**How should we think about linguistic function?**

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Conceptual engineers face a central problem: How can we evaluate rival proposals about what we should do with our concepts or terms? Where familiar terms are concerned, we must decide whether we should eliminate them, or modify or precisify them in some way--and if so, how. Where new terms or concepts are being proposed, we must decide whether to accept or reject the proposed introduction, and what form a proposal along those lines should take. Without agreed standards, conceptual engineering risks looking like a power game, where those with the relevant power or influence simply re-engineer concepts or terms to suit their own purposes.

 Metaphysicians seek a *worldly* standard--aiming to make our conceptual scheme match the real contours and kinds of the world. But while this may seem like a suitable goal for natural kind terms, it is not at all clear that many of our terms and concepts (moral terms, mathematical terms, modal terms, logical terms) even *aim to* track worldly boundaries.[[1]](#footnote-1) Indeed, an important and powerful idea familiar from the pragmatist and neo-pragmatist tradition is that many philosophically interesting parts of language don't aim to track worldly features at all. Wittgenstein (1953, 1958), Price (2011), and Williams (2011) have argued for a *functional pluralist* view in general terms. Others have argued for alternative functional conceptions of some interesting area of discourse, as Ramsey did in arguing that universal generalizations serve not as judgments but as rules for judging (1929, 137), as Sellars (1958) did for counterfactuals, as Hare (1952), Blackburn (1993) and Gibbard (1990) have done in arguing for alternative functional views of moral discourse, as Ryle (1949) and Bar-On (2004) have done for areas of mental discourse, as Perez-Carballo (2016) has done for mathematical discourse, and as Brandom (2008) and myself (2020) have done for modal discourse. Even if such discourse did 'track worldly boundaries', we would run into formidable and familiar epistemological problems in trying to 'discover' what those boundaries *are,* in a way that could help us adjudicate among competing proposals in conceptual engineering.

 I have argued elsewhere (2020a) that we can do better by taking a *pragmatic* approach to conceptual engineering. Such an approach, I have argued, enables us to provide the evaluative standards we need, while avoiding the problems that arise from seeking a 'metaphysical' standard. On such a pragmatic approach, we begin with the idea that parts of our linguistic or conceptual scheme (like other cultural artifacts) serve certain *functions.[[2]](#footnote-2)* Then, when examining, or reconsidering (and perhaps revising) extant concepts, we should begin with *reverse engineering—*figuring out what the functions of the relevant concepts *are* or *have been* in order to make better judgments about whether they should be eliminated or retained, modified or not (and if so, in what ways). Once the relevant function(s) are determined, we can use those to evaluate concepts in two different ways. Narrowly, we can evaluate concepts according to how *well* they fulfill their functions. More broadly, we can evaluate the functions served, asking questions about whether these are functions that *should be served at all*. If we are not examining extant concepts, but engineering new ones (engaging in what David Chalmers (2020) calls '*de novo* engineering'), we can begin by asking what functions we want the new concept to serve, and how we can do that well. In either case—whether of backward-looking reverse engineering, or forward-looking consideration of proposals for conceptual emendation or *de novo* construction—the appeal to function gives us a way in which conceptual choice can be neither arbitrary nor subjective, without that being guaranteed by an appeal to the concepts ‘matching’ the ‘structure of the world’.

 This pragmatic approach to conceptual engineering fits naturally with and develops out of central insights from pragmatism--especially and most directly the form of neo-pragmatism developed in the work of Price (2011), Williams (2011), and Brandom (2008). Pragmatists have long emphasized that: "language is better understood as a set of tools rather than as the mirror of nature" (Williams 2009, xvi),[[3]](#footnote-3) and have long rejected a monolithic view of language as simply functioning to represent, describe, or track worldly features. The pragmatist view, as David Macarthur and Huw Price describe it, "begins with questions about the functions and genealogy of certain *linguistic* items" (2007, 95). That is, rather than beginning with metaphysical questions about the natures of various (putative) objects and properties, the pragmatist begins with questions about how we should understand the "roles and functions of the [linguistic] behavior in question" (2007, 95). Indeed Macarthur and Price present pragmatism as characterized by the combination of a language-first approach, along with the rejection of 'Representationalist' presuppositions that all language functions to 'Represent' or mirror the world (2007, 97).[[4]](#footnote-4)

 The pragmatist approach to conceptual engineering I aim to develop here inherits both of those features, asking us to begin by asking questions about the *functions* of the relevant forms of language, and to suspend representationalist assumptions, before addressing questions about whether we should accept proposals for whether to retain, revise, or reject various forms of language. So it is, I hope, an approach to conceptual engineering that neo-pragmatists will find amenable, and see as a natural extension of the neo-pragmatist program. I also hope that neo-pragmatists will find the account of linguistic functions outlined below a useful contribution to their project, in beginning to lay out a framework for developing and defending alternative functional analyses of various areas of discourse.

 Nonetheless, the intended audience here is not merely those who are already neo-pragmatists. My hope is that this series of papers (including not only this one, but also my 2020a and 2021) can form the basis for an independent argument for anyone interested in conceptual engineering to take a pragmatic approach. That is: if you are interested in the project of conceptual engineering, and seek standards for that work that do not rely on epistemically mysterious metaphysical claims and dubious global representationalist presuppositions, then you should look to a pragmatic approach to conceptual engineering.

**1. Why we need an account of function**

If you *do* seek a pragmatic approach to conceptual engineering, you will need a good account of how to identify the functions of parts of our linguistic or conceptual scheme.[[5]](#footnote-5) For many people are skeptical of the idea that we can make any good sense of the idea of linguistic or conceptual functions--expressing a kind of worry that one can just ‘say anything’, make stuff up, about what the function of a word or concept is. Indeed this is a reproach often levelled against neo-pragmatist proposals that begin by identifying non-representational functions of various terms or concepts. The skepticism also reflects a worry about a lack of a clear methodology or standards for determining the functions of a word or concept. Herman Cappelen goes further, bluntly stating: “I don’t think concepts have purposes and certainly not words” (2018, 181), and arguing that the appeal to function doesn’t ‘do any work’. Why? In response to my proposal (as well as proposals by Haslanger (2000) and by Brigandt (2010)) for how to understand functions, Cappelen asserts that the only such functions that can be identified are ‘denotational’ functions:

“The reason ‘salmon’ is useful for us is that it can be used to talk about salmons (or denote salmons). The reason ‘freedom’ is useful is that it can be used to talk about freedom. We care about salmons and freedom and so we have words that enable us to talk about them… However… beyond these disquotationally specified functions, there’s variability. We can use ‘freedom’ in speech acts that have as their aim to undermine freedom or promote it or discuss it or disparage or make fun of it or… There’s no limit to what we can go on to do with this term” (2018, 187).

And this reflects a more widely-held view that the most that can be consistently said about linguistic function is disquotational: "the function of ‘F’ is to refer to the Fs" (Cappelen 2018, 187). On this view, there is nothing unified we can say except, perhaps, that language serves to represent or describe the world in certain ways: biological discourse describes the life forms, mathematical discourse describes the numbers, moral discourse describes the moral facts, and so on. “If the goal is to find functions that are more substantive and informative than the disquotationally specified functions, then it will be unsuccessful”, Cappelen predicts (2018, 187).

 In this paper I aim to address these concerns, and to take some steps towards showing how we can find better approach to understanding functions that can help us in developing a pragmatic approach to conceptual engineering. There are rich questions about whether one should speak foremost in terms of engineering (parts of) *language* or of *concepts.* For reasons I have discussed elsewhere (2021, section 2), here I will speak mainly in terms of engineering *language*, addressing questions about *linguistic* functions and evaluating linguistic proposals in conceptual engineering.[[6]](#footnote-6) Doing so will enable us to sidestep issues about how we should think about concepts, to make use of work in linguistics, and to attend more directly to the role that *grammatical* differences may make in the problems we consider. Nonetheless, this is not meant to dismiss work that begins from the evaluation of *concepts--*this is simply not the direction undertaken here.[[7]](#footnote-7)

 In this paper, I aim to make the case that:

1. The idea that pieces of language have functions is not hopeless, and the claim that all that can be said about function is disquotational is not only plainly inadequate, but bound to lead us philosophically astray.
2. We can do better by starting at the level of system function, and looking to work in linguistics for a framework for addressing questions about what functions language, and various of its subsystems, serve.
3. Once we can see the functions of some philosophically interesting aspects of language, we can better assess whether we should eliminate or revise them--and thus make better assessments of various proposals in conceptual engineering.

