Filozofia Nauki (The Philosophy of Science)
ISSN 1230-6894 e-ISSN 2657-5868
2023, vol. 31(4) [124]: 89–109
DOI: 10.14394/filnau.2023.0021

István Danka*

THE ENGINEER, THE SCIENTIST, AND THE PHILOSOPHER
CONCEPTUAL ENGINEERING AS AN APPLIED SCIENCE

Abstract

This paper argues that the metaphor of philosophy as conceptual engineering should be better exploited. Conceptual engineers describe their activity as analogous to engineering activities; however, as I will show, some disanalogies can be identified in terms of the purposes of these activities (as described). Engineering has multiple purposes, many of which are external to engineering activity. This applicative part of the metaphor needs further elaboration: conceptual engineering should also pursue purposes external to the profession.

First, I shall show how conceptual engineers understand the notion of conceptual engineering and the philosophical methodology this notion implies. Second, I shall further motivate the engineering analogy through the use of metaphilosophical considerations. Third, I shall point to weaknesses in the present form of the analogy between technological and conceptual engineering. I will show that conceptual engineering often seems to copy the work of a physicist rather than a proper engineer. This picture of philosophers as scientists is not as novel as the term "conceptual engineering" would indicate. Engineering is an applied science rather than fundamental research. This characteristic should be better exploited when applied to conceptual work. Finally, I will provide descriptive and normative reasons for the applied science approach to conceptual engineering and respond to some possible objections.

Keywords: conceptual engineering, metaphilosophy, philosophical methodology, internal and external purposes, fundamental research and applied science

*Budapest University of Technology and Economics, Department of Philosophy and History of Science, Egry József utca 1, 1111 Budapest, Hungary, e-mail: danka.istvan@gmail.com, ORCID: https://orcid.org/0000-0002-8946-2556.

© 2023 The author(s). Open access under the terms of the Creative Commons Attribution-NonCommercial -NoDerivatives 4.0 International License

1. WHAT CONCEPTUAL ENGINEERING IS

Conceptual engineering is a recent trend in metaphilosophy that treats the assessment and improvement of concepts as a central philosophical task. The term "conceptual engineering" has recently enjoyed wide popularity, mainly through the work of Alexis Burgess, Herman Cappelen, and David Plunkett (2020), Cappelen (2018), David Chalmers (2020), Luciano Floridi (2011), Manuel Gustavo Isaac (2020), and others. The notion was introduced by Simon Blackburn (1999) and developed further by Matti Eklund (2014, 2015), though Rudolf Carnap's "linguistic engineering" is also an important precursor of the conceptual engineering movement (Chalmers 2020).

It is widely held that "conceptual engineers aim to improve, rather than merely describe, the concepts we use in thought and talk" (Isaac and Koch 2022: 1). Developing the analogy further, conceptual engineers are expected to design, maintain, and repair concepts, just like engineers in technology do with subjects of their own field. As both the notion and the methodology of conceptual engineering are in the development phase, what exactly these three activities should mean with respect to concepts is a question of debate (Isaac, Koch, and Nefdt 2022). What is beyond debate is that conceptual engineering is a normative philosophical enterprise, in contrast to the traditions of analytic philosophy from which it emerged – traditions that understand themselves, as the name suggests, as analytic and therefore descriptive.

Conceptual engineering can be understood as a response to an apparent decline in conceptual analysis. Proponents of conceptual analysis are gradually facing the problem of how to justify intuitions as a resource for understanding and using concepts (Cappelen 2012). Experimental philosophy (i.e., collecting empirical data about the intuitions of ordinary language users so that intuitive claims can rest on the widest possible basis) is one possible response; another is to turn to idealized models that aim to revise rather than analyze ordinary concept use. Conceptual engineers follow the latter route, asking questions like "What *should* concept *C* mean?" rather than "What do *ordinary language users* mean by concept *C?*", "What does concept *C actually* mean?" or "What does concept *C ideally* mean?" Even though conceptual engineers' questions are closest to the last of these questions, the engineering metaphor suggests that ideal conditions are invented rather than discovered.

A reason why the engineering approach is to be taken as a more promising direction than other responses to the apparent decline of conceptual analysis is as follows. The linguistic intuitions of philosophers from the "ivory tower" may be detached from ordinary language use, while ordinary language users' intuitions may be ambiguous, unclarified, and even inconsistent. Hence, neither ground is sufficient for establishing proper concept use. If Wittgensteinian therapists are right, philosophical problems are rooted in linguistic misunderstandings that stem from both everyday language use and philosopher's own use of language. Therefore, neither philosophers' linguistic intuitions nor those of ordinary language users provides an ideal point of departure, but we do not have anything better. Either we choose from them, or we establish conceptuality on novel grounds. But even if Wittgensteinians are wrong, many philosophical problems can be reconstructed as a result of interpreting concepts on the grounds of intuitions that are tenable separately but are inconsistent if put together. At least in the case of these concepts, conceptual engineering offers a possible way of dissolving merely verbal disputes.

To eliminate inconsistencies in concept use, one must get committed to revisionism. Rejecting one or more linguistic intuitions requires redrawing our conceptual maps. It is very hard (if possible at all) to find descriptive arguments for making alterations to concept use, as the only way of doing so is to apply existing conceptual tools, which require reparation. For this reason, conceptual engineers follow a normative route, arguing what an *ideal* concept use *should* be.

