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Carnapian explication and normativity

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Introduction

This paper was partly inspired by a recent discussion I had with Panu Raatikainen and Jaakko Reinikainen on the relationship between conceptual engineering and Carnapian explication. Panu wondered if conceptual engineering is just rebranded Carnapian explication. My initial sentiment was that Carnapian explication should be thought of as a type of conceptual engineering rather than a rebranding, and this paper seeks to defend this claim. However, while working out the details, it became clear that the relationship between conceptual engineering and Carnapian explication is more complicated than it initially appeared.

Panu's suspicion is well justified since the term conceptual engineering was coined by Richard Creath to refer to Carnapian explication in which existing concepts are improved to better serve the needs of scientists (Creath 1990). However, nowadays the term is used to refer to a broader range of practices aimed at improving concepts. Modern conceptual engineering is not only interested in how concepts could best promote the acquisition of scientific knowledge but also in how they can help to achieve various socially valuable goals, such as increasing inclusivity, justice and democracy. Since both approaches seek to improve concepts, Carnapian explication has been viewed as a special case of a broader practice of conceptual engineering (Cappelen 2018, 3–4).

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Taking Carnapian explication as a species of conceptual engineering has its issues. Conceptual engineering is almost universally accepted as a normative practice. While some, including Creath, have interpreted explication as a normative practice set on improving our existing concepts (Creath 1990; Justus 2012), Carnap also expressed anti-normativist sentiment towards language choice in a famous passage: "in logic [and language], there are no morals." (Carnap 2000 [1934], 52)[1] Carnap argued that instead of prescribing certain linguistic forms and proscribing others, we should be tolerant towards the adoption of various linguistic forms.

How should we understand both the normativity of explication and what is meant by no morals in logic and language? How can the process of improving concepts be normative and at the same time the choice between languages be a non-normative matter? In this paper, I seek to reconcile the apparent tension between normativity of explication and the anti-normativism of Carnap's principle of tolerance. First, I show that Carnapian explication can be understood as *instrumentally normative*. Adopting concepts can be thought of as means to achieve goals. Instrumental normativity is compatible with the principle of tolerance, since (A) there can be several conceptual means to promote scientific goals and (B) if language choice is goal-relative, one ought to prefer certain concepts over others only insofar as one is willing to pursue the goals these concepts promote.

While understanding explication as instrumentally normative might be enough to dispel any worry that there is a tension between explication and tolerance, for the conceptual engineer interested in furthering social justice, mere instrumental normativity does not seem to be sufficient. These engineers may want to go beyond the conditional claim that "if you want to promote inclusivity, you ought to use more inclusive concepts" and instead asks which concepts promote goals which are worth pursuing (see e.g., Haslanger 2000, 33). Likewise, it does not seem to be the case that conceptual engineers, (or anyone really) ought to be tolerant of linguistic forms that further morally questionable goals. Using misogynistic concepts may well further the goal of increasing gender-inequality, but this fact does not itself seem to warrant tolerance.

Does this mean that what distinguishes Carnapian explication from conceptual engineering is that the former is merely instrumentally normative while the latter is in some sense more robustly normative, or that explication is not a subtype of conceptual engineering but merely a precursor to it? This conclusion would be too hastily drawn. First, it should be noted that the goals of improving the clarity, and the acquisition of new scientific knowledge are arguably goals worth pursuing the same way promoting social justice is a goal worth pursuing. I shall argue that since many concepts can promote the acquisition of scientific knowledge, there are no absolutely right concepts which everyone must adopt and therefore there is still room for tolerance of different conventions.

[1] For Carnap, the choice of logic and the choice of language are inseparable as it is evident from the sentence following directly after the quoted passage: "Everyone is at liberty to build up his own logic, i.e. his own form of language, as he wishes." (Carnap 2000 [1934], 52).

