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Quine's Problem
Phenomenalism and the Issue Concerning the Ontology of Sense-Data

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ABSTRACT

This paper offers a defence of sense-datum statements from A.J. Ayer's perspective that represents a response to Quine's naturalistic ontology. Starting with Quine's "On What There Is" (1948), and the following "Symposium" of 1951, I argue that Ayer's proposed method of establishing sense-datum statements in his "Symposium" piece, which challenges Quine's ontology of physical objects, is not a viable alternative to Quine's scientific naturalism. I argue that by taking a broadly intensional approach, Ayer can offer a response to Quine's position. More specifically, I contend that it is possible to form a distinctly non-scientific, epistemological account of sense-data by employing primitive "sensory predicates" within basic propositions. In terms of ontology, a technical ruling for "existence", working alongside appropriate "meaning-rules", legislates for basic sense-datum statements, thus distancing them from the regimented, extensionalised, stimulus meaning strategy indicative of Quine's naturalistic ontology.

1. Introduction

> In general, I think it may be said that the interest of an ontological dispute lies in someone's denying that something is. The denial of being is, in philosophy, the prelude to an explanation: the affirmation of being more often a refusal to provide one (Ayer 1951, 147).

In terms of the analytical tradition, W. V. Quine (1908–2000) and A. J. Ayer (1910–89) follow on from Bertrand Russell (1872–1970) and Ludwig Wittgenstein (1889–1951). Both thinkers were in attendance at the famous Vienna Circle (headed by Moritz Schlick) in 1933, which perhaps helped to develop their respective philosophical positions on epistemology and ontology.

Ayer's general philosophical approach to problems of perception is certainly connected with such historical figures as Hobbes, Locke, Berkeley, Hume, and then Mill, followed by Russell and Wittgenstein. However, Vrahimis questions Ayer's estimation of the "Anglocentric provenance for his ideas" (Vrahimis 2021, 44) in *Language, Truth and Logic* (1936) and the downplaying of the "Germanophone philosophical tradition" (2021, 45), which shaped the Vienna Circle's brand of Logical Empiricism. What is crucial is Ayer's relationship with Gilbert Ryle (1900–1976). After Ayer's return from Vienna in 1933, Ryle and Ayer engaged in a mutual exchange of ideas concerning various aspects of philosophical behaviourism (Kremer 2017, 178–82). This period reached an important phase with "the critical reception" of Ayer's *Thinking and Meaning* (1947), which in turn helped to finalise Ryle's position concerning the nature of dispositions in his 1949 *Concept of Mind* (Kremer 2017, 185–90). Ayer's views on sense-data continued to develop well into the constructionism period of the 1970s. Hostility towards Ayer's theory of sense-data in *Foundations of Empirical Knowledge* (1940) famously appeared in Austin's ordinary language-based *Sense and Sensibilia* (1962), to which Ayer vehemently responded in "Has Austin Refuted the Sense-Datum Theory", written in 1967.[1] In general, we could perhaps follow Honderich in identifying four broad periods of Ayer's career: "Logical Positivism, Phenomenalism, an Epistemological period, and finally something I would like to call Constructionism" (Honderich 1991, 213). The first period mentioned by Honderich places both Ayer and Quine at a point where the impact of the Vienna Circle debates would begin to shape their thinking.

Quine's "internal critique of logical empiricism" (Uebel 2007, 28) grows out of a strict naturalistic reaction to Carnap's tolerant attitude towards separating philosophical aspects of logic, meaning, and justification from science (Uebel 2007, 5–8, 60, 151–52). Quine sought to develop a holistic approach to philosophy and science that would ultimately provide a scientific basis for what C. I. Lewis (1883–1964) had called "the given" in his *Mind and the World Order* (1929).[2] Basic sensory

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[1] An account of Austin's rejection of Ayer's early form of verificationism can be found in Chapman (2021, 72–76). Similarly, Parker-Ryan (2021) puts Austin's ordinary language approach, with its emphasis on the "fine-grainedness of our language" (2021, 147), in opposition to Ayer's logically "ideal" approach to language in *Language, Truth and Logic*.

[2] See in this regard, Sinclair (2007, 459, 466).

experiences, deemed both ineffable and independent of our modes of categorization by Lewis, required scientific credibility. Carnap's initial phenomenalistic, reductive attempt to formalise all elements of experience prompted Schlick's early anti-formalist ripostes (Uebel 2007, 77–95). Quine's naturalistic observation sentences have "no need of an ineffable given" (Morris 2017, 202), indicating a holistic, all-encompassing scientific method.

Quine and Ayer's responses to, and interpretations of, the earlier Vienna Circle's (1923–1937) protocol-sentence debate concerning "basic scientific evidence statements" (Uebel 2007, 27) are important for providing some historical background for how their views on sense-data would develop. Uebel isolates four broad phases of the debate, beginning with various reactions to Rudolf Carnap's (1891–1970) *Aufbau* (1928) and ending sometime after 1936 (Uebel 2007, 27–28). The third phase, beginning in 1933 (when Ayer and Quine were participants), is marked by Moritz Schlick's responses to a form of physicalism held at that time by Neurath, Hempel, and more importantly, Carnap (Uebel 2007, 27). Schlick's early anti-formalist, foundationalist responses to Carnap's "formal method of structure" would continue along "Wittgensteinian-inspired" ordinary language lines (Uebel 2007, 89, 94). Schlick's "rules of language" guide his own basic experiential "affirmations" (Uebel 2007, 322–23, 368–69) and there is a degree of commonality on this issue with Ayer's thinking. Later, I will argue that Ayer's radical non-inferential meaning rules supply a more habitual, dispositional factual basis for immediate certainty of expression than Schlick's rules and are key for helping us articulate a defence of sense-datum statements in opposition to Quine's lifelong rejection of them.

The early protocol-sentence exchanges thus provide the backdrop for the 1951 "Symposium". Quine's paper "On What There Is," written in 1948, is the subject of a three-way symposium held between Ayer, Geach, and Quine three years later. Towards the end of his first paper, Quine mentions a specific problem (hereafter "Quine's Problem"), regarding the physicalistic and phenomenalistic conceptual schemes (1948, 36–37).[3] The problem concerns if and how a translation of statements from the physicalistic conceptual scheme to the PCS can take place. Ayer suggests that sense-datum statements containing "sensory predicates"

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[3]I will abbreviate "phenomenalistic conceptual scheme" as PCS hereafter.

would be "the lowest level" statements (1954a, 123) one could express in a descriptive language, defined in opposition to physical object statements.[4] Quine's decision is to halt any translation from statements concerning physical objects, to statements (in the PCS) concerning the bottommost layer of empirically observable sense-data.[5] This seems like the layer at which Quine says "we must tighten our ontological belts" (1969b, 17). This essay is concerned with questioning whether a loosening of our "ontological belts" is possible so as to enable us to erect a stable ontological and epistemological foothold at the bottom rung of the ladder—that of sense-datum statements.

In Ayer's "Symposium" paper written in 1951, the problem concerning Quine's hesitancy to commit to a PCS (raising questions regarding its exact status and independence from a physicalistic conceptual scheme) is picked up on and scrutinised (1951, 141–43). Here, Ayer prioritises what he calls a "weakened" (1951, 143) reductive method for describing sense-data, known as primitive perceptual elements. I will maintain, though, taking certain key texts as evidence, that a different definitions-based method can be deployed in the construction of a final position taken against Quine and that an ontology of sense-data is clearly the flip side of an epistemological standpoint that can be developed conjointly.

In what follows, I shall argue that tackling Quine's Problem involves two broad stages:

The first stage involves an analysis of Ayer's reduction-based "criterion" found in his 1951 "Symposium" piece.

The second stage reformulates the problem. We will move away from reduction or translation-based approaches and turn our attention towards basic meaning rules and our being disposed to apply them at the level of sense-datum statements. This will constitute our answer to the ontological problem.

Before we can reach the second stage, we need to take a closer look at the initial formation of Quine's Problem and Ayer's provisional solution to it. We shall then be in a position to begin re-assessing the theoretical

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[4]I shall refer to "sense-data" plural and "sense-datum" singular throughout to capture the meaning of the term used by Ayer during the 1940s and 1950s. The terms "sense-qualia" and "percept" (understood as "particularised qualia"), appear in later years. I shall not deal with the issue of this change in terminology here.

[5]Ontologically, Quine countenances sets, although, as Kemp points out, this was not an idea he continued to hold (2017, 155–66).

underpinnings of Quine's scientific naturalism from the standpoint of a revised ontology for sense-data that moves beyond Ayer's first responses to Quine's Problem.

2. The Physical Object as "Postulated" Entity

Let us first look at Quine's Problem in slightly more detail. In his "Symposium" paper, Ayer raises a specific problem for Quine's "postulated" status for a physical object. In Quine's sense, without the physicalistic scheme, which stands as a "convenient myth" (1948, 37) in relation to a PCS, sense-data would lack the necessary unity and stability that the postulated entity provides. As we shall see when we deal with Quine's theoretical background in more detail, we are required to keep within the boundaries of the domain of physical objects in order to make sense of sense-data (1948, 37).

Ayer asks how it is that Quine can "refashion our statements" about abstract entities so that the bound variables take concrete entities as their values, without altering their meanings, but seemingly refuse to commit to statements about sense-data in the same way (1951, 142).

