

What Topic Continuity Problem?

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Abstract. A common objection to the very idea of conceptual engineering is the *topic continuity problem*: whenever one tries to “reengineer” a concept, one only shifts attention away from one concept to another. Put differently, there is no such thing as conceptual revision: there’s only conceptual replacement. Here, I show that topic continuity is compatible with conceptual replacement. Whether the topic is preserved in an act of conceptual replacement simply depends on what is being replaced (a conceptual tool or a conceptual role) and what the topic under discussion is. Thus, the topic continuity problem only arises from a failure to specify these two things.

1 Introduction

Conceptual engineering, as a discipline within philosophy, is the study of conceptual revision, innovation, and exploration (Burgess, Cappelen, and Plunkett, 2020; Simion and Kelp, 2020; Rudolph, 2021). Much of the conceptual engineering literature has centered on what is known as the **topic continuity problem**.¹ The problem is inspired by Strawson’s (1963) criticism of Carnap (1947, 1950). In brief, Carnap held that philosophy should focus on *explication*, which involves finding defects in ordinary concepts and inventing better concepts to replace them. Strawson objected to this view of philosophy, arguing that explication as Carnap describes it simply involves changing the subject rather than shedding light on the original concepts. Here is the often-quoted passage summarizing the critique:

[T]o offer formal explanations of key terms of scientific theories to one who seeks philosophical illumination of essential concepts of non-scientific discourse, is to do something utterly irrelevant. . . [T]ypical philosophical problems about the concepts used in non-scientific discourse cannot be solved by laying down the rules of exact and fruitful concepts in science. To do this last is not to solve the typical philosophical problem, but to change the subject. (Strawson, 1963, pp. 505–506)

Applied to conceptual engineering, the objection goes that whenever someone tries to engineer a concept, all they’ve really done is shift our attention from one concept to another. They didn’t “reengineer” the old concept: they simply changed the topic of discussion.

¹ Also known as the “changing the subject objection” or “Strawson’s challenge”.

For example, suppose we are trying to determine what knowledge is. The conceptual engineer comes along and proposes that we “reengineer” the concept of knowledge so that knowledge is justified true belief. The critic may reasonably object that this reengineered concept of “knowledge” is not the concept that we were trying to investigate, and that the conceptual engineer is merely trying to deceptively change the topic.

There are two main problems concerning topic continuity for conceptual engineering: one metaphysical and one normative (cf. Koch 2021). The **metaphysical problem** concerns the very possibility of engineering concepts: it is impossible to engineer a concept because the concept you start with is not the concept you end up with. Cases where one seems to engineer a concept are just cases where one shifts attention from one concept to another. The **normative problem** concerns whether engineering concepts, even if possible, is a good thing: it’s bad to engineer a concept because it does nothing to address questions about the original concept and is prone to generating miscommunication, confusion, and deception.

These problems are often stated in terms of conceptual *revision* and conceptual *replacement* (Haslanger, 2000; Cappelen, 2018; Prinzing, 2018). A concept is **revised** if it undergoes an identity-preserving change, i.e., the old concept and the revised concept are numerically identical. A concept is **replaced** if a numerically distinct concept is used in place of the original concept. One way to phrase the problem, then, is that there is no such thing as conceptual revision: there is only conceptual replacement. The metaphysical version of the problem concludes that conceptual engineering is impossible. The normative version concludes that it’s bad.

We can distill both problems into premise-conclusion form like so:²

The Metaphysical Topic Continuity Problem

1. Conceptual engineering is just conceptual replacement.
2. Conceptual replacement involves changing the topic.
3. Conceptual engineering requires preserving the topic.
4. Thus, conceptual engineering is impossible.

² These are my best attempt to provide explicit premise-conclusion formulations of these problems, which I have yet to find in the literature. They are admittedly somewhat unclear, however. For example, premise 2 does not state what the topic being changed by conceptual replacement is. (Indeed, I think this unclarity is precisely where the arguments falter; see §5.) Still, these formulations are broad enough to encompass the many variants of the problem from the literature, including those articulated by Cappelen (2018, pp. 101–102), and to sort the many different kinds of responses that have been presented.

The Normative Topic Continuity Problem

1. Conceptual engineering is just conceptual replacement.
2. Conceptual replacement involves changing the topic.
- 3'. Changing the topic is bad.
- 4'. Thus, conceptual engineering is bad.

One natural response to these problems is to reject premises 3 and 3'. On some views, conceptual engineering involves changing the topic to a better one (Knoll, 2020). In many cases, changing topics can be a good thing as it can help us realize our goals (Knoll, 2020; Simion and Kelp, 2020; Koch, 2021; Nado, 2021). And even when it isn't, it may only be one among many factors that should be considered (Pinder, 2021).

Another natural response is to reject premise 1. The claim that conceptual revision is impossible relies on contentious views about the ontology of concepts (Haslanger, 2000, 2020; Brigandt, 2010; Sawyer, 2018, 2020a; Prinzing, 2018; Richard, 2019; Ball, 2020; Thomasson, 2020; McPherson and Plunkett, 2021). If concepts are abstract objects, then one may be unable to change their intrinsic properties (though see Thomasson 2021). But if concepts are four-dimensional entities, then it might be possible for concepts to undergo identity-preserving changes (Richard, 2019).