In this way, I hope to make some strides in determining how we should not, and how we should, come to think about function in language, in ways that matter for conceptual engineering and other projects in philosophy. This can be seen as one way of developing the framework for an attractive pragmatist approach to conceptual engineering. At the same time, by developing the beginnings of a clear and systematic framework for thinking about linguistic functions, it may in turn provide new ways of developing, assessing and defending a range of neo-pragmatist proposals that give alternative functional assessments of many philosophically interesting forms of discourse.

**2. How (not) to think about function**

 Although some have been skeptical of the idea that our concepts or language have identifiable functions, I do not think it is at all hopeless. And given the potential usefulness of the notion, we should not give up so easily. Linguistic structures are artifacts, and identifying functions of other artifacts is not hopeless, nor is it unempirical work in which you can just ‘say whatever you like’ or where ‘anything goes’. On the contrary, identifying functions of artifacts is central to the work of such sciences as anthropology and archeology.

Nonetheless, the critic's concerns deserve to be taken seriously, as ways of showing us what routes *not* to take. One thing we can learn from the skeptics and critics is that we should not collapse the *function* of an entity with the ways in which it is *used* on particular occasions. As we have seen, Cappelen resists the idea that anything useful (beyond the disquotational) can be said about function by noting that we can *use* a term like 'freedom' in many ways, to do many things. Even J. L. Austin wrote:

Certainly there are a great many uses of language. It’s rather a pity that people are apt to invoke a new use of language whenever they feel so inclined, to help them out of this, that, or the other well-known philosophical tangle; we need more of a framework in which to discuss these uses of language; and also I think we should not despair too easily and talk, as people are apt to do, about the *infinite* uses of language. (1961, 234)

I shall aim to develop more of a framework here--one that begins with the idea of *functions* rather than *uses.* For the fact that we *do* many different things with something, of course, does not tell us that there isn’t a *function* in the above sense. Artifacts from pennies to forks to chairs may be used for all sorts of purposes, yet this does not interfere with their having a unified function. The same goes for biological entities such as hands and mouths, which are *used* in an endless variety of ways. Nor should we even require that a type of entity be *typically* or *often* used in a certain way, in order for that to be its function: and a safety valve on a nuclear reactor may never be used to stop a catastrophic reaction, if none ever begins.[[8]](#footnote-8)

 But how can we identify something like stable linguistic *functions*, across the endless varieties of *uses* to which language is put? One tempting route for pennies or forks would be to appeal to their *intended* functions. But clearly the sense of function we need to address linguistic functions can’t be identified with *intended* functions. For the vast majority of our words and concepts (perhaps excepting those that are intentionally created in *de novo* engineering efforts) are not intentionally created, and so can’t be said to have as functions whatever functions their creator(s) intended.

 A better start, as I have argued elsewhere (2020a, 444-5), is to look to system function (in roughly Cummins' (1975) sense) of what roles the linguistic structure plays within the system as a whole, and/or proper function (in roughly Millikan’s (1984) sense): to what it *does* (or has done) for us (or for some) that makes it useful for (some of) us, and has led to its perpetuation in our language.[[9]](#footnote-9) These are generally not in conflict—as identifying what a type of item does within a system that makes it useful is one way to get at why it might have been preserved and perpetuated in our culture or language. It is also in line with methods actually used in reverse engineering for other artifacts: if software engineers are presented with a piece of malware, and aim to discover its function, they begin by figuring out what this bit of inserted code *does,* or what it *can do* within the systems where it becomes embedded.Archeologists, similarly, in discovering a new artifact, employ reconstructive methods in experimental archeology—trying to rebuild a similar tool to discover what it can do (can it be used in butchering? Can it survive fire?) as a crucial step in discovering what its function may have been (Renfrew and Bahn 2016, 322-332), while also attending to the wider system of life of which it formed a part.

 If we are to look for something like *system* functions, we ought to start at the level of *language:* beginning from questions about the functions *language* serves, not about the functions served by individual *words*. For if we can better identify the functions served by language, we can better identify the roles played by various parts of the system. This requires a change from the standard approach in conceptual engineering, which just asks directly after the functions, say, of our race or gender terms, or a truth predicate, without beginning from a more global inquiry into the functions of language and broader linguistic structures. (We can still get to these questions, but we might do better by taking a longer route.)

 Nonetheless, even if we take a broad approach, and begin by asking about the functions of language, language is such a multi-purpose tool that identifying the functions of language might seem hopeless.

Huw Price (2011, 138), however, has a helpful suggestion about where to begin. He notes that in inquiring about the functions of multi-purpose human instruments (such as string), we would do well to begin by recognizing “that string has certain core properties—length, thinness, strength, and flexibility, for example” that are exploited in, and enable, many or most of its various uses. Given that language is itself a multi-purpose tool, we might aim to take a similar approach here—aiming to identify certain *core properties* of language that enable it to fulfill many and varied purposes.

If we think of language as a human cultural artifact, we can ask what functions it serves, and has served, which have made it such an enduring feature of an enormous range of different human cultures. And we can turn to work in empirical linguistics to help us with these questions about what functions language (and its various parts or aspects) serves, and how language is structured--what its 'core features' are that enable it to fulfill these functions.

If we aim to address questions about the functions of language,we might be well advised to follow the spirit of Price's 'subject naturalism'--the view that 'philosophy needs to begin with what science tells us *about ourselves'* (Price 2013, 5). And that includes what science tells about language, how it works, and what functions it serves in human life. And so, we might turn to work on anthropology and linguistics for help with these questions.[[10]](#footnote-10) Work in systemic functional linguistics has focused on exactly these questions, as it begins from the idea that “language has evolved in the service of certain functions” (Halliday 1973, 14). Systemic functional linguistics goes on to ask questions about ways in which the functions of language are reflected in the *structure* of language (Malmkjaer 1991, p, 159). As Michael Halliday writes, “The internal organization of natural language can best be explained in the light of the social functions which language has evolved to serve. Language is as it is because of what it has to do” (2009, 96); “The internal organization of language is not accidental; it embodies the functions that language has evolved to serve in the life of social man” (2009, 107). So work in systemic functional linguistics is well-placed to address both questions about the functions of language and about the ways these are served by particular ways in which languages are structured.

 Systemic functional linguistics may be unfamiliar to many philosophers, who have been more attuned to work in the Chomskian tradition (it has has been far more influential in anthropology). So is important to note that this work is not in conflict with, or a rival to, familiar work in the Chomskian tradition (Bavali and Sadighi 2008).[[11]](#footnote-11) Instead, it simply focuses on a different range of questions about language--questions about the functions language serves in human social life and culture, and about the ways language is structured that enable it to fulfill these functions: the very questions that we need to address here.

 Systemic functional linguistics grows out of work in the Prague School of Linguistics from the 1920s and 30s, led by Vilem Mathesius, and with Roman Jakobson centrally involved. Jakobsen in turn was influenced by Husserl’s *systematic* approach to language in the third and fourth of the *Logical Investigations[[12]](#footnote-12)* where he distinguished linguistic laws of ‘compounding’ that establish which meaning categories can be sensibly conjoined.[[13]](#footnote-13) Husserl also identified laws of ‘modification' that govern the way the ways in which one meaning category can be transformed into another ‘as in the cases of nominalization, in which verbs, adjectives, adverbs, etc. are used as nouns’ (Aurora 2015, 12).The emphasis on *function* developed under the influence of the anthropologist Bronislaw Malinowski, who insisted that we must study meaning by analyzing the functions of language in its culture, and whose work on language influenced both Wittgenstein and the English linguist J. R. Firth. Firth (who drew on work by Wittgenstein and Ryle (Bateman 2017, 14) and repeatedly refers to Wittgenstein's focus on types of speech function (Firth 1962, 10)), was the teacher of Michael Halliday, whose work developed systemic functional linguistics in its modern form.[[14]](#footnote-14)

 While this is not the place (or the author) for a full-scale introduction to systemic functional linguistics,[[15]](#footnote-15) I will suggest that some of its central insights may be extremely useful in seeing how we should come to think about function in language in a way that is helpful both for assessing proposals in conceptual engineering, and elsewhere in philosophy.

