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Three Approaches to Logical Correctness

Abstract. This paper outlines three broad ways one might think about logical correctness: the Realist approach, the One-Language approach and my own Neo-Carnapian view. Although the realist and one-language views have dominated the philosophy of logic in recent years, I argue against them, favouring of the Neo-Carnapian approach.

Keywords: Carnap; logical correctness; logical pluralism; logical realism

Introduction

This paper outlines three different ways one might think about logical correctness[1]: the Realist approach, the One-Language approach and my own Neo-Carnapian view. The realist and one-language views have dominated the philosophy of logic in recent years. I argue against these approaches and in favour of the Neo-Carnapian approach.

The Realist view holds that logical correctness is language and mind-independent.

They hold the following:

OBJ: There are logical facts and they are objective, in the sense that they are mind and language-independent.

REL: These facts matter for logical correctness. The interesting notion of logical correctness is correctness with respect to the logical facts.

I have in mind individuals like Frege (1879; 1893), the early Wittgenstein (1922), Tahko (2014, 2021), Williamson (2017) and McSweeney (2018,

[1] See (Haack, 1978) for an important early formulation of the problem of correctness.

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2019), from whom I take the term 'logical realist', along with naturalists like (arguably[2]) Quine (1960, 1970, 1981) and Maddy (2007, 2012).

The One-Language view takes logical correctness to be semantic and hence not language-independent. However, what they take to be interesting for the philosophy of logic is correctness for some fixed language.

SEM: Logical truths are semantic in that they are mind- but not language-independent.

OL: The semantic truths, given some fixed language, are what matter for logical correctness. The interesting sense of logical correctness is correctness with respect to the semantic facts of some fixed language.

I have in mind individuals like Dummett (1991), Wright (1992), Pedersen (2014), Beall and Restall (2005), Cook (2010, 2023), Shapiro (2014), Priest (2014), Russell (2015), Martin and Hjortland (2020), and Griffiths and Paseau (2022).

Within One-Language views, I also include individuals like Lewis (1986, 1998) who engage in linguistic explication. This is discussed below. Others on the above list could also be categorized along with Lewis as explicators.

Lastly, the Neo-Carnapian. This view is my own and, whilst inspired by Carnap's (1934) view and sharing many similarities, breaks from it at a crucial juncture. The Neo-Carnapian approach agrees with **SEM** but rejects **OL**. They are interested in how logics can be correct across a range of languages, not simply their own. Moreover, the Neo-Carnapian takes there to be a complex web of reasons speaking for or against the adoption of one language or another. They see this web of reasons as of great importance to the philosophy of logic. The Neo-Carnapian has two notions of logical correctness. First, a logic can be descriptively correct for some language iff it captures the truth-preserving inferences of that language. Second, logics can be normatively correct if they are descriptively correct for a language one has reason to adopt.

The Neo-Carnapian approach claims the following:

[2] There is some debate to be had here. For Quine, logical truths are theory internal. If one thinks of theories as similar to Carnapian frameworks, then Quine is likely not a realist. I read Quine as saying that there are objectively correct or incorrect theories, consequently objectively correct and incorrect logics. Hence I include him as a logical realist. See (Keskinen, 2012) for a discussion on realist vs anti-realist readings of Quine about objects, which can be helpfully applied here.

SEM: Logical truths are semantic in that they are mind- but not language-independent.

ML: The semantic truths across many languages are what matter for descriptive logical correctness. A logic is descriptively correct for some language iff it captures the valid inferences in that language.

NORM: There exists a complex web of reasons for and against adopting one language over another. A language is normatively correct iff it is descriptively correct for a language those reasons speak in favour of.

Here I have in mind my own view, though this is greatly inspired by Carnap's view.

§1 clarifies some preliminaries. §2 presents Carnap's view, then contrasts it with my own Neo-Carnapian view. §3 outlines the realist approach and gives two reasons against it. A third reason is mentioned in passing but not discussed in detail. §4 outlines the one-language approach, gives two reasons against it and defends the Neo-Carnapian view from an objection.

1. Preliminaries

1.1. Logic as the normative laws of reasoning?

There is a fourth possible approach to logical correctness that can be found in the work of, amongst others, Frege and Priest (1987, 2006, 2010), amongst other places: the normative approach.

On this view logic is the study of the laws of reasoning. Now, what is meant here is not the *descriptive* laws of reasoning; that would be Psychologism and is, I think, close to universally rejected. Logic is the study of the *normative* laws of thought, i.e., the study of how we *should* reason, the kinds of inferences we may or ought make. On this view, a logic is correct iff it correctly describes the normative laws of reasoning.

Some weaker version of this view is obviously true. Clearly, something logics need to do is adjudicate the success of arguments. Philosophy of logic must include the philosophy of that adjudication.

However, accepting this claim does not speak for or against any of the three views discussed in this paper. Language and reasoning are clearly connected. Language is typically the vehicle for reasoning or, at least, the way in which reasons are *expressed*. It makes sense, then, for language to be the direct object of critique of logic, as linguistic inferences

can actually be evaluated in a way pure thoughts cannot, even if this is just a proxy for "proper" reasoning.

Blake-Turner and Russell (2021), and Russell (2020) as a solo author, have replied to this view, arguing that logic should be thought of as the descriptive study of truth-preserving inference rather than the normative study of reasoning. Given that reasoning is concerned with truth preservation, a descriptively true theory of truth preservation is also a normatively true theory of reasoning.

I am convinced by their explanation for two reasons.

First, most logic textbooks do not discuss normativity but do discuss truth. For example, Halbach's (2010) "Logic Manual" contains the word "truth" 254 times but fails to use the word "norm" or any co-conjugations thereof even once. Even Priest, an advocate of the normative view of logic, never uses the word "normative" in his non-classical logics textbook (Priest, 2008). The word "norm" appears once, though not in connection to reasoning. "Truth" appears 64 times. This does not speak *decisively* in favour of Russell's claim. It might just be that truth talk is more pedagogically useful than norm talk. But this at least provides some prima-facie evidence that logic is really about truth-preserving inference and merely used as a normative tool.

Second, there are many norms of reasoning that aren't of interest to logic. One might have obligations to one's friends or loved ones to believe certain things about them. One might have duties to one's self to believe in a way that promotes what's best for you (James (1896)). One might have obligations not to believe racist beliefs (See the collection by Kim and McGrath (2019), in particular, Basu and Schroeder (2019)). All of these are norms of reasoning but none are of interest to logic. Russell's account explains why only some norms of reasoning are relevant to logic.

Given, then, that the normative view of logic collapses into Russell's descriptive account, what matters for logic is truth preservation. Logical monism/pluralism/nihilism is then true iff there are is one/many/no correct theory/theories of truth preservation.

But one might be a realist about truth, claiming that there are language- and mind-independent facts about the nature of truth (see, e.g., Wittgenstein, 1922; Armstrong, 1997; Maddy, 2007). Alternatively, one might think truth is semantic (see Tarski, 1931, 1943; Field, 2001). But if truth is semantic, should one be concerned with truth in some fixed language or how truth differs across languages?