This paper focuses on the sense of "ideal" in the context of ideal concept use, and it argues that, from an engineering perspective, it should be replaced with the notion of "good enough for some purposes." Rather than taking the purposes of conceptual engineering as absolute values, I shall take them as functional.[1] In this approach, concept use is considered "ideal" if it serves certain purposes. Below I shall provide descriptive and normative reasons for why the "conceptual engineering" concept should be refabricated in this way. But before turning to these descriptive and normative reasons, let me further motivate the analogy between technological engineering and conceptual engineering.

[1]For functional approaches to conceptual engineering, see esp. (Jorem 2022), (Koch 2021), (Nado 2021), (Queloz 2022), (Riggs 2021), (Simion and Kelp 2020).

2. MOTIVATING THE ANALOGY

From an engineering perspective, philosophy should not be considered a highly abstract (often claimed to be self-absorbed) discipline. Philosophy should have mundane effects on society (Haslanger 2000, 2020, Isern-Mas 2023, Nimtz 2021, Podosky 2022) – an external purpose of philosophical activities that philosophy as conceptual analysis has notoriously failed to target. By shaping concepts, conceptual engineers shape how humans think about reality. That way of thinking, in turn, influences human activities, thereby affecting how the world is. The concept of "race" or "marriage" directly affects what races or marriages are; the concept of "nature" or "countryside" directly affects how we concept users relate to our environment.

Conceptual engineers presumably never fully control concept use (Cappelen 2018: 72). There may also be reasons why such control would not be desirable, since it could rapidly lead to Orwellian scenarios. However, aiming at positive effects on society should be an integral part of conceptual engineering, even though full control is impossible and there is always a chance of negative effects. The main reason for this is that one of the most significant effects on philosophy of the engineering metaphor could be leaving the "ivory tower" – the voluntary withdrawal from society of which academic philosophy is often accused.

The "engineering" metaphor has many powerful (and yet unexploited) implications, one of which is precisely the twofold theoretical *and* practical nature of engineering. Engineers examine conceptions (theoretical frameworks, models, toolkits, etc.) and apply them in practice. Conception and application are the two main aspects of engineering, and the applicative part may be less trivially transferable to philosophy. Whether for this reason or some other, conceptual engineers often seem to focus on the theoretical aspects of the engineering metaphor, claiming that concept use is primarily about representation, hence conceptual engineering is about improving the representation of reality (Cappelen 2018). Emphasizing practical applications of concept amelioration would be especially important for legitimating philosophy in contemporary society. This is an important task for the conceptual engineering movement, as the authors above emphasize, but it is difficult to ground it in a philosophical methodology that

aims to improve our representational framework – something many forms of "ivory-tower" philosophy have long claimed to do.[2]

As has been said, conceptual engineering can be seen as a turn from conceptual analysis towards a normative, revisionary metaphilosophy and philosophical methodology. It has developed normative aspects that can improve concept use. A further step is still missing though: defining the purposes *for* which novel concepts are better – be they internal, theoretical or philosophical purposes, or external (e.g., social) purposes. Without defining these purposes, conceptual engineers prevent the full exploitation of the metaphor. A deeper understanding (and wider application) of the metaphor would be important even if it resulted in a picture of conceptual engineering that, to some extent, moves away from what conceptual engineers actually do; however, as has been mentioned, social orientation is not even a complete novelty in the field.

In defining purposes, the first step is systematically distinguishing the two sets of purposes that conceptual engineering should pursue, which I briefly mentioned above: internal and external purposes. Internal purposes of conceptual engineering are essential for philosophical achievements in terms of philosophical success (whatever that lies in). External purposes, in contrast, are essential outside the scope of philosophical activities; most notably, they can involve social needs and expectations so that by taking the applicative part of the engineering metaphor seriously, philosophy can make an impact on contemporary society *by* (and certainly not *instead of*) achieving its internal purposes. By developing more accurate representational devices (internal purpose), philosophy can make society think about social problems more accurately (external purpose). This could prevent philosophy from being not only self-absorbed but also a purely functional servant of daily trends in public opinion. A way of achieving this two-fold purposefulness is to recall the distinction between fundamental research (the model philosophy fits when it is understood descriptively) and applied science (which should serve as philosophy's new role model within the engineering metaphor).

I will build on this analogy in the following section. But before doing so, some clarification is in order. I do not claim that internal and external purposes are always in harmony, or even that they are consistent with each other. It could be

[2] It is important to note that accepting the benefits of conceptual engineering as a socially-minded, function-centered approach does not imply that "ivory tower" philosophy – or any other forms of philosophical activities – should be given up. Conceptual engineering can be seen as the applicative part of philosophy that is closest to social needs, but that can also benefit, e.g., from more theoretically-oriented (or more poetic, historically-minded, spiritual, etc.) forms of philosophy.

the case that improving representational devices in terms of accuracy does not lead to serving social ends more effectively, and it may even hinder their pursuit (see Simion 2018). The connection between internal and external purposes is not necessary. However, it is hard to imagine that *less* accurate representations *generally* or *typically* help us serve social needs better. In most cases, it is presumably more difficult to be faced with problems we cannot understand properly because they are misrepresented. All the same, when internal and external purposes are in tension, it may seem that one must choose between them. However, this is not necessary in several cases. For example, accuracy and visualization are often in a tension in scientific modelling. Accuracy is essential for (internal) scientific purposes, whereas visualization often serves (external) educational purposes. The solution is not choosing one or the other, but clearly identifying scopes of application for both, and using them where they serve their purposes best.