**Functions in developmentally early language**

 A good place to begin investigating linguistic functions is by examining developmentally early language. For, as Halliday puts it, “The functional origin of language is most evident in the language of young children” (2009, 85), since it is functionally simple, with each utterance typically serving a single function. And one way to investigate what a cultural technology does for us is to take a contrastive approach--asking what a child can do in learning (early) language that they couldn't do (or couldn't do so well) without language.

So, what can a child first learning a basic form of language *do* that they couldn’t do (or couldn’t do as effectively) otherwise? Halliday identifies six functions of early childhood language (2009, 101):[[16]](#footnote-16)

1. Instrumental: language as used to satisfy material needs (to get goods or services) (“Milk!”)
2. Regulatory: language as used to control the behavior of others (“Mama, come”)
3. Interactional: language as used in greeting, parting, calls to others and responses to calls (“hi”, “bye bye”, “Sissy!!”)
4. Personal: language as used to express the child’s personal feelings “of interest, pleasure, disgust and so forth” (1975, 20) (“Yuck”, “Yay!” “Oops”)
5. Heuristic: language as used to investigate the environment (“What that?”)
6. Imaginative: language as used in play and pretense (“Let’s pretend…”) (2009, 85)

As a somewhat later development, Halliday also identifies:

1. Informative/representational: language as used to communicate information about the world—to someone thought not to know (1975, 21). (“I got a lollipop! [at school today]”)

This connects well with work on language disabilities and language delays (indeed, language education was Halliday’s central concern). As speech therapists emphasize, a central problem for the child who does not acquire language (or acquires it very late) is not so much that the child can’t state truths about the world, but that they can’t make their needs known, and can’t acquire control over their world—leading to frustration and behavioral problems. As always, one way in which we can study what something *does* is to note what we can’t do when it is *missing.*

 It matters little for present purposes if this is an optimal categorization of functions in early language development. What can get out of this work on language development is a powerful *reminder* of the *many* functions language serves, even for a toddler--and anyone who has spent time around linguistically developing toddlers can easily confirm this from their own experience. It also gives a powerful reminder of how relatively late and peripheral the 'representational' function is in language development. And this makes it clear that, even if we narrow our focus to the relatively simple language of early childhood, the idea that all that we can say about linguistic function is the disquotational ‘The function of F is to pick out the Fs’, is completely inadequate. Serving to 'pick out the Fs' may be a relevant part of the story for *some* terms the child learns.[[17]](#footnote-17) For example, basic nouns (like 'dog' or 'pig') acquired observationally and used in service of the heuristic function, enable the child to inquire and learn more about the dogs and pigs, and eventually (in the service of representational function) to communicate information about the dogs and pigs. But if the thought that ‘yuck’ is used to pick out the yucky stuff (rather than to express disgust and refusal) is hardly plausible, and the thought that ‘oops’ is used to pick out the oopsies is less plausible still, the thought that ‘hi’ is used to pick out the ‘hi’s’ is so bizarre as to be incomprehensible. Even here, with the simple language of early childhood, we need a far broader view of the diverse functions language serves.

 But if the functional pluralism that marks even very early language is so obvious, why have philosophers often missed it, focusing exclusively on the ability of terms (‘F’) to ‘pick out’ the Fs, or of sentences to express propositions? Interestingly, Halliday makes note of this mistake in ways that suggest that it’s not just a philosopher’s mistake. While the representational (or ‘informative’) function—to communicate a content that the speaker thinks is unknown to the addressee—is relatively late for the child, it comes to dominate the adult’s ‘conception of the use of language’ (Halliday 1973, 27). Adults generally tend to think of language only in informational or ideational terms:

“Language is, in addition to all its other guises, a means of communicating about something, of expressing propositions…This is the only model of language that many adults have; and a very inadequate model it is, from the point of view of the child” (Halliday 1973, 8).

The representational function is not “one of the earliest [functions] to come into prominence; and it does not become a dominant function until a much later stage in the development towards maturity” it may never be the dominant function “but it does, in later years, tend to become the dominant *model”* (Halliday 1973, 8). This is a model that is dominant not only in the adult's conception of language generally, but that has become ossified in philosophical conceptions of language and presuppositions about its functions.

**Functions in mature language**

 Having identified a range of functions served by the language of early childhood, we can go on to ask another contrastive question: Why do children *go on*? What can we do, in speaking a *mature* language, that speakers of early childhood language cannot do (or cannot do so well)? What (additional) functions does mature language serve?

 Systemic functional linguistics provides a very interesting answer. Mature language is distinct from the language of early childhood in that it enables speakers to *serve more than one function* at a time, with each utterance. While “It is characteristic… of the utterances of the very young child that they are functionally simple; each utterance serves just one function”, when we get to mature language, this changes: “Every adult linguistic act, with a few broadly specifiable exceptions, is serving more than one function at once” (Halliday 1973, 26).

 The core feature that enables adult language to serve more than one function at a time is the introduction of grammatical form—which brings in a level “intermediate between meanings [content] and sounds [expression]” (Halliday 1973, 26; cf. Halliday 1975, 45). Linguistic form, or grammar “allows for meanings which derive from different functions to be encoded together, as integrated structures, so that every expression becomes, in principle, functionally complex. Grammar makes it possible to mean more than one thing at a time” (Halliday 1975, 48; cf. Eggins 2004, 119).[[18]](#footnote-18)

 This makes it clear why we might get ourselves befuddled, if we begin by asking about *the* *function* of a particular word or utterance. Each utterance (of a mature language) generally serves *more than one function.* A better place to start is at the *systemic* level, where we ask instead about the *functions* (plural) served by language, and the structures within language that enable it to simultaneously serve these different types of function.

 So what are the functions served by language? Again, we might generate a long miscellaneous list if we tried to simply enumerate all the things language can be and has been *used* for. Rather than focusing on the huge range of individual purposes served by different *uses* of language, Halliday helpfully starts from a more abstract level, identifying three ‘macro-functions’ of adult language, all of which are typically served at once in each utterance (indeed, in each clause) of adult language (1973, 34)--and each of which covers a wide variety of different *uses*.

* **Ideational macro-function** (This is related to the earlier informative/representational function, and originally develops out of the personal and heuristic functions of early childhood language). The ideational macrofunction is a matter of encoding and communicating a content (information about the world and/or the speaker’s own experience) (1973, 29-31). In philosophical terms, this is roughly a matter of language functioning to communicate propositional content. This is the macro-function that has been the primary focus of philosophical attention.[[19]](#footnote-19)
* **Interpersonal macro-function:** The interpersonal macro-function is what enables language to serve as a kind of *social* tool. It enables speakers to take up or show their relation to the listener or reader, to take on social/conversational roles (like questioner or commander), and to express their own attitudes and point of view. For example, a speaker may take the position of questioner or respondent, commander, peer or superior, etc. Speakers may also ‘intrude’ into the speech situation in various ways, *showing* their attitudes, judgments, level of certainty, etc. In English, these interpersonal functions are typically carried by the mood and modal systems (Halliday 1973, 33; cf. Eggins 2004,172-84).
* **Textual macro-function:** The textual macro-function involves organizing a text as a piece of writing or speech; making evident how what we are saying hangs together, what the theme and relations among ideas are, and how the parts of a text are interrelated into a whole (Eggins 2004, 11-12). These textual functions are typically carried by logical/connector words ('since', 'therefore', 'so'), and also by grammatical transformations that enable words to shift in their grammatical role, forming what Halliday calls 'grammatical metaphors' (more on these below).