While I am sympathetic to both of these responses, I believe there is a simpler and more straightforward solution that does not require admitting that engineering concepts always involves changing topics or taking a stand on controversial claims about the ontology of concepts. So for the sake of argument, I will simply grant premises 1, 3 and 3' throughout. Instead, I show that premise 2 is false: conceptual replacement does not require changing the topic.

This strategy is not new: others have also rejected premise 2 in response to the topic continuity problem (cf. Cappelen 2018; Shields 2020; Belleri 2021; Flocke 2021; Knoll 2021). Indeed, my view is similar to those who hold that topic continuity is ensured by preserving the *function* or *role* of the concept being engineered (Prinzing 2018; Thomasson 2020; cf. Nado 2021). While I disagree that preserving function always preserves topic, I agree it sometimes does—in fact, my solution explains precisely *when* and *why* it does. To foreshadow, whether conceptual replacement changes the topic depends on (a) what we're replacing (a *conceptual tool* or a *conceptual role*) and (b) what the topic under discussion is.

2 Conceptual Tools and Conceptual Roles

To explain my solution, I first need to make some clarifications about how I'm viewing concepts (§2), topics (§3), and conceptual replacement (§4). After doing so, I will show how to dissolve the topic continuity problem (§5) and explain how this solution addresses cases such as the knowledge example above (§6) before concluding (§7).

2 Conceptual Tools and Conceptual Roles

There are many different ontological views about concepts (see [Margolis and Laurence 2019](#) for an overview). Some of these issues we can remain neutral on (e.g., whether concepts are abstract objects, mental representations, or abilities). However, we do need to clarify the metaphysical relationship between a concept and its *functional role* or *purpose*.

According to what I'll call **concept functionalism**, concepts have their functional role or purpose essentially ([Brigandt, 2010](#); [Prinzling, 2018](#); [Simion and Kelp, 2020](#); [Thomasson, 2020](#)).³ For example, the role of the concept WATER may be to track the substance that appears in lakes and oceans, that humans need to survive, etc. On this view, it is impossible to "discover" that WATER does not have this role: that's part of what it is to be the concept WATER.

According to what I'll call **concept instrumentalism**, concepts do not have their functional role or purpose essentially ([Nado, 2021](#)). Concepts are like tools that we can employ for various purposes. A hammer does not stop being a hammer just because you decide to use it as a paperweight. Likewise, on this view, even if we currently use the concept WATER to track a substance that appears in lakes and oceans, we could also use it to rigidly track a certain kind of chemical compound H₂O, so that if it were discovered that the substance in the lakes and oceans wasn't H₂O, WATER would still pick out the latter.

We need not decide between these views to solve the topic continuity problem. It suffices that we can distinguish between the conceptual instruments used for achieving certain conceptual aims and the conceptual aims themselves. Let's call the former **conceptual tools** and the latter **conceptual roles**. Conceptual tools are the means by which we aim to achieve certain conceptual goals or "fill" certain conceptual roles.

³ This view is clearly related to what is called functionalism in the philosophy of mind, which holds that what makes something a mental state of a particular sort (belief, desire, etc.) is its functional role. See [Levin 2018](#) for an overview.

2 Conceptual Tools and Conceptual Roles

Throughout, I wish to remain neutral on what exactly conceptual tools are and how they relate to concepts. Very roughly, conceptual tools are whatever cognitive agents use to perform conceptual tasks (e.g., mental representations or cognitive capacities/processes). One option is to identify conceptual tools with concepts. Another is to view conceptual tools as constituents of concepts (e.g., treating concepts as kinds of conceptual tools). A third option is to treat conceptual tools as intensions, or perhaps conceptions (i.e., sets of beliefs), associated with a concept. And there may be other options besides these.

Similarly, I wish to remain neutral on what exactly conceptual roles are, or what it means for a conceptual tool to “fill” a conceptual role. One option is to think of a role as a kind of property (“The role of x is to be F ”) and filling as property instantiation: a conceptual tool fills a conceptual role when that tool has the property associated with that role. Another option is to think of a role as a kind of task (“The role of x is to ϕ ”) and filling as deployment towards a task: a conceptual tool fills a conceptual role when that tool is used to accomplish the task associated with that role. A third option would be to think of a role as a position in a cognitive structure, understood as a complex of cognitive (perceptual, inferential, etc.) relations, and filling as occupying a position in that structure (cf. [Ritchie 2020](#)). And there may be other options besides these.

The notions of a conceptual tool, a conceptual role, and of a tool filling a role, are meant to be schematic and neutral on a host of questions, such as whether multiple tools can fill a single role, whether a single tool can fill multiple roles, or whether there are constraints on which tools can possibly fill which roles. These are issues I largely set aside in what follows, as the solution to the topic continuity problem does not crucially hinge on them. (A terminological note: I often talk of the conceptual role(s) “of” or “had by” a conceptual tool as shorthand for the conceptual role(s) that are filled by that conceptual tool.)

To illustrate these notions, consider a common view of concepts evoked in the conceptual engineering literature, viz., that concepts are **intensions**, i.e., mappings from worlds to extensions (cf. [Cappelen 2018](#)). On this view, concepts are abstract objects whose intrinsic properties cannot be “revised”. The only thing that can change is which word (if any) has that concept as its meaning.⁴ In our terminology, conceptual tools are intensions and the

⁴ For ease of exposition, I’m using “the meaning of a word” to refer to semantic meaning (what an expression means in a language or linguistic community), rather than speaker meaning (what a particular speaker means by an expression). This is what Cappelen seems to have in mind. See [Vermeulen \(2018\)](#); [Deutsch \(2020\)](#); [Koch \(2020\)](#); [Pinder \(2021\)](#) for more on this

2 Conceptual Tools and Conceptual Roles

conceptual role of an intension is to be the meaning of an expression (so conceptual roles are properties of intensions).⁵ For example, the intension that maps each world to the set of H₂O substances is a conceptual tool that could fill the role of being the meaning of ‘water’.

