Nineteenth Excursus: Inferentialism and Analyticity*

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In *The Logical Syntax of Language* (1934), Carnap developed a broadly inferentialist view of language. On an inferentialist view of language, the meaning of a sentence is understood in terms of its inferential role, especially with respect to other sentences, and perhaps with respect to perception and action. The meaning of other expressions is understood in terms of its contributions to inferential role of sentences containing the expression. On Carnap's inferentialist view, the meaning of a sentence is understood in terms of its consequences with respect to certain primitive sentences, as captured by certain transformation rules.

Subsequently, various theorists have developed inferentialist views of both linguistic content and mental content.[1] An inferentialist of mental content holds that the content of a mental state (such as a belief or a judgment) is determined or individuated by its inferential relations to other mental states and their contents. Likewise, concepts or their contents are determined or individuated by their contributions to these inferential relations.

The scrutability framework is congenial to an inferentialist view of both linguistic and mental content. The framework of "Verbal Disputes" also naturally suggests an inferentialist view, of a somewhat more fine-grained sort. In this excursus I sketch an inferentialist view based on these frameworks, and I draw out a related way to cast an analytic-synthetic distinction. I will focus first on the case of mental content and of concepts.

To finesse the vexed ambiguity of the word 'concept' let us say that an *m-concept* is a concept qua mental item: m-concepts are the constituent of judgments, where judgments are mental acts. An *a-concept* is a concept qua abstract object: a-concepts are the constituents of propositions,

[0]This excursus is extremely sketchy. I hope to expand on it in later work.

[1]Inferentialist views of linguistic content have been developed by Sellars (1953), who was strongly influenced by Carnap's inferentialism, Field (1977), Harman (1982), and Brandom (1994). Inferentialist views of mental content have been developed by Harman, Block (1986), and Peacocke (1993), among others. Views of this sort also go by the names "conceptual-role semantics" and "inferential-role semantics". I use "inferentialism" as a generic term here mainly because it is shorter than the other two labels and because it applies more naturally to mental content.

where propositions are abstract objects. Propositions are the contents of judgments, and a-concepts are the contents of m-concepts. Then one inferentialist these holds that the content of an m-concept is determined by the m-concept's inferential relations to other m-concepts (perhaps along with relations to perception, action, and other entities). A closely related thesis says that a-concepts are individuated by their inferential relations to other a-concepts (perhaps along with relations to perception, action, and other entities), where these inferential relations are abstract counterparts of the concrete inferential relations that m-concepts stand in. For clarity, I will henceforth use "concept" (simpliciter) to mean m-concept, and will use "contents" to talk of a-concepts, the contents of m-concepts.

A *holistic* inferentialist holds that all inferences in which a concept is involved play a role in determining its content. A non-holistic inferentialist holds that only a special subclass of inferences do this. My own view is non-holistic: it is only the a priori inferences that matter, and perhaps a constrained subclass of these.

A *pure* inferentialist holds that there are no privileged concepts (or expressions) here: the content of every concept is determined only by its place in the web, and the web as a whole is characterized only by its abstract structure. Pure inferentialism is often regarded as implausible because it invokes a sort of wholly abstract structure that seems too abstract to account for the specific and substantive content of our beliefs and our language. An *impure* inferentialist holds that the contents of some primitive concepts are determined noninferentially (and that the corresponding a-concepts are individuated noninferentially), and that the content of all other concepts are determined at least in part by their inferential relations to these concepts.

Impure inferentialism might also be called *anchored* inferentialism, as the primitive concepts serve as anchors in which the contents of other concepts are grounded by inferential relations. The content of anchoring concepts will be determined in some other way: perhaps by causal or acquaintance relations to objects or properties in the world. The anchored inferential picture shares some of the spirit of a traditional descriptivist picture: there are primitive concepts, and nonprimitive concepts that derive their content in part from relations to them. But on this picture, the relation of deriving turns on inferential rather than compositional relations. Because of this, the picture is not threatened by the observation that most concepts cannot be decomposed into other concepts.