> We may say, e.g., that some dogs are white, and not thereby commit ourselves to recognizing either doghood or whiteness as entities. 'Some dogs are white' says that some things that are dogs are white; and, in order that this statement be true, the things over which the bound variable 'something' ranges must include some white dogs, but need not include doghood or whiteness. On the other hand, when we say that some zoological species are cross-fertile, we are committing ourselves to recognizing as entities the several species themselves, abstract though they be. We remain so committed at least until we devise some way of so paraphrasing the statement as to show that the seeming reference to species on the part of our bound variable was an avoidable manner of speaking (Quine 1948, 32).

Quine's levels of commitment can be pursued in a nominalistic vein from statements concerning abstract entities to those involving concrete physical objects in the above manner. The main reason Quine gives for the inability to translate physical object statements into sense-datum statements is that we require "the simplest conceptual scheme into which the disordered fragments of raw experience can be fitted and arranged"

(1948, 35–36). Simplicity is an essential concept of Quine's physicalistic conceptual scheme:

> The rule of simplicity is indeed our guiding maxim in assigning sense data to objects: we associate an earlier and a later round sensum with the same so-called penny, or with two different so-called pennies, in obedience to the demands of maximum simplicity in our total world-picture (Quine 1948, 36).

During the 1930s Quine favoured a phenomenalistic epistemology (as opposed to his junior colleague at Harvard, B. F. Skinner. See Verhaegh 2019, 715–17). Quine continued to grapple with how to deal with phenomenalistic, epistemological constructions from some "basic reality" such as "sense qualia" (1944, Verhaegh's transcription). So, in 1948 "Quine in 'On What There Is' settles for a pluralistic solution" (Verhaegh 2017, 329) accepting sense-datum and physical object statements. Quine could employ sense-datum statements for the purposes of "describing the evidential boundaries" of empiricism (Verhaegh 2017, 337)—notwithstanding any translational problems. According to Verhaegh, Quine had not at this time embraced a full-fledged scientific holism encompassing a naturalised epistemology. The first major signs of this were in "On Mental Entities" (1952) which "rejected any transcendental perspective on reality" (Verhaegh 2017, 339). Even so, the sense-data problem in "On What There Is" (1948) can be contextualised in terms of how Janssen-Lauret sees Quine's commitment-based, inclusive "meta-ontology" as being more apt for "regimenting and clarifying alternative views" (Janssen-Lauret 2015, 154) such that " 'there is' and 'exists' mean the same whether the purported objects are concrete or abstract" (Janssen-Lauret 2018, xxx).

In the next section, I will examine Ayer's 1951 "Symposium" reconstructions of Quine's Problem before tackling the problem of "theory" in the following section. Although Ayer offers two versions of a logical criterion for ameliorating Quine's Problem, his caveat that "this does not carry us very far", indicates a need not necessarily to dig deeper for further evidence, but rather to restate the ontological problem based on basic propositions containing sensory predicates.

3. Ayer's Two Provisional Solutions to Quine's Problem

Ayer's response to Quine's Problem is to offer two formulations of consistent class-membership-based examples as possible solutions. In his 1951 "Symposium" piece, Ayer focuses on the issue of whether translation or reduction of statements is the correct procedure. To logically translate statements is to recast them such that one type can be eliminated in favour of another. Reduction, in Ayer's sense, does not require statements to be eliminated. To reduce means to retain the statements in question such that our ontological commitments will be based on the *logical priority* of observed instances of the reduced sub-set. Quine's method of translation would assign specific values to the variables of Ayer's reduced statements. In this manner, Quine can translate statements about abstract objects into physical object statements seemingly unproblematically, namely, in a manner which is fully "extensional".

> For if we are committed to abstract entities so long as we are not able to refashion our statements in such a way that none of the bound variables which they contain take abstract entities as values, it would seem that the same should apply to physical objects (Ayer 1951, 142).

The problem for Ayer is that Quine refuses to translate statements about physical objects into sense-datum statements in the same manner intimated in the above, thus ruling out a translation that would take sense-data as values of variables. At the level of the PCS, sense-datum statements would seemingly require physical objects as "postulated entities" (Ayer 1951, 142) in order to facilitate any translation. Ayer's problem with such a translation is that we would be "unable to eliminate from our discourse the predicates which are understood as applying to physical objects" (1951, 142), but, paradoxically, still be able to deny their existence as postulated entities.

Ayer seems to be in general agreement with Quine that physical object statements resist translation into sense-datum statements. This is all but confirmed in his essay "Phenomenalism" (1954c, 138–40, 164–65). But still, Ayer thinks he can find a solution that retains Quine's postulated physical object within a reduction but places it in a less basic position than sense-data. In order to *reduce* rather than *translate* statements,

Ayer re-casts a predicate by stipulating an observational criterion for assigning sense-data as members of its reduced sub-set—the level that Quine refuses to commit to, ontologically. Let us take a look at how Ayer proposes his first reductive solution to Quine's Problem.

> Let us say that a predicate ϕ is reducible to a set of predicates κ if it is not logically possible that anything should be experienced which exemplifies or manifests ϕ unless something exemplifies one or more members of κ, but it is logically possible that something should be experienced which exemplifies or manifests a member of κ even though nothing exemplifies ϕ (Ayer 1951, 142).

Ayer's reformulated reduction of a predicate to a sub-set seems to rely on a specific definition of what the logically prior sub-set of predicates "κ" refers to in this case. Ayer offers a similar reductive line of argument in the same piece:

> What can be said, I think, is that a scheme A is superior to another scheme B if to everything describable in B as a fact there corresponds something describable in A as a fact, but there are descriptions of facts in A to which nothing corresponds in B (Ayer 1951, 148).

Ayer immediately states: "But this does not carry us very far" (1951, 148).

How far do Ayer's reductions actually carry him? Ayer wants to go as far as saying that in terms of "experience" and the "descriptions" of the basic facts, sense-datum statements are logically prior to physical object statements. A consequence of Ayer's method is that if we were ontologically committed to abstract entities we would not "maintain that we experience anything that they instantiate without thereby experiencing anything that instantiates them" (1951, 143). Although for Ayer it remains a somewhat "arbitrary procedure" (1951, 143) which language to adopt (one with or without sensory predicates), we can see the emphasis he puts on observational criteria.[6] In "Basic Propositions", Ayer mentions a possible language in which "the lowest level sentence that one could express in it was a sentence which ascribed some property to a physical object". These sentences would only count as "probable" (1954a, 123--24). A language containing sensory predicates, Ayer says,

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[6]See Gibson Jr (1998, 146–52). As Thompson points out, for Quine there is no arbitrariness at the level of stimulus meaning (1998, 551).

would include "certain" statements which depend on "the meaning rules of the language" (1954a, 124). We will have to return to the issue of meaning rules acting as guides for the certainty of sense-datum statements in the second stage of our inquiry.

If Ayer is in agreement with Quine regarding the impossibility of translating physical object statements into those about sense-data, and if both thinkers have recourse to observational primitiveness in terms of evidence, then the issue seems to be, from Ayer's perspective at least (an issue we shall examine in the next section), that Quine could seemingly utilise the same data without the same commitments. At the level of logical notation, statements can be constructed out of predicates with total exclusivity, guided by theory; the truth functions could thus be said to remain intact for Quine if the values the variables take are *translated* as a result of a theoretical commitment to certain entities which guide the translations. Quine could dismiss Ayer's reformulated reductions as a purely *rhetorical* device (on Ayer's part) given his naturalistic theory which assumes physical objects as the values of variables. Nothing would persuade Quine that Ayer's reductions are applicable to sense-data.

I contend that Ayer's reformulated "weak" reductions in his 1951 "Symposium" are inconclusive and fail to sufficiently establish a criterion for the existence of sense-data.[7] Before we can provide a full answer to Quine's Problem we first need to examine the naturalistic, scientific factors that motivate Quine's theoretical choices. According to Verhaegh, such scientific factors appear more forcefully only after Quine has fully vanquished any instrumental or pragmatic elements regarding a non-scientific " 'epistemological point of view' as a transcendental perspective which potentially undermines realism about physical and mathematical objects" (2017, 334). So, we need to bear in mind that in 1948, nominalistic ontological tendencies, as well as tolerance towards a phenomenalistic epistemology, still played a major part in Quine's thinking (see Janssen-Lauret 2019, 194).

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[7]Quinton (1992, 496) depicts Ayer's reductions "(in a sense rather weaker than that of strict translation)". See also Sosa (1992, 554–55), when commenting on the reductionism of Ayer and Michael Dummett.

4. Naturalism and the Conceptual Scheme of Physical Objects

Our focus in this section will be on Quine's naturalistic theory. We need to examine how Quine's naturalism feeds into a system of logic, and, for our purposes, examine how a physical object ontology is manufactured out of such a theory to see if and how it is possible to formulate a different ontology without fundamentally disturbing such physicalistic constraints. Physical objects (stated as "postulated entities" in the context of Quine's 1948 paper in relation to a PCS), stand as part of what Quine refers to as a "conceptual scheme". This somewhat vague-sounding term perhaps best expresses how families of concepts form various systems of thought. The "over-all conceptual scheme which is to accommodate science in the broadest sense" (Quine 1948, 36), comprises a set of terms, or specific "considerations" of ontology, representing the "physicalistic conceptual scheme" (1948, 36). In "On What There Is" (1948, 37) the conceptual scheme of physicalism relegates a phenomenalistic ontology to a merely "literal", secondary epistemological scheme in relation to it. In *Word and Object* (1960, 276), we see a more internal account of "coherence and simplicity". Verhaegh argues persuasively that the plural schemes of 1948 (and any lingering phenomenalistic, epistemological priority concerning sense-data) dissolve once Quine finds a way of "integrating these different conceptual schemes into one single-science-immanent perspective" indicative of "a thoroughly holistic conception of inquiry" (Verhaegh 2017, 329).