3. DEFICIENCIES IN THE ANALOGY: FUNDAMENTAL RESEARCH VS. APPLIED SCIENCE

A purpose of conceptual engineering is often taken to be improving or revising our concepts. Fixing language consists of assessing and improving concepts (Cappelen 2018: 3): the design, implementation, and evaluation of concepts (Chalmers 2020: 1) that involves an evaluative, normative, and manufacturing aspect (Isaac 2020: 4). However, all these only cover the internal purposes of engineering: setting up standards for ideal concept use and improving concepts to meet internal standards as much as possible. However, as suggested above, engineering does not stop at this point: its purpose is not to simply construct as perfect a toolkit as possible; throughout the process of creating toolkits, engineers constantly have in mind what these tools should be good (and applied) *for*. In Weberian terminology, philosophical toolkits should be understood as instrumentally rational rather than value-rational (see Weber 1978: 24–25).

Concepts can be understood as representational devices (Cappelen 2018). Hence, concepts are "good for" representing reality. This is certainly *one* thing concepts are good for, but there may be many further purposes that they can serve. For an observer, accurate representation can be an end in itself. For an engineer, accurate representation is good only insofar as it serves further application-related ends. It is not applied science but fundamental research that aims to represent reality accurately for its own sake. Just as a chemical substance is significant for

medicine only insofar as it has a healing function, a concept should be significant for conceptual engineering only as far as its usage has real effects on how we humans think about reality. From an engineering perspective, representation in itself is uninteresting. It becomes interesting only via its potential usefulness, i.e., making better social relations by developing a better common understanding of reality.

Having this difference in mind, two approaches to conceptual engineering can be introduced. The first is a standard understanding developed most explicitly by Cappelen (2018), according to which conceptual engineering aims to improve representational devices and hence accurate representation. In Cappelen's terminology, this could be called the "representational approach." This approach understands conceptual engineering as fundamental research. The second, to be called the "applicative approach," takes conceptual engineering as an applied science.

Note that these two approaches are entirely compatible with one another: on the one hand, the representational approach allows space for application, while the applicative approach straightforwardly contains representation as a necessary means for application. More precisely, regarding the *process,* both consider conceptual engineering an amelioration of representational devices. The difference between them lies in their *purposes*: while the representational approach takes conceptual engineering as a self-contained epistemic enterprise aiming at truth as its final purpose, the applicative approach takes truth to be functional or instrumental and application to be the ultimate purpose of epistemic enterprises. Hence, in their understanding of the process of conceptual engineering, the two approaches are compatible, and the applicative approach also contains the purposes of the representational approach. Consequently, the applicative approach can be seen as an extension, rather than a rival, of the representational approach.

The choice between the representational and the applicative approach is also connected to the social legitimacy of philosophy – a recurring topic in the history of philosophy. Philosophers often rely on role models to describe the social functions of their profession, most frequently taking the scientist as their model, though other role models include the prophet, the poet, the inventor, the explorer, the historian, or the therapist. Engineering metaphors also occur occasionally (e.g., Richard Rorty (1991) calls pragmatist philosophers "social engineers" whose task is to improve society). These role models usually imply strong commitments regarding the central task of philosophy, including whether philosophical activ-

ity is better understood as resembling discovery or invention. While the most common model for philosophy as discovery (i.e., getting truth) is (hard) science, engineering belongs to the invention side of the dichotomy (sometimes referred to – somewhat misleadingly in my view – as "making truths"). An engineer is not resistant to reality and hence representation, but the proper interface for her to interact with reality is not representation but application.

It is instructive to see how conceptual engineers (more precisely, two often cited pioneers of the conceptual engineering tradition, namely Blackburn and Eklund) relate via their role models to the fundamental science vs. applied science dichotomy. Blackburn characterizes himself as a philosopher

> doing conceptual engineering. For just as the engineer studies the structure of material things, so the philosopher studies the structure of thought. Understanding the structure involves seeing how parts function and how they interconnect. It means knowing what would happen for better or worse if changes were made. (Blackburn 1999: 2)

Do engineers really study the structure of material things? No doubt, they do so now and then, but it is not their primary occupation. What they normally do is design, production control, maintenance, and development. *For the sake of* doing their tasks properly, they also need to study the structure of material things – the functions, and interconnections of their parts, etc. It is not the engineer, however, but the scientist whose primary task is studying structures, connections, and functions of different parts of reality *as an end in itself*.

Based on this overly scientific picture of engineering, the task Blackburn attributes to conceptual engineering is "to supply a clearer outline of alternative structures of thought" (Blackburn 1999: 119). The main reason to do so is – as now Eklund continues with an explicit reference to scientists (more precisely, physicists) rather than engineers – as follows:

> when physicists study reality they do not hold on to the concepts of folk physics but use concepts better suited to their theoretical purposes. Why should things stand differently with what philosophers study? It would be Panglossian to suppose that the concepts we find ourselves with are the ones that are best suited to the purposes in question. (Eklund 2014: 293)

Some of the above-mentioned approaches to conceptual engineering aim to conceptually improve social reality. So, I would not argue that the metaphor of philosophy as conceptual engineering simply inherits all the characteristics of the metaphor of philosophy as the science concerned with the structure of our

conceptual scheme or with the representation of reality. But it is apparent in these passages that *some* conceptual engineers *sometimes* seem to imply that their role models are physicists who are not engineers but scientists.

