analyticity and

paper aims to fill in this gap in the literature. Given that Quine's critique of analyticity was one of the most widely debated issues in analytic philosophy in the 1950s, reconstructing Sellars's account of analyticity and his response to Quine and identifying their originality will contribute to a better understanding of his position in the philosophical context of the time. I want to emphasize, however, that this paper and the above studies do not compete but complement each other, aiming to shed light on different aspects of Sellars's view of analyticity with different interests.

Reconstructing Sellars's account of analyticity will be of interest not only to historians of philosophy of science and analytic philosophy but also to theorists of inferential role semantics or inferentialism. The central idea of inferentialism is that the meaning of a linguistic expression is determined by the role it plays in inferences.[5] One point of contention among inferentialists, as we will see in more detail in Section 3, is which of the inferences involving a given expression are relevant to the determination of its meaning, and this issue is closely related to the issue of the analytic-synthetic distinction. Those who take a *holistic* approach, such as Robert Brandom (1994; see also 2007), follow Quine in rejecting the analytic-synthetic distinction and hold that *all* the inferences involving a given expression are relevant to its meaning. In contrast, those who take a *non*-holistic approach, such as Jaroslav Peregrin (2014) and David Chalmers (2021), hold that only a special subset of the inferences involving a given

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his response to Quine.

[5] Inferentialism can also be understood as a theory about the content of concepts, according to which the content of a concept is determined by the role it plays in inferences. While I will focus on inferentialism as a theory about the meaning of linguistic expressions, the results of this paper should also be applicable to inferentialism as a theory about the content of concepts.

expression is constitutive of its meaning, and distinguish meaning-constitutive inferences from those that are not by appealing to the analytic-synthetic distinction or something akin to it (Chalmers 2021; Drobňák 2017; Peregrin 2014). As we will see in more detail in Section 3 below, Sellars takes a non-holistic approach, using his own account of analyticity to provide his own criterion for meaning-constitutive inferences. Sellars's approach contains several interesting features not found in more recent non-inferentialist approaches, and its promise is recognized even by the holist Brandom: "Sellars's approach seems to be wholly viable" (Brandom 2007, 662). Nevertheless, as Brandom complains, it "has not gotten the attention it deserves" (Brandom 1994, 484; see also 2007, 662). It is my hope that this paper will contribute to Sellars's approach receiving the attention it deserves and getting recognized as a basis for a more systematic development of non-holistic inferentialism.

The interpretation to be developed below of Sellars's account of analyticity and his account of material inferences underlying it is generally in line with the interpretations briefly suggested in Brandom (2007, 661–62) and presented in more detail in Brandom (2008, ch. 4; 2015, chs. 4–5) and O'Shea (2016; 2018), but this paper differs from these studies in its orientation. First, whereas Brandom's discussion of Sellars's account of analyticity, though insightful, is very brief (Brandom 2007, 661–62), I discuss it in much more detail. Second, although both Brandom (2008, ch. 4; 2015, chs. 4–5) and I discuss Sellars's view on material inferences in detail, whereas Brandom discusses it to reconstruct Sellars's account of modality, I discuss it to reconstruct his account of analyticity. Third, whereas O'Shea situates Sellars's account of analyticity and material inferences in the context of the Kantian tradition from Kant through C. I. Lewis to Sellars, I situate it in the context of Quine's critique of analyticity. Here too, however, I

want to emphasize that these studies and mine do not compete but complement each other.[6]

This paper proceeds as follows. After briefly reviewing Quine's arguments against analyticity in "Two Dogmas" (Section 2), I will first reconstruct an outline of Sellars's account of analyticity and inference rules (Section 3) and then attempt to clarify and develop it by addressing some of the issues that might be raised about it (Section 4). I will argue that to properly understand his account of analyticity and inference rules, it is necessary to see that behind it lies his broader picture of our language as dynamically developing in our ongoing inquiry. Finally, I will reconstruct his account of how analytic sentences can be revised and show how it relates within his broader picture to his evolutionary account of the development of conceptual framework and to his account of the diachronic continuity of meaning, language, or conceptual framework (Section 5).

2. Quine's Arguments against Analyticity in "Two Dogmas"

While Quine's "Two Dogmas" is arguably one of the most widely read articles in

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[6] Although I will not discuss C. I. Lewis in this paper, I want to emphasize the importance of his pragmatic conception of the *a priori* and the analytic-synthetic distinction for both Sellars and Quine. Sellars (1953a, 337) acknowledges that his account of the development of conceptual frameworks, which underlies his account of truths in virtue of meaning (see Section 5 below), has certain similarities with Lewis's pragmatic conception of the *a priori* (O'Shea 2018), although he disagrees with Lewis's terminology in which the analytic and the *a priori* are coextensive (Sellars 1953a, 337–38; 1953b, 123). And Quine's understanding of the analytic-synthetic distinction is, according to Sinclair (2022), largely shaped by Lewis.

the history of analytic philosophy, it will still be useful to briefly review his arguments against analyticity before looking at Sellars's account.[7] Although Quine would later come to accept some forms of analyticity in Word and Object (1960), The Roots of Reference (1973), and "Two Dogmas in Retrospect" (1991), I will set aside his later view, since my purpose in this paper is to reconstruct Sellars's response to Quine's influential critique of analyticity in "Two Dogmas."[8]

"Two Dogmas" can be divided into two parts: the first four sections and the last two. In the first four sections, Quine examines what he takes to be the first dogma of empiricism, the view that a distinction can be drawn between analytic and synthetic sentences. He considers various accounts of analyticity that have been proposed so far and rejects them all as relying on notions that are at least equally in need of explanation as analyticity. For example, to say that analytic sentences are those that are true (or false)[9] solely in virtue of the meaning of the terms involved does not work as it stands, Quine argues, unless the notion of meaning is clarified. One might then try to clarify it by saying that meanings are abstract entities that mediate between linguistic expressions and their referents, but Quine quickly dismisses the appeal to abstract entities as obscure and as having no explanatory power at all (Quine 1951, 22–23; see also Quine 1948, 30–31). Quine then turns to an account according to which an analytic sentence is a sentence that is either logically true or can be turned into a logical truth by substituting

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[7] See Creath (1991) for a more detailed commentary on Quine's arguments in "Two Dogmas" and early responses to them. See also Sober (2000) and Soames (2003, chs. 16–17) for more critical discussions from the perspective of half a century later.