[1]It is also possible that some anchoring concepts, such as the concept of negation, will get their content in virtue of inferential role. Here the relevant aspects of inferential role will be structural, as opposed to inferential connections to other specific concepts.

The scrutability framework is especially well-suited for anchored inferentialism. To a first approximation: the concepts involved in a general scrutability base will provide the anchors, and contents for all other contents will be determined by their a priori inferential connections to the concepts in the generalized scrutability base. Things go especially well if the base concepts are all primitive acquaintance concepts: for such concepts, one can make sense of their contents without appealing to inferential roles. Then all other contents will be determined by their a priori inferential connections to these contents.

This model is illustrated by the way intensions for sentences are defined (in chapter 5 and the eleventh excursus). Given a truth-apt sentence S, its intension is a function from scenarios to truth-values such that S is true at a scenario w if $D \rightarrow S$ is a priori, where D is a canonical specification of w. Canonical specifications are always specifications in the vocabulary of a generalized scrutability base. So the intension of S is being defined in terms of the apriority of conditionals connecting S to base sentences. That is, the content of S is defined in terms of its a priori connections to base sentences. One can define intensions for subsentential expressions in a closely related way. Moving to the level of thought, the intension of an arbitrary concept is defined in terms of its a priori connections to certain thoughts using only primitive concepts. So in effect, the intensions of arbitrary concepts are grounded in a priori connections to base concepts. This is just as the anchored inferentialist supposes.

One might worry that intensions do not really correspond to *inferential* roles, as the definition of intensions requires that certain conditionals be a priori, and not certain inferences. When $D \rightarrow S$ is a priori, an inference from D to S might nevertheless be a bad one; as Harman (19xx) has observed, if one has good reason to believe $\neg S$, one might do better to retain that belief and drop D instead. However, for our purposes what is relevant are *suppositional inferences*: what one should infer on supposing that D is the case. We can say that S is a a priori suppositional consequence of D iff when one supposes D, one considers the question of S, and one reasons a priori, one should come to be certain of S (under an insulated idealization). Then if $D \rightarrow S$ is a priori, S is an a priori suppositional consequence of D, and vice versa. So intensions track a priori suppositional inferential roles, at least, and can in principle be defined in terms of these roles. There may be an approximate correspondence to other sorts of inferential roles, but these roles will not be constitutively relevant.

The inferential role of a concept can be construed as a normative role, constituted by *good* inferences that the concept might be involved in. For $D \rightarrow S$ to be a priori is not for the subject to actually connect D to S, or even to be disposed to do so. Rather, it is that the subject *should* accept

this connection is reasoning correctly. So the content of S is given by normative facts about which inferences are good ones, rather than descriptive facts about what inferences the subject performs or accepts.[2]

This inferentialist framework gives special weight to *entry inferences*: inferences from thoughts constituted by primitive concepts alone to thoughts involving the concept in question. The intension of S is determined by specifying those D for which $D \rightarrow S$ is a priori, and those D for which $D \rightarrow \neg S$ is a priori, which is in effect to say it is determined by entry inferences from sentences using primitive concepts. We might represent this inferential role as follows:

$D_1 \vdash S$

$D_2 \vdash \neg S$

...

S will also be involved in exit inferences: inferences from S to sentences involving primitive concepts. Here the simplest way to specify these inference is to take the contrapositive versions of the entry inferences: so $\neg S \vdash \neg D_1$, $S \vdash \neg D_2$, and so on (or alternatively, just two exit inferences with massively conjunctive consequences). Here, the entry inferences will determine the exit inferences, and vice versa, so we need only use one set to determine the sentence's content. I will focus on entry inferences. These entry inferences will determine the sentence's full a priori inferential role, and will determine its intension.