Perhaps Blackburn and Eklund may not be taken by many to be *par excellence* conceptual engineers. However, other strands of conceptual engineering are more functionally and socially oriented (as mentioned above). The ideas behind these approaches may provide a better basis for developing a methodology of conceptual engineering that leaves behind the "philosopher as a scientist" metaphor, changes the focus of investigation from (mostly or exclusively) fundamental research to (mostly but not exclusively) applied science research, and takes the "philosopher as an engineer" metaphor more seriously.

To complete this analogy, further aspects of it are worth developing as models for philosophical concept fabrication. This (normative) claim can be further supported by descriptive and normative reasons. Before discussing some of these reasons, I shall make some general comments on the descriptive vs. normative distinction in the present context.

4. TWO ROUTES LEADING TO CONCEPTUAL ENGINEERING AS AN APPLIED SCIENCE

Now that the idea of conceptual engineering as an applied science has been introduced, I will continue with a slightly more systematic evaluation of the differences between the representational approach and the applicative approach in terms of descriptive and normative reasons. The claim that the concept of conceptual engineering needs some engineering is not original (see Isaac 2020, Chalmers 2020). Cappelen, before developing his account of conceptual engineering, also acknowledges that the term is not the most fortunate for describing what he has in mind:

> I've settled on "conceptual engineering" though it is far from ideal. It's important that readers don't take that name as a description: on the view I defend in this book, the project isn't about concepts and there isn't really any engineering. Despite the descriptive inadequacy of the terms, my experience is that the label directs people's attention in the right direction and that's why I've chosen to go with the Blackburn/Eklund terminology. (Cappelen 2018: 4)

If conceptual engineers such as Cappelen do not intend to literally engineer concepts, that could be a reason why they do not follow through with the analogy.

The philosophical enterprise can be seen in multiple ways, and it is not necessary to take it as analogous to engineering. However, a further question is that if conceptual engineering is not engineering and it is not about concepts either, then what is it at all? Cappelen suggests a potential answer to this question in a footnote: "for all those who think there are concepts and that they can be engineered, this terminological choice is also descriptively adequate" (2018: 4). It seems he finds the term appropriate as far as some commitments to the existence of concepts have been made, and he problematizes the notion of conceptual engineering only because he, in contrast with many other philosophers, does not commit himself to the existence of concepts.

However, I do not think that the term is descriptively adequate (even on the condition of accepting that concepts exist). While Cappelen's main concern is with concepts (he admittedly applies this term only to follow the mainstream terminology – see Cappelen 2018: 3 fn. 2), mine is with engineering: as argued above, engineering has different purposes from those that Blackburn, Eklund, and sometimes Cappelen seem to ascribe to conceptual engineers. Hence, on the Blackburn–Eklund view, philosophers do not engage in engineering in the full sense, unlike socially and functionally oriented approaches to conceptual engineering. But what is even more important is the normative consequences of the metaphor: in accordance with the ameliorative spirit of conceptual engineering, the background analogy should be applied much more thoroughly so that the concept could better serve the widest range of possible purposes of conceptual engineers. Insofar as accurate representation ideally serves better applications, this point is not a rejection but an extension of the view discussed.

There are at least two ways to demonstrate that the term "conceptual engineering" has not been fully exploited. The first is descriptive: the extension of the notion of "engineering" is different (presumably broader) than suggested by the approach sketched above. The second is normative: "engineering" should be understood differently (presumably more broadly). While I see potential in the descriptive route (see the next section), I will mainly emphasize the normative one. The reason for this difference in emphasis is that a purely descriptive account of conceptual engineering does not fit conceptual engineering as a *method*. Conceptual engineering examines concepts on the ground: what concepts *should* be rather than what they are. Hence, even though I shall argue that a proper description of engineering (as well as a description of several particular instances of what conceptual engineers who follow the function-centered and socially minded

approaches actually do) supports the applicative approach, I would find it insufficient without reasons as to why the latter would be *normatively* better than the Blackburn–Eklund approach. After all, conceptual engineering aims to improve our concepts in order to improve our practice. Based on the description of a possibly misguided practice, changing existing concepts that are partly or fully incoherent with that practice on the grounds of the existing practice can easily be misguided too. For this reason, after introducing the descriptive reasons, I will turn towards *pro* and *contra* normative reasons.

The claim that "conceptual engineering" is a term that is often applied improperly can imply at least two alternative consequences. First, there is the "conceptual engineering" phenomenon, which is represented inaccurately (or, to put it in normative terms, it is recommended for the wrong reasons). Second, there are (in the normative version: there should be) *two distinct* phenomena. The first is what is normally called conceptual engineering, but the second is what should bear the name instead; or at least both should be called conceptual engineering, because they realize different aspects of engineering activity.[3]

I will follow the second alternative. I claim that there *is* a phenomenon called "conceptual engineering": this is what (in the above sense) non-function-centered conceptual engineers and their predecessors do. But there *should be,* in my view, *another* phenomenon which would be a more developed version of conceptual engineering, and which also has its roots in function-centered and socially oriented approaches. The key to this development is fully replacing the fundamental research picture with the applied science picture of conceptual engineering. This replacement does not entail replacing the current activities of conceptual engineering with different ones. As argued above, the applicative approach entails (and extends) the representational approach, hence taking conceptual engineering as an applied science does not exclude elements of fundamental research from its scope. On the contrary, conceptual engineering as applied science relies on conceptual engineering as fundamental research, i.e., the accurate representation of concepts to be engineered so that they can be engineered properly.