[8] On whether Quine changed his mind after "Two Dogmas," see Hylton (2007, 63–64) and Verhaegh (2018, 125–39).

[9] For simplicity, I will ignore analytically false sentences in what follows.

synonyms for synonyms (Quine 1951, 23). He argues that while for this account to work, the notion of synonymy must be explained in a non-circular way, no attempt has been successful to explain synonymy in such a way. For example, to explain synonymy in terms of the notion of definition, he argues, will be circular, for the notion of definition presupposes the notion of synonymy and not vice versa (Quine 1951, 24–27). Similarly, to explain synonymy in terms of the notion of interchangeability *salva veritae*, according to him, will also be circular (Quine 1951, 27–31). For while to explain synonymy in terms of interchangeability *salva veritae*, one must appeal to intensional notions such as necessity, the notion of necessity, according to Quine, presupposes the notion of analyticity, or is at least equally in need of explanation (we will shortly return to this point). Quine rejects other accounts of analyticity on similar grounds.

In the fifth and final sixth sections of "Two Dogmas," Quine examines and rejects what he takes to be the second dogma of empiricism, which he calls reductionism, and sketches holism as his own alternative. According to reductionism, to each synthetic sentence, there corresponds a set of possible sense experiences that confirm it. On this view, analytic sentences can be understood as those that are "vacuously confirmed" and thus "hold come what may" (Quine 1951, 38, 40). However, Quine objects, since no sentence can be confirmed in isolation but only in conjunction with auxiliary hypotheses, there is no one-to-one correspondence between a sentence and a set of sense experiences that confirm it. Quine then proposes holism as an alternative picture. According to his holism, the unit of confirmation is not individual sentences but rather the totality of our beliefs, and which belief in this total system is to be revised when a recalcitrant experience occurs is underdetermined by such an experience. Quine's holism is radical in that it further claims that it is in principle possible to deal with a

recalcitrant experience by revising any belief in the system if we make drastic enough adjustments elsewhere in it (Quine 1951, 39–40). For example, even a revision of the logical law of the excluded middle has been proposed as a means of simplifying quantum mechanics (Quine 1951, 40). If Quine's radical holism is correct, two important consequences follow: that any sentence "can be held true come what may" if we make enough adjustments in the system and that "no statement is immune to revision" (Quine 1951, 40; emphasis added). His radical holism thus undermines any account of analyticity that assumes that analytic sentences hold come what may or are immune to revision.

As is clear from this brief review, Quine poses two challenges to advocates of analyticity in "Two Dogmas": (1) they must explain analyticity in terms of a notion that is clearer than and does not presuppose analyticity, and (2) they must show how analytic sentences can be revised (or reject his claim that no sentence is immune to revision). In the following sections, I will explain how Sellars addresses these challenges.

3. Sellars's Account of Analyticity and Inference Rules

Like Quine, Sellars wants to avoid a metaphysical commitment to meanings as abstract entities. At the same time, however, he believes that we can avoid such a commitment to abstract entities without having to abandon our talk about meaning. On his view, to talk about meaning is not to talk about abstract entities but, very roughly, to talk about how to use words (deVries 2005, ch. 2; O'Shea 2007, ch. 3). And once an adequate account of meaning in terms of use is provided, he thinks, we can see that we

can legitimately use analyticity and related notions such as synonymy.[10] His task is thus to develop a use theory of meaning in terms of which analyticity can be explained. In this section, I will first reconstruct his account of meaning in some detail and then present an outline of his account of analyticity based on it, which will be further clarified and developed in the following section.

The version of use theory of meaning Sellars develops is, as is well-known, an inferentialist one. While he agrees with the late Wittgenstein that there is an intimate connection between meaning and use, he complains that Wittgenstein does not specify which aspect of use is essential to meaning (Sellars 1973, 187).[11] The aspect of use that is essential to meaning, according to Sellars, is the inferential use. He writes in his autobiographical essay that "[w]hat was needed was a functional theory of concepts which would make their role in reasoning, rather than a supposed origin in experience, their primary feature" (Sellars 1975, 285). On his view, the meaning of linguistic expressions is to be explained as determined by their role in reasoning or inference, or in short by their inferential role.

What then is the inferential role of an expression? As noted in Introduction, there are broadly two approaches to this question in the inferentialist tradition: *holistic* and

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[10] "[I]t is my conviction that the current "nominalistic" campaign against "synonymy" and the "analytic-synthetic dichotomy" is motivated, at bottom, by a desire to avoid a metaphysics of meanings. If sound, however, my argument will show that one can [...] make full use of these traditional categories, purged of philosophical misconceptions" (Sellars 1963a, 439n12).