These macro-functions of the linguistic system (Halliday 2009, 316) are "modes of meaning that are present in every use of language in every social context” and most texts simultaneously serve all three types of macro-function (Halliday 2009, 316). Grammatical structures give us a variety of options (grammatical variants) for how we use language to pursue (some of) our primary goals, whether those are informing, threatening, commanding...

 Some examples may help make clear how these macrofunctions may be served by variations in how we use various linguistic systems (mood, modality, grammatical flexibility, etc.). These variations enable mature speakers to jointly serve these macrofunctions in subtle ways (ways that are inaccessible to young children, and often also to 'beginners' at speaking a language foreign to them). In examining an individual utterance, we can again seek a contrastive explanation: we can ask why the speaker used *this* formulation, rather than one of the other available options. And that may enable us to identify what the relevant mode of expression—rather than one of the alternatives—more generally *enables* speakers to do.

 Consider, for example, the following speech situation. Suppose you are at the home of an acquaintance and want a cup of tea. Without language, you might have to resort to grabbing the tea and commandeering their kettle. If you were only capable of early childhood language, you might have but one linguistic option: say, "Tea!" in a demanding tone. But you probably won't do that. As a mature speaker, you have various mood options. You could utter a straightforward imperative "Give me tea". But that involves taking on the social position of commander, which may not be appropriate. You could instead utter a declarative, "I want tea". But this still might seem too direct to be polite, so you can soften it by uttering a modal formulation instead "I would like some tea", or even an interrogative "Do you have any tea?", or combine the two for a modal interrogative "Might you have any tea?". Or you could even use a worldly indicative, not directly presenting your own desires at all, and also not commanding, but rather presenting yourself as if you are only commenting on the world, saying just: "Some tea would be lovely". By choosing among such alternatives, and making use of the options for mood and modality that language provides you with, you can not only express the ideational content (roughly: I want tea) and work to acquire tea, but also establish the appropriate social relation with your interlocutor at the same time, show your attitude towards tea (and towards your host), etc.[[20]](#footnote-20)

 The textual macrofunctions can be seen in a longer dialogue, where we can make evident the connections among ideas. Suppose now you have your tea, and you really want some milk for it. Again, you've got a range of linguistic options. You might say, "Since the tea is strong, I would like some milk to go with it", making evident the relations between ideas, while also making evident that you want milk, and establishing a polite request relationship to your interlocutor--serving all three macrofunctions at once. Of course, there are other options for serving these textual macrofunctions, too. You could explain your desire in more general terms, saying, 'It's the *strength* of a tea that matters to whether I prefer milk with it", now introducing a nominalized adjective ('strength' from 'strong') to put the focus of attention on that quality of the tea, in order to both *justify* your preference and enable your interlocutor to make *general inferences* about when you will and will not want milk. Those permissible grammatical transformations enable us to serve additional *textual* functions, beyond the function of conveying a certain propositional (ideational) content and establishing appropriate social roles--more on these textual functions below.

**3. Interpersonal functions**

 What can we get out of this so far? If we begin by zooming out to ask what functions *language* serves, we can find that mature language serves three sorts of macro-functions: conveying propositional content; establishing appropriate social roles and interactions and expressing one's own attitudes; and making evident relations among ideas in formulating more lengthy and complex unified texts. It does not matter much exactly how these macro-functions are labelled, or even if we should divide them as exactly three (or if, say, the so-called 'interpersonal' macrofunctions should be relabeled and/or subdivided (say) to distinguish separate social role, expressive, and regulative functions). What matters is that distinguishing these different sorts of macro-function enables us get us away from the philosophical mistakes that arise from assuming that all that can be said about functions is denotational (that the function of 'F' is to represent or denote the Fs)--mistakes that come from focusing only on the *ideational* macrofunctions that (outside of work in the pragmatist tradition) have been the center of attention in philosophy. It also matters that we identify some of the structural features of language that enable it to fulfill these distinct types of macro-function simultaneously. For then we can note the roles of systems of mood and modality, as well as of grammatical transformations, in serving 'interpersonal' and 'textual' macrofunctions, and we can make evident the ways these interact with the ability to present propositional (ideational) content.[[21]](#footnote-21)

 One reason this matters philosophically is that it turns out that a great majority of those terms that have been philosophically interesting and often problematic are terms (or formulations) that primarily serve *interpersonal* or *textual* macro-functions. If we can properly identify the functions of the relevant terminology and thereby do our *reverse* engineering well, we can avoid a range of philosophical mistakes (giving a better philosophical account of moral or modal discourse, for example), and make better decisions in conceptual engineering, about whether to retain, reject, or revise central parts of our linguistic scheme.

 For example, basic moral and modal expressions ('One *shouldn't* lie', 'That *might be* Jane at the door', 'Squares *can't* have more than four sides') are formulated using *modal* terms--which (as we have seen) serve primarily *interpersonal* functions. That gives us a good idea of where to look in reverse engineering these philosophically interesting parts of language. For we can see that the right place to begin might *not* be to assume that the function of moral discourse is simply to denote the good or right actions, or that the function of modal discourse is simply to talk about the possibilities or other possible worlds. If we assumed that, we might then be driven into metaphysical investigations about the natures of these things described (the right actions, the moral properties, the possible worlds), and to the full range of metaphysical tangles that have resulted from these investigations.

 Instead, with the functional picture outlined more clearly, we might begin by asking what social, regulative, or expressive functions the relevant parts of language serve. And this may make *non-descriptive* accounts of this terminology show up as reasonable options--accounts that don't simply tell us that the function of moral terminology is to denote things that are morally right/wrong, or that the function of modal terminology is to denote the possibilities and necessities. This kind of work can thereby enable us to better develop and defend neo-pragmatist accounts of moral, modal, or other forms of language that deny that such language should be seen as having a primarily *representational* or *descriptive* (ideational) function. This includes, for example, work in metaethics by Hare, Blackburn and Gibbard; and non-descriptive approaches to modal expressions, such as one can find in the work of Ryle, Sellars, Brandom, and myself.[[22]](#footnote-22) And we might even be able to see the simultaneous *ideational* functions that are served by being able to formulate moral and modal claims as indicatives in propositional form, and the *textual* functions that are simultaneously served by nominalizing moral and modal terms--giving us the means for more fine-grained functional assessments than simply those that ask about the function of (all) moral or modal discourse.[[23]](#footnote-23) I will return to this thought in Section 6.

**4. Textual Functions**

 The framework from systemic functional linguistics also enables us to see that many other philosophically interesting terms are introduced primarily to serve (or add) *textual* functions. For a great many terms that present philosophical difficulties fall in the category that systemic functional linguists refer to as 'grammatical metaphors'.

 To be honest, I do not like the terminology of 'grammatical metaphor'. For I do *not* want to read—or think it’s appropriate to read—what Halliday and others in the systemic functional linguistics literature call ‘grammatical metaphors’ as involving *merely metaphorical speech,* to be interpreted in a fictionalist or simulating way, or as if it's *merely pretending*.[[24]](#footnote-24) Once we see the actual idea here, we can distance ourselves from that interpretation. The term 'grammatical metaphor' is introduced by analogy with ordinary *semantic* metaphors. In ordinary metaphors, one semantic content takes over from another (as we move, say, from speaking of a *sharp knife* to speaking of a *sharp wit*). By contrast, “In grammatical metaphor, one grammatical class takes over from another” (Halliday 2009, 126)—so we no longer have congruence (Halliday 2009, 116). By way of these grammatical metaphors, “a meaning that was originally construed by one type of wording comes instead to be construed by another” (Halliday 2009, 117).

