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ON FIXING CONCEPTS AND CHANGING THE SUBJECT
THE CASE OF "NATURALISM"***

Abstract

In philosophy, it is common for a concept to be modified according to the author and the role this concept will play in a theory. This is the case with the term "naturalism." Various naturalistic approaches have emerged from disagreements on how the inquiry underlying the term "naturalism" should be understood. Consider the approach to naturalism designed in the early days of "institutional" philosophy of science (Hanna 2006) *versus* proposals such as Putnam's liberal naturalism or Price's subject naturalism. Our intuition is that the latter two positions defend reformulations of the meaning of the term and of the underlying inquiry that go so far that it is difficult to see any naturalism in them beyond the minimal demand that explanations or inquiries are to be compatible with science.

The purpose of this paper is to see whether conceptual engineering can be useful to argue for the abovementioned intuition. Our tenet is that the case of liberal naturalism involves not just a change of meaning, but also a change of subject. To this purpose, we rely on Belleri's (2021) notion of Progressive Semantic Inquiry and what counts as going too far in that change. The paper serves two objectives: on one hand, it helps to understand what is going on with the versions of naturalism mentioned above; on the other, it assesses Belleri's solution to the change of subject objection.

Keywords: minimal naturalism, scientific naturalism, liberal naturalism, conceptual engineering

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The concept of naturalism is not a static one. If we look at the history and current diversity of uses of the term "naturalism," we can see that its use has evolved, thus making it challenging to provide a universally accepted definition. As early as 1956, Ernest Nagel argued that the number of views for which the word "naturalism" meant something different was truly astonishing. Nonetheless, naturalism should not be seen as a mere collection of theories concerning events in the natural world.

In its philosophical sense, the term naturalism emerged in the mid-1800s to denote a view that everything could be explained in terms of natural entities, leaving aside all non-natural explanations. In the mid-twentieth century, American philosophers such as Roy Wood Sellars (1922, 1924), John Dewey (1925) and later Ernest Nagel and the so-called "1944 school of naturalism" (Kim 2003) adopted the term naturalism, and its philosophical meaning was consolidated.

For some authors (cf. Bilgrami 2010, 2011), the significance of the debate around the idea of "naturalism" can only be unearthed by paying some genealogical attention to the preceding disputes, in which certain issues at stake occupied a wider and more visible place in social life. This is not the approach we will take here. We focus on the historical period around the so-called "received view" because of the importance of naturalism in the early days of "institutional" philosophy of science, but also because of its later influence throughout the twentieth century.

Although, as Jaegwon Kim (2003) points out, mid-twentieth-century American naturalism, like logical positivism, seems to have been proposed primarily as a methodological approach according to which the scientific method is the only way to acquire knowledge in any field, this approach goes hand in hand with an epistemological thesis: everything we know we acquire only through the application of the scientific method. But even earlier naturalists, such as R. W. Sellars, endorsed not only methodological but also ontological naturalism, holding that all that exists belongs to the spatiotemporal-causal order studied by science. In this way, naturalism came to be configured as a project of unifying both the methodological and the ontological spheres.

On the other hand, one of the common features of later epistemological naturalism, according to Philip Kitcher (1992), was its rejection of post-Fregean approaches to scientific knowledge. Kitcher calls pre-Fregean epistemology "traditional naturalism" (1992: 74).

> Pre-Fregean epistemology studied human knowledge as part of the natural order, using psychological language which seemed quaint and repugnant to early-twentieth-century

> ears. But, after almost a century of eclipse, the naturalists have returned, campaigning for the relevance of psychology and biology to epistemology and denying (in contrast to most of their pre-Fregean ancestors) the possibility of a priori knowledge. Traditional naturalism is the obvious heir of pre-Fregean epistemology, because it preserves the ideal of a meliorative project. (Kitcher 1992: 114)

The current philosophers who advocate this research program, which adheres to most tenets of the traditional characterization of naturalism, include David M. Armstrong, Alvin Goldman, Fred Dretske, Larry Laudan, Dudley Shapere, Nicholas Rescher, and Hilary Kornblith (Kitcher 1992: 77).

For many authors, naturalism has a long tradition which we could say culminates with Willard Van Orman Quine (1969), according to whom science, philosophy included, is "inquiry into reality, fallible, and corrigible but not answerable to any supra-scientific tribunal, and not in need of any justification beyond observation and hypothetico-deductive method" (Quine 1975: 72). Quine's purpose is to overcome the two dogmas of traditional empiricism by proposing that all our explanations of the world – across all its domains, including those traditionally regarded as *a priori* and problematic for empiricism, such as the philosophical – should face reality together. Each theoretical domain should be evaluated as integrated into our network of beliefs, hand in hand with our best scientific theories, because it is part of that same network. Epistemological holism is a key element in Quine's naturalism. Nevertheless, we agree with Alex Rosenberg (1996) that naturalism has come to be characterized as that movement in philosophy that is willing to adopt Quine's arguments against empiricism, but not all naturalism has gone down the road with Quine to epistemological holism, eliminativism about modality, or meaning:

> This is what makes naturalists the protégés of Ernest Nagel. 'Epistemology Naturalized' (in (Quine 1969)) is not the *locus classicus* of philosophical naturalism. Rather, it is *The Structure of Science* (Nagel 1961). (Rosenberg 1996: 2)

It is to this *locus classicus* of naturalism that we refer from now on when we use the term in the following pages. We take the characterization of standard, traditional or scientific naturalism (SN) from Robert Hanna (2006) in line with that of Nagel (1961). The first-order inquiry that these early naturalists were pursuing can be identified by the question: Can we offer an account of how the world is that includes philosophy and is scientific in its methodology, ontology, and epistemology? Alternatively, can the world be explained in a philosophical way and in continuity with science?

What counts as a naturalist inquiry is determined by four basic elements that are part of the first-order inquiry that naturalism undertakes: (1) anti-supernaturalism; (2) epistemological scientism; (3) physicalist metaphysics; and (4) radical empiricist epistemology (Hanna 2006: 10–13).

Anti-supernaturalism holds that "only what is either specifically material, or more generally a physical part of the spatiotemporal and causal order of things, can be truly real" (Hanna 2006: 10).

Epistemological scientism: "nothing in the rational or the real world falls outside the theoretical purview of pure mathematics (or, for the logicist, pure mathematical logic) and fundamental physics" (Hanna 2006: 12). Epistemological scientism has been used to justify the cognitive goals and methods of science in a non-foundationalist way. It has also prompted the thesis of a unified science and, consequently, philosophical research in the same vein as in natural sciences. Hence, philosophy, epistemology in particular, not only loses its classical foundational function but becomes, from Quine's point of view, a chapter of psychology, of natural science, since it studies a natural phenomenon, that is, a physical human subject (Quine 1969: 82). Kitcher (1992) calls it "radical naturalism" because it goes to this extreme.[1]

One of the most problematic elements of this characterization is physicalist metaphysics. "The physical facts strictly determine all the facts. … all facts or properties are either identical to or logically strongly supervenient on the fundamental physical facts or properties" (Hanna 2006: 12). From the point of view of strict naturalism, reality is accepted as fundamentally uniform.

Finally, radical empiricist epistemology: "all knowledge whatsoever originates in individual sensory experience, derives its significant content from sensory experiential sources, and is ultimately verified and justified by empirical means and methods alone" (Hanna 2006: 13).

In this description of Hanna, two elements can be distinguished. The first is anti-supernaturalism, which is broadly endorsed by numerous forms of naturalism. The second is the ontological principle, as articulated by Mario De Caro (2016), which asserts that reality is constituted by the entities to which the best scientific explanations are committed.

[1]According to Turunen, Hirvonen, and Pättiniemi (2023), some representatives of epistemological scientism are realists, such as Bunge (1986), Ladyman and Ross (2007), and Rosenberg (2018), while others are non-realists: Fishman (2009) and Fishman and Boudry (2013). Some other philosophers who have tried to pursue the austere naturalistic project include Kornblith (2002) and Sober (2009).