Contrast this with Sawyer’s (2018) externalist view of concepts, on which concepts are mental representations that are the constituents of thought. Sawyer distinguishes between the *concept* a word expresses, which is externally determined by certain nonconceptual relations between the agent and objective properties, and the *linguistic meaning* of a word, which is determined by the set of beliefs (or *conception*) a linguistic community associates with that concept (see also Sawyer 2020a,b). The concept expressed by a word can remain constant while its linguistic meaning changes over time. On this picture, the conceptual tools are still intensions, or perhaps conceptions, but the conceptual role of an intension or conception is to characterize the content of a concept. Importantly, Sawyer does not identify concepts with what we’re calling conceptual tools, here. Rather, concepts are what individuate what we’re calling conceptual roles.

Next, consider Prinzing’s (2018) function theory, on which concepts are functional kinds (cf. Haslanger 2000; Brigandt 2010; Simion and Kelp 2020; Thomasson 2020). Function theory is a version of concept functionalism: “[h]aving function *F* is what makes *C* the concept that it is” (p. 867). The function of a concept is, roughly, to achieve a certain cognitive task: it is what that concept is *for*.⁶ Concepts are not abstract objects, but rather “cognitive tools that we use when thinking about and interacting with the world” (p. 858). While Prinzing does not defend any specific metaphysics of “cognitive tools”, one way to think of them is as mental representations. So on this picture, what makes a certain mental representation the concept WATER is that it has a certain function, say to track a certain kind of substance. In our terminology, conceptual tools are mental representations, and the conceptual role of a mental representation is its function, i.e., the cognitive task(s) it was designed for (say, to track certain objects). Concepts are kinds

distinction (which is originally due to Grice (1968)) in the context of conceptual engineering.

⁵ I set aside Cappelen’s (2018) doubts over the very idea of a concept’s function. See Simion and Kelp 2020; Thomasson 2020 for responses. Cappelen mainly objects to the idea that concepts have “central” or “proper” functions (Haslanger, 2000; Thomasson, 2020). My notion of a conceptual role does not assume (or deny) that the conceptual role filled by a conceptual tool is that tool’s central or proper function in this sense.

⁶ Prinzing distinguishes between two senses of what a concept is “for”, viz., the point of the concept in a particular case vs. the point of a concept in the first place (cf. the distinction between etiological and design functions; Simion and Kelp 2020). He’s clear that he has in mind the latter (p. 868).

of mental representations individuated in part by their function, i.e., by the conceptual role they fill.

By contrast, on [Nado's \(2021\)](#) view, concepts do not have their function essentially. Rather, concepts can be employed for a variety of purposes. So instead of talking about "functions" as intrinsic properties of concepts ("C's function is F" or "C is for F"), Nado proposes to talk about functions as extrinsic relational properties ("x uses C for F") (p. S1521). This suggests a picture like [Prinzing's](#) except that concepts are not individuated by their role or purpose: it is up to us what we use a concept for. In our terminology, conceptual tools are, again, mental representations (say), but now the conceptual role of a mental representation is the purpose an individual or community employs it for. Concepts are mental representations, which are not individuated by the role they fill since individuals can use the same representation for different purposes.

Notice these views differ on a range of issues about tools, roles, and "filling". Some, for example, hold that concepts just are conceptual tools, while others hold they merely determine, or are determined by, conceptual roles. Some hold that conceptual tools essentially fill the conceptual roles that they do, while others do not. Some hold that whether a conceptual tool fills a conceptual role is an absolute matter (conceptual tools fill conceptual roles simpliciter), while others hold it is a relative matter (individuals or communities fill roles with tools). Despite this variety, the distinction between conceptual tools and conceptual roles can be applied to them. That's all we need to solve the topic continuity problem.

Officially, I adopt no stance towards these views. I will use [Cappelen's](#) view of concepts as intensions mainly to illustrate various points and distinctions in what follows, as it is the easiest to integrate into existing theories of topics (see [§3](#)). But the same points and distinctions made below apply to a wide range of ontological views on concepts, including the ones mentioned above.

3 Topics and Questions

As with concepts, there are many different views on what topics are (see [Hawke 2018](#) for an overview). While it is not necessary to defend a particular view of topics here, it will be helpful to have a concrete model of topics to illustrate my proposed solution to the topic continuity problem.

3 Topics and Questions

The classic approach to topics due to Lewis (1988a,b) models topics as partitions on possible worlds.⁷ The cells of the partition corresponding to a topic contain all the worlds that “agree” on every claim on that topic. For example, if T is the partition for the topic of the weather, two worlds are in the same cell of T iff they have the same weather conditions. A proposition is “on-topic” if it is a union of cells in the partition (cf. Roberts 2012; see Figure 1 for an illustration). So, the proposition that it’s raining and between 70–80°F is on-topic for T , since any two worlds in the same cell (i.e., that have the same weather conditions) agree on whether that proposition is true. By contrast, the proposition that aliens invade Earth is off-topic, since two worlds can agree on the weather conditions while disagreeing over whether aliens invade.

