Counterfactually robust inferences, modally ruled out inferences, and semantic holism

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Abstract

It is often argued that inferential role semantics (IRS) entails semantic holism as long as theorists fail to answer the question about which inferences, among the many, are meaning-constitutive. Since analyticity, as truth in virtue of meaning, is a widely dismissed notion in indicating which inferences determine meaning, it seems that holism follows. Semantic holism is often understood as facing problems with the stability of content and many usual explanations of communication. Thus, we should choose between giving up IRS, to avoid these holistic entailments, and defending holism against this charge, to rescue IRS. I try to pursue the second goal by analyzing certain patterns of counterfactual reasoning. Wilfrid Sellars and Robert Brandom claim that, to defend IRS, content-constitutive inferences are those counterfactually robust. While it is difficult to assess the goodness of such a view, it nonetheless entails that counterfactually non-robust inferences (which I call "modally ruled out inferences") are not content-constitutive. If this is true, and if we take certain remarks about the grasp of concepts on board, there is a way to restrict the scope of the holism entailed by IRS to the extent of reshaping problems with the stability of content.

Keywords: Inferential Role Semantics, Semantic Holism, Grasp of Concepts, Modally Ruled Out Inferences, Counterfactually Robust Inferences.

1. Summary

According to inferential role semantics (IRS), concepts are determined by their inferential role, the set of inferences a concept is involved in. It thus follows that IRS is a holistic theory of conceptual content. If one cannot answer the question about which inferences are constitutive of content—as Fodor and Lepore (2002) have forcefully claimed—it seems that inferentialism will turn out to be an unreasonable view; the holism involved is so strong that it faces many big problems with the stability of content. In this study, I first (section 2, below) present the problem and then (2a) examine the main reasons why strong holism is an unreasonable option. Thereafter, I explore (3) the possibility of endorsing a conception of a grasp of concepts that is not compromised, per se, with such strong semantic holism. Then (4), I focus my attention on the account provided by Sellars (and recently seconded by Brandom) about which inferences

are content-constitutive; these are the counterfactually robust inferences, those encoded in counterfactual conditionals. If the proposal works, we can avoid the bad holistic entailments for inferentialism. While cogent arguments in support of this view appear to be missing, I wonder whether indirect ones are available. At this point (5), I introduce a perspective (which is a consequence of Sellars' view) that I find useful in avoiding the worst consequences of holism for inferentialism (and in indirectly supporting Sellars' view): modally ruled out inferences (inferences that are *not* counterfactually robust) are not content-constitutive. Inferences involving *C* that are not counterfactually robust are not constitutive of *C*. Since these are not content-constitutive, we have evidence that there are many inferences we can subtract from the inferential roles of concepts, circumscribing the problems of stability of content given by strong holism; inferential roles will thus appear to be sufficiently smaller than they seemed to be. Problems with holism will then seem less pressing (also given the fairly minimal requirements for the grasp of concepts). Then (5a), I offer many examples of modally ruled out inferences, showing that they belong to a general pattern. In the following subsection (5b), I provide an argument to prove that modally ruled out inferences actually belong to a general pattern and that they can indeed rescue inferentialism from strong semantic holism. Finally, modally ruled out inferences *may not* be the proof that counterfactually robust inferences are content-constitutive, but they can, unless the contrary is proven, count as a robust clue in that direction. The criterion for not being constitutive that emerges, in fact, is being counterfactually non-robust: by this very criterion, then, counterfactually robust inferences are putatively "(not non-)constitutive."