 Early childhood language contains ‘congruent’ meanings: nouns for things, verbs for processes… (Halliday 2009, 117). An early subject-verb-object utterance like ‘man clean car’ is congruent. Congruent relations are “evolutionarily and developmentally prior” (Halliday 2009, 117). Basic ‘congruent’ nouns such as ‘stick’, ‘car’, ‘hole’, and ‘ball’ are acquired in response to observations of interest in the environment: “In contexts of observation, recall, and prediction”. Such terms seem to be something like those Huw Price identifies as ‘e-representational’. That is, they are terms that have the job “to *co-vary* with something else—typically, some *external* factor or environmental condition” (Price 2011, 20). As Halliday puts it, these terms function to contribute to the child’s learning about the environment (1975, 27-28).

But by departing from congruent formulations, as we acquire more mature language,[[25]](#footnote-25) we learn to use ‘grammatical metaphors’.[[26]](#footnote-26) So, for example, we shift from speaking of washing the car, to say we will ‘give the car a good clean’, speak of ‘a carwash’, ‘the cleaning of the car’, and so on. The most obvious grammatical metaphors, at least in English, involve nominalization, but they need not involve converting another form of speech to a *noun*. The direction can also go the other way, as we might transform the noun 'knife' to a verb that enables us to say 'she knifed someone'. Grammatical metaphors may also involve shifts from a wide range of grammatical categories (for example, we may move from saying 'She lit the match, *so* the stove ignited', to 'She lit the match, and that *caused* the stove to ignite'; or from 'It might rain tomorrow' to 'There is a possibility of rain tomorrow').[[27]](#footnote-27) Nonetheless, the examples of primary interest here will be nominalizations.

What functions do nominalizations serve? Though it may also sound more ‘learned’ and be used for rhetorical effect, the primary motivation for nominalization is “a functional one: by nominalizing we are able to do things with the text that we cannot do in unnominalized text” (Eggins 2004, 95). Everyday grammatical metaphors (which, for example, shift us from saying ‘she bathed’ to ‘she took a bath’, or from ‘they danced’ to ‘they did a dance’), enable us to qualify and quantify processes. That in turn enables us to say things such as: “she had a relaxing hot bath” or “there are three folk-dances in the second act”… (Halliday 2009, 135).[[28]](#footnote-28) Consider how difficult it would be to express these ideas without grammatical metaphor. As Eggins notes, with nouns, we can expand our clauses to do many things that we can’t do with other parts of a clause (like verbs), viz: count, specify, describe, classify, qualify (Eggins 2004, 96). This enables greater lexical density: that is, a greater proportion of content-carrying words (main verbs, nouns, adjectives, adverbs) in the text.[[29]](#footnote-29) It also (as Thomas Hofweber noted (2005a, 2005b), and Eggins 2004 argues) can help us organize texts rhetorically, putting the focus on different parts of information.

While everyday language contains some grammatical metaphors (such as those above), grammatical metaphors get much more numerous, sophisticated and layered when we develop scientific theories and bureaucratic systems. Grammatical metaphors “seem to represent tendencies common to the elaborated discourse of science and technology, government and bureaucracy, in all languages” (Halliday 2009, 138).[[30]](#footnote-30) There is historical evidence that use of grammatical metaphors explodes with the development of science, technology, and bureaucracy. As a result, many such terms play an important role in explanation and theory construction,serving textual macrofunctions of enabling us to construct extended theories, showing how diverse observations and ideas are interrelated in generalized explanations*.*

Grammatical metaphors enable us to ‘pick up where we left off’ in communicating information to experts. So, for example, after a long section explaining how spin components fluctuate, a physics book may refer back to “the random fluctuations in the spin components of one of the two particles…”, enabling the author to “package the knowledge” that has been developed over much preceding text and present it as to be ‘taken for granted’ as we move to the next step (Halliday 2009, 45). If I “have to say every time that particles spin, that they spin in three dimensions, that a pair of particles can spin in association with one another, that each one of the pair fluctuates randomly as it is spinning, and so on, then it is clear that I will never get very far” (Halliday 2009, 45).

Halliday emphasizes that the function of much grammatical metaphor is to enable theory construction:

“It is no exaggeration to say that grammatical metaphor is at the foundation of all scientific thought. You cannot construct a theory—that is, a designed theory, as distinct from the evolved, commonsense theory incorporated in the grammar of everyday discourse—without exploiting the power of the grammar to create new, ‘virtual’ phenomena by using metaphoric strategies of this kind.” (Halliday 2009, 119)

“Such discourse evolved as the language of technology and science” and was “moulded by the demands of the physical sciences into its modern form” (Halliday 2009, 125) and "specialized technical discourse cannot be created without deploying grammatical metaphor" (Halliday 2009, 125).[[31]](#footnote-31) Halliday notes that such grammatical metaphors were also in ancient Greek and Chinese and Sanskrit, and claims that “this metaphoric shift from the clausal to the nominal construal of experience seems to be a characteristic of scientific discourse in every language” (Halliday 2009, 123n21).

 But that is not the only function of grammatical metaphors. For they are essential not only to the formulation of *theories* that provide *explanations* in ways *generalize* over observations, present causal links, and connect ideas in ways that take us from one explanation to another. They are also essential to constructing bureaucracies--where we an impose not generalized systems of *explanations* but of *requirements.* In developing a bureaucracy, we do not just impose orders on individuals--we establish *general* requirements (and permissions) on *any individual* who meets certain conditions*.*[[32]](#footnote-32)To layer up the requirements into a bureaucratic system, we must introduce new nominalizations for categories of people, situation, objects, requirements and entitlements. So we can also move from speaking of where someone lives, to introduce nominalized talk of *permanent residents* who are *homeowners* and *taxpayers,* and go on to speak of their resulting civic and tax *obligations,* and the *debts* that may result.

 In sum, we can identify at least the following functions that are served by having a language that enables us to form grammatical metaphors. Doing so enables speakers to:

* + Quantify and qualify processes, events, attributes… (These may also enable us to make quantities measurable—so we can say not just ‘this is long’ or ‘that is hot’ but ‘the pendulum has a *length of four feet’* or ‘the mixture a *heat of 425 degrees*')
	+ Increase lexical density: with a higher proportion of content-carrying words and more efficient communication of information
	+ Organize texts rhetorically, showing connections among ideas, formulating arguments, putting the focus on different parts of information
	+ Enable the flow of information and the construction of theories, forming ordered chains of generalized explanations
	+ Expand expressive power in ways that, once introduced, can’t always be fully ‘unpacked’ and eliminated into more basic forms of speech
	+ Organizing and running bureaucracy (‘homeowners will receive a tax deduction’, ‘bill posters will be prosecuted’) and layering systems of permissions and requirements

 Turning back now to our work on function, we can see more clearly why it would be a mistake to think that all that can be said about function is disquotational--say, that the function of ‘length’ is just to pick out the lengths, the function of ‘whites’ is just to pick out the whites, or the function of 'tax obligation' is just to pick out the tax obligations. For these functions do not just include *ideational* macro-functions (though of course in a harmless sense they do enable us to speak of the lengths or the whites, and express propositions regarding them--we can simultaneously fulfill an ideational macro-function). More crucially, these grammatical metaphors enable us to serve important *textual* macro-functions that enable us to construct unified theories and bureaucracies.

5. **Uses of this approach for conceptual engineering**

 We are now in a position to see the philosophical relevance of this work on linguistic function. For so-called 'grammatical metaphors' include noun terms for properties, numbers processes, events, possibilities, thoughts, minds, causes, time, knowledge, truth, races and genders. All of these terms are derived via grammatical shifts from expressions in different categories, as we move from saying 'The barn *is red'* to 'The barn *has the property of redness';* or from 'there are two cups on the table' (with a determiner use of number terms) to 't*he number of cups* on the table is two'; or from "It might rain tomorrow" to "There is a possibility of rain tomorrow", or from 'She knows that Smith killed Jones' to 'She *has knowledge* that Smith killed Jones'. (Though again, in using the terminology from systemic functional linguistics, I do not mean to suggest that the relevant discourse should be taken as *merely fictional or metaphorical.*)

 If we wish to reverse engineer these philosophically interesting terms, as a first stage in figuring out what to do with them in our work in conceptual engineering, we might begin by noting that terms introduced via these grammatical shifts typically add *textual* functions to the language. We can then go on to ask *what* textual functions these particular terms might serve.