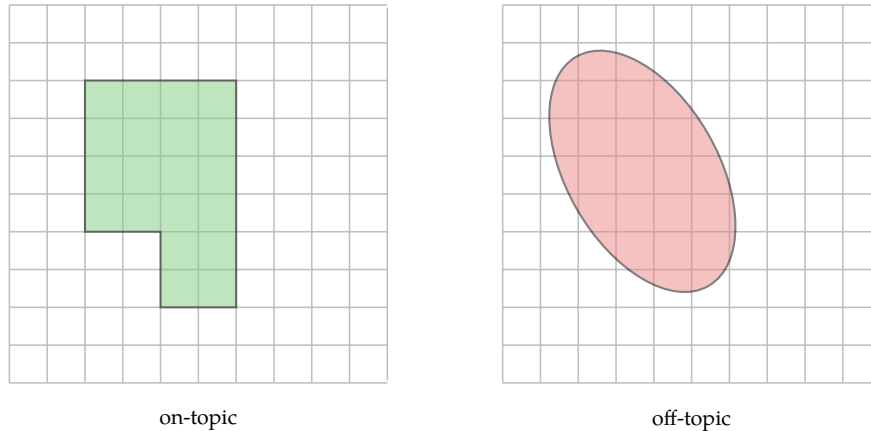


Figure 1: Illustrating on-topic vs. off-topic propositions.

The Lewisian approach to topics is by no means perfect, and there have been plenty of alternative accounts proposed in the literature.⁸ Fortunately, we do not have to take a stand on the theory of topics to solve the topic continuity problem. Any of these alternative approaches would do for our purposes. To keep things simple, though, I will stick with the standard Lewisian model throughout.

⁷ Formally, a partition on W is a set $\Pi \subseteq \wp W$ such that (i) $\emptyset \notin \Pi$, (ii) $\bigcup \Pi = W$, and (iii) $A \cap B = \emptyset$ for all $A, B \in \Pi$. A “cell” of Π is just a member of Π . We can also think of Π in terms of the equivalence relation \sim_Π , where $x \sim_\Pi y$ iff there is some $A \in \Pi$ such that $x, y \in A$.

⁸ See Parry 1968; Perry 1989; Railton 1993; Yablo 2014; Fine 2016; Cappelen 2018; Hawke 2018; McPherson and Plunkett 2021 for alternative approaches.

Topics and questions are intimately connected. One can move back and forth between talk of topics and talk of questions (cf. [Yalcin 2018](#)). For every topic T , there is a corresponding question: what is true of T ? For every question Q , there is a corresponding topic: the answer to Q . Indeed, many of the proposals discussed above for how to model topics turn out to parallel proposals in the literature on questions.⁹ For example, the Lewisian model, converted to questions, models questions as sets of their complete and exhaustive answers (cf. [Hamblin 1958, 1973](#); [Groenendijk and Stokhof 1984](#)). Thus, in what follows, I treat topics and questions as interchangeable and freely move between talk of topics and talk of questions.

Before moving on, we should distinguish two kinds of questions that might be under discussion (cf. [Moran 2001](#); [Balcerak Jackson 2019](#); [Risberg forthcoming](#)). A **factual question** is a request for information (e.g., “What’s the weather like?”), where the admissible answers to the question are ordinary propositions (e.g., “It’s sunny”). A **practical question** is a request for deliberation or advice (e.g., “What do we do with the leftovers?”), where the admissible answers are something more like proposals for action (e.g., “Let’s put them in the fridge”). A similar distinction applies to topics: a factual topic is one that concerns what the world is like (e.g., the topic of the weather), whereas a practical topic is one that concerns what to do (e.g., the topic of what to have for dinner).

The distinction between factual and practical questions can be accommodated in the Lewisian framework in several ways. Ultimately, the solution to the topic continuity problem presented in §5 does not crucially hinge on which model of practical questions we adopt: it just relies on the notion of an answer to a question being on- or off-topic. To streamline the discussion, I will simply model practical and factual questions alike in terms partitions on worlds, and answers to them will be modeled as sets of worlds. Thus, the practical question “What do we do?”, say, will be understood as a partition over worlds where all the worlds in a cell agree on what we do, and a proposal to ϕ (i.e., an answer to this practical question) will be understood as the set of worlds where we ϕ .¹⁰

⁹ See, e.g., [Hamblin 1958, 1973](#); [Karttunen 1977](#); [Groenendijk and Stokhof 1984](#); [Groenendijk 1999, 2009](#); [Ciardelli, Groenendijk, and Roelofsen 2018](#). See [Cross and Roelofsen 2018](#) for an overview.

¹⁰ Another option is to treat practical questions as *normative questions*, i.e., questions about what we *should* do (though see [Balcerak Jackson 2019](#); [Risberg forthcoming](#)). Yet another option (one that I prefer) is to treat practical questions as *sui generis*, in that their answers are not analyzed in terms of sets of worlds but something else altogether (e.g., plans).

4 Replacing Conceptual Tools and Conceptual Roles

What is “conceptual replacement”? I propose the following answer: conceptual replacement is a matter of matching conceptual tools with conceptual roles. When we engage in conceptual replacement, we change which conceptual tools fill which conceptual roles.