2. IRS in question

According to IRS, concepts are determined by their inferential role, the distinctive role they play in reasoning. Such a role encompasses, for the concept *C*, all the good premises for *C* and all the sentences that we can appropriately infer from *C*. A theory that appeals to these ideas is that of Robert Brandom (1994).[1] The inferences that determine content are those that are

[1] Brandom gave a pragmatic account of how inferences articulate the content of speech acts within the social practice of "giving and asking for reasons." He explained inferential norms in a pragmatist way, making them dependent on discursive practice. The game of "giving and asking for reasons" determines what the correct inferential moves are and which beliefs are correct in the light of their consequences and of the best reasons at one's disposal. The score-keeping activity implicit in such a practice determines the normative statuses of our linguistic utterances and behaviour; we should distinguish between "commitments" and "entitlements." This practice, which is aimed at assessing which commitments can receive an entitlement and which cannot, is supposed to enable us to make explicit, through the exploration of the actual entailments of the inferences that we draw, the difference between simply undertaking a particular commitment and being entitled to something.

materially good. Their goodness must be understood as "material:" it depends on the nonlogical concepts involved. For instance, if I infer from "cats are felines" that "cats are mammals," the inference is good in virtue of the content of feline and mammal.[2]

Since the content of a concept is determined by a set of inferences, it follows that IRS is a holistic theory. Roughly, semantic holism entails that to grasp, know, and master a particular concept *C*, one needs to grasp, know, and master many further concepts.

Jerry Fodor and Ernest Lepore (F&L) have raised many doubts about IRS in general and Brandom's view in particular (F&L, 1992; 2002: 13, 139). They claimed that IRS[3] entails the adoption of a *strong* form of holism and that this would imply big problems for any semantic theory committed to it: the concepts needed to master *C* could be, in principle, all the other concepts in the language/conceptual system, or a very large section of it. Problems associated with holism led F&L to claim that IRS is unacceptable (see below).

F&L asked Brandom directly, *Which inferences are meaning-constitutive*?[4] If you cannot say which inferences among many are constitutive, you must conclude, in fact, that all are constitutive. This would mean that all the inferences are, in principle, constitutive of every single concept. An IRS that cannot solve the "which inferences" (WI) problem then seems to entail the strong holism that F&L elsewhere say is unacceptable. A weak version of holism, the claim that the content of a concept depends on many other concepts belonging to a relatively limited set, does not represent a threat for IRS; in this case, there would be a reasonably small set of constitutive inferences.

The inferential role theorist needs some criteria for taking a step back from a strong holism to a weaker version of it, and arguably, these criteria can be provided by somehow directly solving the WI problem; otherwise, he or she has to bite the bullet by adopting a strategy that is explicitly holistic.

F&L claimed that this answer can hardly be provided without a principled analytic/synthetic (A/S) distinction (between sentences true only in virtue of their meaning and sentences true only in virtue of how the world is); in this case, analytic inferences would count as constitutive and would be the natural option (for example, the inference from "X is a

[2] See Brandom (1994: 97–105) and Sellars (1953). In general, Brandom uses "inference" to indicate a transition between propositions (which may play the role of premises and/or of conclusions). A proposition *A* entails a proposition *B* (and a proposition *B* follows from a proposition *A*) if the inference from *A* to *B* is a materially good one. An inference that is good only because of its logical form is what Brandom calls a formal one (standard deductive inferences). See Brandom (1994: 97–102).

[3] At least, versions of IRS provided without a tenable analytic/synthetic distinction; read further.

[4] They also asked IRS theorists: *How do you explain the compositionality of meaning*? See F&L (2002: 139). I will neither address this issue here nor discuss it in relation to semantic holism.

bachelor" to "X is an unmarried man" would be constitutive of the concept bachelor). However, Quine (1953) has convincingly shown that such a sharp distinction cannot be maintained.[5] At the very least, it has become a highly suspicious distinction, and avoiding it would probably be the best option (as Brandom and F&L do). F&L not only believed that IRS is in need of such criteria but also that these cannot be achieved and, therefore, that IRS cannot avoid strong semantic holism (SSH). Here comes the problem: F&L argued, on the basis of this entailment, that IRS *must* be in trouble. An argument that runs between the lines, against IRS, can be synthesized in this way:

1) SSH is unacceptable.

2) We need a principled A/S distinction to claim that analytic inferences are content-constitutive (and thus to adopt IRS while avoiding SSH).

3) We do not have any A/S distinction.

4) Thus, IRS entails SSH.

5) Given (1) and (4), it follows that IRS is unacceptable.