But Hanna's characterization is far from unique. On the one hand, it is easy to see that, for example, it explicitly encompasses David Papineau's ontological (anti-supernaturalism) and, implicitly, methodological naturalism (Papineau 2021). Ontological naturalism considers that there are only natural things or things postulated by the natural sciences. Methodological naturalism, on the other hand, contends that philosophical research must be carried out in the manner of the natural sciences. Methodological naturalism comes with no metaphysical claim (Papineau 1993), while metaphysical and scientific naturalism do come with metaphysical tenets (Hinzen 2013: 220).

The approach we have sketched out so far is in contrast to other so-called *naturalisms* that emerged at the end of the 20th century, such as Hilary Putnam's liberal naturalism[2] (Putnam 2004, 2015) or Huw Price's subject naturalism (Price 2004). For Price (2011), the subject naturalist investigates not to see how the various objects of study fit into the structure of objective reality, but to understand the function and origin of our concepts of them. What remains of naturalistic inquiry is that it is given by our best scientific explanations of the world.

We contend that both liberal naturalism and subject naturalism have radically recalibrated the original direction of inquiry as a solution to its most acute problems. The result is that these two views (liberal naturalism and subject naturalism) retain the label "naturalism," while at the same rejecting the line of inquiry originally outlined by scientific naturalism and having departed from certain basic naturalistic principles to such an extent that it is questionable whether they can still be described as fully naturalistic.

The paper argues that there are good reasons to opt for what Delia Belleri calls a *Semantic Progressive Approach* (Belleri 2021: 11), stating that both Putnam's and Price's versions of naturalism go too far to deserve the name. In Section 1, we introduce the tools for our analysis: Belleri's notion of Semantically Progressive Inquiry (SPI). This type of inquiry takes a stance on a question defined by a given research program and can be modified by narrowing or broadening the scope of the inquiry. Then, in Section 2, we apply this tool to the case of naturalism.[3] We consider various naturalist views to show how some of them have undertaken

[2]"Putnam was happy to borrow this phrase to identify his position" (Dell'Utri 2024: 4).

[3]A contemporary debate exists between two other forms of understanding naturalism: as an *attitude* and as a *thesis*. Different solutions have been proposed, such as opting for a third way: naturalism as a worldview (see Spiegel 2023). However, this debate will not be pursued here. In general terms, our approach is that of naturalism as a research program.

the road of SPI, therefore it makes sense to continue to consider them naturalist accounts. On the other hand, it is also reasonable to reject the utilization of the term "naturalism" in reference to those purported naturalist theses that extend beyond the confines of SPI. The issue under discussion has previously been a source of concern for other authors; for instance, Ram Neta (2007) argues that either Liberal Naturalism (LN) is not liberal enough (because it is only superficially different from SN), or it is not a genuine form of naturalism at all (that is to say it is a form of non-naturalism in disguise). Subsequently, given what we take to be the inquiry underlying Scientific Naturalism, we apply Belleri's criterion to show that Liberal Naturalism and Subject Naturalism have crossed the line. Our contention is that our arguments apply to any kind of liberal naturalism that proposes a *change of inquiry*.

1. OUR TOOLS OF ANALYSIS

The utilization of conceptual engineering might initially appear off-limits since our focus is on "naturalism." Couldn't conceptual engineering be at odds with naturalism? Following the work of Walter Veit and Heather Browning (2020) alongside Sebastian Lutz (2020), we contend that the practice of conceptual engineering aligns with scientific methodology and, therefore, with naturalism:

> Naturalist Conceptual Engineering = (i) The scientific assessment of concepts, categories, and classificatory systems, (ii) determination of their relevant context and purposes to which they are and should be put to use, (iii) reflections on and proposal for how to improve them, and (iv) proposals for and active participation in the implementation of the suggested improvements. (Veit and Browning 2020: 11)

In his 2020 examination, Lutz highlights the crucial role of conceptual engineering within scientific investigation. Utilizing empirical techniques, Lutz substantiates the significance of conceptual engineering as a fundamental component of scientific methodology, suggesting that analytic propositions contribute to scientific theories more significantly than has traditionally been assumed, thereby allowing these theories to be treated as instances of conceptual engineering. This perspective supports the implementation of a methodologically naturalistic philosophy, akin to Rudolf Carnap's view (1928, 1950). As the conceptual propositions in scientific contexts hold equivalency with those in philosophy, both fields partake in conceptual engineering, facilitating collaboration without diminishing philosophy's relevance, or relegating it to merely supporting scientific outcomes

(Lutz 2020). Consequently, Lutz (2020) posits "that since many results of the sciences can be construed as stemming from conceptual engineering as well, Carnap's account of philosophy can be methodologically naturalistic."[4]

1.1. CONCEPTUAL ENGINEERING

Conceptual engineering aims to provide useful tools for us to comprehend the underlying principles of phenomena that give rise to concerns. In particular, the field of conceptual engineering seeks to address the intricate relationship between meanings, concepts, and subject matter. It does so by placing emphasis on the cognitive dimension, along with the theoretical assumptions that underpin it, and their subsequent implications at a level of representation of reality. This is a crucial point, as Martin Hinton and Fabrizio Macagno claim, "conceptual engineering focuses on the way we shape a worldview; this sense-making process that is called cognition results in 'conceptual repertoires' and 'schemes,' namely instruments that are used to interact with reality. When we modify such cognitive structures, we modify our worldview and possibly our actions" (2024: 1569).

In this paper, to assess the options we rely on David Chalmers' (2020) discussion of conceptual engineering, and on Belleri's analysis of the Change of Subject objection (2021).

Chalmers (2020): 1) characterizes conceptual engineering as the "design, implementation, and evaluation of concepts," both old and new. Rather than asking "What does 'N' mean?" (as in a conceptual analysis approach) or "What is the nature of N?" (as in an empirical or metaphysical investigation), conceptual engineering approaches shift the focus of discussion to questions such as "How should we define or improve our concept of N so that it can better fulfil its role?" There are cases of conceptual engineering in which a new concept is articulated, and this goes together with proposing a new thesis: "even when philosophy involves new concepts, it typically also involves new theses involving those concepts" (Chalmers 2020: 13). For Chalmers, this is what philosophy is about: it is about discovering new truths.

Proposing a thesis is understood to be inextricably linked to the initiation of an inquiry that is designed to evaluate its validity and relevance. Thus, we put

[4]Other philosophers, such as Ladyman and Ross (2007), who argue for a naturalizing view of metaphysics that calls on metaphysicians to reflect on and contribute to current scientific praxis, may also come close to Carnap's view.

forward the endeavor of naturalism (in the standard or traditional sense), while advancing other naturalistic developments (liberal or subject naturalism) that depart from the original project of naturalism in significant ways.

The point is that using the methodology of conceptual engineering to evaluate and improve concepts (Cappelen 2018, 2020) should help us decide on the adequacy of the inclusion of the word "naturalism" in different sorts of naturalism. For the assessment, we draw upon Belleri's analysis of the implications of a change of meaning when evaluating the differences and similarities between various (purported) naturalist proposals.

Consider the following example: "liberal naturalism" is the result of a revision of the concept of "scientific naturalism" and the modification of some of its characteristics. If we look at the term "naturalism," it has a certain intension and extension. If there is a conceptual change in the revision of this term, from "scientific" to "liberal," it is necessary to analyze whether this change goes beyond the limits of what was originally understood by "naturalism." If such a conceptual change exceeds those limits and thereby entails a change of subject, then any answer to the question "What is naturalism?" will not be an answer to the original question. This is a version of a general problem with conceptual engineering: the so-called *change-of-subject objection*. It is important to note that meanings associated with terms should, in some cases, be subject to change according to the tenets of conceptual engineering. Nonetheless, the issue of when changes in meaning necessitate a change in subject remains open. In such instances, it is imperative that such changes are not permitted.