Broadly speaking, we could say at the outset that Quine utilises a variant of Ockham's razor, which compels him to:

> formulate scientific theories in a way that involves existential quantification over the smallest number of kinds of entities possible. This translates into a requirement that, all other things being equal (such as "simplicity"), one formulates one's theories so that there are as small a number of logically inequivalent instantiated predicates as possible. This is how we'll understand Occam's razor in what follows (Azzouni 1998, 8).

Physical objects, theoretically speaking, the "concrete objects *par excellence*" (Quine 1960, 233), equate to the lowest level of scientific entities that Ockham's razor seeks out. Quine's correlative terms "simplicity"

and "utility for theory" explain how physical objects are opposed to the fragmentary, once-occurring, random appearances of sense-data. Quine's naturalistic theory grants ultimate *simplicity* to physical object statements, which entails stopping short of assigning such a status to sense-datum statements.

We now need to turn our attention towards the core elements of Quine's scientific naturalism. Our objective will be to understand how Quine's theoretical stimulus meaning-based epistemology is designed to reject sense-data from a scientific ontology.

4.1. Quine's naturalism: physical stimuli

If we turn to Quine's major work on epistemology, *Word and Object,* we find a rich account of the scientific method that impacts on the sense-data issue.[8] In Chapter One, §1, especially, Quine presents an initial defence of psychological physicalism, which goes part and parcel with both the rejection of sense-data and the establishment of the main ingredients that enter the process of learning a language.

Quine provides memory-based opposition to sense-datum statements suggesting that they provide "too meager an affair" (1960, 3) for access to the past, due to "the disordered fragments of raw experience", which are too "scattered" (1948, 35–36) to count as entities of a physicalistic conceptual scheme. Quine notes that the "subjective language for sense data", consisting of once-occurring elements of experience, leaves too scant a trace in the memory stores to play a role at the primitive level; sense-data thus fail to provide a secure, "continuing access" (1960, 2) to the past. Physical objects, by comparison, provide a more secure, stable, and enduring foothold for establishing such basic units of meaning. For Quine, physical objects provide the best evidential support for consistent memories to occur. This is a key ingredient of scientific naturalism as opposed to a sense-datum language. I will argue later that Ayer's meaning rules can supply the certainty of expression required for stable memories concerning sense-datum statements.

For Quine, a sense-datum language lacks the fundamental simplicity and unity essential for primary memory access that a physical object

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[8]*Word and Object* represents what Kemp (2020, 223) calls the end of the classical period of Quine's thought up to 1960.

language possesses.[9] It is in order to provide such simplicity and
unity that Quine's *naturalised epistemology* seeks to derive basic units
of *meaning* from specific physical stimuli rather than sense-data. What
we find is a picture of a primitive language consisting of reactions
to stimuli, called "stimulus meanings" (Quine 1960, chap. 2, section
8).[10] Once these reactions are coupled with the appropriate associative
patterns of assent and dissent they form what Quine calls in §9 "occasion
sentences". A more basic sub-class of occasion sentences "that wear
their meanings on their sleeves", are observation sentences: "Occasion
sentences whose stimulus meanings vary none under the influence
of collateral information may naturally be called *observation sentences*"
(1960, 42).

Let us turn to examine the specific connection between Quine's basic
scientific sentences and the nature of scientific evidence that they are
based on. Quine's basic stimulus-based epistemology, when viewed
alongside his thesis of evidential indeterminacy of translation, is interest-
ing for us in that at the primitive level of evidence we are concentrating
on no indeterminacy is present. What we have at the lowest level of
empirical content for Quine involves "*observation categoricals*" which,
as he explains, "enjoy generality over places and times" (1981a, 27).[11]
At this level, we find a "generality that is compounded of observables"
(1990, 10). The observations that Quine focuses on evade translational
indeterminacy; indeterminacy occurs at a higher level as Fogelin points
out when he says of the contents of observation sentences that they are
"wholly nontheoretical" (2004, 40).

As opposed to the stimulus level, Quine's famous example of a
cultural anthropologist investigating a native speaker's use of "Gavagai",
when faced with his word for "Rabbit" (1960, sec. 12), does involve
indeterminacy. As Quine puts it in "Ontological Relativity": "It is
meaningless to ask whether, in general, our terms 'rabbit', 'rabbit
part', 'number', etc., really refer respectively to rabbits, rabbit parts,

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[9]Quine suggests that if competing theories are to be judged scientists would look for
"the simpler of the two hypotheses" (1966b, 234) in terms of the available evidence. See
also Koehler (1972, 124–27).

[10]Especially 35–37. Interestingly, Quine remarks that he is going to defer talk of the
ontology of dispositions until Chap. 6, §47. See also Lee (1998, 300–302).

[11]See Robert Sinclair's (2013, 354–55) discussion of Quine and the problem of evidence
at the level of observation sentences.

numbers, etc.", and then "we can meaningfully ask it only relative to some background language (1968, 200). The process of translating may create indeterminacy, but interestingly, Quine does not think the same applies to the basic evidential data that gives rise to the competing senses of translation. At the level of"theory formulation", we may have incompatible words that have the same empirical content, but Quine thinks that in such a case of incompatible manuals we could reconcile this through translation "and not disturb the empirical content" (1981a, 29).[12]

Hylton explores the question of basic observational evidence in some detail. "Evidence" for Quine is a term that lacks theoretical scientific precision and clarity on its own. Sensory stimulation or "episodes of neural intake" (Hylton 2017, 220) provide a scientific basis for observation sentences. Importantly, observation sentences are not 'about' such stimulations, as Hylton says: "They are, rather, about objects and occurrences in the immediate environment of the speaker" (2017, 220). At this level, stimulus meaning "remains invariant through all tenable interpretations". Through surface stimuli and speech dispositions, we gain "final objectivity" (Thompson 1998, 553). Again, there are "speech dispositions" (Quine 1968, 187) but there is no fact of the matter concerning translation manuals for Quine.[13] Speech dispositions are inextricably bound up with the "distribution of microphysical states over space-time" (Quine 1998c, 429). As Sinclair points out, the concept of stimulus meaning is not without its problems. Whereas stimulus meaning has wider significance for Quine in terms of clarifying his naturalistic theory of meaning and translation, Sinclair explains that Quine prefers not to employ the term at the causal level of observation sentences due to problems of specifying the "shared neural input" amongst speakers (2002, 406). "Any appeal to stimulus meanings to define observation

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[12]Also: "The observation sentence, situated at the sensory periphery of the body scientific, is the minimal verifiable aggregate; it has an empirical content all its own and wears it on its sleeve" (Quine 1969a, 89). See Quine (1990, 18, 33, 39—40).

[13]See Roth (1998, 434). Gibson explains (to Quine's liking it seems: see Quine 1998e, 155–57) how facts of the matter "belong to the ontological phase of inquiry" (1998, 151). Gibson remarks "There is a fact of the matter to physics, but there is no fact of the matter to translation" (1998, 153). The salient point concerning the "reciprocal containment" (1998, 147) of ontology and epistemology is put nicely by Gibson: "Any putative meanings, therefore, that fall between the cracks of the physical facts just aren't meanings at all" (1998, 152).

sentences will then fail" (2002, 405) at the causal level of neural triggers for our observations.

To contextualise the above: If we take an example of a supposed sense-datum word (equated to the seeing of a qualitative expanse), in terms of Quine's scientific stimulus triggers, "the uniformity will lie at the surface and there will be little variation in stimulus meaning; the sentence will be highly observational" (1960, 45). It is physical surfaces that "trigger" the appropriate stimulus meaning at the level of observational occasions.[14] This is the scientific intersection where basic observational components of Quine's theory of primitive language are clearly linked to the surfaces of physical objects, or what Kemp calls "stimulus fields" that produce "the impinging forces" on us in a causal sense (Kemp 2022, 813). These basic scientific connections represent the stable elements of "unity" and "simplicity" that, ostensibly, sense-data lack as we mentioned above. The basic physical components supply traces of rudimentary memory for us. We can see how Quine can say that basic memories are "about ordinary things instead of requiring them to report sense data" (1960, 44). In this context, sense-data, or "concrete sensory events", belong to a "deep context" (Quine 1960, 234).[15] Similarly, Levison remarks that the language of sense-data (taken as theoretical entities of science) can be thought of as "a derivative idiom" (1998, 326).

Such is the nature of basic evidence at the scientific level for Quine. We now need to ask how an ontological conceptual scheme, based on a body of background theory, can support the scientific stimulus-based observations we have dealt with in the above.[16] Background theory is essential for any commitment to a conceptual scheme, as Quine makes clear:

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[14]See Quine (1981b). When discussing "the triggering of nerve endings" in the context of supplying a basis of evidence fit for knowing the world, Quine admits: "True, there are scarcely the beginnings here of a full theory of evidence and scientific method" (1981b, 238).