If we cannot answer the WI problem, then we face a very strong form of holism, one entailing that the content of every concept is constituted by the totality of good material inferences it is involved in. An inferential role should involve, at this point, the whole language or, at least, a very large part of it. Indeed, IRS seems to entail the kind of holism that F&L claimed is unacceptable. This would mean paying too high a price for every kind of IRS. Why is SSH unacceptable? Is it true that IRS entails SSH?

2a) Problems with SSH

There are many reasons to think that SSH entails problems about grasping, sharing, and learning contents. The difficulties, highlighted especially by F&L (1992, 1993), Jackman (1999, 2014), and Whiting (2008), are the following:

[5] First, to know P only in virtue of its meaning ipso facto means to know P *a priori*. Second, if analytic sentences are true only in virtue of their meanings, then they cannot be revised by means of experience. Analyticity entails both *aprioricity* and *unrevisability*, epistemic consequences that are semantically troublesome, since, as Quine claimed, the inferences that one accepts do not depend only "on what one intend[s] [his/her] […] words to mean but also on how [he/she] […] take[s] the (non-linguistic) world to be. And there is no principled way to separate the respective contributions of these factors." See F&L (1992: 57). Third, Quine showed that in defining analyticity, when we begin with semantic notions like "meaning" and "synonymy," we cannot avoid circularities. For different readings, see for example Boghossian (1994, 1994a), Katz (1979), and Rey (1993).

Grasp: First of all, grasping a concept seems to entail the mastery and understanding of all the relevant inferences. A prima facie, troublesome entailment of this holistic conception is that if you need to master too many inferences to grasp a concept *C*, then it appears as if you need to master an entire language/conceptual system to grasp any single concept. The requirement for the grasp of a concept, then, would be to master and understand all the other concepts. This is a problem, since the conditions for grasping concepts would become very hard to meet. Here we need an explanation of the way in which such a grasp could be accommodated holistically.

Concept learning: SSH also faces problems in explaining concept learning. Imagine a child learning her first concept, *C*. The very idea of concept learning seems to suggest that there must be a starting point in the process. This case is relevant, since holism is the claim that concepts come in groups, while a starting point in concept acquisition would be arguably a concept *C* alone. How can it be possible to learn *C* if its content is determined by certain inferences that the child is unable to draw? Our basic ideas about learning as a cumulative process would be impossible to accommodate. If we want to preserve these ideas about concept learning, then we should avoid SSH or provide a different account suitable to accommodate both holism and concept learning.

Constitutive instability: A very troublesome aspect of SSH is the connected thesis of the permanent instability of meaning and of the content of belief; every form of SSH systematically generates this instability. Conceptual contents, as such, are usually meant to be stable; "copper is not an electric insulator" should mean the same thing in my mouth and in your ear, and as well, it should mean the same thing for me today and tomorrow (and whenever). The strong holism we are dealing with seems to pose a radical challenge to this view; since the way in which we understand our concepts depends on the inferences that we draw and on our beliefs—that are not shared and can also change—it follows that our conceptual contents cannot be stable. What is unacceptable in holism is that it seems obvious that we have *different beliefs* and, at the same time, that we share *the same meanings*. SSH, in fact, entails that semantic contents be different from mind to mind and that they vary depending on the beliefs of the speakers. In principle, it is possible to have temporal instability for a single speaker; every change of belief can transform the entire range of beliefs again and again. This means that holistic contents cannot be stable and, rather, that they *must* be something that shifts depending on people's beliefs. Therefore, we have reasons to suppose that this instability is a feature strictly related to SSH.