[11] According to Stefan Brandt (2020, 75–76)'s archival research, Sellars obtained a copy of Wittgenstein's *Blue and Brown Books* in 1937 and studied the *Philosophical Investigations* (1953) just after it was published.

non-holistic. In the holistic approach, what is relevant to determining the inferential role of a given expression is the entire network of inferential connections in which it participates (Brandom 1994; 2007). In the case of 'red,' for example, what is relevant to determining its inferential role would include not only inferences from 'something is red' to 'it is colored,' 'it is not green,' etc., but also inferences from 'something is red' to 'it tends to provoke strong emotions,' from 'a political flag is red' to 'it is a flag of socialism or communism,' and so on. Indeed, Brandom acknowledges that even the idiosyncratic inference from 'the sun is shining' to 'the seventh god graces us' is relevant to determining the inferential role of 'sun' if the collateral premises or auxiliary hypotheses that Zoroaster is the sun and that its shining is his beatitude are in play (Brandom 1994, 514; see also 480). In the non-holistic approach, by contrast, only a special subset of inferences is relevant. Thus, in the case of 'red,' again, the inference from 'something is green' to 'it tends to provoke strong emotions' and the inference from 'a political flag is red' to 'it is a flag of socialism or communism' may be irrelevant in this approach.[12]

One important task for non-holistic inferentialists is to provide a criterion for distinguishing meaning-constitutive inferences from those that are not. Sellars identifies the meaning-constitutive inferences in a language as those licensed by the inference rules accepted in the linguistic community in which that language is used. In the case of non-descriptive terms such as 'and' and 'not,' meaning-constitutive inferences are those licensed by *formal* inference rules. Formal inference rules are rules for formal inferences, which are justified on their form alone, and in which descriptive terms, if any, occur only vacuously. For example, the inference rule that licenses the inference

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[12] Chalmers (2021, 201) makes a similar point with the example of 'bachelor.'

from 'x is red and x is square' to 'x is red' is a formal inference rule. In the case of descriptive terms such as 'thunder,' by contrast, meaning-constitutive inferences are those licensed by what Sellars calls *material* inference rules (Sellars 1953a, 366; 1953b, 136). Material inference rules are rules for material inferences, in which descriptive terms occur non-vacuously and whose justification depends on the meaning of these terms.[13] For example, the inference rule that licenses the inference from 'There is a flash of lightning' to 'There will be thunder' is a material inference rule.[14]

There are important constraints on inferences that can be licensed by inference rules: inferences licensed by inference rules must be lawlike. Lawlike inferences, if they are good inferences, must be *counterfactually robust*, that is, not just accidentally good, but remain good across a certain range of counterfactual circumstances.[15] Note that not all lawlike inferences are good inferences nor are all good inferences lawlike. For example, the inference from 'This coin is made of copper' to 'It melts at 1085°C' is both good and lawlike. However, the inference from 'Something is burnt' to 'Phlogiston will be released,' though lawlike, is not a good inference. And the inference from 'A coin was taken from my pocket' to 'It is made of copper' is not lawlike, though it can be a good inference if it is provided, for example, that all the coins in my pocket are made of copper. Since inferences licensed by inference rules must be lawlike, non-lawlike

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[13] Sellars (1953a) argues that material inferences are not mere enthymeme of formal inferences.

[14] These examples are taken from Sellars (1953a). His other examples of material inferences include inferences from 'It is raining' to 'The streets will be wet' (Sellars 1953a), from 'Here is smoke' to 'Here is fire,' and from 'it is colored' to 'it is extended' (Sellars 1954).

[15] Brandom 2015, (162–63) emphasizes the same point in expounding on Sellars's view.

inferences cannot be licensed by inference rules even if they are good inferences. On the other hand, lawlike inferences, even if they are *not* good inferences, can be licensed by inference rules. For even if we try to accept only those inference rules that license good inferences, since the world is extremely complex and we are fallible beings, we may mistakenly adopt inference rules that in fact license bad inferences.

Issues related to inference rules that do not license good inferences will be discussed in more detail in the following sections. For now, what is important is that on Sellars's view, our inference rules reflect our understanding of the relevant laws, including the laws of nature, however inadequate or wrong it may eventually turn out to be. As Sellars writes, "the use of a conceptual frame is the awareness of a system of logical and extra-logical necessities" (Sellars 1953b, 138; 1963c, 319), and "our understanding of the laws of nature resides in what we have called the material moves (inferences) of our language" (Sellars 1954, 214; 1963c, 340). And since the meanings of expressions and the concepts they express are determined by our inference rules, they also reflect our understanding of the relevant laws. Sellars encapsulates this point in the title of one of his earliest essays "Concepts as Involving Laws and Inconceivable without Them." [16]

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[16] Some might think that it is not clear whether Sellars's account can admit the existence of concepts specific to special scientific disciplines, such as psychological or biological concepts, since it is not clear whether there are laws in these disciplines. As for psychology, while Sellars admits that there are no strict, universal, exceptionless laws in it, he still believes that there are inferences in it that remain good in a certain range of counterfactual situations, and this, I think, is sufficient for him to claim that there are psychological concepts. And he would say the same thing about biology and other disciplines. The next question that naturally arises is how much counterfactual robustness is necessary for a special scientific discipline to have its own concepts.

Two points are worth noting here regarding Sellars's views on material inference rules. First, some might think that the notion of material inference rules cannot be applied to natural languages, which are vague, but only to formal languages. Sellars admits that ordinary languages have a "vague, fluctuating and ambiguous character" (Sellars 1953b, 124; 1963c, 301). However, this does not imply, according to Sellars, that the notion of material inference rules does not have "legitimate application to natural languages" (Sellars 1953b, 123–24; 1963c, 301). Rather, material inference rules, however vague, fluctuating, and ambiguous, are already "embedded in natural languages" (Sellars 1953b, 124; 1963c, 301). This is indicated, according to Sellars, by the fact that we assess our own and others' utterances as correct or incorrect (Sellars 1974c, 459). For, as he asks, how "can we make sense of critical appraisals of linguistic phenomena as correct or incorrect [...] without supposing that linguistic rules are embedded in ordinary usage?" (Sellars 1953b, 124; 1963c, 302)