While I believe that some textual evidence, particularly in "Empiricism, Semantics, and Ontology" (1988 [1950]) and *Logical Foundations of Probability* (1971 [1950]) suggests that Carnap did treat epistemological goals of science as valuable on their own, the main purpose of this paper is not exegetical. Nor is the goal of the paper to defend Carnap against criticism laid towards his conception of explication or its broader philosophical basis (Quine 1951; 1954; Strawson 1978 [1963]). Rather the goal is to show that both instrumental normativity and stronger normative notions are consistent with Carnap's principle of tolerance. As such this paper contributes to the understanding of the practice of explication and also provides insight into how to understand normativity in conceptual engineering in its modern sense.

Principle of tolerance

Throughout his career Carnap held the view that the everyday language was vague and ambiguous, which produced misunderstandings and confusions. Carnap argued that much of philosophical literature discuss pseudo-problems, which are the results of confusions created by the use of these vague concepts (1928). To overcome the pseudo-problems, the concepts with which we conduct our philosophical and scientific inquiries must be logically exact. In *Logische Aufbau der Welt*, he referred to this process as rational reconstruction, but later he came to call this process *explication*. In "The Two Concepts of Probability" (1945) and in the first chapter of his *Logical Foundations of Probability* (1971 [1950]) he gave the most detailed discussion of this process. In explication, a prescientific concept (explicandum) is analysed making notes about the possible vagueness and ambiguities as he argued was the case with probability. Then these concepts are given formal definitions (explicatum). A pretheoretic concept may encompass multiple distinct notions – as Carnap argued was the case with the notion of probability – then explicandum can be given multiple explicata. If the concept is vague, the explicator can define the unclear instances as either belonging to the explicatum or not.

Martin Gustafsson, among others, has argued that explication is tied to the Carnap's logical pluralism (Gustafsson 2014, 510–11). Since the explicandum is by its very nature inexact (otherwise there would be no need for explication in the first place) there is no exact way to determine whether the proposed explicatum is right or wrong (Carnap 1971 [1950], 4). Similar denial of the applicability of rightness and wrongness to the choice of language can be found in the in The Principle of Tolerance the most famous statement of which can be found in the *Logische Syntax*:

> *In logic, there are no morals*. Everyone is at liberty to build up his own logic, i.e. his own form of language, as he wishes. All that is required of him is that, if he wishes to discuss it, he must state his methods clearly, and give syntactical rules instead of philosophical arguments. (Carnap 2000 [1934], 52)

Carnap was unimpressed by intuitionist arguments against classical logic, but he saw the value of studying formal systems that could capture intuitionist ideas. Indeed, Language I in *Logische Syntax* was such systems. While it may be useful to study formal systems in which certain inferences, such as the law of excluded middle, are restricted, Carnap objected to extending these restrictions to alternative systems.

Similarly, correct language is not forced on us by the considerations of what are the true meanings of the expressions. Absolute faithfulness to the prescientific concepts would only reproduce the deficiencies of those concepts and thus, even in their most logically exact form the explicated concepts would not serve the needs of the scientists. Since one is free to use one's language and logic there is no absolutely right or wrong choice between possible explicata of the same explicandum (Carnap 1971 [1950], 4–6).

Normativity and the principle of tolerance

It should be pointed out that while the principle of tolerance denies that there are absolutely right or absolutely wrong linguistic forms, this does not lead to an *anything goes* sentiment in the choice of explicatum. In *Logical Foundations of Probability* Carnap lists four requirements for a successful explication:

1. Similarity: The explicatum must be similar to the explicandum.
2. Exactness: The logical connection between the explicatum and the scientific system must be clear.
3. Fruitfulness: Explicatum must allow formulation of many universal statements (empirical laws or logical theorems).
4. Simplicity (Carnap 1971 [1950], 5–8).