Communication: If we endorse SSH, since individual perspectives may diverge, the inferences and beliefs that different speakers associate with the concept *C* may be different, and this entails that *C* not only can be *slightly* different for you and me but, in principle, that it can also be *radically* different (despite the fact that, independently of individual perspectives, certain inferences actually determine *C*). In fact, if we associate different inferences with the same sentences, we cannot conceive communication as a successful exchange, or transmission, of information between speakers (because the inferences that we draw may differ). This entailment of SSH no longer seems enough to warrant successful communication between speakers. Here again, to explain communication, we would need to avoid SSH or provide a theory of how it can be possible to explain communication holistically.[6]

Psychological generalization: Psychological generalization is supposed to work only if we can attribute to other people the same contents we ourselves undertake. Thus, there is also a problem for the psychological attribution of thoughts, beliefs, and desires to other people. (Can I attribute to Jimmy the belief of being thirsty, if by thirsty we mean actually different things—e.g., if we draw different inferences from it?) How can SSH be suitable for the successful attribution of psychological contentful states in these cases? Psychological generalizations seem to require a more stable notion of content than the one provided by SSH.

These difficulties indicate that we need to know how the stability of content can be explained and defended. SSH here presents a challenge to the very idea of mutual understanding, since the instability of contents entails the possibility of permanent equivocation (both in communicating and in attributing psychological states).

3. Remarks on grasp: an anti-individualist proposal[7]

Before addressing the questions raised in the previous section, I think it is useful to develop a further premise. In fact, the peculiar holism entailed by IRS seems to depend on the conception of grasp that one endorses. This becomes evident if one thinks about the grasp of concepts as an *all-or-nothing* matter; since to grasp a concept, I have to master its *complete* inferential role, grasp will entail the kind of holism that is semantically disastrous (everything being constitutive). Thus, this conception of grasp (together with IRS) seems to lead to the holism we

[6] Brandom developed a holistic account of communication and claimed that communicating would be better understood in terms of "cooperating in joint activity" and that it should rather involve "coordinating social perspectives by keeping deontic score [the argumentative score between discussants] according to common practices." See Brandom (1994: 479).

[7] For an extended version of this point, see Salis (2015).

should avoid in semantics. This line of reasoning can be undermined by proposing a conception of grasp that does not commit us to these holistic entailments. I believe, and it seems to me that I am supported by good evidence on this, that grasp is not an all-or-nothing matter; rather, it is a matter of degree. It seems actually sound and coherent to distinguish at least between these two basic (anti-individualist)[8] levels of grasp:

1. "Minimum grasp," regarding a neophyte's possession and use of concepts, does not require the mastering of inferential roles but just of a few inferences.
2. "Full grasp" is equivalent to expertise; here the expert has a qualified mastery of the inferential transitions involving a concept.

We should also consider a medium level of grasp exemplified by those who are working to become experts (like graduate students). Furthermore, while it is strongly plausible that linguistic children are people we can talk with, we do not consider them as experts (we presuppose in practice that grasp is a matter of degree). If we think as well about the inferential roles of many concepts we commonly use, we easily realize that we do not master all the constitutive inferences but just a few, and to know more about those, we have to ask experts (think about legal, physical, and biological concepts and so forth).[9] Thus, common sense grasp and expertise are different things, since we can grasp concepts without being experts. Grasp then concerns the first basic judgments and inferences we learn to perform with certain words (and not the whole framework of implications).[10]

Another feature of this suggestion is that our common sense mastery of inferential roles has to be understood as minimum grasp. We should not (and actually do not) require expertise about anything to attribute linguistic/conceptual competence to speakers, and so minimum grasp is enough for language users. This competence is also the degree zero, the a priori condition, for becoming experts about certain conceptual systems/items. Think about the concept, copper. We can have a common sense competence about it, but then we can, on a

[8] See Burge (1979) for the basic idea of anti-individualism, and Putnam (1975) for the ground-breaking idea of a "division of linguistic labour." Very roughly, the idea is that common speakers do not entirely master the concepts they use and that in case of doubt and controversy, they "defer to experts" (who actually master the relevant concepts).
[9] In the same way, someone who is not a doctor can even come to think that "arthritis" can concern one's thigh. See Burge (1979).
[10] Brandom seems to explicitly endorse this view, even if a little bit quickly, in (2000: 64), where he talks about grasping concepts: "the metallurgist understands the concept *tellurium* better than I do, for training has made her master of the inferential intricacies of its employment in a way that I can only crudely approximate."

second occasion, become expert about the peculiar physical properties of copper (and so we can become competent about all the relevant inferences involving copper). This is a coherent story about which inferences constitute common sense grasp; it is not a story about particular inferences but rather a matter of statistics about the things we know. (There is merely something that most of us know as common speakers.) Far from being a brute fact about knowledge, common sense grasp is something related to our (common, actual) practices, the relevant epistemic and cultural context, the effective way in which we learn language.