The second point to note is that Sellars is not claiming here that we can always recite our inference rules or that when we speak, we have those rules in mind. His point is only that they are at least implicitly accepted. He makes this point using an analogy between inference rules and the rules of a game without a rulebook. While it may be

Although Sellars does not explicitly address this question (but see Sellars 1963, 21, for a related point), his account is compatible with the idea that how much counterfactual robustness is necessary depends on the concerns, purposes, or methods of that discipline (see Lange 2000 for related ideas). That said, it is also important to note that Sellars does not think that psychological or biological concepts are *perfect* tools for describing and explaining the world. Rather, he thinks that in the future, they may be replaced by concepts that embody stricter and more universal laws (see Christias 2016). Thanks to an anonymous reviewer for raising this important concern.

hard to formulate the rules of a game that has been handed down for generations without a rulebook, this does not prevent us from saying that when people play this game, "they do what they do because of the very rules they would find it so difficult to formulate" (Sellars 1953b, 124; 1963c, 301). Similarly, while it may be hard to formulate the rules of a natural language that has been handed down for generations, this does not prevent us from saying that when people speak, they say what they say because of the very rules they would find it so difficult to formulate. As Sellars puts it, rules may be "written in flesh and blood, or nerve and sinew, rather than in pen and ink" (Sellars 1949, 299; 2005, 123 [¶17]).

With these points in mind, let us turn to Sellars's account of analyticity. As I noted at the beginning of this section, Sellars thinks that we can legitimately use the notion of analyticity once we can provide an adequate use theory of meaning. Indeed, his account of analyticity immediately follows from his non-holistic inferentialist account of meaning and inference rules underlying it. In "Is There a Synthetic A Priori?" he writes "where 'x is B' can be [materially] validly inferred from 'x is A,' the proposition 'All A is B' is unconditionally assertable on the basis of the rules of the language. Our thesis, then, implies that every primitive descriptive predicate occurs in one or more [material] propositions which are unconditionally assertable — in short, true *ex vi terminorum*" (Sellars 1953b, 136; 1963c, 317). On his non-holistic inferentialist account of meaning, for any primitive descriptive term, we have accepted one or more inference rules governing its use, which license certain inferences. And corresponding to the inference licensed by an inference rule, there is a sentence that is assertable solely on the basis of that inference rule, where to say that a sentence is assertable *solely* on the basis of our inference rules is to say that it is assertable on the basis of our inference rules "*without*

having to appeal to evidence or grounds" (Sellars 1953a, 330).[17] For example, where the inference from 'x is A' to 'x is B' is licensed by our inference rules, the sentence 'all A is B' is assertable solely on the basis of our inference rules. On Sellars's account, then, analytic sentences are those that are assertable solely on the basis of our inference rules.[18]

This is just an outline of Sellars's account of analyticity, but in the following two sections, I will attempt to clarify and develop it by addressing some of the issues that might be raised about it and by situating it within his broader picture of language as dynamically developing in our ongoing inquiry. Issues related to the revisability of analytic sentences will be addressed in Section 5. In the next section, I will consider four other issues.

4. A Clarification of Sellars's Account of Analyticity

In this section, I will address four issues that might be raised about Sellars's account of analyticity: (1) whether it can draw a *sharp* boundary between analytic and

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[17] On holistic inferentialism, there is no such sentence that is assertable solely on the basis of our inference rules, since which sentence is assertable depends on the whole inferential network.

[18] It is important to note that while analytic sentences are assertable on the basis of our inference rules, "without having to appeal to evidence or grounds," inference rules on the basis of which they are assertable can be adopted on the basis of evidence or grounds. We might thus say that analytic sentences *indirectly* rely on evidence or grounds. This point will be important when we discuss the revision of inference rules and analytic sentences in the following sections. Thanks to an anonymous reviewer for their helpful suggestion here.

synthetic sentences, (2) whether it can draw a distinction in a *non-circular* way, (3) whether it does not count as analytic those sentences that we would regard as *false*, and (4) whether it does not count as analytic those sentences that we would regard as *synthetic*.

First, can Sellars's account provide a way to draw a sharp boundary between analytic and synthetic sentences? Even if we set aside the question of whether it is possible to draw a sharp boundary in artificial languages,[19] many sentences in natural languages are difficult to classify either as analytic or synthetic. According to Quine, no attempt has been successful to draw a sharp boundary, and "[t]hat there is such a distinction to be drawn at all is an unempirical dogma of empiricists, a metaphysical article of faith" (Quine 1951, 34).

Although Sellars himself does not explicitly address this issue, I think he can reasonably reject Quine's assumption that for there to be a distinction between the analytic and the synthetic, there must be a sharp boundary between them. First of all, as Grice and Strawson (1956, 151–52) convincingly argue, even if there is no sharp boundary, it does not follow that there is no distinction. Moreover, since Sellars thinks that inference rules in natural languages have a "vague, fluctuating and ambiguous character" (Sellars 1953b, 124; 1963c, 301) and explains analyticity in terms of such inference rules, it is reasonable to suppose that, on his account, the analytic-synthetic distinction will inherit the "vague, fluctuating and ambiguous character." If this is correct, his account can accept that we may not be able to draw a sharp boundary between analytic and synthetic sentences in natural languages while rejecting Quine's

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[19] Quine (1951, 31–34) claims that a sharp boundary cannot be drawn even in artificial languages, but see Carnap (1990) and Martin (1952) for responses.

assumption that this implies that there is no distinction between them at all.[20]

Second, can Sellars's account satisfy Quine's requirement that an adequate account of analyticity be non-circular? As we have seen in the last section, Sellars's account relies on modal notions such as counterfactual dependence. But Quine would object that since modal notions presuppose the notion of analyticity, using the former to explain the latter would be circular. How can Sellars address this circularity objection?