There are two main forms of conceptual replacement (cf. Cappelen 2018, p. 35). First, there’s **conceptual tool replacement**, which involves changing which conceptual tool fills a specific conceptual role r . Second, there’s **conceptual role replacement**, which involves changing which conceptual roles are filled by a specific conceptual tool t .¹¹ So on the concepts-as-intensions view, conceptual tool replacement involves changing the intension assigned to a particular word (redefining), while conceptual role replacement involves changing the word that a particular intension is assigned to (relabeling).

For example, when the International Astronomical Union (IAU) decided in 2006 to revise the definition of ‘planet’ to exclude Pluto, they effectively attempted to change which intension is associated with the word ‘planet’. Here, there is a conceptual role r_{planet} of being the meaning of ‘planet’ and two conceptual tools i_{old} and i_{new} corresponding to various definitions of ‘planet’. (So on this construal, r_e is a property, viz., the property of being the meaning of expression e ; an intension i fills r_e iff i is the meaning of e .¹²) Before the decision, i_{old} filled r_{planet} , i.e., the meaning of ‘planet’ was i_{old} . After the decision (assuming all went as planned), i_{new} filled r_{planet} , i.e., the meaning of ‘planet’ changed to i_{new} . So the IAU’s decision to redefine ‘planet’ was (an attempt at) a conceptual tool replacement.

Let’s now suppose (hypothetically) that the IAU still wanted to keep the old definition of ‘planet’ around and simply give it a new label. After considering several proposals (‘dwarf planet’, ‘planetary-mass object’, etc.), they decide to go with ‘classical planet’. Here, there is a fixed conceptual tool i_{old} and multiple proposed conceptual roles corresponding to different words it could be assigned to ($r_{\text{dwarf planet}}$, $r_{\text{planetary-mass object}}$, $r_{\text{classical planet}}$, etc.). Before the decision, i_{old} filled r_{planet} , i.e., i_{old} was the meaning of ‘planet’. After the decision (again, assuming all went as planned), i_{old} filled

¹¹ We could also talk about conceptual tool *creation*, i.e., introducing a tool to fill a previously unfilled role, or conceptual tool *destruction*, i.e., removing a tool from filling a role without replacement (cf. Cappelen 2018; Simion and Kelp 2020). Similarly for conceptual role creation and destruction. The solution in §5 applies equally to conceptual creation and destruction.

¹² Since there is a one-to-one correspondence between expressions e and properties of the form *being the meaning of e* , we could have equivalently taken r_e to just be e and interpreted the filling relation as the relation *being the meaning of*.

5 Solving the Problem

$r_{\text{classical planet}}$, i.e., i_{old} became the meaning of ‘classical planet’. So the IAU’s decision was (an attempt at) a conceptual role replacement.

My characterization of conceptual replacement assumes that we generally have the power to change which tools fill which roles.¹³ One might question this, though. For example, it seems out of our control to change which words have which intensions as their meaning: that’s determined by the linguistic community and/or various external factors (Cappelen, 2018; Deutsch, 2020). This is a version of the **implementation problem** for conceptual engineering. While I think we do have the ability to replace concepts in an interesting sense, addressing this concern is beyond the scope of this paper (see Koch 2020; Simion and Kelp 2020; Thomasson 2020, 2021). If we cannot (easily) change which conceptual tools fill which conceptual roles, then we cannot (easily) engineer concepts.¹⁴ My aim is just to show that *if* conceptual replacement is possible, then it is compatible with topic continuity.

5 Solving the Problem

So far, we’ve introduced three key ideas. First, we distinguished *conceptual tools* (what we use to achieve certain conceptual goals) from *conceptual roles* (the conceptual goals themselves). Second, we introduced the notion of a topic/question as a *partition* on worlds. A proposition is on topic T if it is a union of cells from T . Lastly, we distinguished two kinds of conceptual replacement, viz., *conceptual tool replacement* (replacing the tool that fills a specific role) and *conceptual role replacement* (replacing the role that a specific tool fills).

With these ideas in place, we can now solve the topic continuity problem. The solution requires making explicit what the topic or question under

¹³ The question of whether we have power to change which tools fill which roles should be distinguished from the question of whether filling is an absolute or relative matter, i.e., whether tools fill roles simpliciter or whether individuals or communities fill roles with tools. In one direction, we may have the power to change which tools fill which roles even if filling is absolute. For example, if roles are properties and filling is instantiation, then filling is absolute. But this is compatible with us having the power to change which tools instantiate which role-properties. In the other direction, it is possible for us to lack the power to change which tools fill which roles even if filling is a relative matter. For example, it may be that whether a tool fills a role depends on the origins of a society, which cannot be changed.

¹⁴ With that said, even if engineering concepts is hard, it may still be worth pursuing (Cappelen, 2018; Koch, 2020). Moreover, even if it’s impossible, it may still be possible (and fruitful) to engage in other conceptual activities such as conceptual innovation (Simion and Kelp, 2020) or conceptual exploration (Rudolph, 2021).

discussion is. Are we trying to find a tool to fill a particular role r , or to find a role for a particular tool t to fill? If the former, one does not change the topic by proposing a new tool to fill r . If the latter, one does not change the topic by proposing a new role for t to fill. To illustrate this, let's examine an example of each kind of case.