The same goes at the level of concepts. Under certain reasonable assumptions, the pattern of entry inferences for a nonprimitive concept C will itself fix a pattern of scrutability inferences: inferences from certain complete sets of sentences involving expressions for primitive concepts (where these sets correspond to full scenarios) to sentences also involving C. And in the reverse

[2]This normative character is shared with the inferentialism of Brandom 20xx. Differences include that my inferentialism is non-holistic (privileging a priori inferences), representational (giving a central role to truth-conditions), short-armed (the roles do not stretch into the environment), mind-first (privileging the mental over the linguistic) and impure, whereas Brandom's is holistic, nonrepresentational, long-armed, language-first, and pure (though it can also be understood as short-armed and impure, grounded in perceptual expressions whose content is then grounded in causal connections to the world). Carnap's inferentialism in *Logical Syntax* is arguably normative, non-holistic, nonrepresentational, short-armed, language-first, and impure (focusing on logical roles with respect to primitive sentences). Peacocke's inferentialism in *A Study of Concepts* (1993) is non-normative, non-holistic, representational, long-armed, mind-first, and either pure or impure (grounded partly in perceptual concepts which are themselves grounded in connections to the contents of perceptual experience, which serve as anchors).

direction, these scrutability inferences will fix the pattern of entry inferences. So on this model, the content of any concept corresponds to a pattern of scrutability inferences.

We can use this picture to address certain standard worries for inferentialism.

(1) *What is the relation between inferential role and truth-conditions?* On the current framework, an anchored inferential role determines an intension, which is a sort of truth-condition. Of course the anchors help here, as we are supposing that they have some sort of truth-conditional content that is not grounded in inferential role. Then inferential roles in effect ground the content of all concepts and expressions in the contents of anchors and inferential roles.

(2) *What is the relation between inferential role and wide content?* On the current view, anchored inferential role determines a primary intension. The relevant role can be seen as an internal (narrow or short-armed) role, so that the content is a narrow content. However, the primary intension of an expression such as 'water', on conjunction with the environment, determines its extension (H_2O) and so its wide content. On my view this relation holds quite generally. So wide content is fixed by internal inferential role and facts about the environment.

(3) *What about defective concepts?* The putative expression *tonk* is defined by saying that from A one can infer 'A tonk B', and that from 'A tonk B' one can infer B. It is commonly held that there is something defective about such expressions and such roles, and that an inferentialism theory needs to explain this and disallow them somehow. It is commonly observed that the problem with roles such as this one is that entry rules and exit rules are not in "harmony" with each other. The current approach avoids this issue by individuating inferential roles by entry rules alone, and making exit rules derive from the entry rules in the fashion discussed above, which ensures that harmony is preserved. I do not think that it is possible to possess a concept with a disharmonious inferential role.

(4) *Which has priority, inferential role or truth-conditions?* I am neutral on the important question of priority. Fixing normative inferential role and the content of anchors fixes the content of all contents and expressions, but this fixing relation may or may not reflect a grounding relation. The key question here is whether the norms of inference are themselves grounded in the content of the concepts, or whether the content of the concepts are grounded in the norms of inference. I am unsure to the answer of this question about the relative priority of the normative and the intentional here.

An anchored inferentialist picture of concepts is also suggested by the model of bedrock concepts in "Verbal Disputes". An anchored inferentialist will hold that the content of an expression such as 'go round' is grounded in the content of inferentially related expressions, such as ex-

pressions concerning relative location and motion. On the current picture, when one applies the method of elimination to 'The squirrel goes round the tree', one is in effect cashing out aspects of the content of 'go round', at least insofar as that content matters for dialectical purposes, in terms of the content of various associated expressions, expressing associated concepts. That is just what an inferentialist would expect. If one applies the method repeatedly, one will cash out aspects of the content of 'go round' in terms of the content of various associated bedrock expressions, expressing bedrock concepts. That is just what an anchored inferentialist would expect. In effect, the method of elimination consists in moving to inferentially related concepts within the web of concepts, and ultimately to the primitive concepts that serve as anchors.