I think there are two possible responses to this circularity objection. First, looking back from the present vantage point, one might insist that we need not worry about whether Sellars's account can satisfy Quine's non-circularity requirement, since nowadays, largely due to Saul Kripke's *Naming and Necessity* (Kripke 1980), few would accept Quine's assumption that modal notions presuppose the notion of analyticity (Soames 2003, 360–62). Second, from a more contextualized perspective, one might argue that Sellars has resources to address the circularity objection in his own way. While Sellars does not hesitate to use modal notions in his account of analyticity, he is as skeptical as Quine about the existence of modal facts, and justifies the use of modal notions in his own way that does not require the existence of modal facts (Sellars 1958). His view of modal notions has recently been reconstructed as *modal expressivism* by Brandom (2008, chap. 4; 2015, chaps. 4–5). Modal expressivism argues for the legitimacy of the use of modal terms, by claiming, first, that the *function* of modal terms is not to describe modal facts out there, but to make our commitments explicit, and, second, that the *ability* required to use modal terms is already implicit in the ability required to use any empirical descriptive term. If modal expressivism is true, then insofar as we can use any one empirical descriptive term, we are already in a position to

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[20] deVries (2005, 61–62) makes the same point.

use modal terms and we can legitimately use them without thereby committing ourselves to the existence of modal facts. [21] Modal expressivism is of course a controversial claim, and it is beyond the scope of this paper to defend it,[22] but it is worth emphasizing that Sellars provides his own justification for the use of modal notions that does not require the existence of modal facts.

The third issue concerns the point we saw in the last section that our inference rules may not reflect an adequate understanding of the world. Since the world is extremely complex and we are fallible beings, our inference rules may reflect our inadequate understanding or even a misunderstanding. On Sellars's account, however, any sentences that are assertable solely on the basis of our inference rules count as analytic. Thus, even if our inference rules reflect a misunderstanding of the world, a sentence that is assertable on the basis of these inference rules alone would count as analytic on his account. Consider, for example, the sentence 'Phlogiston is released during combustion.' This sentence is now regarded as obviously false. On Sellars's account, however, it would count as analytic and thus as *true* in virtue of meaning if the corresponding inference rule is in play and that sentence is assertable on that basis alone. Consider also the sentence "F=ma," which, unlike the phlogiston sentence above, is not obviously false but approximately true, but is only approximately true and strictly speaking false. On Sellars's account, however, it would also count as analytic if the

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[21] As Sellars suggests in his autobiographical essay (Sellars 1975, 285), one motivation behind his inferentialist understanding of meaning is to explain the legitimacy of the use of modal notions.

[22] See Brandom (2008, ch. 4; 2015, ch. 5) for further details and refinements of Sellarsian modal expressivism. Thomasson (2020) also explores a similar position with respect to metaphysical modality, which she calls *modal normativism*.

corresponding inference rules are in play. Thus, on Sellars's account, some of the sentences that we would not take to be true may count as analytic and thus as true in virtue of meaning.[23] Perhaps even worse, Sellars notes that we cannot tell by reflection alone whether our inference rules actually license good inferences. It can be the case that while it is certain that a sentence is assertable on the basis of our inference rules alone, it is not certain that those inference rules actually license good inferences, and the "[u]ncertainty in this second sense is not something that can be remedied by 'paying closer attention to what we mean'" (Sellars 1953b, 138; 1963c, 319).

To adequately address this issue, Sellars would respond, we must first think of analyticity as relative to a language or conceptual framework (i.e., a set of inference rules).[24] Sentences that are assertable solely on the basis of the inference rules of one language may not be assertable solely on the basis of the inference rules of another language. Thus, sentences that are analytic in one language may not be so in another. Moreover, and this is an important point, he would add that we must abandon a picture of our language as fixed and instead see it as dynamically developing in our ongoing inquiry.[25] We have not always accepted the same set of inference rules, nor will we

[23] Sellars shares with Michael Friedman the idea that basic principles of science such as Newton's laws of motion have a different status than ordinary empirical sentences. O'Shea (2007, 222n23) also notes that Friedman's relativized conception of the *a priori* would be congenial to Sellars.

[24] In thinking of analyticity as relative to a language, Sellars's account is in line with Carnap's. This naturally raises the issue of diachronic continuity in languages. How Sellars addresses this issue will be addressed in the next section.

[25] Sellars thinks that "the concept of a language as studied in current formal semantics is an abstraction" from "the concept of a developing language or conceptual scheme" and that "the usual concept of a 'sense' or 'intension' is also an abstraction" from "the

forever keep accepting the same set of inference rules that we are currently accepting. Rather, we are constantly changing our inference rules by abandoning some of the inference rules we had inherited from previous generations and by adopting new inference rules they did not accept.[26] And the process by which we change our inference rules is not a random but a "self-correcting" one (Sellars 1963c, 170; 1997, §38, 79). We may mistakenly adopt inference rules that actually license bad inferences. But, even if we have mistakenly adopted such rules, as we empirically inquire into the world and know more about it, we will eventually find that the inferences licensed by them are not good inferences. And when we find that, we will abandon those rules and adopt new ones that we think better reflect the relevant laws. The same can be said for inference rules that license only approximately good inferences. We will eventually adopt more adequate inference rules that license better inferences.

The implication of this dynamic picture of language for analyticity is that which sentences are analytic is also not fixed. As we change our inference rules, which sentences are analytic will also change. Thus, sentences that are analytic at one time may not be analytic at another time. Of course, this brings us to another issue of how analytic sentences can be revised, which we will consider in detail in the next section. But for now, what is important is that while some sentences that would be false from a later perspective may count as analytic on Sellars's account, that those sentences count as analytic is only a temporary feature of our developing language.[27]

concept of a developing linguistic or conceptual role" (Sellars 1968, 131).