If this is our conception of grasp, then the only version relevant to common speakers will be, from a semantic perspective, the minimal one. This conception of grasp does not, per se, entail SSH, and so I think it is useful to take it on board before addressing the WI problem again. Even if this view is *not* meant to be a direct response to the worries about semantic holism, it helps us to restrict the scope of the problem just before addressing the main proposal of this study. It directly answers the problem about grasp, but it will also become helpful in clarifying and explaining learning, communication and psychological generalizations, as well as, partly, content-stability (see below).

4. On counterfactually robust inferences: alternative views of content-constitutiveness

In the logical space opened by the problems with semantic holism, there is a certain response that I consider, for different reasons, worthy of attention. The main idea is not very new, since it was presented for the first time by Sellars (1948). It is based on certain modal features of our patterns of inference.

According to Brandom's reading, Sellars proposed another way to demarcate the "realm of the conceptual:" he claimed, that counterfactually robust inferences, the inferences that support counterfactual conditionals, are content-constitutive. IRS would become, from this point of view, the claim that content *C* is determined by the good material inferences that are counterfactually robust. Brandom (2007: 661), defines this proposal as a "modal theory of meaning," because these inferences are heavily influenced by nomological—law-like—necessities. This is a possible way to address the WI problem, which Quine implicitly showed could not be solved by means of the A/S distinction. This move is seconded as a live option in Brandom's (2007, 2008) most recent works. He describes this enterprise in these terms:

> Sellars, for instance, does not take all the materially good inferences involving a concept to be essential to it. He picks out the privileged concept-constitutive inferential connections as

> those that support *counterfactual* reasoning, and so count as having *nomological* force. This is a real practical difference; this way of drawing the line does not fall afoul of Quine's strictures, for it by no means follows that these conceptual matters are a priori—we need to investigate the world to find out what the laws are, as for any other facts. Since the laws involved are not a priori, unrevisable or immune to factual evidence, this is not a version of analyticity (Brandom, 1994: 634).

This is a conception of content-constitutiveness that is not supposed to be just a new version of analyticity, since constitutive inferences are not a priori or unrevisable. Quine criticized a conception of analyticity (and hence of content-constitutiveness) understood to be both a priori and unrevisable. This proposal is meant to play the same role that IRS would want from the A/S distinction (but without the problems highlighted by Quine for this): distinguishing between constitutive and nonconstitutive inferences. Counterfactually robust inferences are understood to be content-constitutive, while *non*counterfactually supporting inferences should *not* be content-constitutive. If this proposal works, then it could be what we are looking for; we could get a response to the WI problem without committing ourselves to any version of analyticity (and could stop worrying about holism at the very beginning).

At this point, we can raise a number of questions. What exactly does this "counterfactual" proposal mean? When exactly is an inference counterfactually robust? What examples can we find to give content to these ideas? Are we able to show that this "modal" view is true? Do we have the direct argument we need to defend it?

Let us try to better understand the meaning of this account. We can start with a very clear quotation from Brandom:

> The inference from something's being copper to its melting at 1083.4°C is partly constitutive of the concept copper because *if* the coin in my pocket *were* copper, it *would* melt at that temperature. The inference from the coin's being in my pocket to its being copper is not partly constitutive of the concept copper because if this nickel were in my pocket, it would not follow that it was copper. This is a directly responsive answer to Quine's challenge, because we do in our ordinary linguistic practice distinguish between inferences based on their modal status as counterfactual-supporting or not —between those that would explicitly be licensed by law-like regularities such as connect atomic structure and melting point, and those that would be licensed only by accidental regularities, such as those connecting atomic structure and location in space (Brandom, 2007: 661).