1.2. BELLERI'S APPROACH

Belleri (2021: 19) puts forward a novel approach to the change of subject objection. Her proposal differentiates between two categories of inquiries:

> (a) Those for which the underlying inquiry cannot be coherently reproduced as allowing for either a change of meaning or metalinguistic questions. She terms this the "Semantic Conservative Approach."
>
> (b) A second category that comprises inquiries that permit semantic shifts under specific circumstances. This approach is referred to as the "Semantic Progressive Approach."

Note that, given a first-order question – such as what counts as pursuing a naturalist explanation – allowing for semantic progressive change means embedding that question within a broader type of inquiry, one that includes a first-order and a meta-linguistic stage (Belleri 2021: 11). The first-order stage is the one in which the inquirer pursues her research by addressing a question (take "What is a planet?"). Dissatisfaction with the way the inquiry progresses may lead the community to decide to change the meaning of the concept. The meta-linguistic stage is the one in which she assesses whether it makes sense to revise a meaning due to epistemic values – truth, accuracy, explanatory power are the ones Belleri mentions – or non-epistemic reasons, such as convenience and social or political progress. Assume the community goes for a change in meaning; then, according to Belleri's proposal, that change of meaning must be compatible with continuity at the level of inquiry.[5] A change of meaning is allowed in so far as it does not convey a change of inquiry. At this point "sameness-judgments and difference-judgments arise within the same conversational context" (Belleri 2021: 17). That is to say, there may be different verdicts among the community of inquirers about what counts as a reasonable move. According to Belleri, whether we proceed in one direction or another is something "objective"; the prerogative to select does not lie with the inquirer. The issue here is how to distinguish between cases of SPI and cases in which the change of meaning goes too far because it entails a change of inquiry.

Belleri (2021: 16) acknowledges that there is no general procedure to establish whether the question of inquiry has changed or not. She explicitly states that it is a case-by-case issue. Nevertheless, she proceeds to provide a series of examples that highlight the following features:

a) Note the terms used in the research question; check whether these lead to confusion and/or a change of inquiry. Belleri raises the question of whether whales are fish. The answer to this question requires a change in the conceptual framework regarding "fish" that engenders substantial perplexity regarding the concept of fish and catalyzes a transition in the direction of the research inquiry. In contrast, if we take the question of whether free will is compatible with determinism to modify the meaning of "free will," keeping the meaning of the terms "compatible" and "determinism" unchanged, then the inquiry, arguably, remains the same. Belleri acknowledges that SPI is compatible with confusion

[5]For an illustration, see the case of a planet below.

and perplexity because confusion occasionally accompanies a change in meaning. The crucial question is whether the change in meaning also involves a change of inquiry.

b) Measure the impact the change of meaning would have on the general theory (i.e., Will the change still allow for a useful taxonomy? Will the change provide clarification?). Take the case of the term "planet," which used to be understood as " 'wanderers' known only as moving lights in the sky." New research showed that using the term in this way led to many astronomical objects being identified as planets, and as a result "the term 'planet' would then lose any taxonomic utility" (Soter 2006: 2513). The new definition was agreed on by a vote at the International Astronomical Union (IAU) General Assembly in 2006.[6] According to the new meaning, Pluto is not a planet but a dwarf planet. As Belleri claims,[7] at least in this case, the need to change the meaning rests with the research community. Nevertheless, it is interesting to note that consensus on what the new meaning of the term "planet" should be was reached by a vote. Astronomers were deciding on which way of defining "planet" has the most theoretical interest. The decision is about how to use language; it is pragmatic, even if based on evidence.

c) Ask whether the inquiry makes sense at all in the light of the identified problems. Belleri illustrates this point with the term "phlogiston": the inquiry of its meaning had to be abandoned; since it had been proved that the term had no extension, it was not for the inquirer to decide as Belleri contends. In this particular instance, the issue was not related to the reformulation of the concept; rather, the theoretical proposition was found to be erroneous.

d) She also suggests playing with the question of inquiry (Q) and with the advocated answers (A) as follows: i) Take Q and A, both "individuated narrowly," and check whether the latter counts as an answer to the former; ii) take Q, "individuated narrowly," and A, not individuated narrowly, and ask "why was Q individuated narrowly in the first place?" (Belleri 2021: 20).

Next, we apply Belleri's proposal to address the case of "naturalism" to see to what extent the difficulties encountered by the initial naturalistic program recommend taking the conservative or the progressive approach.

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[6]Note that "planet" was not the only term about which the assembly made decisions: https://www.iau.org/news/pressreleases/detail/iau0603/.

[7]"My aim is to convince the reader that these two categories are not mere stipulations, but rather describe something that already exists" (Belleri 2021: 14).

2. FIXING THE CONCEPT OF NATURALISM: SHOULD WE CHOOSE THE CONSERVATIVE OR THE PROGRESSIVE APPROACH?

Following Belleri's framework, the pursuit of progressive semantic change necessitates that preliminary research reveals issues with SN, our foundational naturalism framework. Nonetheless, as will be shown, although some authors have taken a conservative stance, several issues suggest the need for the implementation of SPI.

In what follows, we are relying on Belleri's proposal to analyze:

- Those authors who are for going conservative
- The case of versions of naturalism with semantic progressive change
- A special case of semantic progressive change: the case of minimal naturalism
- The case of Putnam's liberal naturalism and Price's subject naturalism.

2.1. GOING CONSERVATIVE

How to justify that the initial inquiry is still alive? According to Belleri (2017, 2018, 2019, 2021), conservatism is a very general position that encompasses epistemic, practical, or ethical aspects. Thus, critical conservatism is about trusting our concepts unless we have reason to doubt them, i.e., the fact that we have certain concepts makes it rational for us to trust such concepts unless we have reason to believe that these concepts are epistemically unsound, epistemically unjustified, or do not help us in some other, perhaps practical, way. But what is it that allows us to be critically conservative about the concept of naturalism?

In our days, there are philosophers who would subscribe to Hanna's features. One of the contemporary defenders of the metaphysical, epistemological, and methodological commitments of naturalism is Graham Oppy (2024). Other philosophers such as James Ladyman and Don Ross maintain these commitments as a research program that treats " 'beliefs that survive the institutional filters of science' as basic sources of evidence" (Ladyman and Ross 2007: 301).

Unlike what happened with "phlogiston," naturalism, as defined by Hanna, has not been proved false, which is why going conservative is an option. Never-

theless, the issue for conservatism is that naturalism has encountered numerous challenges; among them:

- The *placement* problem points out that scientific naturalism restricts the scope of entities belonging to the realm of nature, so that certain phenomena such as consciousness, normativity, or values seem to have "no place" in this paradigm. Because these ontological reductions present serious difficulties, the door opened for other versions of naturalism that were intended to fix the concept; some of these were non-reductive, such as liberal naturalism, proposed by Putnam himself (De Caro and Macarthur 2004).
- The Coherence Dilemma states that "methodological naturalism articulates a basic principle, i.e., that philosophy should be aligned with the natural sciences in a specific way. Yet, methodological naturalism itself cannot be justified by that basic principle" (Spiegel 2023: 745).
- Hempel's Dilemma "states that ontological naturalism is either a false thesis (since current physics cannot account for all of reality) or a trivial thesis (if a future-ideal physics is promised to account for all of reality)" (Spiegel 2023: 745).
- Timothy Williamson (2016a) challenges epistemological scientism on the basis that there is no scientific reason to think that everything that is to be known has to be discovered by using the methodology human scientists use. This is not to claim that there are supernatural entities, but just to question whether humans, as a kind of knower, are capable of developing the sort of scientific methodology that allows us to get to know whatever is to be known.

Clearly, there are difficulties, and there is consensus about them, but there is certainly no consensus about how to deal with them. As a result, it seems that, contrary to those authors who defend conservatism, the underlying inquiry does allow for a change in meaning.