 As a way of exemplifying, all too briefly, the potential usefulness of this approach, I turn now to look at this particular example: showing how our understanding of the *textual* functions grammatical metaphors, in general, serve, might enable us to make better decisions in conceptual engineering, for example, about what to do with our property, number, race, and gender vocabulary.

It is striking how many of the philosophically problematic areas of discourse involve grammatical metaphors.[[33]](#footnote-33) Many of these terms (for properties, processes, events, possibilities, thoughts, numbers, cause, time, mind, knowledge, truth...) have long been on the list of prime suspects, as language that is prone to 'systematically mislead' us,[[34]](#footnote-34) that leads to puzzles or paradoxes, that turns out to 'not really refer', that should be eliminated in a more logically perfect language--in short, language that conceptual engineers might do well to eliminate or revise.

But once we can see more clearly the functions of grammatical metaphors, we can make better choices. Although, as we have seen, it is very useful for a language to enable the kinds of grammatical shift that introduce grammatical metaphors, doing so also risks introducing puzzles, paradoxes and (apparent) category mistakes, because of the shift in grammatical category. As Halliday puts it, “Their metaphoric nature is obvious, because of internal contradictions” (2009, 131). For example, rather than saying ‘they reached the summit on the fifth day’, one may (emphasizing order of days) say, ‘the fifth day saw them at the summit’’—a paradoxical mode of speech, since days can’t see (Halliday 2009, 131).[[35]](#footnote-35) We can see similar paradoxes driving a host of philosophical problems, and often appealed to as grounds for thinking that a range of vocabulary doesn't refer. For example, we see frequent complaints that properties can't be in two places at the same time, that numbers can't be known through empirical means, that moral properties can't be action-guiding,or that necessities can't beobserved*.*

To suggest that we eliminate vocabulary referring to abstract entities such as properties or numbers from our discourse (or even just from our scientific discourse) is to make a proposal for re-engineering our conceptual and linguistic scheme. If we thought the only function of property talk was ‘to refer to the properties’ or number talk was ‘to refer to the numbers’, and thought we had legitimate ‘metaphysical qualms’ about saying there are such things, we might blithely press for elimination.

 But many of the alleged metaphysical ‘qualms’ or worries can be seen to have no place once we properly understand the functions of and introduction rules for the relevant terms. Metaphysical puzzles which ask us, say, what a universal is and how it can be in two places at the same time, or ask what (sort of things) meanings are, how we can come to know moral or modal properties if we are not able to *observe* them, etc.—can be seen as arising from the mistake of expecting all of our noun terms to function like observationally-introduced *congruent* terms that have a function of referring to a discrete spatio-temporal thing.[[36]](#footnote-36)

 Before taking any such eliminative proposal seriously, we need to engage in reverse engineering—to figure out what having such terms does for us. Attempts to eliminate such terms from our vocabulary are not only a waste of time (given that they are motivated by mistaken expectations), but positively harmful, if they eliminate a range of discourse that is essential for other purposes—for example, essential to our ways of building theories, constructing arguments, etc.

For example, much work has been put into nominalist projects of showing how we can reject noun terms for numbers and other abstract objects, and yet still express our scientific theories. But once we understand the useful functions nominative number terms serve in simplifying statements of laws, adding expressive power, and restructuring logical space in a way that makes new patterns apparent, we can see that eliminating such terms would be a mistake. We can also come (with defenders of 'easy ontology') to see how these useful terms are introduced from more basic determiner uses of numerical terms via redundant inferences, for example that entitle us to infer from 'there are five cups on the table' that 'the number of cups on the table is five'--enabling us to introduce the new noun terms for numbers.[[37]](#footnote-37) But we can go beyond the insistence of easy ontology that these inferences *are* redundant and trivial, to explain *why we would want* a language with such built-in capacities for redundancy. And we can see that we have no reason to *deny* that the terms refer—instead, we should accept that there are numbers in the only sense that has been given sense. (This, in my view, is a reason for resisting thinking of this talk as *merely metaphorical.*) And once we see that the various puzzles about how we could come to have knowledge of numbers if we aren’t in causal contact with them arise from faulty analogies with congruent nouns that are observationally introduced, we may be able to take these puzzles less seriously as *objections* to the claim that there are numbers. And once we gain a clearer view of the rules that introduce mathematical language, we may also be able to find new routes to explain how mathematical knowledge *is* possible.[[38]](#footnote-38)

In other cases, however, as we do our reverse engineering we may find that the relevant functions served aren’t so helpful—perhaps even that they aren’t innocuous. Some functional knowledge—such as knowing that nominalizations serve in theory formation and encourage generalizing inferences and predictions—might give us reason to resist introducing nominalizations for genders, races, and the like. For they might illegitimately encourage us to think that these are terms suitable for theorizing with, and encourage us to use them in a range of inferences, thinking of them as picking out some essence that is suitable to predict and explain a wide range of features of the individuals picked out. Along these lines, Katherine Ritchie (2021) has shown that using nominalized terms such as "is *a Black"* or "is *a Blonde"* is far more likely to elicit essentializing inferences—to incline the hearers to assume that there is a kind with a hidden essence that can explain the observable features of members of the kind. And that can give us good reason to question whether we should retain these general nouns.

The analysis of the functions of grammatical metaphors, too, can give us a clue about what other roles such terms play: for as we have seen, grammatical metaphors serve central roles not only in scientific theorizing, but also in *bureaucracies—*systems that aim not to *predict and explain* but to construct a web of interlocking norms and requirements. Race and gender terms may then *purport to* or *be taken to* function as suitable for scientific theorizing, when they have in fact played a more central role in embedding the individuals referred to into a web of social norms. Such observations may give us good grounds to consider rejecting this terminology, if we reject the legitimacy of structuring large webs of social norms around such categories as race and gender.

This shows that the results can go either way: our work in reverse engineering may give us grounds for *retaining*, or for *rejecting* or *revising* our concepts and language. But in any case, knowledge of linguistic functions can give *grounds for assessing* various proposals in conceptual engineering in terms of *how well they enable the terms to serve their relevant functions.* And by revealing these functions, we also can open a second level of assessment: assessing the functions themselves, and whether they are ones we *should* serve at all.

**6. Conclusions**

 As I have argued, we need to have good ways of thinking about and identifying linguistic functions, in order to better assess proposals in conceptual engineering. I have tried to show that analyzing linguistic functions is not hopeless, nor should we think that the most that can be said is the disquotational "the function of 'F' is to pick out the Fs". On the contrary, the disquotational view is clearly inadequate and liable to lead us philosophically astray.

 I have also aimed to redirect our ways of thinking about function, away from thinking in terms of uses or intended functions, and towards a notion of *system* function that begins by assessing the functions of language as a whole, and uses that in identifying the functions that various grammatical systems and enablements serve. If we take that path, we will begin our investigations not by asking about the function of this or that individual *word*, but rather by asking questions about the functions of *language* in human life, and working from there to determine what roles various linguistic subsystems play in fulfilling these functions. I have also tried to show that we can make progress on those very questions by turning to work on systemic functional linguistics. While this is only a preliminary glance at this work in linguistics, I hope that it has been enough to show its philosophical relevance.

 First, the results from systemic functional linguistics may aid our work in conceptual engineering, helping us to develop a pragmatic approach to conceptual engineering that can give standards for our work without the mysteries and dubious Representationalist presuppositions of a 'metaphysical' approach. A pragmatic approach to conceptual engineering begins from *reverse* engineering, identifying the functions of the relevant parts of our linguistic framework. And the above work on linguistic function provides important clues about where to start in looking for relevant functions. If we have modal terminology, for example, we can begin by asking questions about what *interpersonal* (social role, regulative, and/or expressive) functions might be served by it. If noun terms for numbers or properties, or races or genders, are in question, we might begin by asking what *textual* functions are served by introducing these grammatical metaphors (beyond the functions served by the terminology from which they are derived). If the terms are to serve in constructing scientific theories and generalizations, we can go on to ask and if these are functions they *succeed at* serving or not. (Does 'fish' serve successfully in general biological explanations? Do race terms?). If they don't, we may have reason to revise or eliminate them. We can also go on to ask if the relevant functions are ones we *should* aim to serve. (For example, if a central function of race or gender terms is the to impose a range of differential norms and requirements based on perceived race or gender--are these functions we should continue to support?)