The picture in "Verbal Disputes" also helps with a worry about the inferentialist picture above. The worry is that a priori inferential roles are too coarse-grained to fix the content of concepts and expressions. After all, two distinct concepts can be a priori equivalent: *the 17th prime* and *59*, for example, or perhaps a moral concept (*right*) and a nonmoral concept that is coextensive with it (*maximizes expected utility*?). These will have the same a priori inferential roles, but they seem to be different concepts with different contents.

Here we could take the line that a priori inferential roles at lest fix a certain coarse-grained content for m-concepts, while saying that separate considerations fix fine-grained content. Or we could appeal to structure in the m-concepts to yield fine-grained structured content, as we did in the linguistic case in the eleventh excursus. But it is especially attractive to appeal to a constraint on inferential roles stronger than apriority, more akin to a kind of analyticity.

Here the picture in "Verbal Disputes", with all truths translucently settled by bedrock truths, is suggestive. On this picture the anchoring concepts are more numerous than on the a priori scrutability picture: they include normative/evaluative and some mathematical concepts, for example. And the inferential relation between bedrock concepts and other concepts is tighter than just a priori inference— it is more akin to a sort of analytic inference. At least the phenomena involving verbal disputes can be regarded as evidence for an inferentialist model on which the bedrock concepts serve as anchors, and on which all other concepts are connected by a sort of quasi-analytic inference.

We need not presuppose a notion of analyticity here (although later we will say how this picture might be used to define a notion of analyticity). Instead, we can take the verbal dispute phenomena as evidence as strong evidence that all concepts (in the sense of a-concepts) are individuated by certain inferential connections to bedrock concepts, where the inferential relations are stronger than mere a priori connections. They will be individuated by patterns of entry rules, like those

discussed earlier but more fine-grained, and corresponding patterns of exit rules. Now there is no reason to suppose that the pairs of a priori equivalent concepts above must have the same entry and exit rules. For example, *right* may be a bedrock concept, while *maximizes expected utility* will be a non-bedrock concept itself connected to probabilistic, mathematical, and evaluative concepts.

There will be many different ways to represent S's inferential role. Ultimately we will still want to be able to determine entry rules for S from the (now enriched) base language alone. But there will typically be much simpler representations of the entry rules than those that go scenario-by-scenario. In many cases, there will be much shorter sufficient conditions for S that can be specified in the base language, in effect covering a huge range of scenarios at once. One can also specify entry rules without using the base language, as when we specify the meaning of 'vixen' by entry rules such as

x is a female fox $\vdash$ x is a vixen

x is not a female fox $\vdash$ x is not a vixen

As long as there are further entry rules that ground expressions such as 'female' and 'fox' in other expressions and ultimately in the base language, these rules will collectively determine entry rules for 'vixen' starting from the base language. This sort of representation, when it is available, will give a much better representation of the structure of the concept and the core inferences it is involved in.

Of course most concepts are not well-behaved enough to be summed up in a couple of clean inferences such as those above. For a typical concept, as we have seen, such inferences are very often defeasible and subject to counterexample. But this leaves open the possibility of specifying the inferential role of a concept using defeasible inferences. For example, one might specify the inferential role of *knowledge* as follows:

x is not a belief $\vdash \neg K(x)$

x is not true $\vdash \neg K(x)$

x is not justified $\vdash \neg K(x)$

x is a justified true belief $\nvdash K(x)$

x is inferred from a falsehood $\vdash \neg K(x)$

x is true by luck $\nvdash \neg K(x)$

...

Here the idea is that we have a hierarchy of conclusive inferences (marked by '⊢') and defeasible inferences (marked by '⊩'). To classify a given case as knowledge or not, one starts at the top of the list and goes down until one comes across an entry rule whose left-hand side is satisfied by the case. If that rule is conclusive, one classifies the case according to the right-hand side and stops. If that rule is defeasible, one tentatively classifies the case according to the right-hand side and keeps going. If the case is eventually classified conclusively, that classification counts; otherwise the last defeasible classification counts. The rules should be such that every case is classified eventually (alternatively, those that are not are indeterminate). The left-hand sides will likely get longer and longer, and the list may be infinite, as the list of scenario-by-scenario entry rules are. These rules will ultimately determine the scenario-by-scenario rules, at least on conjunction with entry rules for the other expressions in question. But this specification will indicate the core inferential stucture of the concept much more transparently than the scenario-by-scenario rules.