[15]Quine equates "subjective sensory objects" with an intensional idiom (1960, 234). Ayer's sense-data belong neither to intentional nor physical object idioms. This sense-datum neutrality is crucial for the reading we are putting forward here.

[16]Against scientific attempts to analyse "seeing" and "hearing" in terms of "stimulation of the relevant sense-organs", Ayer says "these processes cannot on the face of it be taken to be purely physical" (1984a, 145).

> The relativistic thesis to which we have come is this, to repeat: it makes
> no sense to say what the objects of a theory are, beyond saying how to
> interpret or reinterpret that theory in another. Suppose we are working
> within a theory and thus treating of its objects. We do so by using the
> variables of the theory, whose values those objects are, though there be
> no ultimate sense in which that universe can have been specified (Quine
> 1968, 202).

Quine's ontological choice concerning epistemological naturalism
evinces a clear commitment to dealing with physical objects, which,
replete with the requirement of *causal efficacy* of physical connections,
supports the theoretical notions of "simplicity" and "utility for theory".
These notions facilitate a fully extensional ontology and serve to
eliminate sense-data from the conceptual scheme of science.[17] A
fundamental stimulus meaning-based ontology halts at the level of
an interconnected holistic web of statements concerning physical
structures.[18]

> In the language of the theory there are predicates by which to distinguish
> portions of this universe from other portions, and these predicates differ
> from one another purely in the roles they play in the laws of the theory
> (Quine 1968, 202).[19]

Things are clearer now as to why sense-data for Quine would fall into
a non-scientific language.[20] Naturalistic ontology provides the funda-
mental basis for Quine's denying sense-data an *existence commensurate*

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[17] Ayer argues that identifying an object must precede a causal account that "cannot
possibly be a method of *introducing* such an object" (1984b, 71). Also, Ayer (1969b, 123)
and Ayer (1979, 293). Causal relations that ground our justifications of dispositions and
fact-stating propositions are mentioned in Ayer (1947, 19).

[18] Quine's proxy function device executes logically translatable terms. "The observation
sentences remain associated with the same sensory stimulations as before, and the logical
interconnections remain intact. Yet the objects of the theory have been supplanted as
drastically as you please" (1990, 32). Also, Quine (1968, 205–8) and Quine (1981c, 19).

[19] Quine's "predicate-functor logic" dispenses with variables and thus problematises
the language of "to be is to be a value of a variable". See Collins (2020, 56–82). Whether
ontological commitments are altered, nullified, or else able to be assimilated to predicate-
functor logic, will not be further discussed here.

[20] "But the watchword of austere science remains 'extensionality'" (Quine 1998a, 115).
In *Roots of Reference* (1974), Quine says we gain intellectual "freedom" and "responsibility"
the more that we: "gain access to the resources of natural science and we accept the
methodological restraints of natural science" (1974, 34). Further, "Language is conceived
in sin and science is its redemption" (1974, 68).

with the immanent truth basis of naturalistic theory.[21] Taken Quine's
way, we can understand why Ayer's (1951) reductions would fail to
meet the standards of "simplicity" and adherence to "scientific theories"
(Quine 1966a, 247).[22] On the basis of the available empirical evidence,
Quine could reject any translations or reductions to sense-datum state-
ments as simply a matter of a choice in favour of a naturalistic ontology
concerning the immanent truths of a scientific method at the level of
surface stimulus and stimulus meaning. On Quine's understanding,
Ayer's (1951) reductions regarding predicates and sub-sets of predicates
and their requisite members, even at the observationally "basic" level
(1951, 143), could legitimately and consistently be rejected on the basis
that such observations of reputed sense-data could still be interpreted
as physical objects.[23] The sub-sets of Ayer's reductions could range
over values of variables of a proposed physical object substratum at the
level of Kemp's "stimulus fields" (Kemp 2022, 814) while remaining
inscrutable in terms of reference (in a *Word and Object* sense).

I take Ayer's two attempts to *reduce* conceptual schemes to be insuf-
ficient to ameliorate Quine's Problem, which means that in his 1951
"Symposium" a clear ontological response fails to materialise. Quine
would reject Ayer's "weak" reductions from physical object statements
to sense-data statements due to the fact that they mirror, or assimilate his
method too closely.[24] However, I shall argue from hereon that an alter-
native method can be found. Utilising Ayer's definitions of sense-data
(which clearly distinguish them from physical objects), an ontological

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[21]Quine's naturalism requires that some determinate, immanent sense of truth, viewed
"in the terms of a given theory" (1960, 24), is "reciprocally contained" in ontological and
epistemological terms (see Gibson Jr 1998, 152). It is in this context that reinterpreting
sentences for Quine (as this relates to Ayer and the PCS) would mean that "the logical
interconnections" would *not* "remain intact" (Quine 1990, 32) if an attempted *translation*
from physical object statements to the PCS were attempted. See Kemp (2017, 155–66).

[22]In this regard, Ayer (1951) concedes that with regard to a hallucinatory "ghost" seen
by the "Benthamite", Quine could perhaps respond: "Or, if we do not care to admit
sense-data into our ontology, there was at least the Benthamite's body, which was in such
and such a pathological state" (1951a, 139).

[23]Hence Ayer's caveat: "this does not carry us very far" (1951, 148). Elsewhere, Ayer
mentions how a physicalist might disavow mental states due to being convinced "on *a
priori* grounds" otherwise, thus being inclined to reject counter-arguments if they are not
"in accordance with his principles" (1963c, 27).

[24]In Ayer (1963d, 170–72) there is a semblance of a further "weak reduction" with regard
to basic statements (see footnote 7).

response to Quine's Problem can be formulated. What this requires is a coherent language for sense-data that is in tacit agreement with Quine on some points regarding overall theory but departs from Quine in terms of how a technical "manufacturing" of the basic evidence, supported by a meaning rule for existence, provides for a distinction between physical surfaces and sense-data.

Tackling Quine's Problem thus represents the challenge of taking an alternative stance against, but not necessarily attempting to reject, Quine's theoretical assumptions. At this point we need to return to the "Symposium" in order to lay the ground for a positive ontology of sense-data. It is necessary that we first examine the underpinnings of logical predication before we can formulate a counter-argument for a sense-datum ontology in response to the underlying logic of Quine's ontology of physical objects. Our aim from this point will be to articulate an intensional aspect of basic sensory predication detached from an extensional method of application. This analysis will enable us to see more clearly how Ayer's basic predicates can be applied in actual situations, guided by appropriate meaning rules.

5. Quine and Ayer on Meaning and Extensionality

In order to present a robust alternative to Quine's ontology, we need a fundamentally different theoretical, epistemological, and ontological perspective, comprising a different mode of presentation of a predicate, which eschews Quine's quantificational approach. Only after this analysis has articulated Ayer's sense of predication will we be able to move further toward a positive response to Quine's Problem in terms of a non-extensional method of predication sufficient for a viable sense-datum ontology.

Let us say, following Marcus' classic paper (1960), that extensionality involves a principle of substitution such that: "If p is equivalent$_1$ to q then A is equivalent$_2$ to B, where B is the result of replacing one or more occurrences of p in A by q" (1960, 55). In order to contextualise matters to the Symposium issue, we could say that a predicate "applies to" or "denotes" in such a manner as to pick out basic extensions of predicates, where intension goes beyond this in registering the meanings or definitions of the said predicates.

We need to examine exactly how Ayer extracts an intensional, or meaningful aspect of sensory predication from the "∃*x*" instantiation symbol, formal predication, and the manner in which Quinean predicates are related to variables and extensional members of classes. Ayer's analysis of *meaning*, *extensionality*, and the role of the *variable* will help us form an ontological account of meaning rules and sensory predicates that are applied in *actual situations*.[25]

We need to address Ayer's specific analysis of Russell's existential quantifier "∃*x*" (Ayer 1951, 140) in relation to Quine's method of predication (Quine 1948, 1951a). The quantifier allows us to talk of there being "∃*x*" "some x" in relation to a predicate, say, "f". Our first main concern in what follows will be to show how the phrases "*stands for*", "*naming*" and "*applies to*", as they are used in relation to predicates, are taken by Ayer, Quine and Geach. We can then proceed to untangle the terms for our purposes to extract the crucial intensional aspect of predication that Ayer's interpretation focuses on.

If we start by looking at Ayer's analysis of the problem of predication, we can see that he examines how "coupling" the "∃*x*" instantiation symbol with a predicate facilitates a reading of property instantiation that "is not necessarily to imply that there are properties, as opposed to what instantiates them" (1951, 140). This way of putting things indicates how asserting the existence of a property implies its instantiation, which in turn shifts the focus onto the formal work of the predicate, or, more specifically, to how the predicate is "being applied". By emphasising how the "∃*x*" symbol can be coupled with an intensional aspect of predication, Ayer wants to draw attention to how predicates can be said to *stand for* something without requiring them to denote or name anything that exists: "And from the fact that a property ϕ is instantiated it certainly does not follow that there is anything that it instantiates" (1951, 141). The emphasis is instead placed on the use, or mode of application, of predicates.