Whichever answers one agrees with, one arrives at one of the three positions outlined above.

1.2. Logic and Generality

Logical correctness, it is frequently claimed, is maximally general (see, e.g., Williamson, 2007, 2013a,b; Priest, 2006, 2014). In different domains on inquiry, different logical rules are correct or incorrect. To find the one true logic, simply take the intersection of the correct rules across all domains. How does this claim interact with the three theories outlined here?

But note that the generality claim does not fully explain the nature of logical correctness. Instead, it deflates the notion of correctness in general to the notion of correctness for a domain. One still needs to give an account of domain-relative correctness and this will presumably have to be done in, more or less, one of the three ways outlined here.

Claims about generality and logic, then, whilst very interesting and important for discussions of, say, logical pluralism, are surprisingly somewhat tangential to the nature of logical correctness.

1.3. What do the three approaches disagree on?

I do not believe that there is an objectively correct notion of logical correctness. The disagreement between the three approaches outlined is not about which notion of logical correctness, and hence which versions of logical monism, pluralism and nihilism, is correct, in some objective sense. All three approaches make perfectly intelligible claims about the relationship between logics, languages and reality. It is uninteresting if the ordinary notion of "logical correctness" is closer to Realism, the One-Language view or the Neo-Carnapian view.

The disagreement is about the relative importance of these three competing notions. The three approaches might grant that each other's notions of correctness are perfectly intelligible, whilst rejecting that this is interesting or important for logic or the philosophy of logic.

Suppose for instance that the following is the case:

1. A logic L_1 perfectly captures the logical structure of reality.
2. A logic L_2 perfectly captures the semantics of our actual language.
3. A logic L_3 is the most advantageous logic to work with, in a given context.

The logical realist, one-language theorist and Neo-Carnapian all know these facts.

The logical realist takes (1) to speak decisively for L_1. After all, L_1 is objectively right. The world is the way L_1 says it is.

The one-language theorist takes (2) to speak decisively for L_2. It does not matter that L_1 is 'right' in some objective sense. We do not reason in the pure concepts of the universe, we reason in our actual potentially flawed language. Consequently what matters is if our actual language endorses an inference.

The Neo-Carnapian takes (3) to speak decisively for L_3, within this context. (1) might be interesting; there are certainly some contexts where capturing the logical structure of reality is important. (2) is just irrelevant. We can change our language quite easily; there is no good reason for conservatism for conservatism's sake. If L_2 is sub-optimal, our language should just be changed to satisfy a better logic. What matters is understanding what a context requires our logic to do (which might include capturing the logical structure of reality) and picking a logic that best meets those requirements. L_3 is that logic.

What this means is that the disagreement between the three approaches isn't per se about which logics relate to which kinds of linguistic or metaphysical structures in which ways, but rather about what those relations mean for the adoption of a particular logic. The disagreement is about the philosophical upshot of potentially agreed-upon facts, not necessarily the facts themselves.

Now, they might also disagree on these facts. In particular, there are plausible objections to Logical Realism that deny that there is even such a thing as the objective logical structure of reality, or that we could know about it. §3.2 briefly discusses these objections. The point is that one can just as easily object to logical realism on the grounds that objective logical facts are irrelevant as one can on the grounds that there are no objective logical facts.[3]

[3] Even if one were to show that there are no objective logical facts, that would not necessarily mean that logical realism is wrong. It might just mean that logical nihilism is true — logics are correct iff they are descriptively true theories of the objective logical facts. There are no objective logical facts. So there are no correct logics.

2. The Carnapian and Neo-Carnapian approaches to Logical Correctness

2.1. Carnap's Philosophy of Logic

Carnap agrees with **SEM** and **ML**. He takes logics to be correct relative to a language. Logical facts are mind- but not langauge-independent. The majority of the *Logical Syntax of Language* (LSL) is devoted to showing how a first-order logic and a type theory could be true of two different languages.

For example, one might define a language where predication is Boolean or a language where it allows for predication gluts or gaps. This would then yield a difference in the validity of certain logical rules. Disjunctive syllogism, for instance, is valid in two-valued logics but not glutty three-valued logics.[4] One might define a language where all terms refer or where they may be empty terms. These semantic choices lead to different correct logics in that language.

However Carnap, at least in some places, appears to disagree with **NORM**. His tolerance principle states the following (LSL P52):

> In logic there are no morals. Everyone is at liberty to build up [their] own logic, i.e. [their] own language. All that is required of [them] is that, if [they] wishes to discuss it, [they] must state [their] methods clearly, and give syntactical rules instead of philosophical arguments.

He continues saying that: "It is not [the business of philosophy of logic] to set up prohibitions, but to arrive at conventions".

One one reading of Carnap's view, that a logic is correct for some language is sufficient to reason with it, provided one is clear about one's choice of language. There are no prohibitions, normative or descriptive, to be placed on one's choice of logic. There is certainly not the Neo-Carnapian's web of reasons as outlined in **NORM**.

This reading of Carnap is a little old-fashioned. It is the reading present in, for instance, (Prior, 1960) and (Belnap, 1962). More recent work on Carnap tends to read the tolerance principle in a more modest

[4] Consider the following formulation of the logic LP. There are three truth values: T, F and B. T and B are designated. $\phi \vee \psi$ takes the maximum value of ϕ and ϕ on the order $T > B > F$. $\neg\phi$ behaves classically for T and F and takes B to itself. Now consider the assignment where ϕ is F and ψ is B. $\phi \vee \psi$ and $\neg\psi$ are B, both designated, but ϕ is F, undesignated. Thus disjunctive syllogism is invalid in this logic.

manner. Marschall (2023), discussing Carnap (1934), says the following:

> Traditional philosophy, so Carnap, was hindered by the idea that basic rules and principles have to be justified as being correct. Once we give up this presupposition in favor of the principle of tolerance, we will overcome the "pseudo-problems and wearisome controversies" associated with it in favor of a "boundless ocean of unlimited possibilities".

The tolerance principle, on Marshall's reading, is simply the rejection of the need to establish the truth or validity of one's logical rules prior to their use. The possibility of normative considerations deciding between competing choices of rules is left very much open. Steinberger (2015) and Kissel (2023) make comparable claims about the role of normativity in Carnap's account of logical or framework selection.

For further evidence of a more normative reading of Carnap, I would also point to the closing lines of *Empiricism, Semantics and Ontology*:

> The acceptance or rejection of abstract linguistic forms, just as the acceptance or rejection of any other linguistic forms in any branch of science, will finally be decided by their efficiency as instruments, the ratio of the results achieved to the amount and complexity of the efforts required. (Carnap, 1950)

This Carnap, the normative Carnap, is much closer to my own Neo-Carnapian position. Perhaps my own view really is just Carnap's, when all's said and done.

There are therefore some passages in Carnap's work where he appears to accept **NORM** and some passages where he appears to reject it. Given these exegetical questions, how is it best to proceed?