This model is doubtless oversimplistic and would need to be refined in various ways, for example to capture more complex dependencies among conditions of application for a concept. But it gives the idea of a way of representing entry rules on an inferentialist model like the current one that allows some recognition of conceptual connections between high-level concepts will still recognizing the inadequacy of a definitional model. As a bonus, this model fits well with the dynamic program of conceptual analysis set out in chapter 8. In effect, that model might be seen as gradually articulating the constitutive conclusive and defeasible entry rules for a concept, achieving ever-better approximate conceptual analyses.

What sort of psychological reality does this model have? That is, is any set of rules, however gruesome, that ultimately yields the same conditions of application an equally valid representation of the concept? Or is there something priveleged about some representations, such as the one above? I am not sure of the answer to this question, it is attractive to hold that some inferences at least have a sort of normative privilege: they are somehow directly warranted by conceptual structure alone, perhaps, where other more gruesome inferences that the concept is involved in are not.

This model goes naturally with a certain understanding of analyticity that invokes the framework of warrants discussed in the fourth excursus. We can say that S is *warrant-analytic* for a subject if there is a *conceptual warrant* for the subject to accept S. We can say that S is warrant-analytic (simpliciter) when there exists a conceptual warrant for any subject who uses the expressions in S (with full competence) to accept S. Warrant-analyticity is a relative of the notion of positional analyticity discussed in chapter 9: S is positionally analytic if any subject who uses the

expressions in S (with full competence) is in a position to know S. Warrant-analyticity cashes out "in a position to know" in terms of warrants, as in the fourth excursus, and more importantly, it constrains the sort of warrants that are relevant to a special sort: conceptual warrants.

Here, intuitively, a conceptual warrant for accepting a sentence is one that derives wholly from the concepts expressed by the expressions in that sentence. For example, it is natural to hold that there is a warrant for accepting 'Vixens are female foxes' that derives from the concept expressed by 'vixens', 'foxes', and so on. The existence of a warrant does not entail that any given subject will use the warrant, so the warrant-analyticity of a sentence S does not entail its epistemological analyticity, and warrant-analyticity is not subject to Williamson's critique of epistemological analyticity. But it is still an epistemological notion, and is one that may be able to play some roles of the traditional notion of analyticity.

Can we characterize conceptual warrants more precisely? Here the inferentialist analysis of concepts provides some potential tools. On this view, most concepts can be characterized by certain inferential roles with respect to other concepts. One might suggest that there is a conceptual warrant to accept a proposition p, constituted by various concepts, when p is warranted by the constitutive inferential roles of the concepts that constitute it.

For example, suppose that the inferential role of *vixen* is constituted by the obvious inferential relations to *female* and to *fox*. Then it is natural to hold that an inference from *x is a vixen* to *x is a female fox* is warranted by these constitutive inferential relations. It is not a large step from there to hold that *vixens are female foxes* is warranted by these inferential relations (perhaps along with inferential relations deriving from *are* and from various logical concepts). If this is right, then there is a conceptual warrant to accept *vixens are female foxes*. As before, none of this entails that a subject possessing the concepts must accept the proposition: constitutive inferential roles are normative rather than descriptive. But the roles nevertheless provide a warrant.

If we follow the model above, in some cases constitutive inferential roles will be defeasible: the inference from *x* is a justified true belief to *x* is knowledge, for example. In these cases, subjects will have at best a defeasible warrant for the relevant inferences, and any further claims grounded in these inferences—*all justified true beliefs are knowledge*, say—should not count as analytic. But in the case of conclusive inferences, it is reasonable to count the resulting claims as warrant-analytic.