 This pragmatic approach to conceptual engineering builds on the crucial work from the neo-pragmatist tradition. Having such a framework for functional analyses may also enable us to develop and defend particular neo-pragmatist proposals and perhaps even to make them more fine-grained and sophisticated. As I noted at the start, neo-pragmatists have noticed the functional pluralism of language, and have developed non-descriptive accounts of the functions of moral, modal, mathematical, or logical language. With a framework for thinking about linguistic functions in place, we may be able to do a more unified job of *justifying* such claims of alternative functions, and identifying where we should expect to find alternative functional stories, without their looking like *ad hoc* claims made just to avoid philosophical problems.[[39]](#footnote-39) But even neo-pragmatists have tended to just ask about the functions, say, of moral or modal discourse--and we can now see why we shouldn't simply aim to identify function by *topic* (say, moral discourse, or modal discourse…). For terms that are in some sense about the same ‘topic’ may nonetheless serve a different range of functions—in ways that matter. The full range of functions we can serve by giving moral commands ("don't kill"), may differ from those served by introducing modal formulations of moral discourse and saying "one *mustn't* kill"; and these may differ again from the full range of functions that can be served by introducing nominalizations and speaking of moral *obligations* and *requirements.*[[40]](#footnote-40) Similarly, the functions served by simple modal talk of what *might* happen may overlap but not entirely coincide with those served by nominalized talk of the relevant *possibilities* and even of *possible worlds.* The above framework for thinking about linguistic functions enables us to notice the differences between these different aspects of modal or moral terminology. For these latter cases introduce grammatical metaphors on top of basic modal formulations--and thereby serve additional *textual* functions that we can go on to inquire about.

 While this is all difficult and complicated territory, I hope here to have begun redirecting how we can think about linguistic functions, and developing a more fruitful way of thinking about and identifying those functions. Thinking about linguistic functions is important in conceptual engineering--particularly if we aim to develop a pragmatic approach to conceptual engineering that can provide *standards* for evaluating proposals in conceptual engineering without relying on a dubious 'metaphysical' guide. And while it is complicated to do serious structured work on linguistic function, it is not hopeless or just a matter of ‘making things up’, but rather can fruitfully make use of work in empirical linguistics that can shed new light on how to address problems regarding how we should understand the roles of philosophically interesting parts of our language, and when we should retain, reject, or revise, elements of our linguistic scheme.

 In my view, the most plausible way to think about developing an approach to conceptual engineering is in a pragmatic vein. My hope is that this work on linguistic function can take us closer to seeing at least one way in which such a pragmatic approach to conceptual engineering may be defended and developed systematically, in a way that could lead to progress on a range of philosophical problems.[[41]](#footnote-41)