As argued, the recommendation to develop the analogy in line with the applied science model has a descriptive basis: non-conceptual engineering *belongs to* ap-

[3]This problem resembles the "changing the subject" objection to conceptual engineering (see esp. Prinzing 2017 and Belleri 2021), but for the present purposes, changing the subject is more valuable than replacing old notions with new ones, insofar as the new notion of conceptual engineering aims at involving the old one.

plied science. Hence, the "engineering" metaphor could be much better exploited if the applicative components of engineering were taken seriously. However, the main reason for this recommendation is normative: understanding philosophy as an applied science is more beneficial than understanding it as fundamental research. The reasons for this will be provided in the final section, but let me first follow the descriptive route.

4.1. THE DESCRIPTIVE ROUTE

The previous section has argued that descriptive arguments in a debate over conceptual engineering are somewhat inadequate: they build on what "conceptual" and "engineering" actually mean, whereas the heart of the conceptual engineering idea is that conceptual debates should be about what concepts *should* mean. Nonetheless, descriptive reasons can be useful for demonstrating that the normative recommendations are not unrealistic. Perhaps these recommendations would make serious alterations to how conceptual engineering is actually understood, but they would do so partly on the grounds of attributing descriptively adequate characteristics of non-conceptual engineering to conceptual offspring. In other words, the normative recommendations simply suggest further developing the metaphor based on the analogy between what engineers do and what philosophers as conceptual engineers should do.

A trivial form of a descriptive definition of conceptual engineering takes what "concept(ual)" and "engineering" mean and applies compositionality to them (Chalmers 2020). While doing so, Chalmers claims that three common factors can be identified in the countless different definitions of engineering: designing, building, and analyzing. He takes the best (rough) description of conceptual engineering to be designing, implementing, and evaluating concepts for the reason that "implementing" is more general than "building" and can therefore increase the applicability of the concept, whereas "evaluation" is philosophically more neutral than "analysis," which – especially in this context – can misleadingly suggest "conceptual analysis."

Chalmers argues that

> all three of these things [are] playing a role, say, in bridge engineering. You design a bridge, you implement a bridge, you evaluate the bridge to see how well it's doing. If the evaluation isn't positive, you design some repairs and you implement the repairs. And so on. You also see something like this in software engineering. You design

> a program, implement the program, evaluate the program, and so on in a continuing circle. (Chalmers 2020: 3)

This analogy describes a *common process* shared by bridge engineering and software engineering. This analogy can be extended to concept engineering by comparing the *methods* used in these engineering processes. What makes this analogy tenable is that the three elements – designing, implementing, and evaluating – do seem to be common in bridge engineering and software engineering, on the one hand, and to some philosophical activities that can, by analogy, be described as conceptual engineering, on the other.

Now let me continue the analogy a bit further. Similarities in these processes and methods can be seen well. But what are the *purposes* of these activities? Bridge engineering aims to build bridges, *thereby* enabling land vehicles to cross rivers. Software engineering aims to make virtual tools, *thereby* solving problems and, for example, making everyday tasks easier. Their internal purposes can be seen as a means for external purposes. Perhaps it is not too strong to say that no engineering task is complete unless its outcome serves further aims. To put it differently, a task is an engineering task only if its outcome is intended to serve further purposes external to engineering activities.

If the analogy is applied to philosophy as conceptual engineering, then philosophy should not stop at perfecting its representational devices: it should also show what further extra-philosophical purposes those devices can serve. Fully developed representational devices (under ideal circumstances) are evidently good for representation, but representation is still an internal purpose of philosophical (more precisely, epistemic) activities. Philosophers as engineers should also answer the question of what representation is good for – even if, *or especially if*, these benefits are purely mundane – as this is what makes them external to philosophy.

Defining the external purposes of conceptual engineering (and, via them, its mundane applications) is only the first step on the descriptive route. A comprehensive analysis of what "engineering" means and what different sorts of engineers do is beyond the scope of this paper. I hope that the most important point has become clear: if conceptual engineering aims to follow the engineering analogy properly, the internal relevance of external purposes in engineering should be inherited from technological engineering. Further additions may be found by following the analogy even further; however, in the spirit of conceptual engineering, I shall instead focus on normative reasons as further support.

4.2. THE NORMATIVE ROUTE

Normativity is central to conceptual engineering because of its "should"-talk. Despite this, there is not too much emphasis on the norms *governing* that normativity. Providing a taxonomy, Cappelen intentionally leaves norms that motivate conceptual engineering out of the classification, since he does not find it "particularly useful" and even thinks a list is "pointless" (Cappelen 2018: 36–37). He even invites the reader to "insert" her preferred classification. For this reason, I assume that Cappelen would accept that governing principles other than norms of representation can also motivate conceptual engineering. If that is right, my line of thought can be seen as an extension of this aspect of his view.

The advantages of the applicative approach to conceptual engineering outweigh its possible disadvantages. Hence, even if disregarding its descriptive superiority discussed above, we should consider conceptual engineering as an applied science because it is better than the representational approach. What follows is an overview of the main pros and cons.