[26] See deVries (2005, 24) for a related point.

[27] Thus, Sellars's account implies that there is some arbitrariness in how to draw a distinction between analytic and synthetic sentences. This does not imply, however, that all ways of drawing a distinction are equally good.

The fourth and final issue I want to consider in this section concerns the *scope* of analytic sentences. On Sellars's account, many sentences we would regard as analytic may count as analytic. For example, the sentence 'Copper melts at 1085°C' may count as analytic. Indeed, O'Shea (2018, 219) points out that on Sellars's account, much more sentences would count as analytic than one would normally expect.

Here too, I think, it is important to situate his account of analyticity in his dynamic picture of language. While Sellars's account certainly implies that sentences such as 'Copper melts at 1085°C' are *now* analytic, it does not imply that they have always been so. Rather, they are analytic only in more or less developed languages. Recall that he thinks that our inference rules reflect our understanding of the world. When we establish, say, new laws of nature, we will thereby adopt new material inference rules that reflect our new understanding of the world (Sellars 1964; see also deVries 2005, 148). And, as we have just seen, when we change our inference rules, which sentences are analytic will also change. On his account, then, sentences such as 'Copper melts at 1085°C' have acquired the status of being analytic through the process of our empirical inquiry into the world and our constant attempts to adjust our inference rules to our new understanding of the world.[28]

As is already clear, at the heart of Sellars's account of analyticity is a dynamic picture of language, in which even analytic sentences are revisable. In the next section, I will explore issues related to the revisability of analytic sentences in more detail.

5. Sellars's Account of the Revisability of Analytic Sentences and His Dynamic

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[28] It is worth noting that Sellarsian inference rules are "world-involving" (O'Shea 2018, 223) and have a semantic externalist aspect (Brandom 2008, 100; Matsui 2021).

Picture of Language

Although Sellars makes several suggestions about how analytic sentences can be revised, he never develops them into a systematic account. This section aims to bring these suggestions together to reconstruct his account of the revisability of analytic sentences. As we will shortly see, Sellars's basic strategy for explaining how analytic sentences can be revised is not in itself unique: rather, it is basically in line with the strategies of his contemporaries such as Carnap (1963; 1990) and Grice and Strawson (1956). However, what distinguishes Sellars's account, I argue, is that it forms, along with his other interesting ideas, a broader picture of how our language dynamically develops in our ongoing inquiry. In what follows, I will first present his basic strategy for explaining the revisability of analytic sentences and then situate it within his broader picture.

In the following discussion, I will limit myself to the revisability of *material* analytic sentences and *material* inference rules underlying them, leaving aside that of formal analytic sentences and formal inference rules,[29] since when Sellars discusses issues related to the revisability of analytic sentences or inference rules, he tends to focus on material analytic sentences and material inference rules and writes little about formal ones. However, the account to be reconstructed below, I think, should also be applicable to formal ones.[30]

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[29] As indicated in footnote 3, in "Is There a Synthetic A Priori?" and related papers, Sellars calls sentences that are solely assertable on the basis of *material* inference rules synthetic *a priori*. Thus, the following discussion can be read as concerning his account of the synthetic *a priori*.

[30] Whether Sellars himself thinks formal analytic sentences and formal inference rules are revisable is in fact not clear. While Brandt (2017, 124–25) speculates that Sellars

5.1 Two sorts of revision

Sellars's basic strategy for explaining the revisability of analytic sentences is by distinguishing two sorts of revision: the revision of beliefs within the rules of a language and the revision of these rules themselves.[31] As we have seen, on Sellars's non-holistic inferentialist account of meaning, the meaning of an expression is determined not by all the inferences in which it occurs but only by a subset of them that is licensed by our inference rules. This implies that, on his account, a change in the meaning of expressions occurs not every time we revise our beliefs but only when we revise our inference rules. And on his account of analyticity, since analytic sentences are sentences that are assertable on the basis of our inference rules alone, which sentences are analytic will change when we revise our inference rules. Hence, on his account, analytic sentences can be revised by revising our inference rules.

Sellars illustrates revisions of the rules of a language using an analogy with revisions of the rules of a game (Sellars 1974a, 186–87). Sellars himself uses a chess analogy, but I think a soccer analogy will be more suitable, for while the chess analogy can only be used to illustrate the revision of rules, the soccer analogy can be used to illustrate both sorts of revision. Suppose, for example, that in a soccer match, an offside decision was overturned and a goal was awarded upon the advice of the video assistant referee (VAR). This is a revision of a judgment within the offside rule of soccer. But the offside rule itself can also be revised. The former revision can be seen as analogous to a

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thinks only material analytic sentences and material inference rules are revisable, O'Shea (2018, 222–23) seems to think that Sellars accepts that any analytic sentences and any inference rules are revisable.

[31] O'Shea (2007, 222n23; 2018, 223) also makes this point.

revision of a belief within the rules of a language and the latter as analogous to a revision of the rules of a language themselves. Of course, there is an important disanalogy in that, unlike in soccer, there are no official rules in natural languages. But the analogy can still help us intuitively understand the distinction between the two sorts of revision.

In appealing to the distinction between the two sorts of revision, Sellars's account of the revisability of analytic sentences is in line with Carnap (1963, 921; 1990, 431–32)'s and Grice and Strawson (1956, 157)'s. Moreover, Sellars agrees with Carnap that a revision of the rules of a language is justified on pragmatic grounds (Sellars 1949, 314; 2005, 133–34; Carnap 1950, 31–32).[32] What distinguishes Sellars's account is rather that it forms, along with his other interesting ideas, a broader picture of language as dynamically developing in our ongoing inquiry. In particular, his account of the revisability of analytic sentences hangs together, first, with his *evolutionary* view of the development of conceptual frameworks, and second, with his inferentialist account of how *diachronic continuity* can be preserved through the revision of the rules of a language. In the remainder of this section, we will consider these points in turn.