This paper is not a work of Carnap scholarship. Spending too much time establishing exactly what Carnap *really* meant with the tolerance principle would distract from this papers main goal: an analysis of logical correctness. For the sake of a helpful contrast, in this paper I will read Carnap in the "old-fashioned" way. I will take the tolerance principle to be a rejection of **NORM**. This is just to bring out an important contrast in different Carnapian positions. It is not to say that I endorse the "old fashioned" reading of Carnap- quite the opposite.

2.2. The Neo-Carnapian view explained

Like Carnap, the Neo-Carnapian takes logical correctness to be a language-relative matter. A logic is correct only if it is sound. Typically,

a logic will be correct iff it is sound and complete, but this requirement will obviously have to be weakened in the context of higher-order logics.

However, soundness and completeness depend on the nature of truth and the nature of truth varies from language to language. Languages might differ in the connectives they use, the number of truth values they have, the nature of identity, predication or quantification, or any other number of determinables. Consequently, which logic is correct varies from language to language.

The relevant question, then, is how to decide which language one ought work in. For Carnap, at least as I am presenting him, there is not much to say here. It is simply a matter of arriving at a convention, there are no stronger normative considerations which determine which language one really *should* work within.

For the Neo-Carnapian, however, this is where one of the most interesting parts of the philosophy of logic begins. The Neo-Carnapian sees a complex web of reasons speaking for or against one language or another. There are questions about how one might want predication or naming to function, or what truth, falsity or other truth values should signify about the true statement. There are questions about what we want our logics to do or how we want our language to go about carving up the world.

One of the central tasks of the philosophy of logic, according to the Neo-Carnapian, is to map and understand these reasons and how they relate to one another. Language selection, for the Neo-Carnapian, is then a complex and philosophically rich issue.

To return momentarily to §1.1, I think it is helpful to consider how the Neo-Carnapian view thinks about the norms of reasoning to understand their view. The Neo-Carnapian has a two-tiered view of the norms of reasoning. On the higher tier, there are norms relating to language selection. There are reasons that speak for or against the use of one language or another. There are then lower-tier reasons that say, given some choice of language, how one ought reason. These lower-tier reasons are, to use Kant's terminology, hypothetical imperatives.

In summary, then, the Neo-Carnapian makes the following claims:

SEM: Logical truths are semantic in that they are mind- but not langauge-independent.

ML: The semantic truths across many languages are what matter for descriptive logical correctness. A logic is descriptively correct for some language iff it captures the valid inferences in that language.

NORM: There exists a complex web of reasons for and against adopting one language over another. A language is normatively correct iff it is descriptively correct for a language those reasons speak in favour of.

2.3. A brief comment on reasons pertaining to logic selection

Having stated that the primary difference between Carnap's view and the Neo-Carnapian view is the acceptance of a network of normative reasons counting for or against one choice of logic or another, it is important to provide a little more detail as to what these reasons look like.

I do not wish to give an exact theory of the reasons pertaining to logic selection here. Different neo-Carnapian views might differ on exactly what the correct normative theory of logic selection is. I personally haven't settled on a singular account. It would therefore be unhelpful to commit the Neo-Carnapian approach to a singular normative theory at this stage. That being said, it's worth considering the kinds of considerations that might appear in these sorts of theories.

Context must play a large role in any good normative theory of logic selection. Contexts, amongst other things, often contain certain goals or aims. The context of fundamental physics, for instance, might have the goal of capturing the structure of reality as closely as possible. Consequently, the kinds of metaphysical considerations outlined below in §3 might be more important within this context. Many social contexts might need to track many types of identity across time and might therefore benefit from the inclusion of non-rigid designators. Many contexts in the macroscopic world do not need to specify every vague boundary and hence might benefit from adopting a fuzzy logic.

It might even be the case that all of the norms of logic selection come from contextual factors. There might be no "universal" norms of logic selection. I remain neutral on this question. There is certainly something to be said for it, but I don't think a decisive case can be made in favour of it.

Other considerations might be pragmatic. Some logics might simply be easier or more productive to reason with. For instance, all else being equal, a stronger logic is likely better. If a logical rule could be unproblematically adopted within a context without undermining some other beneficial feature, then it likely should be.

Whilst this is far from a full normative theory of logic selection, this hopefully clarifies the kinds of considerations that the Neo-Carnapian takes to be relevant to logic selection.

Additionally, there is the question of the appropriate logic to use when evaluating competing logics. There is a danger of a regress: any framework for or theory of the normative aspect of logic selection will, itself, be governed by some logic. But how does one select the appropriate logic for logic selection, given that this is precisely the matter under concern?

Both Steinberger (2015) and Kissel (2023) have discussed this issue at length. I take Steinberger's reply to be sufficient here — This might be a regress, but not a vicious one. Any functional theory of logic selection maps logics to tasks to which they are either well or ill-suited. As long as it considers itself to be well suited to the task of logical arbitration, the regress is not necessarily problematic.

There's more to say on this interesting objection to the Carnapian position, but this is deferred to future work as it is somewhat tangential to the nature of logical correctness.

3. The Realist approach to Logical Correctness

3.1. Logical Realism Explained

Logical Realism holds that there are objective logical facts. Logic is the descriptive study of those facts. It is modern defenders include the likes of (Tahko, 2014, 2021; McSweeney, 2018, 2019; Maddy, 2007, 2012). Historic defenders include but are certainly not limited to Frege (1879, 1893), the early Wittgenstein (1922) and Quine (1960, 1981).

I take Logical Realism to amount to the following two claims:

OBJ: There are logical facts and they are objective, in the sense that they are mind and language-independent.

REL: These facts matter for logical correctness. The interesting notion of logical correctness is correctness with respect to the logical facts.

What are logical facts and what are they like?

Exactly what one wants to say about logical facts will depend on one's metaphysical views. Tahko, for instance, is a committed Neo-Aristotelian and would likely have something quite different to say than,

say, Wittgenstein. It would be more than a little impractical to enumerate all the possible metaphysical positions and how they might go about adopting the realist's approach. What I present instead is an example position that serves as an exemplar of this kind of position, a dummy model that captures the essence of Logical Realism.

Although the arguments of this section are presented in response to the exemplar, this is only for ease and brevity of explanation. The arguments will generalise quite naturally to other versions of logical realism as well, though I want to leave open the option that especially well-crafted versions of logical realism might find inventive ways of avoiding one, many or all of my objections.

For the exemplar, I use a factive ontology, which has elsewhere been called a truthmaker ontology or an assertory ontology. On this view, the world is, at least in part, composed of facts. By facts, here, I do not simply mean true sentences. No one denies that there are facts in the sense of true sentences. What the factive ontologist asserts is that there are language-independent *things* called facts.

Exactly what those facts are will differ between different versions of this view, but a natural view would be that they're abstract objects. Sentences are about facts, perhaps some sentences about many facts. They are true iff the fact(s) they are about exists[5].

Facts stand in certain relations to one another. A fact ϕ might be the negation of a fact ψ. A fact ρ might be the conjunction of the facts ϕ and ϕ.

A basic category of facts are what we might call first-order facts. These are simple descriptive facts about the world[6]. These include atomic facts, which predicate a relation of some objects, truth-functional combinations of first-order facts, such as conjunctions, disjunctions, etc, and quantified statements about the world, such as "all men are mortal" or "there are some critics who only admire one another".