4.2.1. ADVANTAGES

(1) *Philosophy and external purposes.* If conceptual engineering as a sort of philosophical activity inherently involves the requirement to aim at purposes external to philosophy, it helps us a lot in the social legitimation of philosophy. Legitimacy is an old problem of philosophy (perhaps as old as philosophy itself), and from time to time, intense pressure reoccurs on philosophers to justify the social utility of their profession. If philosophy explicitly aims to make a social impact through its conceptual engineering, the legitimacy problem can be reduced to two questions: on the one hand, how effective is engineering; on the other hand, how desirable are its effects for society? Presumably, these are not easy questions, but they are still much easier than the question of whether philosophy, as the self-absorbed, passive contemplation of ideas, is socially good or useful.

(2) *Fixing concepts.* As mentioned, the idea that philosophy is about fixing concepts presupposes an ideal system of concepts that such fixing is meant to achieve. This is not a supposition that is extremely hard to take, but it is still unacceptable for many philosophers as it requires answering questions like how we can know what an ideal system of concepts is, what directions this fixing should take in order to achieve the ideal (and whether it is achievable at all), and how we

can know that we have achieved it when we have, etc. Even if there have been previous attempts to answer some of these questions, if philosophy is taken (fully or partly) as conceptual engineering, there is no need for such complex theories.

If fixing language through conceptual engineering is understood as rescuing concepts from inconsistencies along multiple possible paths, then such fixing does not presuppose an ideal target language. Purposes of fabrication can be determined case by case, and there is no need for an ultimate purpose of conceptual engineering, such as having accurate representational devices. Fixation in this view is moving away *from*, rather than *toward*, a pre-defined point: it starts with a conceptually flawed set of concepts, and the goal of engineering is to leave its deficiencies behind. In this case, the direction in which conceptual engineering develops those concepts is open; the aim is to arrive at concepts that functions in accordance with purposes defined by concept users, and only the point of departure is pre-determined.

But this is certainly not what the representational approach means by "fixing language." Cappelen thinks that many substantive philosophical debates should be interpreted as being "about what our words *should* mean, or what concepts those words *should* express" (Cappelen 2018: 28). Fixing the language does not remedy the internal failures of concepts; it aims to progress towards ideal concept use (or at least, what conceptual engineers think ideal concept use is). Even though it is reasonable to think that ideal concept use would fix all failures, it may not be necessary to do so. Aiming at less ambitious internal purposes may equally well serve the external purposes and show short-term success.

(3) *Extending the scope of engineering within philosophy*. If philosophy in some sense, or in some of its forms, is about fabricating concepts for purposes other than fixing them in order to accurately represent reality, many more philosophers can be included in philosophy as conceptual engineering. Those who would not accept the supposition of an ideal language as a precondition of conceptual "fixing" could also be involved in conceptual engineering activities, namely philosophers whose work involves conceptual revision, assessment, or clarification. Similarly, if conceptual engineering does not (necessarily) aim at proper representation but treats representation as a possible means to further purposes, philosophers who reject representationalism can also be included.

(4) *Extending the scope of engineering interdisciplinarity*. If we see conceptual engineering and philosophy as identical (or at least, the former is a subset of the latter), it can be said that, e.g., physicists use some sort of philosophy when

fabricating their conceptual framework. This supports the idea that scientific activities (and other activities involving conceptual machinations) are deeply interwoven with philosophical activities; hence, science and philosophy interact dynamically. An emphasis on interdisciplinarity satisfies the requirement that conceptual engineering must have purposes external to philosophy. In the meantime, we can also reserve research directions that are of purely theoretical interest. However, what could make philosophy proper conceptual engineering (rather than a physics of concepts) is the mundane application of the results of concept fabrication.

In addition, if there are intersections between what physicists (or other concept fabricators) and philosophers do, it opens further possibilities for interdisciplinary cooperation. Philosophy should not necessarily be forced to play the role of the common factor of different disciplines. Nonetheless, it can exploit connections and similar interests in engineering concepts in different fields, based on philosophers' expertise in working with concepts.

(5) *Philosophy and science.* Finally, despite all its pragmatizing tendencies, the applied science picture keeps the idea that philosophy is (at least in some of its forms) scientific, that it has a theoretical role, and that representation of reality is an internal purpose of philosophy. Hence, by involving philosophers who do not sympathize with philosophy as a science of ideal language and representation, we would not lose those who sympathize with this picture – as long as they accept a pluralism of norms governing engineering activities. This is the most inclusive notion of "philosophy" I can imagine. Even if I am wrong in thinking so, it is certainly more inclusive than the one implied by the fundamental research picture.

4.2.2. POSSIBLE DISADVANTAGES

From the above line of thought, some extreme directions can follow. To avoid these, it is worth making a list of the undesirable consequences.

(1) *A lack of distinctive characteristics.* If philosophers are conceptual engineers, and conceptual engineering is something even physicists do, why would society need philosophers? Rather than giving a positive response to the legitimation problem, this could even make things worse for philosophy.

A response may be as follows. If philosophy is inherently involved in many (scientific and non-scientific) activities, doing philosophy is necessary in order to do those activities. Unless it is supposed that doing philosophy is something that

everyone can do on the grounds of their pure instincts or intuitions, professional philosophers are required to guide non-philosophers on how to apply philosophy to their field. Doing research of purely theoretical interest in philosophy is perhaps not a necessary component of teaching applied philosophy, but all the same, it should not be lost for the price of serving external purposes. Doing research is certainly one way for philosophers to self-educate themselves, and it is reasonable to think that self-education also makes their teaching activity more effective. Once again, internal and external purposes can be achieved in parallel, even though intellectual resources and efforts divided between the two should be balanced carefully.