5.2 The evolution of conceptual frameworks

In several places, Sellars describes the process by which our language or conceptual framework develops using an evolutionary analogy and suggests that our

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[32] Both Sellars (1963a, 434n7) and Carnap (1950, 31n1) refer to Herbert Feigl, who distinguishes two sorts of justification: *validation* as a theoretical justification concerning the truth of a proposition or the validity of an inference and *vindication* as a pragmatic justification concerning our attitudes or action, including the adoption of a principle (Feigl 1981).

language or conceptual framework evolves by something like natural selection. According to him, the conceptual framework we are currently using is an "evolutionary development, culturally inherited" (Sellars 1963b, 90). It is not the only possible framework, but rather just "one of a vast number of alternative frames any one of which we might have been brought to adopt" (Sellars 1953b, 137; 1963c, 318; see also 1953a, 337). These alternative frameworks, which license different inferences and reflect different understandings of the world, "compete for adoption" (Sellars 1953b, 138; 1963c, 320; see also 1953a, 337).[33] Conceptual frameworks that reflect a better understanding of the world will tend to be adopted as we inquire into the world and learn more about it; and conceptual frameworks that license bad inferences or only approximately good inferences, even if adopted, will tend to be abandoned in our ongoing inquiry.

Sellars emphasizes that scientists play a special role in the evolutionary process of conceptual framework. According to him, scientists deliberately explore alternative frameworks in their attempts to better understand the world (Sellars 1949, 312; 2005, 132) and tentatively adopt some of them that they think reflect a better understanding of the world. As he puts it, scientists, so to speak, "produce deliberately mutant conceptual structures" (Sellars 1953a, 337; see also 1958, 288).[34] And if an alternative framework they have tentatively adopted turns out to work inadequately or not at all, they will

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[33] This is not to say that Sellars thinks that only one conceptual framework exists at a given time. Rather, he thinks that different frameworks exist in different populations such as in German and French (Sellars 1968, 134).

[34] As deVries (2005, 148) aptly puts it, "[s]cience, for Sellars, […] aims to *change* our concepts and terms to enable us to anticipate, explain and plan ever better our interaction with reality."

abandon it and again tentatively adopt another one. Sellars emphasizes the importance of the tentativeness with which scientists adopt new conceptual frameworks. "The essence of scientific wisdom consists […] in a readiness to move […] from one conceptual frame to another, […] in being tentative about what one takes to be extra-logically necessary" (Sellars 1953b, 138; 1963c, 319).[35] It is through such a process of trial and error, Sellars suggests, that our conceptual framework is improved to become a more and more adequate one.

Some might think that Sellars's use of evolutionary terminology is merely metaphorical and should not be taken at face value, since, as Sellars himself emphasizes, conceptual frameworks are not genetically inherited and new variant frameworks are often introduced not randomly but deliberately. However, if we adopt the geneticist Richard Lewontin's famous formulation of the notion of evolution by natural selection, which is "the most widely known contemporary statement of Darwin's theory" (Rosenberg and McShea 2007, 16), then we can take Sellars's use of evolutionary terminology at face value and see that conceptual frameworks evolve by the very process of natural selection.

Lewontin formulates the notion of evolution by natural selection in terms of three principles (Lewontin 1970). The first is the principle of variation that there is variation in traits among members of a species. The second is the principle of heredity that the variation is heritable. And the third is the principle of differential fitness that different variants leave different numbers of offspring either in immediate or remote generations. According to Lewontin, anything that satisfies these three principles can be said to evolve by natural selection. As Tim Lewens summarizes Lewontin's view, "selection

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[35] deVries (2005, 63) also notes this tentativeness or provisionality.

acts whenever there is 'heritable variation in fitness'" (Lewens 2006, 45). Note that Lewontin's formulation is very abstract (Godfrey-Smith 2014, 31; Okasha 2006, 13–18). In particular, it is "entirely silent on the mechanism of inheritance and the source of variation" (Rosenberg and McShea 2007, 18). This abstractness has two important consequences for our purposes. First, evolution by natural selection does not rule out the possibility of non-genetic inheritance such as social or cultural inheritance through learning from others (Lewens 2018, §1). Second, it does not rule out the possibility that "a novel […] variant is introduced deliberately rather than arising at random" (Okasha 2019, 115; emphasis added).[36]

With this understanding of evolution by natural selection in hand, let us return to the evolution of conceptual frameworks as Sellars describes it. We can now see that it satisfies all of Lewontin's three principles of evolution by natural selection.[37] First, conceptual frameworks vary in their inferential traits: different frameworks license different inferences. Second, each variant conceptual framework can be inherited through learning from person to person: from scientists to scientists, from scientists to laypeople, from laypeople to laypeople, or from adults to children.[38] Third, some variants spread more than others, and some variants are eliminated through the process of our empirical inquiry. Thus, we can take Sellars's use of evolutionary terminology at face value and say that conceptual frameworks evolve by natural selection, even though

[36] Jablonka and Lamb (2014) also argue that heredity need not be based on genes and variation need not be random.

[37] See also Mesoudi (2011, 27–34), who argues that changes in cultural items in general, including languages, satisfy all the three principles of natural selection.