There are also facts about facts, I will call these higher-order facts. For instance, there might be the fact that, necessarily, it is never the

[5] There's an alternative version of this view where all facts exist necessarily but contingently have the properties of truth, falsity or whichever other truth values there might be.

[6] This is not to be confused with first-order in the *quantificational* sense. I am contrasting facts about the world with facts about facts, not different types of quantification.

case that both a fact and its negation exist. This is the metaphysical formulation of the law of non-contradiction – **LNC**.

Logical facts are higher-order facts about what possible facts can exist alongside others. For instance, if it might say that if the fact that ϕ exists then the fact $\phi \vee \psi$ exists as well. Logical facts take the form "If the facts x_1, x_2, x_3, etc do/do not exist; then the facts y_1, y_2, y_3, etc do/do not exist."

On the simplest version of logical realism, a logic is correct iff it is a correct descriptive theory of the logical facts[7]. So if the existence of facts x_1, x_2 and x_3 necessitate the existence of fact y then it should be the case that $x_1, x_2, x_3 \vdash y$ in the logic.

There are more fined-grained versions of logical realism that are even more demanding. McSweeney (2018, 2019), for instance, argues that there are certain privileged sets of logical operators. Universal quantification might be more basic than existential quantification, for instance. On a factive view, this would correspond to a fundamentality relation between facts. The universal fact that $\forall x\phi$ is more fundamental than the existential fact that $\neg\exists x\neg\phi$.

Resolving the argument between McSweeney and more modest logical realists is not necessary for this paper and the point at hand. What's worth noting for present purposes is that this debate essentially amounts to an argument about what the logical facts are. The view presented here is just concerned with what facts exist. McSweeney argues that the logical facts also include facts about quite fine-grained dependence between logical facts and that these also need to be reflected in the logic. The outcome of this debate is not necessary for this paper, though, so no more is said on it in the main paper. A few comments are made in footnote, however.[8]

[7] Or at least as many of them as possible, given completeness constraints in higher order logics.

[8] I do think McSweeney's version of logical realism is less plausible than more modest views. McSweeney needs to establish three things: (1) There are facts about the objective priority between logical connectives, e.g., which complete sets of connectives are *really* fundamental and which are *really* derived (2) We can know said facts and (3) We should actually care about these facts, if they do exist.

On (1), I confess some level of confusion. I am honestly unsure what the world would have to be like in order for, say, existential quantification to be objectively more fundamental than universal quantification. What are the ways the world could be that would make either of these true?

(2) runs into well-known (Benacerraf, 1965)-style objections, given McSweeney's

How does this work in practice when considering debates between rival logics? Here are two examples: fuzzy vs classical logic, and free vs classical logic.

Consider the debate over fuzzy logic. On non-fuzzy views, predication is binary. Objects satisfy a predicate or they don't. Metaphysically, this amounts to the claim that there exist full facts about some objects satisfying the predicate (or negative facts about them failing to). In fuzzy logic, objects can partially satisfy predicates. It can be, say, 20% true that $P(a)$. Metaphysically, this could amount to the claims that (1) there exist partial facts — i.e., facts about partial states of affairs or (2) full facts can partially exist.

But these are both claims about the logical facts. The question about which logic is correct reduces to a set of claims about the nature of these facts.

Similarly so in the debate between classical logic and various types of free logic. Free logics break from classical logics in that they allow for terms which don't refer, e.g., when the referent does not exist. Free logics can be negative if atomic sentences containing empty terms get false truth values or gappy if atomic sentences containing empty terms get no truth value.

There is some question as to how classical logic should handle non-existence. Terms in classical logic have to refer. Certainly, if we have classical logic with rigid designators, necessitism follows, i.e., everything that possibly exists necessarily exists. Assume for the present case that names do have to be rigid designators, though an analogous case challenging this is considered in §3.3.

If necessitism is true, then classical semantics for terms is correct. For any object o, o exists in every world, so the fact that $o = o$ exists in every world, so classical identity introduction is valid.

If necessitism is false, again assuming names have to be rigid designators, then the classical semantics for identity cannot be true. There

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view of logical facts as abstract. Besides that issue, it is difficult to see how one could ever establish which of $\forall$ or $\exists$ is more metaphysically fundamental, given that the resulting logics are entirely formally equivalent.

Lastly, (3) is the subject of a localised version of the Neo-Carnapian's objection to the relevance of logical facts (3). Even if there is an objective priority between connectives or quantifiers, for instance, it is not obvious why one should care about that when selecting one's logic. It is unclear how we're better equipped to understand the world by using a logic that respects this objective priority.

are contingent objects o which do not exist in some worlds. In those worlds the fact $o = o$ does not exist. So classical identity introduction is invalid.

Exactly which free logic would be correct depends on whether the fact that $o \neq o$ exists in worlds where o does not. And, more generally, if negations of atomic facts about o exist in non-o worlds. If they do, negative free logic is true. If they do not, gappy-free logic is true.

The crux, though, is that all of these are questions about the logical facts which, according to logical realism, determine logical correctness.

In summary, the logical realist claims the following:

- There are objective (i.e., language and mind-independent) logical facts.
- The logical facts are higher-order facts about the relationship between other kinds of facts
- A logic is correct iff it correctly describes the logical facts. There are some different options available as to which facts are the logical facts.
- Given this, logical questions are determined by metaphysical questions.

I discuss three objections.

3.2. Standard Nominalist Objections

Familiar nominalist objections against this kind of position can be raised. Following Burgess and Rosen (1997), there are three types of familiar nominalist objections: Semantic, Ontic and Epistemic.

A semantic argument, following someone like Ayer (1936), might conclude that talk of strange metaphysical objects called facts is, simply put, non-sense.

Similarly one might argue for a world where there are no abstract metaphysical facts, just ordinary concrete objects.

Lastly, one might argue that even if there are things called facts, one could never know about them Benacerraf (1965, 1973).

Each of these three objections provides a different way to reject **OBJ**.

This is, though, all rather well-trodden ground, at least with respect to the analogous issue of mathematical realism (see, e.g.. Quine, 1981; Liggins, 2006; Linnebo, 2006; Lange, 2016; Leng, 2021).

Moreover, these arguments only target the versions of Logical Realism where logical facts are taken to be abstract. For Tahko and Maddy, for instance, this is not the case.

So for three reasons, I am not going to discuss this line of objection any further:

1. These are well-trodden debates about which I could not hope to briefly say anything novel.
2. These objections only target abstract logical realism, not logical realism in general.
3. These arguments involve highly contentious claims about the nature of knowledge, language and reality. I do not want to hang the case against the Logical Realism on such contentious assumptions.

Instead, I give two hopefully less contentious and perhaps more novel arguments against logical realism. I target **REL** rather than **OBJ**. First, even taking logical realism at its strongest, there are debates in the philosophy of logic which aren't resolved by objective logical facts. This means that logical correctness can't *merely* be a matter resolved by the logical facts. Metaphysics might play a role, but it requires a little help. Second, even if there are logical facts, it is unclear why they are always relevant to logic selection and a notion of logical correctness not relevant to logic selection is less relevant than one that is.