2.2. NATURALISMS WITH SEMANTIC PROGRESSIVE CHANGE

Now we want to show that there are views that advocate for changes in the meaning of the term "naturalism" that do not advocate for a change of inquiry, thus

qualifying as cases of SPI. As previously stated, there is no general procedure for determining whether a specific change in meaning is faithful to the original inquiry. In order to address this issue effectively, it is essential that each case is examined individually. Take the case of Williamson (2013) and his modal metaphysics. We mean to demonstrate that his inquiry can be regarded as naturalistic because although he promotes several relevant pertinent changes, it can be argued that he does not relinquish the initial line of inquiry. To that purpose, in order to apply the methodology advocated by Belleri, we look at how he understands the terms in the question posed by SN (anti-supernaturalism; epistemological scientism; physicalist metaphysics; and radical empiricist epistemology) and in his answer to that question.

1. He advocates for a radical empiricist epistemology: Williamson (2013) claims that the modal second-order logic system S5 is our best scientific (logical) theory about metaphysical necessity. Thus, at the metalinguistic level this theory possesses epistemic value due to its enhanced explanatory capacity. His purpose is to provide an account of metaphysical necessity that not only is compatible with science but also applies the methodology for theory choice used by scientists and advocated by Quine. Our metaphysical theories are assessed in the same way as the rest of our scientific theories.

2. Physicalist metaphysics and anti-supernaturalism: Nevertheless, Williamson's proposal allows for semantic change since he subscribes to a physicalist ontology in relation to concrete entities; however, because he acknowledges second-order S5 modal logic as our best scientific theory about metaphysical necessity, he commits to necessitism, namely the view that everything that *exists*, in the logical sense of the word "exist," exists necessarily. But this should not be taken as implying that these entities are "real" (concrete), hence he agrees that "only what is either specifically material, or more generally a physical part of the spatiotemporal and causal order of things, can be truly real" (Hanna 2006: 10). His inquiry goes beyond the initial inquiry by endeavoring to implement a naturalist perspective to justify modality, a phenomenon SN was not interested in. Nevertheless, Williamson's view seems to keep its taxonomical import. It could be said that his view counts as naturalistic, *modulo* trying to apply it to account for modality, which he takes to be part of the physical world.

3. We have mentioned above that Williamson (2016a) is critical of epistemological scientism, but his critique comes with a decidedly naturalist approach. His contention is that science might eventually establish that there are other

methodologies, also scientific ones, but more fitted, say, for subjects with different cognitive abilities. His commitment to epistemological scientism reveals itself distinctively in his notion of being "compatible" with science, because *compatible* does not mean being "logically consistent with," but should be understood as "meeting scientific standards" (Williamson 2016b).

According to Belleri's proposal, this amounts to allowing for semantic progressive change because, even though the inquiry underlying Williamson's account of metaphysical necessity helps itself to scientific tools and commitments that were previously unavailable, the inquiry still aims to account for metaphysical necessity in scientific terms, refuses to commit itself to non-naturalistic entities as real, respects (arguably) a physicalist metaphysics, and uses an empiricist epistemology that is continuous with science.

Although there is no consensus that Williamson's proposal is the way to go to widen the investigation of SN (note even *modulo* trying to account for metaphysical necessity), there is consensus, as noted above, that it should be extended. And this extension of Williamson's proposal suffices, according to Belleri, for SPI:

> if one could reasonably reconstruct their inquiry as stemming from dissatisfaction with a certain definition, category or terminology, and as making certain semantic revisions permissible, one could legitimately portray them as pursuing a SPI. (Belleri 2021: 14)

Another case in point might be Ronald Giere's proposal. In his article "Modest Evolutionary Naturalism," Giere (2006a) argues that a consistent naturalism, in general terms, should be understood in terms of methodological maxims rather than metaphysical doctrines.

> My recommendation for naturalists would be to take a *methodological* turn. Characterize naturalism not as doctrine, but as method. A general formulation of the method would be something like this: For any aspect of the world, seek a naturalistic rather than a supernaturalistic explanation. It is a virtue of a methodological stance that its adoption does not require a transcendental justification. Commitment to the method can be somewhat justified by appeal to past successes at finding naturalistic explanations. One might even argue that the success rate has been going up for the past three hundred years. More than that one cannot do without going outside a naturalistic stance. I think would-be naturalists should settle for the methodological stance. But again, naturalists remain free to *criticize* non-naturalistic explanations as being unjustified, incoherent, vacuous, contradicting established science, and so on. One must only not pretend to an *a priori* refutation of non-naturalistic pretensions. (Giere 2001: 55–56)

So, let us determine whether the change of meaning he proposes is compatible with SPI.

He proposes specific maxims to guide naturalistic inquiry so that explanations appeal only to natural processes and entities and avoid metaphysical or supernatural explanations. This conveys that he does not change the meaning of "naturalism" with respect to supernaturalism.

His scientifically informed naturalistic approach is intended to meet the common objection that SN is unable to account for the normative aspects of human life, including scientific practice itself. Giere suggests that while evolutionary naturalism may have difficulty explaining categorical moral norms, it can justify epistemological norms as conditional rather than categorical. Accordingly, he posits that the historical development of science constitutes a superior context for the implementation of evolutionary concepts and underscores the role of naturally developed cognitive abilities in the formation of scientific knowledge. Consequently, he hypothesizes that our comprehension of the world is mediated by these capacities, which have evolved through evolutionary processes. In particular, Giere proposes that scientific knowledge should be understood as "perspectival" (influenced by human cognitive abilities and historical context) rather than absolutely objective.

> I conclude that naturalism is a viable general project, capable of encompassing all of nature, including culture and the enterprise of science itself. The role of evolutionary thinking within a naturalist program is a matter for continued investigation. It cannot, I think, be all encompassing in a useful way. As Campbell insisted regarding descriptive epistemology, it must be cognitive and social as well as evolutionary.
>
> . . . Success in applying these rules gives comfort to those pursuing the program and encourages others to join the effort. Positively, that is the most a consistent naturalist can do. (Giere 2001: 68–69)

While Giere's work aligns more closely with scientific naturalism (Giere 1988), he also acknowledges the role of human perspectives and cognitive processes in scientific practice. His motivation emerges from his naturalistic framework, which "is based entirely on an examination of scientific practice, something appreciated by scientists as well as historians, sociologists, psychologists, and other students of science as a human enterprise" (Giere 2006b: 5).

Furthermore, Giere's approach develops detailed case studies within a naturalistic and cognitivist framework, thus allowing us both to recognize when certain non-epistemic values and interests may compromise objectivity, and to

distinguish the extent to which perspectival aspects of science affect its outcomes. As a result, Giere's naturalism doesn't cause confusion because any attempt to explain ontology and epistemology in evolutionary terms is part of scientific naturalism. It amounts to a reformulation of the original proposal because it increases the possibility of success in problematic areas. Thus, the acceptance of the perspectivist point of view as a form of understanding has no implications for general theory, and this makes taxonomy still useful.

2.3. MINIMAL NATURALISM

One potential approach would be to employ the term in a minimal sense, thereby encompassing all forms of naturalism. So-called "minimal naturalism"[8] (MN) amounts to saying that one's preferred philosophical view should be *compatible* with the data and results that science offers. One can be a minimal naturalist in relation to both content and methodology, or just in relation to one of them.

Minimal naturalism about content conveys that any explanation of the nature of the world must assert that all phenomena can be explained in terms of natural causes and established laws, without invoking or referencing any supernatural elements or making additional metaphysical claims. Paul Horwich defends minimal naturalism:

> Science encompasses everything there is. Fully rational belief can emerge only from the scientific method. And all facts can in principle be explained by science. (Horwich 2014: 37)

Minimal methodological naturalism asserts that investigation into the explanation of what the world is should be justified and advanced through the application of scientific methodologies.

Whatever version one chooses, being a naturalist in this minimal sense is compatible with pursuing the sort of inquiry our scientific naturalist pursues, but (arguably) it is also compatible with advocating for an inquiry that, while compatible with science, feels free to leave science aside given the difficulties that scientific naturalism faces; take, for instance, the *placement* problem mentioned above, and the line of inquiry advocated by Putnam as a reaction to it.