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1. The reasons for this will become clearer below, once we get a better view of the diverse functions different parts of language serve. For discussion of the problems with assuming that our logical terms track the 'logical structure of the world', see Thomasson (2015, Chapter 11). [↑](#footnote-ref-1)
2. For development of this idea that language should be thought of as a cultural artifact which, like other cultural artifacts, should be seen as serving functions, see my (2021), drawing on work by Irmak (2019) and Kaplan (1990). [↑](#footnote-ref-2)
3. Michael Williams here is summarizing Richard Rorty's views. [↑](#footnote-ref-3)
4. Where 'Represent' is here taken in the sense of mirroring, standing for, or tracking worldly features (Price 2011, 5). This does not preclude the idea that most mature language does serve an *ideational* macrofunction, in the sense to be described below. [↑](#footnote-ref-4)
5. Some have also appealed to sameness of function to address what is often thought of as Strawson’s challenge (1963)—to identify sameness of topic, across conceptual revisions, or, as it is sometimes put, to address “the limits of revision” (Cappelen 2018, 180-82). This won’t be my central concern. As I’ve discussed elsewhere (2020a), I don’t think that we should take the question ‘when is a concept the same?’ with deep metaphysical seriousness (as if there were some boundaries of concepts to be discovered); and when we ask whether we should make certain revisions in our conceptual scheme, the way to evaluate that is not on the whole to ask if it involves a replacement (rather than a modification) of a concept. There is again a parallel with civil engineering here: questions about what ought to be modified, torn down, restructured, etc. in civil engineering should not be guided at all by metaphysical questions about whether *the same walls, screws, boards, and buildings* would remain, or if they’d be ‘replaced’. Instead, the questions resolve more directly into questions about our goals and how best to fulfill them, regardless of these ‘metaphysical’ identity issues. [↑](#footnote-ref-5)
6. This focus on language also harmonizes with Macarthur and Price (2007, 94), who (with some reservations) similarly speak primarily about 'linguistic' functions, in part to avoid introducing the inapt term 'representations' as the standard way of covering both linguistic and conceptual items. [↑](#footnote-ref-6)
7. For further discussion of whether to think in terms of engineering language or concepts (and arguments for a psychological version of a conceptual approach), see Isaac (2021a and 2021b). [↑](#footnote-ref-7)
8. It is also crucial to distinguish a stable *function* from variable *uses* if we are to avoid the notorious Frege/Geach problem in proposing non-descriptive approaches to an area of discourse. That is, if we can identify a stable function, and identify meaning with the rules a term follows that enable it to fulfill those functions, then we may be able to identify a stable sense of meaning that remains even in embedded contexts where the term is not *used* to perform the characteristic speech acts with which it is associated. (For work on this approach, for the case of modal terms, see my 2020b, Chapters 2 and 3, drawing on work by Michael Williams (2011)). [↑](#footnote-ref-8)
9. It is important to note that these functions needn’t be beneficial to all or benign, there is room here for critique. More on this below. [↑](#footnote-ref-9)
10. Later we will see additional reasons that it is helpful to begin by asking about the functions of language and linguistic formations rather than concepts. Nonetheless, it would also be extremely interesting to see such functional analyses done in psychological/conceptual rather than linguistic terms--I simply will not be undertaking that approach here. For some additional considerations in favor of starting at the linguistic level, see also my (2021). [↑](#footnote-ref-10)
11. On the lack of rivalry, see also (Halliday 2014, 56). And as Halliday also puts it "different coexisting models in linguistics may best be regarded as appropriate to different aims, rather than as competing contenders for the same goal" (1964, 13). For further discussion of the place of systemic functional linguistics in the history of linguistics, see also Bateman (2017). [↑](#footnote-ref-11)
12. See Aurora (2015).Roman Jakobsen “explicitly considers Husserl’s phenomenology [especially the third Logical Investigation] as one of the main sources underlying Prague structuralism and Russian formalism” (Aurora 2015, 14). Husserl also gave a lecture to the Prague Circle (invited by Jakobsen) on November 18, 1935. [↑](#footnote-ref-12)
13. This Husserlian work also influenced Ryle’s later work on linguistic categories and category mistakes. [↑](#footnote-ref-13)
14. For a brief overview, see Malmkajaer (1991), 141-6. [↑](#footnote-ref-14)
15. Interested readers are instead referred to Eggins (2004) and Halliday (2009). [↑](#footnote-ref-15)
16. These are really characteristic ‘uses’ of language—unlike the macrofunctions that come later. [↑](#footnote-ref-16)
17. In saying this, I do not mean to endorse a merely *local* form of expressivism (endorsed, e.g., by Simon Blackburn (2013)) as opposed to the *global* expressivism defended by Price (2013). For the distinction between the introduction rules and functions governing words like 'dog' or 'pig' on the one hand, and those governing terms for properties and numbers (for example) on the other hand can also be captured by Price's distinction between terms that are (and are not) 'e-representational'. Those congruent terms that are introduced observationally to serve a heuristic function seem to be 'e-representational' in the sense that their "job... is to covary with something else--typically some *external* factor or environmental condition" (Price 2011, 20). For discussion of the global versus local expressivist debate, see the full range of essays in Price (2013). For a defense of a form of global pragmatism against concerns that it can't properly address discourse about ordinary objects, see my (2019). [↑](#footnote-ref-17)
18. The relevant notion of meaning used is of ‘meaning potential’—what a speaker can do, linguistically (Halliday 1973, 44), where this is a subset of general behavioral options (1973, 47). So the thought is that grammar enables us to (linguistically) do the same thing, in different ways—and often by combining the primary goal with other functions. “So a category like that of ‘threat’… will be realized in the language system through a number of different grammatical options” (1973, 49)—each of which may realize ‘more delicate options in the meaning potential’,(1973, 50). For example, a gangster might say "I'll kill your dog if you don't pay your debts", or (adding subtlety and plausible deniability), "You sure owe me a lot of money. It'd be a shame if something was to happen to your dog". [↑](#footnote-ref-18)
19. It also seems to coincide with the small-r, 'internal' sense of representation identified by Price (2011), on which something 'counts as a representation, in this sense, in virtue of its...role, in some sort of cognitive or inferential architecture' (2011, 20). For it is plausibly the ability to carry propositional content that enables pieces of language to be used in inferences. Having an ideational/representational macrofunction in this sense must be distinguished from the idea that the relevant language is *congruent* language, *observationally introduced* (roughly, from the idea that it is 'e-representational' in something like Price's sense (2011, 20)). [↑](#footnote-ref-19)
20. For a further exemplification of such options, see Eggins (2004, 118-9). [↑](#footnote-ref-20)
21. It is the ability of terms such as modal terms to enter language with a primarily *non-descriptive* (regulative) function, but go on to (serve ideational functions as well and) be used in expressing propositional content that can be *reasoned with*, that leads to the notorious Frege-Geach problem. I will have to leave discussion of this problem for another occasion, but for preliminary work in that direction, see my (2020b, Chapters 2 and 3). [↑](#footnote-ref-21)
22. Unfortunately there is not space here to do the relevant reverse engineering work on moral or modal language. I have aimed to make a start at work on metaphysical modal language (as serving a regulative function of mandating, conveying, or renegotiating semantic rules) elsewhere (2020b), though I had not yet found the material on systemic functional linguistics to work from. For an initial approach to *moral* discourse through this framework, see Warren and Thomasson (forthcoming). [↑](#footnote-ref-22)
23. Though they may still be expressed in propositional form and come to serve an ideational macro-function, the crucial point here is that moral or modal claims (even expressed propositionally) originate from forms of speech introduced to serve inter-personal macro-functions, and thus have introduction rules that differ in crucial ways from congruent, observationally acquired language introduced to serve an ideational macrofunction. [↑](#footnote-ref-23)
24. Those familiar with my other work will see why: for I think that it is a mistake to think of nominalizations to speak, say, of properties as *merely pretending,* rather than as giving rules for what it takes to speak of properties*, in the only sense that has sense*. For details of the argument for a deflationist rather than fictionalist interpretation of such nominalizing discourse, see my (2013). Macarthur and Price similarly endorse a pragmatist *quietism* about metaphysical issues--which means they are normally "happy to stand with the folk and affirm the first-order truths of the domain in question", contrasting this with an anti-realist fictionalist approach (2007, 99). For a similar reaction to fictionalism, see Blackburn's (2005) response to David Lewis. [↑](#footnote-ref-24)
25. Children typically process grammatical metaphor only after age 8 or 9 (Halliday 2009, 46). [↑](#footnote-ref-25)
26. This also seems like a way of making good on the idea that there are optional additional frameworks that can be added onto the ‘thing’ language, in Carnap’s (1950/1956) terms. [↑](#footnote-ref-26)
27. Whether the grammatical metaphor is introduced from a congruent verb or adjective, or from another part of speech, such as a modal term, may make important differences in the ways we articulate their introduction rules, in what epistemological story is appropriate, etc. But such investigations will have to be left for another occasion. [↑](#footnote-ref-27)
28. Halliday also shows that parallel nominalization constructions appear in Chinese to similar effect (2009, 135). [↑](#footnote-ref-28)
29. Non-content carrying words include prepositions, conjunctions, auxiliary verbs and pronouns. [↑](#footnote-ref-29)
30. “Grammar has always had this potential for ‘cross-coupling’. But it came well to the fore in the classical languages of the iron age, such as Chinese, Sanskrit and Greek, where it became the resource for creating abstract, technical objects… hundreds of verbs were nominalized as technical terms, and these nouns, together with their associated nominal group constructions, formed the core of a new, typically written, mode of discourse” (Halliday 2009, 119). We might even speculate that it may be no coincidence that these coincide with the origins of philosophy as we know it, across traditions, as many philosophical questions cannot be formulated without a rich vocabulary of grammatical metaphors. [↑](#footnote-ref-30)
31. Martin (1990: “Literacy in science: learning to handle text as technology”, cited in Halliday 2009, 125) has shown that specialized technical discourse cannot be created without deploying grammatical metaphor. [↑](#footnote-ref-31)
32. One might even think that this is essential for moving from a situation of individualized power and commands (in the 'rule of man'), to the rule of law. [↑](#footnote-ref-32)
33. The above work enables us to justify the decision noted earlier, to think first in terms of *linguistic* functions rather than in terms of the functions of *concepts.* Asking first about the functions of individual concepts can lead us astray, since asking about *the concept of F* inevitably nominalizes the F. That is, we can ask about the concept *of redness,* but this elides the functional differences we might discover between the function of having congruent adjectives such as ‘red’ versus nominalized forms (*redness*) which we must use in naming concepts. (This of course does not prevent us from drawing similar conclusions about the functions of phonetically distinct terms that would be good translations or synonyms). [↑](#footnote-ref-33)
34. To use Gilbert Ryle's (1932) phrase. [↑](#footnote-ref-34)
35. This should bring Ryle (1949) back to mind—one of the earliest philosophers I know of who was onto the idea that there are important *functional differences* in different modes of speech, which show up in the paradoxes and puzzles that arise with category mistakes. P. F. Strawson seems to be onto a similar point, where he talks about how the subject/predicate form is applied in the basic case to spatio-temporal particulars, but by ‘imaginative extension’ this logical form is also carried over to ‘higher levels’, enabling us to make predications of colors, numbers, etc. The basic case is a model for the other cases, but “From this fact spring both the delusions of Platonism and the delusions of anti-Platonism. They are indeed, but two sides of the same delusion” (1974/2016, 30). [↑](#footnote-ref-35)
36. A full disentangling from various philosophical problems would require extensive separate work, including understanding the different introduction rules that govern congruent observationally acquired nouns, versus nouns that enter as grammatical metaphors from various other forms of speech. There is not space here to do that detailed work, but only to gesture at how various inappropriate expectations may arise and lead to puzzles. [↑](#footnote-ref-36)
37. For discussion and defense of such 'easy' ontological inferences, see my (2015), especially Chapter 3, which draws on and builds from work by Hale and Wright (2001) and Schiffer (2003). [↑](#footnote-ref-37)
38. See, for example, Hale and Wright (2001). [↑](#footnote-ref-38)
39. We can also give due credit to the intuitions often raised against these functionally alternative proposals: that moral, modal, or mathematical discourse has propositional content that enables us to state truths 'about' numbers, moral qualities or possible worlds. For we can notice the ideational functions that are simultaneously served. [↑](#footnote-ref-39)
40. For a start on this, see Warren and Thomasson (forthcoming). [↑](#footnote-ref-40)
41. For insightful comments on earlier versions of this work, I wish to thank Manuel Gustavo Isaac, Katherine Ritchie, Herman Cappelen, and David Woodruff Smith, and the editors and an anonymous referee from this journal, as well as audiences at (virtual) talks at Arche, Hong Kong University's Concept Lab, Temple University, and the University of California, Irvine. [↑](#footnote-ref-41)