3.3. Logical facts do not resolve every debate between logics

This section argues that even taking logical realism at its strongest, there are still questions about the validity of certain logical rules which are not resolved by the logical facts alone. For the sake of argument, grant, contra the previous section, that there are logical facts and that we have perfect epistemic access to these facts. Nevertheless, there are some questions about the validity of logical rules which are not fully resolved.

Consider the logical rule that allows for the substitution of identity inside modal operators. Call this the **MSR** for the modal substitution rule. The prima facie grounds for accepting or rejecting **MSR** are clear for the logical realist. Assume, as in the case of free vs classical logics above, that names are rigid designators.

MSR is true iff if two terms refer to the same thing in some world, they refer to the same thing in all worlds (where either refers at all). Assuming that terms are rigid designators, this is true iff objects that are identical in one world are identical in all worlds (necessity of identity).

This is a substantive metaphysical claim that might be true or false, but what matters is that the status of **MSR** is determined by the logical facts about the necessity of identity.

The issue with this argument is that the assumption that names are rigid designators does a lot of work. Names certainly don't *have* to be rigid designators. One can make perfectly good sense of languages containing non-rigid designators.

An example of a name that might quite naturally be understood as a non-rigid designator is a name like 'Spiderman'. To illustrate a point, I ignore the distinction between fictional and non-actual names. I'll assume that everything that takes place within the fictional story of Spiderman takes place in some possible world and consider the semantics of the name 'Spiderman' within that world.

'Spiderman' is not a rigid designator. At some times in some worlds, 'Spiderman' refers to Peter Parker. At other times in other worlds, 'Spiderman' refers to Miles Morales. There are some worlds where it refers to neither. It changes its reference and is therefore a non-rigid designator.

Of course, one could still work in a language where names are rigid designators and accommodate for 'Spiderman' in known ways. There are two options: (1) When the apparent reference change happens, one could hold that this is actually the baptism of a new name. There are the two distinct names S_{mm} and S_{pp} (2) One could hold that "Spiderman" is really just a (definite) description in disguise, akin to designators like "The King of France".

I am certainly not claiming that a name like 'Spiderman' can only function as a non-rigid designator. I am simply claiming that it would be perfectly possible to have a language where 'Spiderman' is a non-rigid designator. I think it is even likely that English is one such language, but that's contentious.

Why does this matter for logical correctness?

MSR is invalid in languages with non-rigid designators. Necessarily, Spiderman is Spiderman. Contingently, Spiderman is Miles Morales. It would follow by **MRS** that necessarily Miles Morales is Spiderman, but this would be false.

Note that the presence of non-rigid designators is a sufficient but not necessary condition for **MSR** failing. If necessity of identity, the metaphysical law, is false, **MSR** fails either way. **MSR** only holds when (1) necessity of identity is true and (2) all names are rigid designators.

What does this mean for logical realism?

It is a semantic not a metaphysical matter whether names can be non-rigid designators in some particular language. The logical facts do not determine if a language contains non-rigid designators. But **MSR** depends on the claim that names are rigid designators. So **MSR** depends, at least in part, on something other than the logical facts. This means that the correctness of a logic containing **MSR** is not entirely determined by the logical facts.

Four objections on behalf of the logical realist:

Objection 1: We know from Kripke (1980) that names have to be rigid designators.

Reply 1: Kripke's arguments largely rely on case-intuitions. At best he shows that languages containing non-rigid designators are unintuitive. Perhaps that's a reason not to adopt those languages. Moreover, even if Kripke's right and names have to be rigid designators, that's a semantic fact, not a logical one. It would still be the case that logical correctness is not entirely settled by the logical facts. See Ahmed (2007) for further discussion of Kripke's work.

Objection 2: The correctness of the inclusion or exclusion of non-rigid designators is determined by the logical facts. There are objective facts about identity. The identity predicate in a language needs to describe these facts. If the necessity of identity is true, then terms need to rigidly designate so that the corresponding logical principle **MSR** holds as well. If necessity of identity is false, then non-rigid designators need to be allowed, so that **MSR** fails.

Reply 2: I am sceptical of objective facts about identity, even granting the existence of metaphysical facts more broadly. Identity seems to have more to do with the co-reference of names (i.e., something semantic) than anything metaphysical. Identity is really just an object-language expression of the meta-linguistic facts of co-reference. But even granting that there are, languages with non-rigid designators can still successfully describe the facts about identity, provided that they also contain rigid designators. The rigid designating part of the language succeeds in capturing an important metaphysical structure and the non-rigid part serves the practical utility of having non-rigid designators.

Objection 3: Logical realists frequently conceded that it's possible to define languages in which certain objectively incorrect rules are invalid or objectively incorrect rules are valid (see §3.4). They distinguish between logical rules being semantically and metaphysically correct (e.g.,

in Tahko, 2021). This is just another instance of that. You can define a language where **MSR** is semantically incorrect, but its metaphysical correctness is an objective fact.

Reply 3: The case is not like cases of mere semantic, but not metaphysical, correctness of a logical rule. The point is that what decides **MSR** is, in part, a fact about the nature of terms. There is no metaphysical fact that entirely determines **MSR**. There is no fact of the matter about **MSR** simply on the metaphysical level, because **MSR** depends on semantics facts as well as metaphysical ones.

Objection 4[9]: There is, arguably, more to logical correctness than merely capturing logical consequence. Other familiar kinds of theoretical virtues, such as comparative simplicity, play a role and allow the logical realist to resolve statements otherwise left undetermined by the logical facts (see, e.g., Williamson, 2013a; Priest, 2016; Hjortland, 2017, 2019a; Martin and Hjortland, 2020).

Reply 4: First, in the particular case of **MSR**, it is unclear to me how any of these considerations could resolve the issue of the inclusion or exclusion of rigid designators. Identical theories that differ only on this point are not obviously different with regards to the kinds of theory-choice virtues one might invoke.

Second, as with Reply 1, even if there is a way to resolve this question using these kinds of theory-choice virtues, this would still amount to a failure of the logical facts, in the realist's sense, to completely determine the correct logical rules. These considerations are potential reasons to include or exclude rigid designators from a language, but the truth of **MSR** is still in-part determined by the semantic fact of the inclusion or exclusion.

In summary, then, at best, the logical facts do not resolve all logical disputes. Many contain semantic elements that are not resolved on entirely metaphysical grounds. This means that logical correctness is not entirely determined by the logical facts, even granting that such facts exist.

3.4. Why care about the logical facts at all?

This argument is an adaptation of an argument against ethical realism first presented in Korsgaard (1996) and more recently discussed in Peterson and Samuel (2021). Their argument goes as follows. Suppose

[9] My thanks to an anonymous reviewer for this objection.

that there are objective ethical facts. E.g. certain actions take on a special property if they are good and lack that property if they aren't. Why, ethically, should we care about this property? What makes this property really something worth having? Even if the realist can establish that there are so-called 'ethical' facts, they still have the task of establishing why those 'ethical' facts are actually relevant to ethics, why they're something that should guide our actions.