[8] Our way of characterizing minimal naturalism does not refer back exactly to the minimal naturalism characterized by Oppy (2024): "naturalism concerning causal reality."

However, the reduction of scientific naturalism to minimal naturalism suggests a relinquishment of numerous significant tenets underlying this inquiry. Plausibly, that is the point of advocating for naturalism in a minimal sense. Naturalism so understood is a simplified version of strict naturalism that deprives it of its explanatory value. It is merely a restriction to philosophical theorizing (being compatible with science) that can be seen as present throughout the history of philosophy.

SN extends beyond minimal naturalism, advocating for a paradigm that is inextricably linked to scientific findings. This entails a reliance on an account of the world that is not merely compatible with scientific principles, but rather is intrinsically continuous with them, notwithstanding any challenges that may arise. Liberal naturalism goes well beyond minimal naturalism to allow for non-scientific modes of understanding, recognizing that some aspects of human experience, such as moral values, artworks, and institutions, may require explanations beyond what science alone can provide, and accordingly embracing a wider range of explanatory resources (Spiegel, Schüz, and Kaplan 2023).

3. THE CASES OF PUTNAM'S LIBERAL NATURALISM AND PRICE'S SUBJECT NATURALISM

In this section we mean to establish that liberal naturalism and subject naturalism propose a change in meaning that is beyond what semantic progressive change permits.

3.1. PUTNAM'S LIBERAL NATURALISM

Our goal is to demonstrate that Putnam's liberal naturalism should not be regarded as an expansion of SN's objectives as it is beyond SPI. To substantiate this argument, we employ Belleri's recommended approach, which involves analyzing Putnam's response to the question of inquiry posed by SN. Our study focuses on Putnam's interpretation of the concepts that are key to SN as they feature in his response: anti-supernaturalism, epistemological scientism, physicalist metaphysics, and radical empiricist epistemology.

Putnam began his philosophical journey, as De Caro notes (2020: 58), by defending reductionism and physicalist monism, in line with the neo-positivist approach of the "Unity of Science." However, over time Putnam began to critique

metaphysical realism, which posits a singular comprehensive description of reality as depicted by the natural sciences, particularly physics (Papineau 1993). This shift in perspective led him to adopt a more liberal non-reductive version of naturalism. Next, we examine how Putnam's LN (De Caro and Macarthur 2004: 14) redefines the terms originally posed in the guiding question of scientific naturalism – how to provide a philosophical account of the world that remains continuous with science:

1. Putnam gives up on anti-supernaturalism when applied in the moral realm. There are certain *levels* that are not reducible to the level of fundamental physics; for example, he found the naturalization of mathematics[9] (Putnam 2012a) or ethics (Putnam 2004) bizarre. The reductive attitude of SN left out moral norms as supernatural entities, and this is precisely Putnam's view.

2. Physicalist metaphysics and radical empiricist epistemology: Putnam revises Quine's criticism of the *a priori* (defined in terms of analyticity) to argue for the contextually *a priori* (Putnam 1978), while accepting that any truth can be revised (Putnam 1969). He invites philosophers to adopt a basic practical attitude towards the evident plurality and disunity of the sciences (including the social and human sciences). Thus, Putnam's LN (Putnam 2012b) promotes a pluralistic conception of the sciences and a reconsideration of human nature, whereas the stricter naturalism focused on non-human nature. In this sense, in addition to philosophy, a space of its own is being explored for the human and social sciences, admitting their legitimacy as sciences and, therefore, conceding that normative aspects such as reason or meaning are irreducible. It is precisely in this sense that both Putnam (2015, De Caro and Macarthur 2004) and Price (2004), as we shall see below, challenge scientific naturalism due to its restrictive conception of science and knowledge, among other things.

3. Key to Putnam's LN is the rejection of epistemological scientism and the attempt to find a new position for philosophy, one with certain autonomy from the scientific method and its scientific goals. Philosophy is to be *compatible* with science, but in the course-grained sense of being just *logically compatible* with science, that is, a minimal naturalism. But even more, LN recognizes the conceptual possibility of non-scientific forms of understanding and knowledge. In Putnam's view, moral or aesthetic forms of understanding have a non-scientific character because these fields are not involved in the activity of prediction and

[9] Putnam disagrees with projects to naturalize mathematics, such as those of Maddy (1997) and Field (1980, 1989). See (De Caro 2020: 60).

control based on the identification of causal models or natural laws in the world. These forms of understanding also refer to a subjective or agent's point of view, and there is not a plausible scientific account of them. Quite clearly, the change of meaning proposed goes for a rejection of epistemological scientism since it gives up on the possibility of a scientific approach in problematic areas. Putnam's view is therefore the opposite of the position advocated by Williamson.

Putnam's liberal naturalism causes perplexity, which does not suffice by itself to reject the proposal, according to Belleri, since confusion frequently accompanies change of meaning. The issue is that when we compare the original question of SN with the answer provided by LN, it is easy to see that LN does not provide a response to the question proposed by SN. In contrast, proponents of LN recognize that they are advocating for a broadening of the inquiry, albeit with a concomitant change of subject. This is due to the fact that the inquiry is no longer aligned with a naturalist approach to the problematic areas. It is claimed that the change of subject is warranted because scientific naturalism is incapable of tackling the aforementioned issues. The problem is that – contrary to what happens in the case of "phlogiston" – there is no consensus that the term has no extension in those areas.

Many authors disagree that the initial inquiry *does* make sense in spite of the difficulties it has encountered (Papineau 2021). Take the case of moral facts; according to LN, they are *sui generis* facts, and accounting for them cannot be done in naturalistic terms. But authors who try to account for moral discourse in naturalist terms address the problem either "without supposing that moral utterances report on moral facts with a substantial independent existence" (Joyce 2015), or by acknowledging that substantial moral facts exist, yet aiming to position them within the sphere of nature rather than in a distinct non-natural domain (Lenman 2014).

Given that the original inquiry is still active, it can be argued that naturalism has not been agreed to be defendable only in certain cases. As a result, LN constitutes a reformulation of the initial proposal that conveys a change of subject.

Moreover, accepting the subjective point of view as a form of understanding, and conceding that normative aspects such as reason or meaning are irreducible, also have implications for the general theory: as Neta (2007) contends, either liberal naturalism is not liberal enough, since it is only superficially different from strict naturalism, or it is not a genuine form of naturalism at all, but rather a form of non-naturalism in disguise, as this paper argues. This change of meaning

makes naturalism a proxy of antinaturalism, as a result of which taxonomy is no longer useful.

3.2. PRICE'S SUBJECT NATURALISM

Price's subject naturalism is predicated on the premise that a radical shift in the point of departure is imperative for the resolution of placement issues, whereby subjects are to be regarded as part of nature, as opposed to the conventional focus on objects. Accordingly, the proposal is put forward that object naturalism be substituted for subject naturalism. Price claims this proposal to be naturalist because, unlike Putnam, he advocates for a naturalized view of our linguistic practices as the appropriate starting point for philosophy: the normative is part of nature in as much as human beings and their practices are part of nature.

Price identifies *object* naturalism as the popular version of naturalism, a problematic stance that must be replaced. Object naturalism[10] includes an ontological and an epistemological thesis that remind us of those included in Hanna's characterization of scientific naturalism. The ontological thesis contends that "in some important sense, all there is, is the world studied by science," while the epistemological thesis asserts that "genuine knowledge is scientific knowledge." Certain interpretations of object naturalism embrace pluralism and consequently dismiss physicalism; nonetheless, objects linked with different discursive approaches to understanding the world must maintain a scientific nature.

Price critiques object naturalism and suggests that naturalists have two paths to choose from: they can pursue either *object* naturalism or *subject* naturalism. But *object* naturalism is not an option since, according to it, we talk about the world in ways such that "how to locate object X in the world" is far from clear; consider how to locate mathematical entities or ethical facts.[11] Hence, the onto-

[10]"... insofar as philosophy is concerned with the nature of objects and properties of various kinds, its concern is with something in the natural world, or with nothing at all. For there simply is nothing else" (Price 2004: 72).