The first types of counterfactual conditionals are generally ruled, as the example shows, by the necessities exemplified in natural laws; the second types of counterfactual conditionals deal with regularities that are only accidental.

Inferences that are counterfactually robust are in general those that are supported by the laws of nature that actually obtain.[11] Here, counterfactual robustness is understood as a consequence of the fact that laws obtain in hypothetical situations where contingent facts may be very different from their actual course; it is the stability of laws under counterfactual circumstances. On this basis, we can say more clearly what it means, according to Brandom, to say that a material inference is counterfactually robust. Having, for some good material inferences, a certain range of counterfactual robustness means their "remaining good under various merely hypothetical circumstances" (Brandom, 2008: 105).

It is both a presupposition and a result of our scientific practices that laws are necessary and stable, and these features are strictly related to our ability to evaluate specific counterfactual conditionals (our ability to identify which necessities would still hold in different hypothetical contingent situations). For example, it is a law that gold has atomic number 79. We can imagine counterfactual situations that hold the law fixed, while changing some contingent facts: "If this coin had not been gold, it would have had a different atomic number." It is a law that emeralds are green: "Had this emerald been inside my pocket, something green would have been there." So, generally, counterfactuals can help us in distinguishing facts that are somehow necessary (laws) from the mere facts that are contingent (accidents).[12] A consequence of this view is that counterfactual conditionals involve laws that, Sellars suggested, can be understood as entailments between *universals;*[13] to say that it is a law that emeralds are green is to say that the universal "emerald" is a subset of the universal "green." These features, being lawful, can be made explicit by counterfactual conditionals: "Had these gems been rubies, they would not have been green." For this Brandomian reading of Sellars,

[11] Other types of necessity, as for example logical or mathematical necessity, can be as well preserved by our use of counterfactuals. See Lange (2009: chap. 2).

[12] See Lange (2009: 17). Even though, in certain cases, accidental happenings may show some misleading degree of regularity.

[13] See Sellars (1948: 296): "Universals and laws are correlative, same universals, same laws, different universals, different laws." Here, "universal" should be understood, broadly, as something that can be exemplified, just as "red things" exemplify the universal, "Red." Vice versa, "particulars" serve to exemplify some universal, for example "this red patch" exemplifies (the universal) "Red." In this sense, universals are general properties that can be exemplified by particulars. See Sellars (1948: 300).

concepts are constituted by actual laws of nature that are independent of our knowledge of them (if we had had no idea of them, they would have still obtained). This feature is very interesting for concepts, because the stability of laws over space and time would render conceptual contents stable per se (independently of our grasp and understanding).

This independence leads us to a further specification: the inferences that are content-constitutive are those that are counterfactually robust and not those that are merely *taken* to be counterfactually robust. It means that our concepts are somehow independent of our conceptions (i.e., we can get the concepts wrong). That emeralds are green is true even in the world where nobody knows it or in the world where everyone wrongly believes that they are blue (and, in the same way, the counterfactuals regarding emeralds will hold again in that world, notwithstanding their being neglected).

However, here we must be careful to avoid certain easy confusions. There are claims that are counterfactually robust, and hence content-constitutive, but that nonetheless are good independently of natural laws. There is prima facie a difficulty, in fact, with such lexical concepts as bachelor. The inference from "A is a bachelor" to "A is unmarried" is constitutive of bachelor, but it does not depend on natural laws. However, this inference shows as well a certain undeniable degree of counterfactual robustness; the inference from "A being a bachelor" to "A being unmarried" is content-constitutive of bachelor, since, if Barack Obama were a bachelor, he would be unmarried. This inference is constitutive and counterfactually robust, but not yet law-like. (Perhaps it is a "conceptual necessity," but not yet a natural law, that bachelors are unmarried.)