The ethical realist needs to establish two claims: (1) that there are objective ethical facts which can be described by ethical theories and (2) that these facts are relevant to the question of which ethical theory one ought use. Korsgaard (1996) and later Peterson and Samuel (2021) argue that even if (1) is true, (2) does not automatically follow.

The same argument can be made with respect to logical realism. The logical realist has to establish two claims: (1) that there are objective logical facts (**OBJ**) and (2) that these facts are relevant to logical correctness (**REL**). This section targets this second claim.

Suppose, using the example of §3.1, that fuzzy predication is objectively false. Properties in reality really are boolean and there are no partial facts about some object o having the property P. The use of any fuzzy predicate would be, strictly, incorrect. It would fail to describe the objective structure of reality. But this does not mean that we should therefore abandon the use of fuzzy predicates. They are incredibly useful in contexts where undue precision is unnecessary and either difficult or actively unhelpful to achieve.

Take something like the distinction between a hill and a mountain. Suppose that reality is Boolean and either (1) there is a crisp cut-off somewhere between hills and mountains or (2) there is no objectively tenable distinction between the two. All there is from objective reality's point of view are blocks of rock standing at particular heights.

I think it would be impractical to care too much about reality here. If (1) is true, that does not mean that the concept of "mountain" should be fixed to the objective boundary. The concept might be used more practically to indicate, say, the need for warmer clothes or to expect a longer hike. It might be intentionally misapplied to draw out certain important considerations. If someone primarily familiar with the Alps asks if England has mountains, then "sort of" is probably the best reply, to indicate a level of contextually appropriate nuance, irrespective of where the objective boundary between hills and mountains sits.

If (2) is true, logical realism might lead one to think that the concepts of "hill" and "mountain" should be abandoned, or at least arbitrarily precisified in a manner that serves no practical purpose beyond ensuring that our languages models the One True Logic. But that would clearly be impractical. Just because no objective boundary for vague terms exists does not mean that they do not serve practical use. The terms, for instance, might indicate the kinds of clothing or equipment one should bring when hiking. This is not something a reality's eye view perspective would necessarily care about, but it is certainly something we should.

The upshot is that, in this case, the inclusion or exclusion of a particular semantic object from the language (e.g., fuzzy predicates) should be a pragmatic matter; the metaphysics is only of limited relevance. But this has the upshot that the correct logic to use is also a pragmatic choice in some contexts not a strictly metaphysical one. Logic selection does not always care about metaphysics.

Moreover, there is nothing special about hills and mountains here, or even vagueness for that matter. The more general idea is that there are frequently cases where pragmatic concerns are more important than metaphysical ones.

Interestingly, some logical realists agree. Tahko (2021) distinguish between the semantic and metaphysical correctness of a logical rule. Something like dialetheism, for instance, might offer the best account of the semantics of natural language liar sentences and hence be semantically correct for those languages, or be the most useful account of the liar and hence worth adopting, whilst nevertheless being metaphysically false . Moreover, the logical realists do not necessarily advocate for adopting languages whose logics are metaphysical correct. They might concede that objectively false logics are useful in some contexts. But these logics would nevertheless not be *correct*, merely a helpful falsehood.

Just as Newtonian Mechanics is an objectively false theory that is practically useful in contexts such as, say, building bridges, so too might dialethic or fuzzy languages be false but useful for some kinds of activity.

Surprisingly, the Neo-Carnapian and the logical realists find a fair amount of agreement here. The Neo-Carnapian concedes to the Metaphysician that there could be contexts where what the metaphysician calls 'logical facts' would matter (assuming such facts exist).[10] When

[10] Here my Neo-Carnapian breaks from Carnap quite sharply. Carnap could not acknowledge this as he believes metaphysical claims of this sort are framework-

doing fundamental physics, for instance, this might be the case. Both agree that there are also contexts where those considerations take a back seat in favour of other kinds of pragmatic considerations consideration. They very plausibly agree on which contexts are which.

Where is the disagreement, then, assuming Logical Realists follow Tahko's lead?

A small difference is in the two views respective attitudes towards the logical facts. The Logical Realist accepts that there are. My Neo-Carnapian remains neutral. This is not a trivial difference, given that one of the most popular interpretations of Quantum Mechanics, the Copenhagen Interpretation, explicitly opposes reading any kind of metaphysical structure into the world. Quantum Mechanics, on this view, is predictive but not descriptive.

But on the relevance of logical facts for logic selection, should such facts exist and be knowable, the Neo-Carnapian and the logical realist have essentially reached an agreement. The Neo-Carnapian is not claiming that there could not be certain logics that stand in some special relationship to certain logical facts, provided such facts exist. The Neo-Carnapian is also happy to admit that there might be contexts where the objective logical structure of reality, if such a thing exists, might be relevant for logic selection in some contexts; fundamental physics, for instance. They simply claim that this is not uniform across all contexts. Any logical facts that do exist are only sometimes relevant to logic selection. The logical realist provides the correct account of logical correctness for some contexts, but only for some.

Similarly the Logical Realist, should they follow Tahko's lead, might accept that there are logics which are (1) strictly metaphysically false (2) correct for some language and (3) more appropriate to use in some contexts than the objectively correct logic.

If this is the case, then the only disagreement between the Neo-Carnapian and the logical realist is over what to apply the label "logical correctness" to. This is, in true Carnapian style, a good old-fashioned semantic dispute!

Both grant that there is (1) a semantic notion of correctness that holds between logics and languages (2) a normative notion of correctness that says which languages/logics are appropriate for which contexts and

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independent and hence pseudo questions. My Neo-Carnapian is not committed to Carnapian frameworks, though.

(3) conditional on such facts existing, a metaphysical notion of correctness that relates logics to facts in the world. It is merely a disagreement over where to apply the particular label "correctness" simpliciter.

Nevertheless, the Neo-Carnapian's use of "correctness" has an advantage over the logical realist's: normative upshot. As discussed in §1.1, something I assume the concept of "correctness" is supposed to do is tell us which logical rules we may reason with. Logical correctness should give us normative guidance.

Metaphysical correctness does not achieve this. It only has relevance for how we should reason within the context of, say, fundamental physics. It does not provide any guidance on how to reason in day-to-day contexts, in non-fundamental domains of enquiry or when considering the kinds of logical paradox that frequently take the center in debates between different logics.

Normative correctness, on the other hand, is normatively important in all of above contexts. If normative upshot is a feature one wishes to preserve of logical correctness, then the Neo-Carnapian's definition of correctness is better than the Logical Realists.

4. The One Language Approach to the Logical Correctness

4.1. The One Language Approach Explained

The One-Language Approach holds that:

SEM: Logical truths are semantic in that they are mind- but not language-independent.

OL: The semantic truths, given some fixed language, are what matter for logical correctness. The interesting sense of logical correctness is correctness with respect to the semantic facts of some fixed language.