[11]Expressivism posits that moral declarations are expressions of emotional attitudes instead of factual claims subject to truth valuation. This theory implies that moral judgments convey emotions and attitudes rather than truths. Price (2011) contends that statements across all discourses, not limited to moral discourse, reflect attitudes or commitments rather than factual content. Price's perspective, known as global anti-representationalism, refutes the notion that statements represent the world. Conversely, Price's stance diverges from others, such as that of Alfred J. Ayer (1936/1952). Ayer is classified as a non-representationalist, but solely concerning moral discourse, a viewpoint referred to as emotivism. According to Ayer, moral statements, and only those such as "Stealing

logical naturalist must explain how certain ways of talking can be scientific or reject them *tout court* (placement problem). Since she can neither explain nor reject these discursive practices, the presuppositions of object naturalism are (scientifically) suspect. Hence, subject naturalism goes first. Price (2004: 72) characterizes *subject* naturalism as contending that:

1. "Philosophy needs to begin with what science tells us about ourselves."
2. "Science tells us that we humans are natural creatures."
3. "If the claims and ambitions of philosophy conflict with this view, then philosophy needs to give way."

Furthermore, Price's argument posits that the concept of object naturalism cannot be substantiated from the standpoint of subject naturalism. The central notion of his proposal is that philosophy ought to clarify our linguistic practices. Given his deflationist stance on truth, this involves explaining these practices without employing the "matching model," which positions language on one side and the world (truth-makers) on the other (Price 2013: 23nn). Placement problems arise when we have difficulties in finding a suitable truth-maker for a certain utterance. Price aims to avoid these problems by defending, on the basis of semantic deflationism (concerning both truth and reference), a global anti-representationalism which, as he contends, would avoid the need to establish truth-makers for utterances regardless of the subject matter the utterances deal with.

Matthew Simpson (2017: chap. 5; 2020) shows that "non-representationalists' commitment to deflationism about truth, facts and properties doesn't affect how they should approach metaphysical questions about truth-makers." Moreover, Simpson contends that the anti-representationalist view – that non-representationalists can sidestep issues related to the entities in the world by avoiding representational characteristics – is unfounded (Simpson 2017: 139). Essentially, Simpson (2017: chap. 6) posits that Price's anti-representationalism does not adequately address the placement problems.

Again, in order to clarify whether Price's proposed semantic change remains faithful to the inquiry underlying SN, we employ Belleri's proposed approach, which entails analyzing various things (see section 1.2 above).

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money is wrong," communicate sentiments of disapproval rather than factual assertions available for truth assessment.

First, we should look at the terms used in the question of inquiry: Can we offer an account of how the world is that includes philosophy and is scientific in its methodology, ontology, and epistemology? Changing the starting point does certainly bring up some confusion. But, as we know, confusion comes with change of meaning sometimes and does not always convey a change of inquiry.

The extent to which this perspective impacts Price's position on the issues that are a source of concern – anti-supernaturalism, epistemological scientism, physicalist metaphysics, and radical empiricist epistemology – remains unclear. Given Price's adoption of a naturalistic perspective on norms, his proposal can be characterized as anti-supernaturalist. However, his proposal appears to repudiate epistemological scientism, if understood narrowly, as Hanna (2006: 12) asserts. Price's position is that there are phenomena in the real world that lie beyond the scope of pure mathematics and fundamental physics. By beginning with human beings as natural entities, his approach seeks to broaden the scope of the scientific domain to address the challenges encountered by SN.

Price's proposal cannot be charged with transcending the limits of physicalist metaphysics; instead, he aims to eliminate metaphysical problems by dropping representationalism. This approach appears to be an alteration in inquiry rather than an expansion of the investigation in response to the problems posed by SN. The non-representationalist standpoint adopted here seeks to explicate the function and rationale behind the terms employed in our linguistic practices. The degree to which this inquiry aligns with an extensively interpreted radical empiricist epistemology remains uncertain.

The impact of this change of meaning on the general naturalist approach is huge. The question is, according to Belleri, whether this change provides clarification. The data show that, unlike in the planet case, there is no consensus among philosophers that Price's reformulation of the problem is the way to go. Also, contrary to what happened with the phlogiston case, the initial inquiry proposed by SN has not been abandoned. The reformulation of the inquiry proposed by Price would make sense if it were clear that it solved the placement problems it was designed to address. But as Simpson contends: "There is still as much need for an answer to the placement problem as there was before the non-representationalist gave her theory" (Simpson 2017: 150).

Consequently, Price's naturalism seems far removed from the way in which naturalism was conceived of, and it entertains a very different inquiry, as does Putnam's. Of course, all the considered naturalist approaches comply with a clearly

naturalistic constraint: the proposals have to be logically compatible with science. However, they no longer have a common method or, in Ernest Nagel's words, a common world view, or, in our wording, a common research program. They do not offer an adequate explanation of the relationship between philosophy and the other sciences, nor do they adapt their ontology to the scientific picture when they admit non-scientific, non-supernatural realities.

Applying the methodology introduced by Belleri, we have determined that evaluating the acceptability of the proposed change yields insights that enable us to distinguish those cases in which the change is semantic and progressive from those that go further to promote a change of research. This result provides some evidence that this methodology is applicable to any other proposal that goes beyond SPI to propose a topic change.

4. CONCLUSION

The foregoing considerations lead us to argue that the enterprise undertaken by these liberal naturalisms is so different from that of the original project that it is difficult to see why the label "naturalism" should be applied to these new versions of the position.

Putnam and Price's proposals still start with what science says. Both Putnam and Price are willing to keep the label because they intend their proposals to be logically compatible with science. Papineau (2021) certainly gets it right when he claims: "For better or worse, 'naturalism' is widely viewed as a positive term in philosophical circles – only a minority of philosophers nowadays are happy to announce themselves as 'non-naturalists.' This inevitably leads to a divergence in understanding the requirements of 'naturalism'." Also, the more meager the meaning of the term "naturalism," the greater the possibility of falling under this label. However, the sort of inquiry liberal naturalists undertake in certain areas differs substantially from the initial meaning of "naturalism." Price's subject naturalism is committed to a more radical revision of the project: he rejects scientific realism and representationalism. At the same time, Price continues to defend the theory that we should only believe what our best science postulates, but he proposes a metaphysical picture that is different from the one underlying the scientific one.

Belleri's proposal has proved useful in reaching a verdict about what is going on with the term "naturalism." Based on this proposal, we have distinguished

versions of naturalism that change the meaning without giving up on the initial inquiry, and we have also distinguished those that involve revision of the concept of scientific naturalism and of the underlying inquiry, hence going beyond semantic progressive inquiry to change the subject. Moreover, it seems plausible that Belleri's proposal works in general as an appropriate tool to set limits to changes of meaning.

Note that we are not assessing the plausibility of these views. Rather, the question has been whether the change in meaning promoted by LN has modified the intension and extension of the concept of naturalism to the point of producing a change of subject and *a discontinuity of the original naturalistic inquiry*. The verdict, based on Belleri's solution to the change of subject objection, is that LN goes beyond the limits of SPI. It proposes a change of inquiry that can only make sense under the assumption that the project of old naturalism is dead and should be replaced by the new one. Of course, contrary to what happened with the case of the term "phlogiston," there is no consensus about this.

REFERENCES

Ayer A. J. (1936/1952), *Language, Truth, and Logic*, New York: Dover.