Quine's use of the specific terminology is clear. He thinks that "standing for" something does mean "naming" (1951a, 149–50, 156–57). Quine clarifies this point when responding to Geach: "*Standing-for* is what I call *naming*" (1951a, 149). Even so, Quine still accuses Geach of

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[25]In Ayer (1954b, 8–9), the terms "situation" and "occasion" are developed in the context of their application to complex individuals. In Section 8 I will draw out their dispositional sense.

taking "abstract singular terms" (Quine 1951a, 157) to stand for entities, with the implication that predicates could somehow be named in such a manner. Ayer seizes on this problem for his own devices as we shall see in a moment. The fact is, though, that Quine's terminology of predication involves the phrase "applies to" as it is connected to "denoting", which will be key for us to unravel things for our purposes shortly.

If we turn to what Geach says, he first distinguishes names from predicates: "I have found it preferable to use the nouns 'name' and 'predicate' as contrasted terms" (1951, 132). Geach suggests that Quine "fails to make a sharp distinction between an expression that *stands for*, and a predicate that *applies to*, a thing" (1951, 126–27). What Geach wants to do is connect a sense of "standing for" something to the way a predicate can be applied and, as such, distinguish it from naming in a manner he thinks Quine fails to do. If this is the case, then we can get a sense of how Ayer clearly thinks Quine might be construing things:

> He assumes that Geach's "standing for" is what he himself calls "naming": but this is a mistake. On the contrary, one of the points that Geach appears most anxious to establish is that there may be something that a predicate stands for even though there is nothing that, in Quine's sense, it names (Ayer 1951, 144).

As I pointed out above, "standing for" something does mean "naming" for Quine (1951a, 149), but Ayer takes Geach to employ the phrase "standing for" in relation to a predicate's having an application, which is backed up by what Geach says: "Whatever 'redness' may or may not stand for, the predicate 'red' certainly stands for something" (1951, 132). This does seem to bring Geach's analysis closer to Ayer's in this important respect. Having said that, I think a case can be made for Quine's clearly distinguishing the aforementioned terms, but it is still the case that Ayer's different sense of applying a predicate will be crucial for our purposes.

Looked at from Quine's perspective, it does not seem to be the case that he would want to identify any form of property instantiation (of the sort suggested by Ayer) with a predicate as something *stood for*, as being *named*. This would be to misplace predicates, somehow mistaking them for things named as variables. Quine is not guilty of this and is quite explicit on this point. " 'Red' " denotes, or applies to, each red thing and

nothing else" (1951a, 150).[26] Denoting stands in a predicative relation to "applies to" as Quine states emphatically (1951a, 149, 155–57). It follows that if something is instantiated, it entails that it is denoted as a *variable*, where Quine calls variables, following Peano, the "notational adjuncts of quantification" (1951a, 151).[27] Quine says of Geach that he wished he would have limited "the function of a general term or predicate to that of applying to many things or one or none" (1951a, 158).

Ayer's treatment of Quine's position on predication goes further in that he wants to sever the link between the phrases "applies to" and "denoting" things, which Geach also seems to be in favour of in his reading of Quine (1951, 127). This analysis is key to unravelling the difference between Quine's extensional method of predication and Ayer's radical intensional application of a predicate. As we pointed out above, Ayer claims that Geach's phrase "*stands for*" is what Quine "calls 'naming'" (1951, 143–44), with the major difference from Quine being that "standing for" expresses a predicative expression (without naming anything). This sense of standing for something allows Ayer some degree of latitude for interpreting predication in that it "commits us, on this interpretation, to no more than we are committed by using the predicate" (1951, 144). Quine's sense of "*applies to*" would have something in common with Geach's "standing for" in this sense, *but not* that which Quine believes to be "*naming*" for Geach (Quine 1951a, 149–50). Significantly, whereas Quine's "*applies to*" relates to the "*denoting*" aspect of predication, which is inextricably linked to the variable, Ayer's sense of a predicate's applying to something need not take a variable or denote anything at all.[28] This fundamental application of basic predication will ultimately allow us a route out of Quine's ontology, enabling us to reconfigure things along the lines of Ayer's radical sense of intensional sensory predication, which I shall deal with later.

Finally, Ayer unnecessarily complicates things when he imagines a scenario in which predicates *could name* abstract entities: "But let us suppose that someone wishes, as Geach apparently does not, to

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[26]"McX said that *redness* was what A and B both *had*". But "Geach says that *red* (or the entity which"red" stands for) is what A and B both *are*" (Quine 1951a, 157).

[27]Quine says of Geach's paper that "a good half is evidently motivated by his having read into my remarks some curious conception of bound variables as quasi-names" (1951a, 150).

[28]Quine is emphatic on this identification of the "variable" and its "object".

put forward the view that predicates do name abstract entities" (1951, 144). This would not be an intelligible situation for Quine. That Quine thinks "*naming*" means "*stands for*" is true, but, as we have seen, the phrase "applies to" for Quine is designed for a predicate to relate to a variable as that which is denoted. No "abstract entities" could stand for that which is being named in this sense. Anyhow, we get a more emphatic sense of what Ayer thinks of Quine's extensional method of predication when he suggests that Geach confuses matters with Quine such that "whenever he says that predicates stand for something he could equally well for his purposes have said simply that *they had a meaning*" (1951, 144, italics added).[29] This cements Ayer's denial that, in terms of basic predication, anything must necessarily be "named" or "denoted" in terms of a predicate having a formal relation to a variable. Ayer disconnects the relation that predicates have to variables in Quine's extensional statements.

What has emerged for us from this analysis is a picture of basic sensory predication differing from Quine's sense of how predicates are related to variables at the primitive level. Ayer wants to downgrade extensional reference (in terms of quantifiable variables) in favour of a form of sensory intensional predication that maintains the sense of "applies to" as a symbol's intrinsic possession of meaning. We now need to concentrate on how Ayer analyses Russell's "this" demonstrative in order to absorb it into the structure of predication. It will then be possible to extend this analysis into a dispositional account of how sensory predicates, applied in actual situations, provide a criterion of validity for basic propositions. This will provide us with a further contrastive lens to that of Quine's system.

6. Towards a Final Ontological Position

We can now start to hone in on a final position regarding a positive ontology of sense-data. In "Names and Descriptions", where Ayer

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[29]In "Individuals" (1954b) Ayer says that "red" as a predicate "stands for" some property but does not "stand for" the property of "redness" (1954b, 5). It cannot be taken as a name like Russell attempted to say in his later work. Ayer's "stands for" means something like the universal "applies to" something; observationally, it can be applied descriptively on any "occasion" of something being experienced in accordance with a meaning rule of language.

discusses Russell's primitive logically proper names as they are said to denote sense-data *known* by direct acquaintance, there are threads of reasoning that tie in with our previous analysis concerning basic predicate application (1963b, 147-–51).[30] We need to ask: what exactly are the elements we need to keep intact from an empirical statement such as "this is red" (Russell 1940, 97) or any paraphrase of such a statement?[31] How can we interpret a basic proposition consisting of a logically proper name (demonstrative element) and a basic colour predicate? Taking stock of our previous analysis, we shall now focus on how recasting the *denoting* element of a logically proper name can yield a basic sense of "applies to" predication we discussed above.

At Russell's primitive, irreducible level of experience, a perceived colour property, "red", would count as an example of a sense-datum upon which no further analysis can be carried out. Ayer's significant treatment of Russell's propositional arrangement is to say that the logically proper name, or "demonstrative", must, at this grounding level of epistemological description, be "transformed" (1963b, 150) into the *basic application* of the predicate. The "this" (1963b, 148) demonstrative is, then, in this context, what the predicate symbol ostensibly applies to. Ayer's claim is that a predicate can indeed be applied as *intrinsically denoting and meaning red* at the same time. The implication is that the logically proper name is inextricably linked to the *sense* or intension of the predicate at the bottommost epistemological level (1963b, 147–48). The descriptive elements at this level comprise a primitive reference and a dispositional containment of general and particular aspects of a sensory predicate that symbolises something observationally basic in experience.[32] Hence we have an epistemological arrangement whereby

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[30] Russell's universals are accessed by acquaintance (1911, 111; 1912, 58–59).

[31] See Thompson (1998, 556), where he discusses Russell's "Redness is here" (see footnote 32).

[32] See Quine (1998d, 564–68). Quine says of Russell's changed logically proper name that takes "redness" to be a name and not a predicate expression (see Thompson 1998, 556), that it has somehow been transformed from a term applicable to a "concrete general" symbol to an "abstract singular one." So "positing" an abstract object at this point is inadmissible according to Quine (1998d, 567) (see footnote 52). Also, Ayer (1972, 105–6), re universal and particular as linguistic dispositions. See Russell and Whitehead (1910, Section A, especially 95), where the elementary proposition "this is red" is mentioned; see Russell (1919, chap. 16).

the meaning of the Russellian "this" demonstrative for Ayer is transferred to the basic application of predication at the most primitive level.[33]

Recasting Russell's position directly relates to our previous analysis of how predicates "standing for" something are also capable of being applied in terms of Ayer's basic predication.

> For if we take predicates as denoting not their extensions, the objects which are characterised by the properties for which they stand, but these properties themselves, then they are bound to have denotations if they have meaning; to say that they are meaningful will entail that there are properties for which they stand (Ayer 1963b, 148).[34]

Ayer's "standing for" element of predication takes an intensional aspect of "applies to" we discussed above. Combining this element with a method of accounting for basic predication that incorporates meaning rules of language rather than a formal method of predication is what we shall concentrate on now.