Much more would need to be said to make this picture fully precise. As well as spelling out the rules out what can be a constitutive inferential role, we would need a precise account of just how these inferential roles have to be related to a proposition to warrant it. Thre are also questions

about how precisely to represent conceptual warrants in the framework of support structures: they might be seen as a sort of basic warrant, providing basic a priori evidence, or alternatively they might be seen as grounded in concepts, somehow deriving their warrant from concepts as more primitive states.

A final question is whether we might be able to use the inferentialist picture outlined here to help provide a reductive account of mental content. I do not have such an account to offer, but if something like the account above is correct, it at least suggests certain directions to pursue. We have seen that once we fix the content of anchoring concepts and certain normative facts about inferential connections between these concepts and non-anchoring concepts, then the content of other concepts is fixed. So one might at least try out the suggestion that the latter content is grounded in the former contents and in the normative facts. Once that model is accepted, it reduces the question of the grounds of mental content to the questions of (i) the grounds of the relevant normative facts about inference (in paricular, the fact that there is an a priori warrant for certain suppositional inferences between anchoring concepts and other concepts) and (ii) the grounds of the content of anchoring concepts.

Regarding (i), there are various options. First, one might simply take normative facts as primitive. Second, one might endorse Brandom's "normative phenomenalism" according to which certain inferences count as good ones roughly in virtue of our treating them as good inferences. Third, one might try to reduce the normativity by giving a reductive analysis of rationality: we could then at least approximate the normative inferences by equating them with the inferences that one would make if one were ideally rational. Fourth, one might try to ground the normative facts about inference in certain non-normative facts about inference—most obviously, the fact that we are disposed to make certain inferences—along with further factors in order avoid problems concerning error and incompleteness here. Fifth, the normative facts might be grounded in prior facts about the content of the non-primitive concepts, along with quite general norms of inference between related concepts.[3] I am inclined to give the most weight to the fourth option (which will then yield as a reductive dispositional inferentialism, not just a nonreductive normative inferentialism), but I take all the options but the first seriously.

[3]Of course the fifth view then raises the question of where these prior contents are grounded. Presumably these are not grounded in norms of inference. Holding that they are grounded in inferential dispositions in effect reduces this option to the fourth option. On my view this content is narrow, so it will not be grounded in causal connections to the thinker's environment. A remaining possibility is that it is grounded in the phenomenology associated with the non-primitive concept.

Regarding (ii), there are also various options. I am inclined to divide the relevant concepts into structural concepts and acquaintance concepts. For structural concepts, such as logical concepts and perhaps nomic and fundamentality concepts, it is not out of the question that these will themselves be grounded in some sort of structural inferential role: not grounded in connections to other bedrock concepts as much as in certain structural forms of inference. For example, there are standard inferentialist approaches to logical concepts. There are broadly inferentialist approaches to normative concepts, grounding them in certain connections to judgment and action. One might try an inferentialist approach to nomic concepts, for example, grounding these in norms of inference from observed cases to laws? One might also try something similar for fundamentality concepts, perhaps centering on their role in explanation.

Acquaintance concepts may include phenomenal concepts and observational concepts: primitive concepts of phenomenal properties, spatiotemporal properties, and secondary qualities. Here I think it is plausible that our concepts of these properties derive from our relation to these properties in experience: from the way spatiotemporal properties and secondary qualities are represented in perceptual experience, for example, and from the way that experiences are presented to us in introspection. Of course that then shifts the question to the grounds our relations to these properties in experience. One might hold that causal relations play a role here, or one might hold that Russell-style acquaintance is central. It is also not out of the question to hold that somewhere around here, intentional content (for example, primitive awareness of the relevant Edenic properties) is primitive and not grounded in anything more basic.

I return to these issues about the naturalization of inference-grounded content briefly in the fourth additional excursus. Of course both the inferentialist view here and the speculation about naturalization need much more development to be taken seriously as theories of the grounds of mental content. But the scrutability framework at least provides some promising avenues to pursue.