Belleri D. (2017), *A Pluralistic Way Out of Epistemic Deflationism about Ontological Disputes*, [in:] *Epistemic Pluralism*, A. Coliva and N. J. L. L. Pedersen (eds.), Cham: Palgrave Macmillan, 317–344. https://doi.org/10.1007/978-3-319-65460-7_12

Belleri D. (2018), "Two Species of Merely Verbal Disputes," *Metaphilosophy* 49(5), 691–710. https://doi.org/10.1111/meta.12335

Belleri D. (2019), *Ontological Relativism and the Status of Ontological Disputes*, [in:] *The Routledge Handbook of Philosophy of Relativism*, M. Kusch (ed.), London and New York: Routledge, 367–375. https://doi.org/10.4324/9781351052306-40

Belleri D. (2021), "Downplaying the Change of Subject Objection to Conceptual Engineering," *Inquiry*, 1–24. https://doi.org/10.1080/0020174X.2021.1908161

Belleri D. (2023), "Conceptual Engineering Between Representational Skepticism and Complacency: Is There a Third Way?" *Topoi* 42, 1051–1062. https://doi.org/10.1007/s11245-023-09924-3

Bilgrami A. (2010), *The Wider Significance of Naturalism: A Genealogical Essay*, [in:] *Naturalism and Normativity*, M. De Caro and D. Macarthur (eds.), New York: Columbia University Press.

Bilgrami A. (2011), "The Wider Significance of Naturalism: A Genealogical Essay," *Balkan Journal of Philosophy* 3(1), 23–40. https://doi.org/10.5840/bjp20113115

Bunge M. (1986), *In Defense of Realism and Scientism*, [in:] *Annals of Theoretical Psychology*, L. P. Mos (ed.), vol. 4, New York: Plenum Press, 23–26. https://doi.org/10.1007/978-1-4615-6453-9_3

Cappelen H. (2018), *Fixing Language: An Essay on Conceptual Engineering*, Oxford: Oxford University Press.

Cappelen H. (2020), *Conceptual Engineering: The Master Argument*, [in:] *Conceptual Engineering and Conceptual Ethics*, A. Burgess, H. Cappelen, and D. Plunkett (eds.), Oxford University Press. https://doi.org/10.1093/oso/9780198801856.003.0007

Carnap R. (1928), *The Logical Structure of the World*, Berkeley: University of California Press.

Carnap R. (1950), "Empiricism, Semantics, and Ontology," *Revue Internationale de Philosophie* 4, 20–40. https://doi.org/10.1515/9781400838684-018

Chalmers D. J. (2020), "What is Conceptual Engineering and What Should it Be?" *Inquiry*, 1–18. https://doi.org/10.1080/0020174X.2020.1817141

De Caro M. (2014), "Two Forms of Non-reductive Naturalism," *Phenomenology and Mind*(7), 54–62. https://doi.org/10.13128/Phe_Mi-19533

De Caro M. (2015), "Realism, Common Sense, and Science," *The Monist* 98(2), 197–214. https://doi.org/10.1093/monist/onv006

De Caro M. (2016), *Naturalism and Realism*, [in:] *A Companion to Naturalism: Naturalism, Metaphysical Naturalism, Methodological Naturalism*, D. Papineau, D. Macarthur, M. De Caro, F. C. Chagas, C. L. Araldi, J. E. Porcher, and J. Ritchie (eds.), NEPFIL online, 185–195.

De Caro M. (2020), *Hilary Putnam on Perspectivism and Naturalism*, [in:] *Knowledge from a Human Point of View*, A. M. Creţu and M. Massimi (eds.), Springer Nature, 57–70.

De Caro M. (2023), "Between the Placement Problem and the Reconciliation Problem. Philosophical Naturalism Today," *Topoi* 42, 675–682. https://doi.org/10.1007/s11245-023-09913-6

De Caro M. and Macarthur D., eds. (2004), *Naturalism in Question*, Cambridge, MA: Harvard University Press.

De Caro M. and Macarthur D., eds. (2010), *Naturalism and Normativity*, New York: Columbia University Press.

De Caro M. and Macarthur D. (2012), "Introduzione," [in:] H. Putnam, *La filosofia nell'età della scienza*, Il Mulino, 7–45.

Dell'Utri M. (2024), *Hilary Putnam's Philosophical Naturalism: Making Philosophy Matter for Life*, Lexington Books.

Dewey J. (1925), *Experience and Nature*, Chicago: Open Court Publishing. https://doi.org/10.1037/13377-000

Field H. (1980), *Science Without Numbers: A Defense of Nominalism*, New York: Blackwell.

Field H. (1989), *Realism, Mathematics and Modality*, New York: Blackwell.

Fishman Y. I. (2009), "Can Science Test Supernatural Worldviews?" *Science & Education* 18(6–7), 813–837.

Fishman Y. I. and Boudry M. (2013), "Does Science Presuppose Naturalism (or Anything At All)?" *Science & Education* 22(5), 921–949. https://doi.org/10.1007/s11191-012-9574-1

Giere R. N. (1988), *Explaining Science: A Cognitive Approach*, Chicago: The University of Chicago Press. https://doi.org/10.7208/chicago/9780226292038.001.0001

Giere R. N. (2001), *Critical Hypothetical Evolutionary Naturalism*, [in:] *Selection Theory and Social Construction: The Evolutionary Naturalistic Epistemology of Donald T. Campbell*, C. Heyes and D. L. Hull (eds.), Albany: State University of New York Press, 53–70.

Giere R. N. (2006a), "Modest Evolutionary Naturalism," *Biological Theory* 1, 52–60. https://doi.org/https://doi.org/10.1162/biot.2006.1.1.52

Giere R. N. (2006b), *Scientific Perspectivism*, Chicago: The University of Chicago Press. https://doi.org/10.7208/chicago/9780226292144.001.0001

Hanna R. (2006), *Kant, Science and Human Nature*, Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199285549.001.0001

Hinton M. and Macagno F. (2024), "Arguing with Engineered Concepts: An Introduction to Conceptual Engineering and the Strategies of Definition," *Topoi* 43(5), 1569–1576. https://doi.org/10.1007/s11245-024-10143-7

Hinzen W. (2013), *Naturalizing Pluralism about Truth*, [in:] *Truth and Pluralism: Current Debates*, N. J. L. L. Pedersen and C. D. Wright (eds.), Oxford: Oxford University Press, 213–237. https://doi.org/10.1093/acprof:oso/9780195387469.003.0011

Horwich P. (2014), *Naturalism and the Linguistic Turn*, [in:] *Contemporary Philosophical Naturalism and Its Implications*, B. Bashour and H. D. Muller (eds.), Routledge, 37–43.

International Astronomical Union (2006), *Resolution B5: definition of a planet in the solar system*, https://www.iau.org/static/resolutions/Resolution_GA26-5-6.pdf

Joyce R. (2015), *Moral Anti-Realism*, [in:] *The Stanford Encyclopedia of Philosophy (Summer 2015 edition)*, E. N. Zalta (ed.), https://plato.stanford.edu/archives/sum2015/entries/moral-anti-realism/

Kim J. (2003), "The American Origins of Philosophical Naturalism," *Journal of Philosophical Research* 28(Supplement), 83–98. https://doi.org/10.5840/jpr200328supplement28

Kitcher P. (1992), "The Naturalists Return," *The Philosophical Review* 101(1), 53–114. https://doi.org/10.1093/acprof:oso/9780199899555.003.0003

Kornblith H. (2002), *Knowledge and Its Place in Nature*, Oxford: Oxford University Press. https://doi.org/10.1093/0199246319.001.0001

Ladyman J. (2011), "The Scientistic Stance: The Empirical and Materialist Stances Reconciled," *Synthese* 178(1), 87–98.

Ladyman J. and Ross D., eds. (2007), *Everything Must Go: Metaphysics Naturalized*, Oxford University Press.

Lenman J. (2014), *Moral Naturalism*, [in:] *The Stanford Encyclopedia of Philosophy*, E. N. Zalta (ed.), https://plato.stanford.edu/archives/spr2014/entries/naturalism-moral/

Lutz S. (2020), "Armchair Philosophy Naturalized," *Synthese* 197, 1099–1125. https://doi.org/10.1007/s11229-017-1653-z

Maddy P. (1997), *Naturalism in Mathematics*, Oxford: Oxford University Press. https://doi.org/10.1093/0198250754.001.0001

Martínez-Vidal C. (2018), "Putnam and Contemporary Fictionalism," *Theoria. Revista de Teoría, Historia y Fund de la Ciencia* 33(2), 165–181. https://doi.org/10.1387/theoria.17610

Nagel E. (1956), *Logic Without Metaphysics*, Glencoe: The Free Press.