In order to develop the notion of basic sensory predication which is taking shape, I will draw upon a cluster of points concerning basic propositions and the inherent meaningfulness of predicates secured by the adoption of meaning rules (Ayer 1954a, 119–22).[35] By incorporating meaning rules into our ontological account, we can move even further away from Quine's extensionalised, stimulus meaning methodology. A solution to Quine's Problem will thus involve meaning rules as well as a classification of the terminology of sense-data as a form of response to basic observations in terms of a particular way of being disposed to respond.

6.1. Basic propositions and the application of a sensory predicate in actual situations

An in-depth account of a sensory predicate's being *meaningfully applied* is fleshed out in Ayer's essay, "Basic Propositions".[36] We need to expand on

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[33]See Ayer (1992, 402–6). Primary recognition, whereby the first of a kind can be labelled, is disposed to repeat a universal aspect of "same again" to enable future comparisons.

[34]See Russell (1940, 108–16).

[35]Especially Ayer (1954a); Ayer (1954b); Ayer (1954e). Interestingly, "Basic Propositions", written in 1950, predates "On What There Is" (1951). Ayer's "Philosophy and Language" appears in the same year as Quine's *Word and Object* (1960).

[36]Quine is sceptical of propositions understood as the meanings of sentences on the one hand, and as being the conveyors of truth or falsity on the other: "But as matters stand

our previous findings by looking at how Ayer places basic propositions outside the scope of formal, logical methods such that: "the meaning of sentences which express such propositions is to be determined by reference to sentences which designate sense-data" (1940, 109–10). Basic sense-datum statements, operating with meaning rules for existence, contain sensory predicates, which "apply to" what is observed without entailing either physical object or subjective idioms (Ayer 1973, 98).[37] This stage of analysis of basic propositions will support a move towards a positive ontology of sense-data by articulating how basic sensory predication eschews class-membership-based constructions presupposing reference to physical objects. I shall argue that basic propositions can legitimately *describe* and *ontologise sense-data considered as neutral with regard to mental and physical characterizations*.[38]

In "Basic Propositions", Ayer claims that a formal, class-based system of predication can satisfactorily yield the *truth* of primitive statements; such statements contain the analytic identities of resembling instances of the members of the class concerned, prior to establishing the *meaning*, or intension, of the predicates. The significant issue for us is that based on an extensional method of identity formation, unwanted consequences ensue regarding the *meaning* of sensory predicates. Ayer points out that by deriving the *identity* of members of a class in terms of some kind of formal cataloguing, or similar method of "enumeration", any subsequent empirical application would become problematic (1954a, 118).[39] In a non-extensional context, the denotations would be incapable

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we fare better by treating directly of sentences" (1990, 78). For Ayer, indicative sentences of the same meaning can be grouped together, "and our use of the word 'proposition' enables us to do this concisely" (1940, 102).

[37]Basic propositions legislate for the meanings of sense-data as "facts" of one kind distinguishable from the "facts" of physical objects (see Ayer 1940, 73; 1947, 20). See Taylor (1979, 104–5) for criticisms regarding the lack of "patterned activity" regarding sense-data.

[38]See Quine (1966b, 243).

[39]On the centrality of "class membership" for Quine, see Lee (1998, 302–11), and Quine (1998b, 315–18). Quine says that his reasons "for not accepting intensions" are different to what Lee thinks: "In denying intensions I am not denying that classes are normally specified intensionally, if this merely means stating a membership condition." Then slightly later: "Even extrapolable ostension of members is a kind of membership condition" (1998b, 317). The latter sentence is more relevant for Ayer's opposite claim that a basic sensory predicate could pick out "red" (by ostension) intensionally without class membership conditions.

of consistently adhering to the required sense of analyticity.[40] On each
application of a basic colour predicate, variations of meaning would be
bound to occur, so that "every time that anyone whitewashed a blue wall,
he would be affecting the meaning of the adjectives 'blue' and 'white' "
(1973, 206).[41] Although analytically defined predicates are sufficient for
the formal "truth" of extensions of predicates and the substitutions of
members, they fail to specify "actual situations" (1954a, 120) essential
for a descriptive account of the world to emerge.[42]

In terms of memory, a basic proposition working as a meaning rule,
such as "This is green" (Ayer 1954a, 121) does not, Ayer argues, require
any *resemblance comparisons* in order for successful primary recognition
to occur (Ayer 1954a, 117–18). This builds on what he says regarding
the extension of a class that would be left "undetermined", and the
universal defined "intensionally", if one did not presuppose other objects
with which to compare the one under recognition (Ayer 1972, 105–6).[43]
Instead of relying on Quine's physical structures to supply the necessary
unity and simplicity for an account of memory to emerge, Ayer says,
"we require also rules which correlate certain signs in the language with
actual situations; and it is these that I am calling meaning rules" (Ayer
1954a, 120).[44] There is an element of transparency and an inextricable
connection between meaning rules and basic propositions encapsulated
in Ayer's claim that stating such rules is "normally superfluous"; for
this reason "it may even be misleading to call them 'rules' at all" (Ayer
1954a, 120). Being disposed to employ meaning rules results from
"correlating these expressions, not with other expressions, but with
what is actually observed" (Ayer 1940, 88), which distances them from

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[40]See Quine (1951b, 32–37) regarding his scepticism towards analyticity and the drawing
of any sharp boundaries between analytic and synthetic statements.

[41]Also see Ayer (1954a, 119), where he mentions the same issue.

[42]Ayer (1963d, 162–87) describes Tarski's formal account of truth as insufficient for
supplying a "criterion of validity" for true statements as opposed to merely supplying "a
definition of truth" (1963d, 167) for formal languages. See also Ayer (1940, 84—92; 1959b,
esp. 231–38).

[43]See Ayer (1954d, 167–90; 1956, chaps. iv, 149–53; 1973, 94–95) regarding his habit-
based account of memory. In "Can There be a Private language?" (1963a), basic meaning
rules are in evidence when Ayer depicts Robinson Crusoe as being disposed to possibly
"invent words" for sensations (1963a, 44), which carries a commitment to "no more than
the fact that certain sensory qualities are presented" (Ayer 1971, 64). See David Pears'
counterargument in Pears (1979, 68).

[44]See Ayer's "right to be sure" criterion (1947, 26–28; 1969b, 121).

any formal, coherentist elements. Ayer captures the quintessence of meaning rules when he says "unless one knows how to employ them, one does not understand the language" (Ayer 1954a, 120).

Ayer's meaning rules share many similarities with Schlick's basic "confirmations" (1959b, 222). Schlick's Wittgensteinian, non-scientific "rules of language" (see Uebel 2007, 323–32, 359–60), comprised of acquaintance-based demonstrative elements, require a strict connection between a criterion and a definition of truth (Kocsis 2021, 285–86).[45] Kocsis claims that Ayer's fallibilism of *Language, Truth and Logic* (1934) is accepting of Schlick's correspondence criterion of truth for empirical propositions but this "does not go together with a commitment to a certain definition of truth" (2021, 287). Schlick's "consistent empiricism" (1959a, 107) is anti-metaphysical, but as Kocsis (2021) points out, Schlick's "confirmations" (1959b, 225) possess a "guaranteeing criterion of truth" as opposed to Ayer's 1934 "authorizing criterion" of truth (2021, 296, 299). Crucially, Kocsis indicates that Ayer would eventually abandon fallibilism (2021, 297, n15). I argue that Ayer's meaning rules of "Basic Propositions" are tightly bound up with a type of "certainty" expressed through basic propositions, whereby doubting their application is more like testing a "procedure" of language use (Ayer 1954a, 122–24), which brings them closer to Schlick's anti-formalistic, infallible "affirmations".[46]

There is a definite sense that the meaning rules expounded in Ayer's "Basic Propositions" (1950) exhibit dispositional facets of a more

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[45]Although not acknowledged by Ayer, Schlick's affirmation statements are closely linked with Wittgensteinian rules of language (see Uebel 2007, 308–9). Uebel (2020) traces two "turning points" of Schlick's development of his "affirmations": the first phase attempted to align epistemological concerns to the *Tractatus* (2020, 154), while the second phase more explicitly followed Wittgenstein's later thinking on rule-following and ordinary language use (2020, 156). We could recall Vrahimis' point mentioned earlier regarding Ayer's underplaying the "Germanophone" influence on his thinking. Contrastively, in "Philosophy and Language" (1963c, 22–26) and *The Central Questions of Philosophy* (1973, 30–31), Ayer distances himself from Wittgenstein's "language as use" slogan.

[46]Schlick's quest for "certain and incorrigible foundations of human knowledge" (Uebel 2020, 142) led him to reshape his thinking concerning "affirmations" by way of revisiting the "old" questions of scepticism and certainty in terms of a "new" means of solving them, namely, in terms of a pathway opened up for him as a result of extensive talks held with Wittgenstein in September 1933 (See Uebel 2020, 146, 149–50, 153–54.) Also see footnote 45. Carnap's semantic "confirmations" have an observational component in tune with Schlick's "affirmations" (Uebel 2007, 336–39). See Uebel (2007, 342–70) for a discussion of Schlick's response to Carnap's semantic period.