Here, we have *two* possible readings of the example about bachelor. The first could represent it as a direct counterexample against this view, since there are constitutive inferences that are not nomological. But I tend to be quite skeptical about this route, since this quick conclusion risks hiding the central feature of the account attributed to Sellars. There is, in fact, a second option that I prefer and that seems to find some help in passages from Brandom. The idea is that the constitutive inferences are those that are counterfactually robust, though not necessarily those governed by nomological laws. An interesting passage, for example, explicitly offers ground for this second reading, when Brandom says that "it may [...] be tempting to think that the inferences that are counterfactually robust are all and only those underwritten by *laws*" (Brandom, 2008: 105). But, he goes on, we should grant that "every claim, whether contingent or not, supports some counterfactual inferences, and if one grasped none of them one would not qualify as understanding those claims" (Brandom, 2008: 105).

This option must thus generalize also to inferences that are not law-like but that show, as well, degrees of counterfactual robustness. The reason proposed by Brandom, which is basically the necessity to grasp certain counterfactual inferences involved in the very use of a concept *C* as a condition to understand *C* (independently of these inferences being law-like or not), seems to pose an interesting requirement. These counterfactual conditionals can be used as rules to license certain inferences as good (or to rule out others as bad). This means that these conditionals may be relevant in matters of concept use. If I take as good an inference that violates some counterfactual constraints for the use of a certain concept involved in it, I am therefore misusing the concept, and I also show that I fail to understand and master it. Think again about the concept, copper. Conditionals such as "if this coin were copper, it would melt at 1084°C" cannot license inferences that clearly violate these constraints (and thus violate our concept use for copper). On this basis, an inference like "it's really hot today, I fear this copper coin is going to melt" is clearly bad (it violates norms for the correct use of copper). So far so good, but this example is law-like, so it was already granted to work that way. (In this case, violating counterfactual constraints ipso facto means violating laws.) Think about the concept, bachelor (which is not law-like), again: "If Josh were a bachelor, he would be an unmarried man" is a conditional that may license certain inferences as good and rule out others as bad (e.g., as violating norms of concept use). For example, the inference from "Josh is a bachelor" to "Josh is a faithful and careful husband" is not only bad, but also an inference that violates counterfactual constraints that are not law-like. Indeed, the necessity violated in these cases cannot be just natural necessity. The counterfactual constraints that determine the norms of use for our concepts indeed extend beyond law-like inferences. So, more generally, the realm of the relevant necessities extends beyond natural laws. This aspect, according, for example, to Lange (2009), is fine with our understanding laws, and all these necessities can, in fact, be preserved by our use of counterfactuals. Thus, the law-likeness of these inferences is not the precise condition for them to be content-constitutive. (It is a sufficient condition but not a necessary one.) The necessary condition, then, is just their being counterfactually robust.

Would this proposal be suitable to explain grasp of concepts? This depends on the requirements one asks for; if one asks for all the constitutive inferences of the concept *C* to explain the grasp of *C*, then there are problems. Only experts, in fact, could grasp *C*. Since content-constitutiveness would in many cases be determined by natural laws, only scientists

defending true theories would have a grasp of those specific concepts.[14] If one thinks that minimum grasp requires less than content-constitutiveness, the problems disappear; some constitutive inference could suffice. Another reason why grasp should not coincide with content-constitutiveness is the following. Since, according to Brandom's reading, Sellars claimed that the constitutive inferences are not generally good a priori, he is *not* committed to claim that grasp needs all the constitutive inferences.[15] We need empirical investigations to learn about concepts (and thus, grasp is necessarily understood as a gradual process). We simply cannot start having the constitutive inferences at the beginning of the learning process.

Brandom says that this approach to the problem has radical consequences for our traditional understanding of concepts. For instance:

> Investigating the world is an attempt at once to rectify our claims and our concepts. Conceptual change is part and parcel of scientific change, because every new law we discover and every old one we are forced to give up brings with it a change in our concepts.[16] Semantics is not a discipline that can be pursued independently of our empirical inquiries into the rest of the world (Brandom, 2007: 661–662).