Case 1: Redefining (conceptual tool replacement). Consider again the IAU's deliberations over how to define 'planet'. Let's simplify and assume that there is a single conceptual role r_{planet} (being the meaning of 'planet') under consideration. (More on this simplification below.) The question under discussion, in our technical jargon, is: which tool do we fill r_{planet} with? In that case, proposing to replace the conceptual tool that fills r_{planet} does not change the topic: it presents a legitimate answer to the question under discussion.

We can see this fleshed out in the Lewisian model of topics (see [Figure 2](#) for illustration). The current topic is modeled as a partition T_{planet} whose cells correspond to different assignments of intension to 'planet'.¹⁵ Two worlds are in the same cell of T_{planet} iff at those worlds, the same intension is assigned to 'planet'. The worlds where i_{new} is assigned to 'planet' therefore form a cell of this partition. Thus, proposing to assign i_{new} to 'planet' is on-topic: it is a direct answer to the question of which intension to assign to 'planet'.

Contrast this with a proposal that *does* change the topic, like proposing to assign i_{old} to 'classical planet'. Since the worlds where i_{old} is assigned to 'classical planet' do not all agree on which intension is assigned to 'planet', they do not form a cell of this partition. Thus, proposing to assign i_{old} to 'classical planet' is off-topic: it does not answer the question of which intension to assign to 'planet'.

Note: an answer can be on-topic while being illegitimate in other respects. Suppose the question under discussion is where to have dinner tonight with your friends. Proposing to have dinner inside an active volcano is on-topic: it is an answer to the original question under discussion. But don't expect to get taken seriously if you propose this to your cohort. Similarly, if an astronomer in the IAU proposed to define 'planet' as any-

¹⁵ Here, I'm setting aside issues that arise from Kaplan's paradox ([Kaplan, 1995](#)). If intensions are functions from worlds to extensions, then there are strictly more intensions than there are worlds by Cantor's theorem. But if there's a world for every intension used to assign to 'planet', then there need to be at least as many worlds as there are intensions. If this undermines the Lewisian model of topics, so be it: the model is inessential to my proposed solution to the topic continuity problem.

5 Solving the Problem

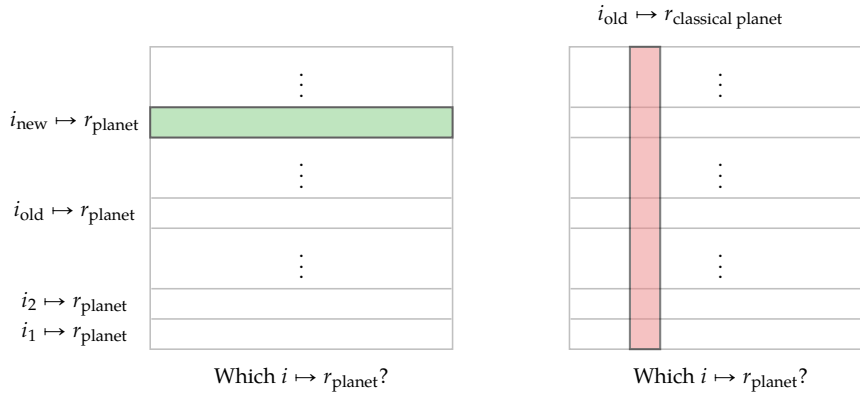


Figure 2: Illustrating how proposing to replace i_{old} with i_{new} to fill r_{planet} is on-topic while proposing to replace r_{planet} with $r_{\text{classical planet}}$ to be filled by i_{old} is off-topic. Here, $i \mapsto r$ stands for the proposal to assign i to r .

thing that has green polka dots, they wouldn't be changing the topic, but their proposal would be infelicitous for other reasons.

Case 2: Relabeling (conceptual role replacement). Consider now the IAU's deliberations over what term to assign the old definition of 'planet' to. Again, let's simplify and assume there is a single conceptual tool i_{old} being considered. The question under discussion is: which role do we fill with i_{old} ? Here, proposing to replace the tool *does* change the topic, whereas proposing to replace the role does not.

Again, this can be implemented in the Lewisian model. The topic is modeled as a partition T_{old} whose cells correspond to different assignments of i_{old} to different words. Two worlds are in the same cell of T_{old} iff at those worlds, the same word has i_{old} assigned to it. The worlds where i_{old} is assigned to 'classical planet' therefore form a cell of this partition. Thus, proposing to assign i_{old} to 'classical planet' is on-topic. By contrast, the worlds where i_{new} is assigned to 'planet' do not form a cell of this partition. Thus, proposing to assign i_{new} to 'planet' is off-topic.

Two lessons can be drawn from this second example. First, it's not always the case that what is held fixed in the context of conceptual engineering is a conceptual role. Sometimes, conceptual tools may themselves be the objects of engineering projects—that is, we may want to preserve a conceptual tool but repurpose it to fill a better conceptual role.

Contrast this with Nado (2021), who says, “sufficient continuity [for successful engineering] is provided by continuity of function” (p.S1515), and that “functional continuity demarcates the limits of permissible revision” (p.S1520). Though Nado takes a change in concept to amount to a “change in subject” (and thus, accepts premise 2), she holds that this is compatible with conceptual engineering when functional continuity is maintained (p.S1520). The case of the IAU looking for a new term for i_{old} suggests otherwise, however: functional continuity comes apart from the limits of permissible revision in cases where the goal is to find a new function for a conceptual tool to serve.¹⁶

Case 2 also shows that role continuity is neither necessary nor sufficient to ensure topic continuity. It is not sufficient, since proposing to assign i_{new} to ‘planet’ if off-topic, even though the proposal is about the role currently assigned to i_{old} , viz., r_{planet} . It is not necessary, since proposing to assign i_{old} to ‘classical planet’ is on-topic, even though it is not about r_{planet} . In general, whether role continuity is necessary and/or sufficient to ensure topic continuity simply depends on the question under discussion.¹⁷ If the question is which tool to fill role r with, then it generally is. If the question is which role to fill with tool t , then it generally is not. And, by the same token, Case 1 shows that tool continuity is neither necessary nor sufficient for topic continuity.