Dummett (1991, p. 338) puts the broad inclinations behind the one-language view quite nicely:

> My contention is that all these metaphysical issues turn on questions about the correct meaning-theory for our language. We must not try to resolve the metaphysical questions first, and then construct a meaning-theory in the light of the answers. We should investigate how our language actually functions, and how we can construct a workable systematic description of how it functions; the answers to those questions will then determine the answers to the metaphysical ones.

Amongst these metaphysical issues are questions in the philosophy of logic. This can be broken apart into two claims:

1. Many metaphysical, including logical, issues "turn on questions about the correct meaning-theory for our language" — This is **SEM**.
2. "We should investigate how our language actually functions, and how we can construct a workable systematic description of how it functions; the answers to those questions will then determine the answers to the metaphysical ones." — This is **OL** where the fixed language is the actual language.

Dummett was influenced by the later Wittgenstein (1953), who also has a One Language view. Following from Dummett, Wright (1992) and Pedersen (2014) should be read as having One Language views.[11]

The approach has also received a great deal of support from within the philosophy of logic. Shapiro (2014), for instance, takes logics to be models of truth-preserving inference in natural language. In Cook's (2010) survey of Logical Pluralism, he's clear that the he takes the appropriate notion of logical correctness to be fixed to natural language. He even goes so far as to call language-relative versions of logical pluralism "insubstantial".

Priest should also be considered in this group. He says the following:

> Given any theory, in science, metaphysics, ethics, logic, or anything else, we choose the theory which best meets those criteria which determine a good theory. Principal amongst these is adequacy to the data for which the theory is meant to account. In the present case, these are those particular inferences that strike us as correct or incorrect.
>
> (Priest, 2014, p. 217)

Priest's One Language view is a little hidden. In the first instance, Priest is talking about intuitions, not language. But he's interested in our intuitions about reasoning in natural language, not across a range of possible languages. Moreover, as discussed in (Hjortland, 2019b), if intuitions are to be seriously taken as evidence for logical correctness, this should be because of the intuitor's linguistic competence.

Other One Language views include (Beall and Restall, 2005; Russell, 2015; Martin and Hjortland, 2020; Griffiths and Paseau, 2022). (Hjortland, 2019b) contains an excellent discussion of this and related views.

[11] In general, the interface between the Alethic Pluralism and Logical Pluralism debates typically assumes a One Language picture.

I also include the project of linguistic explication as types of one-language views. Unlike pure natural language views explicators like (Lewis, 1986, 1998; Tarski, 1931) are willing to revise their languages to some extent, but not much. Lewis accepts that natural languages might not be consistent, but the job of philosophy is to tidy natural languages up causing as little disruption as possible; to find the formally consistent nearest neighbour to our natural languages. They too investigate a fixed language so accept **OL**, but it is our natural language's nearest consistent neighbour, not the natural language itself.

4.2. The Possibility of Linguistic Revision

The main argument against the one-language approach comes from the possibility of linguistic revision. Given that languages *can* be changed, the semantic rules of any particular language are not especially important in determining with which logic one should reason. Suppose, for instance, one's fixed language contains fuzzy predicates. It does not necessarily follow that one should reason with a fuzzy logic, as this might just mean that one should amend the fixed language (i.e., unfix it) in order to remove (or precisify) the fuzzy predicates.

Both the one-language theorist and the Neo-Carnapian accept **SEM**. Logical facts are determined by linguistic facts. They also agree that there is logical variation across languages. The one-language theorist does not deny that there are possible rival languages that could be constructed, modelling logics different from their own. What they deny is the *importance* of this for logical correctness.

One reason to think this connects back to the discussion in §1.1. Something logics are supposed to be able to do is provide us with norms for reasoning.[12] Ultimately, it is the validity of a rule in one's actual language, or the language one adopts within some more rigorous scientific context, that matters for the permissibility of reasoning by that rule. It is, after all, that language in which one reasons. Consequently, what matters for the philosophy of logic is logical correctness within the language one will actually be reasoning in.

[12] This is a variation on the normativity argument against logical pluralism as discussed by Russell (2020) alone, Blake-Turner and Russell (2021). The version presented here makes the weaker claim that something logics should do is contribute towards the norms of reasoning. I do not claim that logics *are* normative theories of reasoning.

The mistake here relates to the discussion of §2.2. It assumes that there are no norms relating to language selection relevant to the philosophy of logic. As discussed in §2.2, the Neo-Carnapian has a two-tier view of the norms of reasoning. There's an array of norms relating to language selection and then an array of conditional norms (hypothetical imperatives, to use a classical term) that state which inferences are permissible, given a particular choice of language.

That a particular inference is valid in some particular language is only sufficient for the conditional norm that if one uses that language, then one may reason by that rule. But the Neo-Carnapian's point is that one is choice of language is not forced and not beyond the scope of critique in the philosophy of logic. But this means that what's relevant for determining the rules one should reason by is not just a study of validity in one's own language (or some fixed language) but in a range of possible languages, along with a study of why one might choose one language over another.

As an example, suppose that it is the early 20$^{\text{th}}$ century and one's privileged language is the language of pre-quantum science. Suppose the correct logic for this language is classical logic. Suppose, then, that quantum phenomena are discovered and it turns out that a quantum logic would have certain beneficial features for describing this domain. This is obviously a contested point[13], but grant this for the sake of the example.

Clearly what should happen is the adoption of quantum logic, at least within the confines of theoretical physics. But the one-language theorist cannot endorse this move. They are interested only in the correct logic for their fixed language. They do not recognise the norms of linguistic revision, the kinds of norms that speak in favour of Quantum Logic within the example.

As a second example, suppose that English is the privileged language, that it has fuzzy predicates and that this is an undesirable result. For the one-language theorist, fuzzy logic is correct, and that's all there is to say of the matter. It is the correct logic of an English reasoner's language, so it is the logic that constrains what inferences they are allowed to make. The Neo-Carnapian sees another option. The reasoner might choose to change their language, moving into, say, some language English*. This is English, but with boundaries, perhaps arbitrarily, specified for each

[13] See (Putnam, 1968; Gibbins, 1987) for an introduction to this topic.

fuzzy predicate. By moving into English*, they are no longer bound by the logical rules correct for English. They are free to adopt whichever non-fuzzy logic is correct for English*.

Interestingly, the logical realist can also level a similar objection against the one-language theorist. Whilst they grant that one's language might fix the norms of reasoning in that language, that's entirely moot if the language does not model the objectively correct logic. Upon discovering, as in the Quantum case, that the logic of a language is false, one should change the language. The difference between the Neo-Carnapian and the Metaphysician here is simply that the Neo-Carnapian has a more expanded conception of the kinds of inter-linguistic norms that bear on language and logic selection.

This option fails because the one-language theorist fails to consider the possibility of linguistic, and hence logical, revision. It is not enough for the one-language theorist to simply show that a logical rule, in fact, does hold within some privileged language. They need to show, in addition, why this language shouldn't simply be changed.

Another option for the one-language theorist is to take a similar stance to the logical realist positions discussed in §3.4 which distinguishes between metaphysical and normative correctness. They can reject that when they talk about logical correctness, they mean anything to do with logic selection. The notion of "correctness" they have in mind is simply a relation between a logic and some fixed language.