Are these requirements in conflict with the principle of tolerance? Should we not tolerate linguistic forms that fail to satisfy these requirements?[2] However, Carnap's goal of stating these requirements was not to set up rules for language choice but rather to make explicit the rules that are implicitly followed by philosophers, scientist, and mathematicians who seek to make concepts more explicit (Carnap 1971 [1950], 7). In his reply to Strawson, Carnap clarifies this instrumentalism towards concepts: "Language, whether natural or artificial, is an instrument that may be replaced or

[2] Out of the four, it is easiest to show that the requirement of similarity is not in conflict with the principle of tolerance. The requirement says that, while there can allows for significant deviation from the prescientific concept, there must be some similarity between the and the explicatum. Otherwise, the proposed explicatum is not an explicatum of the explicandum, but something completely different. A completely arbitrary definition regardless of how exacts, would not be explicatum of explicandum. For example, definition of "fish" as celestial bodies orbiting the Sun, would not be an explication of the prescientific concept of fish. (Carnap 1971 [1950], 5) However, this does not imply that one should not adopt the definition of "fish" as celestial bodies in one's language. It merely means that in such a case the concept would not be explicatum of the prescientific concept fish.

modified according to our needs, like any other instrument." (Carnap 1978 [1963], 938.) Furthermore, he concedes that less exact concepts can themselves be useful for many purposes, suggesting that he does not intend to categorically prohibit the use of prescientific concepts (ibid 938–939).

Instrumentalism towards explications leads to adopting comparative rather than absolute evaluation of possible explicata. The question whether an explicatum promotes the goal of the scientist, the philosopher or the mathematician is not a matter of yes or no, but of better and worse. This idea of evaluation of language being matter of degree also appears in a later discussion of the principle of tolerance in "Empiricism, Semantics, and Ontology". While the sentiment is here very close to the earlier discussion of the principle in *Logische Syntax,* Carnap now clearly leaves room for evaluating competing systems of explicated concepts he called linguistic frameworks. Linguistic choices are to be assessed on the basis how well they serve the goals for which the language, especially the language of science is to be constructed. (Carnap 1988, 221).[3]

As the evaluation of explicata is relative to the goals of scientists, explication can be described as instrumentally normative, that is, in terms of the relationship between means and ends. One should choose the concepts that promote the goals of their inquiry. Explication of the concept of fish as celestial bodies does not promote the goals of the inquiries into marine life, but of those explications that do, some are better than others. One should prefer more fruitful concepts, (permit the verification of universal statements such as "all fishes have gills") and the method of their verification and the logical connections to other concepts are exactly given. Finally, all else being equal one should choose the concept that is simpler. But, these oughts are binding only so far as one has the stated goal. Whether or not the concept *nut* should include peanuts depends on whether one has culinary or botanical communicative goals. Thus, instrumental normativity is not in conflict with the principle of tolerance.

Conceptual engineering in its modern sense could also be described in terms of instrumental normativity. For example, Sally Haslanger suggests that we should assess our concepts in terms of how effective they are for accomplishing our (legitimate) purposes (Haslanger 2000, 33). If the concept of woman is to promote the goals of critical theory it needs to be such that it helps to "identify and explain persistent inequalities between females and males", be "sensitive to both the similarities and differences among males and females", track how gender [..] are implicated in a broad range of social phenomena", and "take seriously the agency of women" (Haslanger 2000, 36).

It is, however, important to note that Haslanger does not speak of any old purposes we may have, but specifically the legitimate ones. This suggests that conceptual engineering requires a notion of normativity that is stronger than merely

[3] I shall leave the question open, whether this difference amounts to change of heart in Carnap from 1930s to 1950s.

instrumental. There may be concepts which promote illegitimate goals, such as perpetuating oppression or disseminating misinformation, but these are not what conceptual engineers are interested in. If conceptual engineering is taken to be a normative endeavour, there is no place for concepts that promote illegitimate goals. Instead focus of a normative endeavour must be on the conceptual means for the ends worth pursuing.

Prima facie, the decision to use emancipatory over oppressive concepts seems to have more normative weight than the decision to use scientific over the prescientific concept of fish. Perhaps normativity is what distinguishes Carnapian explication from conceptual engineering. In other words, it could be that one should be compelled to revise the prescientific concept only so far as one is willing to pursue scientific goals. Nevertheless, setting aside Carnap's views for a moment, I believe that the difference is a matter of degree rather than kind. The advancement of scientific knowledge may not be as important as promoting equality, but this does not make it an unworthy goal to pursue and certainly not an illegitimate goal. The conceptual means for scientific ends could even be in conflict with the conceptual means for emancipatory ends, but this does not show that one of the goals is not pro tanto worth pursuing. There is often conflict in the pursuit of valuable goals. Sometimes this means that we have to consider alternative means in order to achieve both goals and sometimes we have to forsake one goal to achieve another, but none of these make the forsaken goals unworthy to pursue.