[38] When Sellars discusses the inheritance of a conceptual framework, he tends to focus on the inheritance from adults to children. See Sellars (1969; 1974b).

they are not genetically inherited and new variant frameworks are deliberately introduced.[39]

5.3 The Diachronic Continuity of Meaning, Language, or Conceptual Framework

When one explains the revisability of analytic sentences by appealing to the idea of the revision of the rules of language, the question naturally arises: How can the diachronic continuity of meaning, language, or conceptual framework be preserved through a revision of the rules of a language? Another noteworthy aspect of Sellars's account of the revisability of analytic sentences is that it is accompanied by his inferentialist account of the diachronic continuity of meaning, language, or conceptual framework, which is the topic of this subsection.

As we have seen, on Sellars's account of meaning, when we revise our inference rules, the inferential role of expressions, and thus their meaning, will also change. One consequence of his account is that while a mere change in belief will not result in a change in meaning, any slight change in inference rules will result in a change in meaning. Sellars himself explicitly acknowledges this consequence when he says that "strictly speaking, it is a new symbol with each change in rules" (Sellars 1949, 311; 2005, 132). Consider, for example, the term 'length' that appears in Newtonian mechanics and the term 'length' that appears in relativity theory. Since they do not play the same inferential role, they do not have the same meanings nor express the same concepts on his account (Sellars 1974a). Does this imply that there is no continuity

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[39] Sellars's evolutionary picture of language deserves further development, but I will not pursue it any further here. See Millikan (1984; 2005; 2016), who develops Sellars's evolutionary picture of languages in her own way.

between them? If one thinks of a language or conceptual framework as a set of accepted inference rules, a revision of our inference rules would change not only the meaning of expressions but also our language or conceptual framework itself, and the question about continuity arises with respect to them as well.

Sellars devotes an entire essay, "Conceptual Change" (Sellars 1974a), to the issue of diachronic continuity.[40] There he argues that even if we admit that any slight revision of inference rules will result in a change in meaning or concept, this does not imply that no continuity in meaning or concept can be preserved through such a revision. For example, while the Newtonian concept of length and the relativistic concept of length are not identical, we say of each of them that it is "a concept of length" (Sellars 1974a, 176, 185–6). This indicates that there is a sort of continuity that is coarser-grained than the identity of meaning or concept, which can be preserved through a change in the latter. Let us refer to such continuity as *conceptual continuity*.

What conditions must be satisfied for conceptual continuity to be preserved through a revision of inference rules? When we change an inference rule in which an expression E occurs, then the inferential role R played by E will change into R^*, where R^* either allows us to make new inferences which R did not allow, or R^* does not allow us to make some of the inferences which R did allow. R^* is different from R to the extent that R^* allows new inferences or R^* does not allow some of the inferences which R did allow. Still, R^* is similar to R to the extent that R^* allows some of the inferences that R did allow. Now, according to Sellars, in order to preserve conceptual continuity, the new inferential role R^* must be sufficiently similar to the old one R (Sellars 1974a,

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[40] Sellars also discusses the same issue in Chapter 5 of *Science and Metaphysics* (Sellars 1968). See O'Shea (2007, 158–63) for a more detailed discussion.

184–85).[41]

Of course, the appeal to similarity leaves us with the familiar problem of identifying the relevant similarities. A new inferential role of an expression will be similar to the old one in some respects and different from it in others. Thus, in order to determine whether a new inferential role of an expression is sufficiently similar to the old one, one must be able to determine which respects of similarity are relevant and which are not.

Sellars recognizes the need to provide "a criterion of sameness of use which separates relevant from irrelevant differences in use" (Sellars 1963d, 110n1). While he admits that "[t]here is room here for a decision" (Sellars 1968, 128), he suggests that the criterion of the relevant similarities is "flexible, and context dependent," "shifting with context and purpose" (Sellars 1974b, 437n12, n14), so that "differences which are irrelevant to one context of inquiry may be relevant to another" (Sellars 1963d, 110n1). I thus take his view as follows: changing R to R^* is conceptually continuous only if R^* preserves inferences that would be important relative to our shared interests and purposes in the context of revising R, and R^* does not allow us to make new inferences that would be contrary to our shared interests and purposes in that context. This context-dependence of the criterion of the relevant similarities will add flexibility to his account of diachronic continuity in meanings, languages, or conceptual frameworks.

In this fashion, Sellars not only provides an account of how analytic sentences can

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[41] O'Shea (2007, 160) also notes that Sellars explains conceptual continuity in terms of "functional role similarities and differences," but I have tried to add to his point by clarifying what it means for two functional or inferential roles to be similar to each other. Moreover, I will also try to clarify what helps determine the *relevant* similarities on Sellars's account.

be revised by distinguishing the two sorts of revision, but he does so within a broader picture of how our language can dynamically evolve without losing its diachronic continuity. If the main attraction of Quine's arguments against analyticity in "Two Dogmas" is the dynamic nature of his holistic picture, in which no sentence is immune to revision, it should be remarkable that Sellars suggests an alternative equally dynamic picture while retaining the analytic-synthetic distinction.

6. Conclusion

In this paper, I have reconstructed Sellars's account of analytic sentences and their revisability, and addressed several concerns that might be raised about it. As we have seen, underlying his account of analyticity is an account of inference rules: analytic sentences are those that are assertable solely on the basis of our inference rules, and when we revise our inference rules, which sentences are analytic will also change. While Sellars's account of analyticity bears some similarities with Carnap's and Grice and Strawson's, it is still striking in that it hangs together with his other ideas to form a broader picture of language as dynamically evolving in our ongoing inquiry into the world. Of course, Quine would have objected that Sellars's account fails to draw a sharp boundary between analytic and synthetic sentences, and that the modal notions Sellars appeals to in explaining analyticity are not clear, but I have argued that Sellars could have addressed these objections. While I have not argued that the Sellarsian picture of language that accepts the analytic-synthetic distinction is better than the Quinean holistic alternative, I hope I have at least shown that Sellars's neglected account of analyticity should have received more attention in his time, and that it contains several insights that still deserve attention.

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