They are not making any claim about how one should go about picking one's language or logic.

If the one-language theorist wishes to take this line, there is again some level of agreement between the one-language view and the Neo-Carnapian view. As with the discussion of metaphysical correctness in §3.4, a distinction might be drawn between correctness-for-a-given-language and normative correctness. The one-language theorist simply wishes to investigate how a given language can relate to a or many logics. When they use the term "correctness" they mean correctness-for-a-given-language.

But the notion of correctness relevant to deciding how one ought reason is not correctness-for-a-given-language, given that linguistic change is possible. Thus, if the One-Language theorist makes this move, they all but concede that the Neo-Carnapian's notion, not their own, is the more important one for both practical and theoretical reasoning.

Note, as well, that all of this applies equally well to the explicator. The explicator is willing to change their language a little, but only for the purpose of ensuring internal consistency. The examples of reasons for linguistic change given all fall well outside that remit.

4.3. Reply: A change of subject?

There are a remarkable number of parallels between this debate and the debate between conceptual engineers and conceptual analysts. Conceptual analysts hold that when doing philosophical work on concepts, the aim is to understand our concepts *as they are*. The conceptual engineer, on the other hand, wishes to understand what they want particular concepts to do and to amend these concepts to better suit their purposes.[14]

An analogue of the debate in §3.1 can take place between the conceptual analyst and the conceptual engineer. The conceptual engineer asks why they should care about their actual concepts. The conceptual analyst replies that it is because these are the concepts that they do, in fact, have. The conceptual engineer is unmoved, they are used to changing their concepts frequently so do not feel especially bound by the contingent features of their actual concepts, unless those features can be motivated as useful. A common reply by the conceptual analyst at this point is the so-called change of subject objection.

Consider, for instance, the question "Is being a stay-at-home parent a job?" Very plausibly, on the traditional meaning of the word "job" this is false. A job is paid economic labour, typically via an employment contract with a business. The production of goods or the provision of economic services in exchange for money. Stay-at-home parenting is not *economic* labour, in that it does not result in the production of goods or *economic* services, and is not typically paid.

For the conceptual analyst, that's all there is to say. For The conceptual engineer, however, this is just the beginning of the story. The concept "job", understood in a way that excludes domestic labour, has a meaning that encodes or promotes certain negative social values. It devalues the importance of domestic labour. They argue that, there-

[14] Conceptual Explicators sit somewhere between the two. They allow for some degree of linguistic change, but only a minimal amount. In my view, this only gets the worst of both worlds. They are subject to the change of subject objection like the conceptual engineer but are lumbered with any consistent but undesirable features of their language like the conceptual analyst.

fore, the concept of "job" should be changed to include stay-at-home parenting, and other forms of domestic labour.

A major reply to the conceptual engineering program is the change of subject objection. The change of subject objection holds that the conceptual engineer has done something invalid. They are no longer answering the question "Is being a stay-at-home parent a job?" but rather the question "Is being a stay-at-home parent a job*?", where "job*" is the concept job plus the conceptual engineer's modifications. The conceptual engineer hasn't changed the concept of "job", they've simply adopted a new concept job* and stuck the old label on it. They then haven't answered the question "Is being a stay-at-home parent a job?", they've just changed the subject.

This argument has interesting similarities to Quine's (1970) and Restall's (2002) meaning objection to Carnapian logical pluralism, an argument which also applies to my Neo-Carnapian view.

Here I present a slightly adjusted version of their argument to better fit the topic of linguistic revision. See my work elsewhere for a more faithful rendering of their argument and a more detailed and thorough reply.

Consider the question "Does $\phi \vdash \phi \vee \psi$?" Grant that, for our actual language, or for the privileged language, it does. The Neo-Carnapian is not moved by this fact alone. They could, for instance, adopt a three-valued language where disjunctive syllogism is false. What they're interested in is understanding the merits of adopting each of these languages over the other. But Quine and Restall object that they're simply changing the subject. The question was phrased in the original language, so it is a question about $\vee$, the disjunction of the original language. What the Neo-Carnapian does is try and answer the question "Does $\phi \vdash \phi \vee^* \psi$?" where $\vee^*$ is disjunction in their new language. They've simply changed the subject, not answered the question.

The conceptual engineer has a number of replies to the change of subject objection, three are presented here. See (Belleri, 2021) for a more detailed discussion of the various historic and prospective replies to the objection by conceptual engineers. Each reply has a natural counterpart for the Neo-Carnapian.

First, the conceptual engineer can argue that concepts can have their content changed without changing their numerical identity. In short, they argue that job = job*.

For the Neo-Carnapian to take this line, they would have to reject traditional truth-conditional semantics. I am sympathetic to this option. I do not think truth-conditional semantics are appropriate when discussing translations between languages with different notions of truth. A truth-conditional "nearest neighbour" is, in my mind, more appropriate. However, that claim is more than a little controversial and as I do not have a sufficiently worked-out alternative to present, I will not advance this option here.

Alternatively, the conceptual engineer can argue that whilst job and job* are not identical, *subjects* of discussion or inquiry are sufficiently coarse-grained as to allow for some level of conceptual change (Cappelen, 2018).

This is a potentially interesting approach and it would be interesting to see the details of this view born out in the specific context of logical inquiry. I will not develop this reply here, though.

The last option is to accept that there is a change of subject but argue that this is a dialectically permissible move. They accept that they're not answering the question "Is being a stay-at-home parent a job?", but that does not matter because it is an irrelevant question. It is a question formed with a faulty concept, one that they're abandoning, so it can be dismissed.

Analogously, the Neo-Carnapian could accept that they are answering the question "Does $\phi \vdash \phi \vee^* \psi$?" rather than "Does $\phi \vdash \phi \vee \psi$?", but they do not care. $\vee$ is a connective in a language that they've now abandoned. Rules about $\vee$ are no longer relevant for their reasoning.

To tie this back to the discussion of normativity, the Neo-Carnapian is interested in knowing what norms should govern their reasoning. Having established that they should reason in a language with $\vee^*$ rather than $\vee$, the conditional imperatives which follow $\vee$'s inference rules become irrelevant. This means that not only is the change of subject acceptable to the Neo-Carnapian, it is also required by their aims.

In summary, then, the Neo-Carnapian responds to the change of subject objection by accepting that there is a change of subject but denying that this is an issue. The change of subject is a feature, not a bug, of their view. It is baked into their two-tier conception of the norms of reasoning.

5. Conclusion

This paper outlines three approaches to logical correctness: logical realism, the one-language approach and the Neo-Carnapian approach. It outlines the Neo-Carnapian view, contrasting it with Carnap's classic view (§2). It then explains the logical realist (§3) and one-language (§4) views, and gives an objection to each on behalf of the Neo-Carnapian view.

The Neo-Carnapian approach to correctness is ultimately preferred on the grounds that it is the only view with normative upshot. If the concept of "correctness" is supposed to entail something normative, i.e., that one may reason with a correct logic, only the Neo-Carnapian's view does this appropriately. The logical realist misses that there are contexts in which metaphysical considerations are not relevant. The one-language theorist misses that linguistic change is possible.

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