Rylean than Schlickean nature. Kremer sheds light on how Ryle's account of dispositions in *Concept of Mind* (1949) took cognizance of "the critical reception" of Ayer's 1947 "Thinking and Meaning" (2017, 185). Ryle developed a broader account of dispositions which went beyond behavioural occurrence to include talk of "capacities" more equipped to account for problematic mentalistic terms (see Kremer 2017, 185–87, 190). Interestingly, meaning rules are not mentioned in Ayer's 1947 behaviouristic account of being disposed "to speak and act in certain ways" (Ayer 1947, 15), but the seeds of what will later become the multi-levelled, multifaceted use of meaning rules in "Basic Propositions" (1954a) are firmly planted. I argue that Ayer retains a sense of being disposed to respond, verbally or behaviourally, from "Thinking and Meaning" (1947), for his meaning rules expounded in "Basic Propositions" (1954a). A factual basis for dispositions (Ayer 1947, 19) is combined with "logical" certainty of expression (or what we could say is a more Schlickean "guaranteeing" type of certainty) for basic propositions in opposition to probable physical object statements (Ayer 1954a, 23–24). This is the hallmark of our positive response to Quine's Problem, replacing any need of scientific input from physical structures necessary for memories to occur (indicative of Quine's method we looked at earlier).[47]

Let us recap our main findings of this section. In "Basic Propositions", Ayer elucidates the basic mode of application of a "sensory predicate" (1954a, 119–22). Ayer's rejection of class-membership conditions concerning memories ties in with the sense of basic predication we looked at in his 1951 "Symposium" piece earlier. We can say that a physicalistic conceptual scheme replete with relatively stable, independently existing structures, publicly accessible to others, would be required in order to provide unified and simplified memories for Quine's stimulus-based, scientific naturalism—but these structures would not be required in order for meaningful basic propositions to apply basic sensory predicates in actual situations for Ayer. The account of predication we have mapped out differs from the reductions account given in the "Symposium" (1951) in eschewing an extensional, formalised method. If our reasoning is cogent, then we have further expanded on a viable position

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[47]Also see Ayer (1968, chap. 3, section C, 288–316; 1973, 99; 1992, 402–5, especially 403, 405) concerning how further stages of knowledge acquisition *must eventually* proceed from such a primitive starting point, which we shall not pursue here.

taken on basic sensory predication that can challenge the formal method of extensional predicate logic indicative of Quine's ontology of physical objects; we have the makings of a response to Quine's Problem.

Before we can finalise our response to Quine's Problem we need to assess two further issues, one concerning our being disposed to respond at the basic level, and the other, which we shall turn to now, concerning an account of Ayer's technical "manufacturing" of the evidence for a terminology of sense-data (1954e, 79). We need a precise account of how Ayer differentiates the terminology of sensory predicates of "Basic Propositions" from physical elements to supplement our findings so far.

In order to make Ayer's position clear we will take a look at his response to G. E. Moore concerning the problem of sense-data and their supposed connections to physical surfaces in "The Terminology of Sense-Data". This text also elucidates Ayer's method regarding the application of an *ontological rule for sense-datum statements.* The way in which Ayer applies the rule for the existence of sense-data not only adds the final technical support to our account of sensory predication but also serves to show how Moore's account of attempting to find a physicalist basis for sense-data differs from Quine's naturalistic method. So, this section will supply us with a final ontological rule to buttress Ayer's basic propositions in response to Quine's Problem; it will also enable us to see how, in terms of philosophical method, Quine is much more aligned with Ayer than he is with Moore concerning how it is possible to differentiate types of statements that cannot be differentiated on the basis of empirical evidence.

7. The Terminology of Sense-Data and the Rule for Existence

The main concern for us in this section will be the separation of sense-data from physical objects that involves an existence claim for sense-data. In "A Reply to My Critics" (dealt with by Ayer in "The Terminology of Sense-Data"), G. E. Moore's search for a proof for the identity of physical objects with "directly apprehended" sense-data is construed as an empirical search (1952b, 627–52).[48] Ayer objects that terminology such

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[48]See also the Addendum (1952a, 677–87) where Moore responds to points in "The Terminology of Sense-Data" (1954e).

as "directly apprehended" and "directly seeing" (1954e, 81), if applicable
to statements picking out sense-data, has to be strictly maintained in its
opposition to physical objects. The slackness of Moore's definitions, as
highlighted by Ayer's attempt to ameliorate this problem, brings into
sharp focus the crucial sense in which Ayer will want to enforce a rule
for the existence of sense-data.[49]

Let us flesh things out in more detail. Ayer employs a quasi-
Berkeleyan ruling to separate sense-datum statements from physical
object statements that is taken to be *necessarily true* (Ayer 1954e, 84–85).
The *esse est percipi* is the essential ingredient of a meaning rule applied
at the level of basic propositions containing sense-data. Berkeley's prin-
ciple ensures that sense-data *must* exist whilst being perceived. Rather
than being a straightforward empirical claim, the ruling is *manufactured*
out of the evidence available to us. Ayer says of his version of *esse est
percipi*: "It is simply a matter of deciding that the expression 'x exists',
where x is a sense-datum, is to be understood both to be entailed by and
to entail 'x is directly apprehended' " (1954e, 90). If we turn to the tricky
case of an existential hallucination, Ayer remarks that Moore encounters
a definitional problem in that he cannot consistently hold that the partic-
ular sense-datum in this case is both *directly seen* (another condition of
being a sense-datum for Moore), as *existing*, and also identical with some
surface of a physical object. Moore's problem concerns the fitness of the
identity said to hold between sense-data and physical object surfaces:

> But if it be assumed that sense-data cannot be apprehended otherwise
> than directly, and that part of what is meant by saying of something that
> it is directly apprehended is that it exists, then there is no sense in which
> it can significantly be said of a sense-datum that it is 'perceived' but does
> not exist (Ayer 1954e, 83–84).

Ayer's point in the above is that sense-data cannot be *identical* with
physical surfaces in the hallucination case: it is always possible to say of
a physical object "that it is seen, or otherwise perceived, in a sense which
does not necessary involve its existing," but it is never "significant to say
this of a sense-datum" (Ayer 1954e, 85). Ayer's definition of sense-data
works in conjunction with his adaptation of Berkeley's *esse est percipi*
principle in order to legislate for the existence of sense-datum statements.

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[49]The identification of sense-data with physical objects is also something Ayer sees in
Russell. See Ayer (1971, 58–59).

In *Russell and Moore, the Analytical Heritage* (1971), Ayer defends his version of Berkeley's principle against Moore's view that it expresses a refutable analytical claim (1971, 145). Ayer adjusts Berkeley's principle so that it can logically connect a perception of colour as "cognate to being seen" (1971, 149) against Moore's view that consciousness cannot be identical with its contents due to the fact that "they are *distinct*" (1903, 442). Ayer's argument that Berkeley is engaging in "semantic legislation" (1971, 146) for perceptual qualities connects with how meaning rules legislate for the existence of sense-datum statements. With this, we have almost arrived at the position we are seeking.

Before we move on to our final main section, which will provide further evidence for an alternative strategy for sense-datum statements, it is worth explaining further how Quine's naturalistic method fundamentally differs from Moore's empiricism. Quine's formal translations mark out the fundamental limits of an ontological commitment. Quine does *not* attempt to locate empirically identical denotata for distinct epistemological constructs. The logical tools of translation differentiate statements at the level of physical objects from those concerning sense-data. The issue here is a logical one, not an empirical one, as it seems to be for Moore. Ayer's Berkeleyan *esse est percipi* principle, which takes on a legislative ontological role, is similar in this respect.

If Quine and Ayer can be said to agree, broadly speaking, concerning the type of philosophical method required in order to determine different kinds of statements referring to things in the world, they fundamentally disagree concerning the problem of sense-data, as we have seen. So, in order to capture a final distinctive difference between Quine and Ayer concerning sense-data, we will say a few things concerning the notion of *being disposed* to react to the sensory world in terms of symbols. This will represent the last theoretical element that must be put in place to complete our account of primitive sense-datum statements.

8. Being Disposed to Respond to the World in Ayer and Quine

Ayer and Quine both employ the same terms in order to describe the conditions under which a language user is disposed to react to the immediate, directly perceived components of the empirical world.

Highlighting some key differences with regard to the terms "occasion", "situation", and "observation" as they occur in the conceptual systems of Ayer and Quine will complete our account of an ontology of sense-data.

Starting with Quine's naturalism, it is clear from what we have discussed above (in Sections 4 and 4.1) that his system is grounded in physical object dispositionals. "Dispositions to observable behavior are all there is for semantics to be right or wrong about" (Quine 1990, 101). As we pointed out earlier, "occasion sentences" (Quine 1960, chap. 2, sections 9–10) are grounded generally in terms of physical stimulation, with a more specific, tighter connection between stimulus and stimulus meaning found in *observation sentences.* For Quine, primitive empirical observations are disposed towards being "conditioned to ranges of stimulation, and it is holophrastically that their stimulus meanings are their meanings" (1998c, 428). Quine's observation and occasion terms, employed as primitive symbols, are oriented towards physical stimuli.[50] It is in this manner that Quine's terms are tied in with a physicalist ontology.[51]

As explained earlier, Ayer's meaning rules indicate a disposition to respond to the world at the "lowest" level of sense-data (1954a, 123). This enables us to discern some differences from Quine concerning orientation and location of application of the terms, "occasion," and "situation" (Ayer 1954b, 8–9) and allows us to see how sense-data are the basic "observables". The "occasion" for observing a once-occurring sense-datum is at the same time oriented towards a disposition to respond to a general symbol depicting more permanent "situations" for Ayer. Taken this way, a meaning rule incorporating the simple singular, red, can be connected with its universal aspect.[52] Ayer's observationally

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[50]The sense of "orientation" perhaps captures Kant's use of "concepts of reflection" as orientational in regard to their specific level of application. See *Critique of Pure Reason,* Book II Appendix. The Amphiboly of Concepts of Reflection (1929, 276–96).