Sometimes, topic continuity requires neither tool nor role continuity. Throughout, I’ve simplified matters by assuming the question under discussion fixates on a particular role r or a particular tool t . Reality is messier though. In the IAU’s deliberations, there were many different topics at play and they may have considered many different classificatory schemes. If the question under discussion is “What to do about this whole Pluto business?”, then different pairings of tools with roles may count as legitimate answers.

¹⁶ Nado does say, “The needed functional continuity is, moreover, very flexible—functions can be rejected, traded off, split, combined, reshuffled”, suggesting she would allow for some differences in function. But this only delays the problem of “demarcating the limits of permissible revision”: the question then becomes *how much* functional discontinuity is compatible with conceptual engineering? My proposal can be understood as an answer to this question: the amount of functional discontinuity compatible with an engineering project is simply demarcated by the topic under discussion.

¹⁷ This illustrates how my proposal differs from Koch’s (2021) explanatory eliminativism about topics. Koch argues topics play no explanatory role in conceptual engineering, whereas I maintain they explain what kinds of engineering proposals address the conceptual task in question. Still, I agree with the spirit of Koch’s diagnosis: conceptual engineers need not invest heavily in demarcating “the limits of revision”. They simply need to be clear about the terms of the debate: the limits of revision are demarcated by the topic of discussion.

Classifications that abandon ‘planet’ as well as the old definition of ‘planet’ could address the topic of how to order the heavens.¹⁸

Contrast this with [Prinzing \(2018\)](#), who says, “subject-continuity *requires* the preservation of concepts” (p. 857, emphasis added) and that “the subject is preserved *when* the concept undergoes identity-preserving change” (p. 860, emphasis added). Since the identity criterion for concepts is functional equivalence for Prinzing (p. 867), this suggests he holds functional continuity (i.e., continuity in the functional role of the target concept) to be both necessary and sufficient for topic continuity. Again, the case of the IAU looking for a new term for i_{old} suggests otherwise: functional continuity is neither necessary nor sufficient for topic continuity in every case. Sometimes, continuity of conceptual role is necessary and/or sufficient; other times, continuity of conceptual tool is; and in some cases, neither are necessary or sufficient. Which it is depends on what the question under discussion is.

6 “What is F ?”

One might worry I’ve only solved the topic continuity problem in letter but not in spirit. Proposals to replace concepts typically occur in contexts where the question under discussion is a “What is F ?” question, which does not, on its surface, seem to be a *practical* question about which conceptual tools to fill which conceptual roles with. It instead seems to be a straightforwardly *factual* question about the concept that ‘ F ’ *actually* picks out. Concerns about the topic continuity problem often seem to arise from the idea that in these contexts, replacing the concept denoted by ‘ F ’ changes the meaning of ‘ F ’, and thus changes the subject.

Indeed, this seems to be the worry behind the knowledge example from §1. Since ‘knowledge’ doesn’t mean justified true belief (as [Gettier \(1963\)](#) showed), the conceptual engineer who proposes to replace the concept denoted by ‘knowledge’ with justified true belief is not answering the question of what “knowledge”, as we currently use the term, really is. So the worry is that while I have shown that proposals to replace concepts are on-topic in

¹⁸ [Nado \(2021, p. S1519\)](#) gives a similar example of choosing between different biological taxonomies. Nado argues that cases like this really preserve the function of *sets* of concepts. While this could be a way of thinking about such cases, it is not enough to defend the claim that role continuity is necessary for topic continuity. After all, the topic may be to find a role for a particular set of conceptual tools to fill (e.g., the IAU could decide to keep the old classification system but to give them different labels or use them for different purposes).

some contexts, I have not shown that this is true of the contexts that critics of conceptual engineering have in mind.

My response is twofold. First, it's questionable whether conceptual engineers want conceptual replacement to preserve the question under discussion if it is a “What is *F*?” question. Conceptual engineers may argue that we shouldn't focus on such questions (cf. [Knoll 2020](#)), e.g., because they're not fruitful (cf. [Williamson 2000](#)), or because our ordinary concepts are too vague to admit stable answers to them (cf. [Carnap 1950](#); [Haslanger 2000](#)), or they falsely presuppose that what '*F*' means is factually settled. By contrast, questions about which conceptual tools to fill which conceptual roles with arguably avoid these concerns.

Second, some “What is *F*?” questions can be interpreted as practical questions about which conceptual tools to fill which conceptual roles with. Depending on the context, asking “What is a planet?” could either be interpreted as a request for factual information or as initiating a conversation over the interpretation of 'planet' ([Plunkett and Sundell, 2013](#); [Kocurek, Jerzak, and Rudolph, 2020](#); [Belleri, 2021](#); [Knoll, 2021](#); [Soria-Ruiz, 2021](#); [Mena, 2022](#)). In the latter case, one is asking how to interpret 'planet', i.e., which intension to assign to 'planet' as its meaning. On the concepts-as-intensions view, this amounts to asking which conceptual tool to fill the role of being the definition of 'planet'.