Nagel E. (1961), *The Structure of Science*, New York: Harcourt, Brace & World. https://doi.org/10.1119/1.1937571

Neta R. (2007), "Naturalism in Question," *Philosophical Review* 116, 657–662. https://doi.org/10.1215/00318108-2007-020

Oppy G. (2024), *Naturalism*, [in:] *Naturalism and Its Challenges*, G. N. Kemp, A. H. Khani, H. S. Rezaee, and H. Amiriara (eds.), Routledge, 1–18.

Papineau D. (1993), *Philosophical Naturalism*, Oxford: Blackwell.

Papineau D. (2021), *Naturalism*, [in:] *The Stanford Encyclopedia of Philosophy*, E. N. Zalta (ed.), https://plato.stanford.edu/archives/sum2021/entries/naturalism/

Plunkett D. (2015), "Which Concepts Should We Use? Metalinguistic Negotiations and the Methodology of Philosophy," *Inquiry: An Interdisciplinary Journal of Philosophy* 58(7–8), 828–874. https://doi.org/10.1080/0020174x.2015.1080184

Price H. (1988), *Facts and the Function of Truth*, Oxford: Basil Blackwell.

Price H. (2001), *Causation in the Special Sciences: The Case for Pragmatism*, [in:] *Stochastic Causality*, D. Costantini, M. C. Galavotti, and P. Suppes (eds.), Stanford: CSLI Publications.

Price H. (2004), *Naturalism Without Representationalism*, [in:] *Naturalism in Question*, M. De Caro and D. Macarthur (eds.), Cambridge, MA: Harvard University Press, 71–88.

Price H. (2007), "Quining Naturalism," *The Journal of Philosophy* 104(8), 375–402. https://doi.org/10.5840/jphil2007104812

Price H. (2011), *Naturalism Without Mirrors*, Cambridge: Cambridge University Press.

Price H. (2013), *Two Expressivist Programmes, Two Bifurcations*, [in:] *Expressivism, Pragmatism and Representationalism*, H. Price, S. Blackburn, R. Brandom, P. Horwich, and M. Williams (eds.), Cambridge: Cambridge University Press, 22–44. https://doi.org/10.1017/cbo9780511842498.004

Putnam H. (1969), *Is Logic Empirical?* [in:] *Boston Studies in the Philosophy of Science*, R. S. Cohen and M. W. Wartofsky (eds.), vol. 5, Dordrecht: Springer.

Putnam H. (1978), "There Is at Least One a Priori Truth," *Erkenntnis* 13(1), 153–170, http://www.jstor.org/stable/20010625. https://doi.org/10.1007/bf00160892

Putnam H. (1987), *The Many Faces of Realism*, LaSalle: Open Court. https://doi.org/10.4324/9781003061502-12

Putnam H. (1990), *Realism with a Human Face*, Cambridge: Harvard University Press. https://doi.org/10.1515/9781400848393-063

Putnam H. (1993), *Why Reason Can't Be Naturalized*, [in:] *Philosophical Papers, Vol. III: Realism and Reason*, Cambridge: Cambridge University Press.

Putnam H. (1999), *The Threefold Cord, Mind, Body, and World*, New York: Columbia University Press.

Putnam H. (2004), *Content and Appeal of 'Naturalism'*, [in:] *Naturalism in Question*, M. De Caro and D. Macarthur (eds.), Cambridge, MA: Harvard University Press, 59–70.

Putnam H. (2010), *Meaning and the Moral Sciences*, Routledge.

Putnam H. (2012a), *Indispensability Arguments in the Philosophy of Mathematics*, [in:] *Philosophy in an Age of Science: Physics, Mathematics, and Skepticism; A Collection of Essays by Hilary Putnam*, M. De Caro and D. Macarthur (eds.), Cambridge, MA: Harvard University Press, 181–201.

Putnam H. (2012b), *Philosophy in an Age of Science. Physics, Mathematics, and Skepticism*, Cambridge, MA: Harvard University Press.

Putnam H. (2015), "Naturalism, Realism, and Normativity," *Journal of the American Philosophical Association* 1(2), 312–328. https://doi.org/10.4159/9780674969117

Putnam H. and De Caro M., eds. (2016), *Naturalism, Realism, and Normativity*, Cambridge, MA: Harvard University Press. https://doi.org/10.4159/9780674969117-002

Quine W. V. O. (1948), "On What There Is," *Review of Metaphysics* 2, 21–38. https://doi.org/10.2307/j.ctvcm4fzv.18

Quine W. V. O. (1951), "Two Dogmas of Empiricism," *Philosophical Review* 60(1), 20–43. https://doi.org/10.2307/j.ctvcm4fzv.17

Quine W. V. O. (1969), *Epistemology Naturalized*, [in:] *Ontological Relativity and Other Essays*, New York: Columbia University Press.

Quine W. V. O. (1975), *The Nature of Natural Knowledge*, [in:] *Mind and Language*, S. Guttenplan (ed.), Oxford: Oxford University Press, 67–81.

Rosenberg A. (1996), "A Field Guide to Recent Species of Naturalism," *The British Journal for the Philosophy of Science* 47(1), 1–29. https://doi.org/10.1093/bjps/47.1.1

Rosenberg A. (2018), *Philosophical Challenges for Scientism (and How to Meet Them?)* [in:] *Scientism: Prospects and Problems*, J. de Ridder, R. Peels, and R. Woudenberg (eds.), Oxford: Oxford University Press, 83–105. https://doi.org/10.1093/oso/9780190462758.003.0004

Sellars R. W. (1922), *Evolutionary Naturalism*, Chicago: Open Court.

Sellars R. W. (1924), "The Emergence of Naturalism," *The International Journal of Ethics* 34(4), 309–338. https://doi.org/10.5840/apapa2013709

Simpson M. (2017), *Non-Representationalism and Metaphysics*, Apollo - University of Cambridge Repository, https://doi.org/10.17863/CAM.13878

Simpson M. (2019), "Deflationism and Truthmaking," *Synthese* 198(4), 3157–3181. https://doi.org/10.1007/s11229-019-02273-y

Simpson M. (2020), "Creeping Minimalism and Subject Matter," *Canadian Journal of Philosophy* 50(6), 750–766. https://doi.org/10.1017/can.2020.20

Sober E. (2009), *Evidence and Evolution. The Logic Behind the Science*, Cambridge: Cambridge University Press.

Soter S. (2006), "What is a Planet?" *The Astronomical Journal* 132(6), 2513. https://doi.org/10.1038/scientificamerican0107-34

Spiegel T. J. (2023), "Why Naturalism Cannot (Merely) Be an Attitude," *Topoi* 42(3), 745–752.

Spiegel T. J., Schüz S., and Kaplan D. (2023), "Introduction to Naturalism: Challenges and New Perspectives," *Topoi* 42(3), 671–674. https://doi.org/10.1007/s11245-023-09927-0

Turunen P., Hirvonen I., and Pättiniemi I. (2023), "Epistemological Scientism and the Scientific Meta-Method," *Euro Journal of Philosophy of Science* 13, 26. https://doi.org/10.1007/s13194-023-00526-9

Veit W. and Browning H. (2020), *Two Kinds of Conceptual Engineering*, Preprint, https://philsci-archive.pitt.edu/id/eprint/17452

Williamson T. (2013), *Modal Logic as Metaphysics*, Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199552078.001.0001

Williamson T. (2016a), *What is Naturalism*, 2015–2016 Humane Philosophy Project / Ian Ramsey Centre seminar, University of Oxford, https://youtu.be/33qfCWesE1E

Williamson T. (2016b), "Abductive Philosophy," *The Philosophical Forum* 47, 263–280. https://doi.org/10.1111/phil.12122