[51]Quine says of a "phenomenalistic conceptual scheme" that it is "perverse" in relation to the more robust, memory-preserving, physical objects of science (1993, 107).

[52]Quine takes Russell's logically proper names that presuppose an "abstract singular" as a commitment to "positing abstract objects before the stage where there is real need of them" (Quine 1998d, 567). Although Quine takes the "this" demonstrative to *name* something primitive, he will ultimately generalize out the singular "this" (Quine 1960, 102). Ayer's application of a predicate can meaningfully "apply to" a single instance of a sense-datum without the presupposition of "positing" the abstract singular of Russell.

primitive descriptions legitimately aim at *actually occurring situations*, considered as neutral with regard to mental and physical domains.

We can conclude that Ayer's basic sense of "observation" (Ayer 1954b, 10) is fundamentally different from Quine's "observation sentences" in a dispositional sense. For Ayer, being disposed to describe a sense-datum is governed by a fundamentally basic meaning rule of language distinct from any formal mode of characterization. In this way, occasions are generalizable in terms of classifying appropriate situations, such that a "more than once" factor reaches the level of an observed "occasion" (Ayer 1954b, 9; 1992, 403).

Ayer's account of being disposed to apply meaning rules is the final element of our response to Quine's Problem. At the primitive level, basic propositions apply sensory predicates on an "occasion" of recognising a sense-datum (see Ayer 1947, 96; 1954a, 121; 1954b, 11). Ayer's basic sense-datum "observables" and the occasion of witnessing and describing them are thus disposed differently from Quine's observations, which are disposed to respond to behavioural reactions to physical stimuli.

Summing up this short survey of being disposed to respond, we have seen that Ayer's basic propositions aim lower than a "stimulus meaning" naturalistic ontology and sufficiently explain how we locate and describe immediately perceived, ontologically neutral sense-data. What has emerged for us is the emphasis placed on an *ontological choice* to commit to a language containing sensory predicates. Ayer says that a descriptive language must contain meaning rules, but not necessarily basic propositions (Ayer 1954a, 123). I argue that we can manufacture the evidence in order to provide the "certain" (1954a, 124) propositions containing sensory predicates, of which Ayer says, "I am calling meaning rules" (1954a, 120). This is the source of our departure from Quine in terms of an ontological rule for sense-datum statements.

9. Conclusion

Ayer's ontology of sense-data employs primitive sensory predicates that bypass analytical, identity-forming procedures. This represents a move away from the physical object domain of predication. At the level of sense-data, the meaning of a descriptive symbol is its being correctly applied to particular instances, whilst being disposed towards

generalisability, without encroaching upon the domain of physical object statements.

Ayer's solution to Quine's Problem can be understood as a response to a naturalistic philosophy whose only applicable sense of "fact of the matter" is in the context of immanent truth connected with stimulus meanings.[53] The essence of Ayer's solution to Quine's Problem lies in the radical employment of a sensory predicate, which, when freed from the strictures of a formal, extensional method of quantified variables, can provide for meaningful statements at a lower-level of description than Quine's naturalistic level. Although Ayer is in tacit *agreement* with Quine on matters concerning empirical evidence and the general validity of a scientific framework, Quine's ontology is not extended to sense-data, as the limits of sentences are fixed on the basis of physical theory dictating the values of variables.

In order to move beyond Ayer's reductions in the "Symposium" (1951), I presented an alternative ontological framework that is *neutral* regarding mental or physical criteria, namely, a response concerning an ontology of sense-data based on establishing a *criterion of validity for intrinsically meaningful, basic sensory predicates applied in actual situations.*[54]

We are ready to summarise our positive findings in response to Quine's Problem as being broadly twofold:

1. Sense-datum statements must conform to a technical ruling for *existence* by way of an adaptation of Berkeley's "*esse est percipi*" principle.

2. An ontologically *meaningful* use of a descriptive sensory predicate *applies to* actually occurring observations of non-physical, non-mental, sense-data.

I argue that Ayer's weak reductive method is inconclusive as a response to Quine's Problem and cannot provide a sufficient condition for the

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[53]"My purpose is simply to make clear that I speak as a physicalist in saying there is no fact of the matter. I mean that both manuals are compatible with the fulfillment of just the same elementary physical states by space-time regions" (Quine 1978, 167). See Gibson Jr (1998, 143–44, 152). The notion of "fact of the matter," Gibson explains, connects truth as "an immanent notion– à la Tarski" (1998, 152) with an already accepted physical theory where "what there is is a question of *truth*" (1998, 147).

[54]See Ayer (1973, 93–99). Percepts (particularised qualia), are primarily recognised as neither intrinsically mental, physical, inner or outer, nor public or private. Also, Ayer (1968, 288–310, especially at 307–8).

existence of sense-data. In "The Terminology of Sense-Data" (1954e) a definition of sense-data in conjunction with a rule for existence provides the "sufficient conditions" (1951, 139) Ayer requires without committing to the logical regimentation indicative of Quine's naturalistic epistemology and ontology.[55]

Before I finish, I will say a few words concerning methodology. For Ayer, the choice of a scientific framework should be supported by the strongest available empirical hypotheses. Parts of our non-scientific language can be technically defined in order to analyse and record the basic factual elements of experience without logically entailing scientific theory (see 1969a, 128–33; 1973, 63–67, 88)—which distinguishes Ayer's method from Quine's scientific holism. Moving from basic appearances to some "unobserved cause" (1969a, 134) involves an inductive inference; we should strive to simply record what is contained in experience and avoid overcommitting in this respect (see 1971, 239). Even perceptual judgements like "this is a table" contain "assumptions which may be false" (Ayer 1969a, 131). Ayer's "scientific approach" (1973, 108) requires that the sceptic is best answered by accepting premises containing a "strict account of the experience" (see Ayer 1973, 81) in any argument concerning the existence of physical objects. Ayer talks in a Quinean manner of "postulating" physical objects in *The Origins of Pragmatism* and of assessing ontology from a theoretical vantage point, suggesting that "qualia" are "pre-theoretical" (see Ayer 1968, 323).[56] Significantly, Ayer points out that even scientific measurements, such as the size of distant stars, which aim to correct common sense, rely on perceptual appearances of the instruments used for such measurements (1973, 77). The "official" view is that Ayer adopts a physicalist ontology in his later writings (see Ayer 1968, 300–301; 1973, 93). Although Ayer drops the language of "translation" and "reduction" in favour of constructivist requirements, whereby "the acceptance of a P-statement does implicitly

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[55]In 1996 Quine continued to assert his long-standing rejection of "phenomenalistic reductionism". "The ideal of reducing all checkpoints to minimally theoretic observation sentences like 'That's blue,' however, is the old phenomenalistic reductionism of which I have long since despaired" (Quine 1996, 163).

[56]See Ayer (1973, 108). Quine deems sense-data to be "posits" when seen from the vantage point of another conceptual scheme. Although sense-data are "*evidentially* fundamental", they do not possess the stronger "*naturally* fundamental" status of "physical particles" (1966a, 252).

involve the acceptance of an E-statement" (1968, 310), I contend that an ontology of sense-data is still viable in the later phase of Ayer's career.

Quine's emerging naturalism granted sense-data of the PCS "literal truth" in "On What There Is" (1948, 36), which suggests that a phenomenalistic epistemology had not yet been replaced by a fully scientific holism. Interestingly, Janssen-Lauret suggests that the picture of competing conceptual schemes presented here was "an uncharacteristic move" (Janssen-Lauret 2019, 194) at the time. The same conceptual scheme pluralism would fare less well in relation to Quine's later "global epistemic structuralism" period, during which Quine "repudiated an attitude of tolerance in the ontological realm" (2019, 200). For the fully naturalistic Quine, science is purged of any extra-theoretical tools or instruments indicative of early pragmatic influences which fed into the Logical Empiricism of the Vienna Circle (see Uebel 2015, esp. section 10). A drive towards a fully holistic science places Quine in a specific relation to the metaphor of "Neurath's Boat". One must rebuild the boat plank-by-plank on the sea rather than from some foundational starting point—perhaps the foundational, phenomenalistic point at which Quine sees Ayer's sense-data residing! Although Neurath and Quine were perhaps in agreement concerning a naturalistic, anti-foundationalist based approach to basic statements of science, Neurath's "rich reading" of his metaphor is much broader in methodological scope than Quine's "austere" scientific reading (see Uebel 2007, 4–8, 399–400). For Quine, where we are at scientifically dictates that we are oriented towards "the individuation conditions of physical kinds" (Uebel 2007, 7).[57]

Methodological concerns aside, we have provided an account of Ayer's theory of basic predication that *does* provide for an ontology of primitive sense-data. If this is correct, and if it leaves Quine's system pretty much intact, then our aims and intentions could be said to have been met.

We will end by suggesting that Ayer might say:

To be is to be the meaning of a sensory predicate applied in actual situations.

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[57]See Ayer (1968, 293–317, 317–24; 1969c, 58–59). That Ayer has taken stock of Quine's *Word and Object* (1960) is evident when he mimics Quine's cultural anthropologist analogy (Ayer 1968, 302–3).

Acknowledgements

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