To illustrate this last point, consider two contexts where someone may ask “What is a planet?”. In the first, the speaker is a child trying to fill out a school worksheet about the solar system. They turn to their friend sitting behind them and ask, “Hey, what is a planet?”. Here, clearly, the speaker is asking a factual question: they are requesting factual information about planets, as the term is currently used. Call this the **descriptive** reading of the question. In the second context, the speaker is a renowned astrophysicist at the IAU who is taking part in the debates over Pluto. They get up to the podium and say, “Let's reexamine our classification: what is a planet?”. Here, the speaker is not requesting factual information—presumably, they have all the relevant astronomical facts—but instead initiating a discussion over how to interpret the word 'planet' for the purposes of scientific discourse. That is, they are asking the *practical* question of how to interpret 'planet'. Call this the **interpretative** reading of the question.

This distinction between two readings of “What is *F*?” is similar to [Barker's \(2002\)](#) two readings of gradable adjectives. For example, when someone says “Feynman is tall”, they could be communicating something about Feynman's height (e.g., if they're asking how tall Feynman is) or about what to count as tall (e.g., if they're asking what counts as tall in their

country). This distinction arguably generalizes to ordinary assertions even without gradable adjectives (Plunkett and Sundell, 2013; Kocurek et al., 2020; Soria-Ruiz, 2021; Mena, 2022). Thus, when someone says “Pluto is a planet”, they could be communicating something about Pluto’s physical properties (e.g., if they’re answering an exam question about Pluto) or about what to count as a planet (e.g., if they’re protesting the IAU’s 2006 decision to redefine ‘planet’).¹⁹

My suggestion here is that this distinction between two readings of ordinary assertions applies straightforwardly to questions. When someone asks “What is a planet?” or “Is Pluto a planet?”, they could be asking something about some factual matter concerning planets, as we currently use the term, or about what to count as a planet in the first place (cf. Balcerak Jackson 2019), which is just what I’m calling the “interpretative” reading.²⁰ In other words, the interpretative reading of “What is a planet?” concerns which intension to assign to ‘planet’—or, on the concepts-as-intensions view, which conceptual tool to fill which conceptual roles with. Thus, even though “What is *F*?” questions may not seem, on the surface, to be practical questions concerning which conceptual tools to fill which conceptual roles, there is a reading of these questions on which they can be interpreted that way.²¹ Indeed, it’s natural to conclude that these are precisely the readings of “What is *F*?” questions that philosophers regularly engage in.²²

¹⁹ Here, I am not taking a stand on the exact mechanism that gives rise to these different readings. For different proposals, see Belleri 2017; Thomasson 2017; Kocurek et al. 2020; Mankowitz 2021.

²⁰ This distinction is similar to Belleri’s (2021) distinction between conservative inquiries, which require preserving the current meaning of ‘*F*’, and semantically progressive inquiries, which do not. While Belleri views this as a distinction between two forms of inquiry over a single question, I construe it more directly as a distinction between two readings of a question. Thus, semantically conservative inquiries are simply inquiries into factual questions while semantically progressive inquiries are inquiries into interpretative questions.

²¹ While I’ve been construing the “interpretative” reading of the question “What is a planet?” in practical terms, some might prefer to construe them in normative terms. For example, for Plunkett and Sundell (2013), what I’m calling the “interpretative” reading amounts to asking how ‘planet’ *should* be interpreted or how *best* to interpret it—or, in terms of tools and roles, which conceptual tools *should* (or *best*) fill which conceptual roles. Here, it does not matter for my purposes whether we construe this reading in practical or normative terms. Arguably, in most contexts, the two go hand-in-hand. What’s important is that there is a reading of “What is *F*?” questions that can be understood in terms of conceptual tools and conceptual roles.

²² Compare this to Chalmers’s (2011) claim that disputes over “What is *F*?” questions tend to be verbal. Indeed, on the current proposal, philosophical disputes over “What is *F*?” questions will be verbal in the sense that they are disputes over how to interpret ‘*F*’. Unlike Chalmers, however, I do not conclude from this that such disputes are pointless or unimportant for the

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So to return to the knowledge example, if the question “What is knowledge?” is read interpretatively, then proposing to reengineer the concept of knowledge to be justified true belief does not change the topic. But, again, that doesn’t mean the proposal should be taken seriously: recall the proposal to have dinner inside an active volcano (§5). Proposing to reengineer the concept of knowledge to be justified true belief is independently objectionable precisely because it doesn’t capture our intuitions about Gettier cases. We need not (and should not) insist that the proposal changes the topic in order to criticize it.

7 Conclusion

Whether a proposal to replace concepts constitutes a change in topic depends on two things. First, it depends on whether the proposal is to replace a conceptual tool or a conceptual role. Second, it depends on whether the topic under consideration is finding a conceptual tool for a specific role or finding a conceptual role for a specific tool. We saw that, if the answers to these questions are both the former or both the latter, conceptual replacement is compatible with topic continuity. There is, therefore, no topic continuity problem for conceptual engineering.

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purposes of philosophical inquiry (cf. [Plunkett 2015](#); [Belleri 2017](#); [Thomasson 2017](#); [Knoll 2020](#)).

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