(2) *Too inclusive a notion of philosophy*. An extremely inclusive notion of philosophical activities can involve too much – perhaps even activities that are not philosophical. It makes no sense to design and implement a concept that does not describe its intended scope properly or does so at the price that it is meaninglessly broad and vague.

Admittedly, the notion of philosophy as conceptual engineering is rather vague. However, this is probably true for any description of philosophy which is not extremely *exclusive*. Conceiving philosophy as the fixing of representational devices is one such exclusive account. To be fair, conceptual engineers do not present this account as applying to philosophy or philosophical activities in general (nor is that the aim of the present paper), but rather as identifying one specific form of doing philosophy. However, a more inclusive notion can open further possibilities for the conceptual engineering movement. It can provide approximate descriptions for a wider range of philosophical activities, inside and outside professional philosophy. The purpose of this inclusion is to share the benefits of the "conceptual engineering" label with fellow philosophers rather than provide necessary and sufficient criteria for philosophy (which is a requisite of philosophy as conceptual analysis, anyway).

(3) *Relativism*. Giving up the aim of an ideal language and representation of reality as necessary purposes of philosophy can result in extreme forms of relativism about language, knowledge, and even reality. This can be a real danger if possible purposes of philosophical activities are chosen irresponsibly. From the claim that there is no pre-defined purpose of philosophy, such as achieving an ideal language or an accurate representational device, it is easy to conclude that philosophy can have any purpose.

As a response, it can be said that conceptual engineers should avoid these "easy conclusions" precisely because they do not *follow* from the views presented above. A lack of ultimate purposes does not imply that any purpose can be adopted without consequences. It is precisely the applicative part of engineering that warrants a connection with reality: if the result of conceptual fabrication is inapplicable, social or physical reality will let us know.

Still, conceptual engineering can be applied to achieve several purposes (including, e.g., manipulating the undereducated masses), but it does not follow from this that anything that is done by concept engineering is to be taken as a philosophical activity. There is certainly more to philosophy than *just* fabricating concepts. But insofar as the engineering analogy also emphasizes evaluating the outcome – not only testing it in application – the quality assurance of conceptual engineering also includes an internal philosophical component.

(4) *Bad experience.* A further concern builds on an argument from bad experience. In contrast with conceptual analysis and descriptive philosophy in general, it is hard to ignore crosstalk recalling the Marxist imperative from *Theses on Feuerbach* that philosophy must aim to change the world rather than just interpret it. Regardless of the potential theoretical merits and weaknesses of Marxism, changing the world in the name of philosophy has involved undesirable practical consequences in the twentieth century (to say the least). What could guarantee that conceptual engineering would not result in similar consequences?

As conceptual engineering offers a philosophical methodology rather than a set of views, it can be used, as mentioned above, to support any sort of ideology. Whether it is applied for achieving good or evil depends on the purposes that engineers define on a case-by-case basis (and the effectiveness of conceptual engineering). But one thing is certain: under the present circumstances – when confusion, misinterpretation, and deception are norms in public speech – the fabrication of concepts that more accurately represent reality is timely and socially beneficial. If conceptual engineers could, even to a small extent, make changes in how we think about reality *with good intentions*, it would possibly make one of the greatest social impacts in the history of philosophy.

CONCLUSION

In this paper, I have argued that the metaphor of philosophy as conceptual engineering needs to be further developed. While it builds on important analogies

between engineering and concept fabrication processes, it fails to elaborate on the applicative character of engineering. Conceptual engineering was introduced into philosophy as a methodology. Nevertheless, it also implies an image of philosophy: it makes recommendations on how philosophy could benefit from applying methodologies borrowed from engineers. These implications have not yet been exploited, though, because the engineering metaphor has not been completed.

Conceptual engineers often take engineering as fundamental research rather than applied science. They understand engineering as a study of the structure of the material world that goes back to an earlier role model for philosophy – namely, science. They move one step forward from science towards proper engineering: engineers not only study but also change material structures. Analogously, conceptual engineers are expected to change conceptual structures.

This is but one step forward. The next step should be to adopt a pluralistic view of engineering activities that is nonetheless compatible with, though not directly supported by, the idea that conceptual engineering is an amelioration of representational devices. As opposed to the representational approach that implicitly takes engineering as fundamental research that *can* be applied, the approach introduced in this paper understands engineering as an applied science that *must* be applied in order to do it properly.

There are descriptive as well as normative reasons supporting the recommendation to follow this step. Descriptively, engineering *is* applied science, and it inherently involves application in order to function properly. But insofar as conceptual engineering is about how concepts should be understood rather than what they actually mean, the main reasons for conceptually engineering "conceptual engineering" must be normative.

I have provided several normative reasons supporting the applied science approach and responded to some worries that typically arise from exaggerating some possible consequences. I have argued that the extreme consequences are avoidable, and normative reasons generally support the recommendations on how conceptual engineering should be improved.

The normative reasons mainly build on metaphilosophical considerations. Understanding philosophy as applied science open to a variety of internal and external purposes makes the notion more widely applicable and more exploitable across disciplines, and it better serves the social legitimation of philosophy. The question of why the concept should be refabricated can be answered by empha-

sizing the benefits it brings. Most notably, philosophy as applied science (but a science) can aim to achieve internal purposes while also serving social needs.