To treat explication as robustly normative, Carnap needed only to accept that the epistemic goals of science are valuable in their own right. While this may not seem to be much of a concession for Carnap, who throughout his career sought to advance scientific knowledge, this stronger notion of normativity could perhaps compromise his tolerant attitude towards admitting linguistic forms stance. After all, if a concept does not promote our legitimate epistemic goals, do we not arrive at "a dogmatic prohibition" against the adoption of a linguistic form, the very thing Carnap warned against (Carnap 1988, 221)?

However, even if concept A is better for the advancement of scientific knowledge than concept B, this does not mean that the use of the latter should be absolutely prohibited, for such prohibitions themselves can turn against our scientific goals. In a perfect epistemic situation, we might prohibit the use of inferior concepts where there are better ones available. However, since we are not in a perfect situation, a second-order prohibition: "do not prohibit the adoption of any concepts" better promotes scientific goals. Since even a poor tool may still permit the achievement of a goal, the risk of forbidding the use of concepts that may eventually prove to be useful is not worth the possible advantages of making the conceptual choice easier by narrowing the field. Finally, a poor concept for one scientific inquiry may eventually prove useful for another.

There still remains one significant complication. It was noted that conceptual engineers may not be tolerant towards adoption of concepts that seek to promote illegitimate ends. Is this intolerance in conflict with Carnap's principle of tolerance?

If language is a tool that is "useful for a hundred different purposes" (Carnap 1978 [1963] 938) might some of those be considered immoral or otherwise illegitimate? Furthermore, is not the claim that a linguistic form promotes immoral ends precisely the kind of philosophical argument that Carnap argues should not be used to argue for or against adoption of a linguistic form (Carnap 2000 [1934], 52)? While the choosing concepts to promote inequality, totalitarian regime and other insidious goals, is certainly not in the spirit of Carnap's philosophy, it may very well be that Carnap failed to consider the implications of illegitimate ends to his linguistic instrumentalism and that such choices are to be tolerated by the letter of the principle. Nevertheless, it is important to stress that tolerance does not mean that a linguistic form is immune to critique. In his discussion on the principle of tolerance in "Empiricism Semantic and Ontology" Carnap argues that the ultimate acceptance and rejection of a linguistic form is to be decided by the testing it in practical use. If this test can involve taking the critical attitude towards the goals language choice seeks to promote, perhaps Carnapian explication is not so different from normative conceptual engineering.

Conclusion

I have argued that instrumental normativity plays a role in understanding both Carnapian explication and modern conceptual engineering. Both seek to find out what are the conceptual means to achieve various ends. The relevant ends for Carnapian explication relate to scientific knowledge, whereas conceptual engineering deals with a broad range of goals, including furthering justice, unmasking oppression, and defending democracy. Conceptual engineering requires stronger normativity than merely instrumental normativity and given that the pursuit of scientific truth was a goal Carnap had personally adopted, it is not a farfetched idea that explication is at least compatible with treating the goals of science as legitimate ones.

While this suggests that Carnapian explication is indeed a type of conceptual engineering, a strongly normative view of explication must also be compatible with Carnap's principle of tolerance. This turns out to be a slightly more complicated matter, but I have suggested a way to combine these ideas. I argued that there are higher-order reasons that speak against the adoption of prohibitions against poor concepts.

While there is very little textual evidence supporting that Carnap saw explication as normative beyond instrumental, it is at least consistent to maintain that the notions, such as truth and reality only make sense within a chosen linguistic framework, whilst maintaining that the goals for which that framework was constructed are to be goals worth pursuing. Provided of course that these views are independently consistent. Regardless of whether Carnap would accept it, I have suggested a way of combining these ideas in a way which may prove illuminating for the contemporary discussions

with Carnapian themes, including conceptual engineering, and pluralism about logic (e.g. Steinberger 2017; Kissel and Shapiro 2017).[4]

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