A final test for the recommendations advanced in this paper is how realistically they can be introduced in everyday use. If Cappelen is right, the chances that these recommendations can be introduced in everyday use are very low, since the meanings of our words and concepts are shaped by several factors external to conceptual engineering. However, by setting expectations realistically low, a significant contribution to debates over norms determining concept use may be achievable, and this also seems to be a direction which is in accordance with the ambitions of conceptual engineers.

REFERENCES

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

Blackburn S. (1999), *Think: A Compelling Introduction into Philosophy*, Oxford: Oxford University Press.

Burgess A., Cappelen H., and Plunkett D., eds. (2020), *Conceptual Engineering and Conceptual Ethics*, Oxford: Oxford University Press. https://doi.org/10.1093/oso/9780198801856.001.0001

Cappelen H. (2012), *Philosophy Without Intuitions*, Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199644865.001.0001

Cappelen H. (2018), *Fixing Language: An Essay on Conceptual Engineering*, Oxford: Oxford University Press. https://doi.org/10.1093/oso/9780198814719.001.0001

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

Eklund M. (2014), *Replacing Truth?* [in:] *Metasemantics: New Essays on the Foundations of Meaning*, A. Burgess and B. Sherman (eds.), Oxford: Oxford University Press, 293–310. https://doi.org/10.1093/acprof:oso/9780199669592.003.0012

Eklund M. (2015), *Conceptual Engineering and Conceptual Fixed Points*, [in:] *The Palgrave Handbook of Philosophical Methods*, C. Daly (ed.), London: MacMillan, 363–385. https://doi.org/10.1057/9781137344557_15

Floridi L. (2011), "A Defence of Constructionism: Philosophy as Conceptual Engineering," *Metaphilosophy* 42(3), 282–304. https://doi.org/10.1111/j.1467-9973.2011.01693.x

Haslanger S. (2000), "Gender and Race: (What) Are They? (What) Do We Want Them to Be?" *Noûs* 34, 31–55. https://doi.org/10.1111/0029-4624.00201

Haslanger S. (2020), *Going On, Not in the Same Way*, [in:] *Conceptual Engineering and Conceptual Ethics*, A. Burgess, H. Cappelen, and D. Plunkett (eds.), Oxford: Oxford University Press, 230–260. https://doi.org/10.1093/oso/9780198801856.003.0012

Isaac M., Koch S., and Nefdt R. (2022), "Conceptual Engineering: A Road Map to Practice," *Philosophy Compass* 17(10), e1287. https://doi.org/10.1111/phc3.12879

Isaac M. G. (2020), "How to Conceptually Engineer Conceptual Engineering?" *Inquiry*, 1–24. https://doi.org/10.1080/0020174X.2020.1719881

Isaac M. G. and Koch S. (2022), "Foundational Issues in Conceptual Engineering: Introduction and Overview," *Inquiry*. https://doi.org/10.1080/0020174X.2022.2028230

Isern-Mas C. (2023), "Implementing Conceptual Engineering: Lessons from Social Movements," *Inquiry*, 1–12. https://doi.org/10.1080/0020174X.2023.2253274

Jorem S. (2022), "The Good, the Bad and the Insignificant – Assessing Concept Functions for Conceptual Engineering," *Synthese* 200, 106. https://doi.org/10.1007/s11229-022-03548-7

Koch S. (2021), "Engineering What? On Concepts in Conceptual Engineering," *Synthese* 199, 1955–1975. https://doi.org/10.1007/s11229-020-02868-w

Nado J. (2021), "Conceptual Engineering, Truth, and Efficacy," *Synthese* 198(Suppl 7), 1507–1527. https://doi.org/10.1007/s11229-019-02096-x

Nimtz C. (2021), "Engineering Concepts by Engineering Social Norms: Solving the Implementation Challenge," *Inquiry* 67(6), 1716–1743. https://doi.org/10.1080/0020174X.2021.1956368

Podosky P. (2022), "Can Conceptual Engineering Actually Promote Social Justice?" *Synthese* 200, 160. https://doi.org/10.1007/s11229-022-03469-5

Prinzing M. (2017), "The Revisionist's Rubric: Conceptual Engineering and the Discontinuity Objection," *Inquiry* 61(8), 854–880. https://doi.org/10.1080/0020174X.2017.1385522

Queloz M. (2022), "Function-Based Conceptual Engineering and the Authority Problem," *Mind* 131(524), 1247–1278. https://doi.org/10.1093/mind/fzac028

Riggs J. (2021), "Deflating the Functional Turn in Conceptual Engineering," *Synthese* 199, 11555–11586. https://doi.org/10.1007/s11229-021-03302-5

Rorty R. (1991), *Essays on Heidegger and Others. Philosophical Papers Volume 2*, Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511609039

Simion M. (2018), "The Should in Conceptual Engineering," *Inquiry* 61(8), 914–928. https://doi.org/10.1080/0020174X.2017.1392894

Simion M. and Kelp C. (2020), "Conceptual Innovation, Function First," *Noûs* 54(4), 985–1002. https://doi.org/10.1111/nous.12302

Weber M. (1978), *Economy and Society: An Outline of Interpretive Sociology*, G. Roth and C. Wittich (eds.), Berkeley: University of California Press.