The understanding of all our concepts must be considered as almost entirely revisable in virtue of experience, since every new empirical discovery is potentially suitable to change our grasp and mastery of these concepts' inferential role. New empirical evidence can demonstrate the existence of good inferences about something we believe we know that we never imagined before, or it can even demonstrate that some inferences that we used to draw in the past were actually bad. (Think about inferences drawn from a geocentric model.) Revisability a posteriori entails that our grip on concepts may evolve. Thus, the way we use and grasp concepts can change over time depending on our empirical findings. This view, after all, is consistent with

[14] We should also distinguish true theories from merely successful ones in a certain period. Imagine someone talking about combustion when *phlogiston* was the official theory. Now, nobody would concede his grasp of that concept.
[15] See Brandom (1994: 634).
[16] Here Brandom says something that appears to contradict the idea that the constitutive inferences are those determined by the actual laws. Laws do not change, and this holds for concepts too. Changes come only at the level of grasp and understanding, which deal with our conceptions (and *not directly* with concepts). For example, Brandom (1994: 636), claims that: "[the account] distinguishes the proprieties governing *correct* use in which the concepts grasped by individuals consist, on the one hand, from the dispositions to apply concepts, make inferences, and perform speech acts, in which an individual's grasping of a concept consists, on the other—and so distinguishes concepts from conceptions of them. Talk of grasp of concepts as consisting in mastery of inferential roles does not mean that in order to count as grasping a particular concept an individual must be disposed to make or otherwise endorse in practice all the right inferences involving it." The latter characterization, "all the right inferences involving it," should count as ideally relative to concepts as independent of our grasp (and so of our conceptions).

what Quine claimed about the A/S distinction; if there is no such distinction available, then there is no sharp distinction between concepts that are empirically revisable and those that are not. We finally just get a distinction between the connections that are counterfactually robust and those that are not.

What is the moral to be drawn from this? The option appears to be promising, and it also seems capable of deeply intertwining IRS and modality with our concept use.[17] Being that promising is, nonetheless, not enough to endorse it. The only indirect reason that we have found so far in support of the account is that the inferences that we already know to be constitutive, like the inference from "Josh is a bachelor" to "Josh is unmarried" (which is constitutive of bachelor), are also counterfactually robust (though no law-like). We do not know whether *all* the counterfactually robust inferences are content-constitutive; we just know that some content-constitutive inferences are counterfactually robust. Therefore, there are clues, though insufficient, that suggest keeping the option alive. This indirect reason alone, so far, is not enough to defend the view. Even if this view seems to fit with our examples, has a certain valuable explanatory power, and directly solves the problem of stability of content—and these are all good prima facie reasons in support of the account—we still need a direct argument for it. However, a further entailment of this view can still be helpful in dealing with semantic holism, and it depends on another feature of this modal account.

5. On modally ruled out inferences: a modest version of Sellars' view and the "which inferences" problem

This modal proposal yields a complement as well: inferences that are not counterfactual-supporting. When is an inference *not* counterfactually robust? Brandom (2007: 661) provides helpful examples: "The inference from the coin's being in my pocket to its being copper is *not* partly constitutive of the concept copper because *if* this nickel *were* in my pocket, it would *not* follow that it was copper." These non-counterfactual-supporting inferences are described by

[17] See Brandom (2008: 95–102). Here, Brandom supports the view, as embedded implicitly in what he calls "the modal Kant-Sellars thesis," stating that "the ability to use ordinary empirical descriptive terms such as 'green', 'rigid', and 'mass' already presupposes grasp of the kinds of properties and relations made explicit by modal vocabulary" (2008: 96–7). Brandom (2008: xiii) claims that this book has a certain independence from the inferentialist project pursued in Brandom (1994); nonetheless, this point seems to be relevant to inferentialism as well. However, in other places, Brandom explicitly said he does not want to endorse Sellars' view (though admitting that these ideas deserve more attention): "The difference between inferential connections among concepts that are counterfactually robust and those that are not is an important one, and this fact accounts for the felt difference between the two sorts of inferences mentioned above. Nonetheless, nothing is made of it here" (1994: 634); "Sellars's approach seems to be wholly viable, though it has not, as far as I know, yet been pursued by other theorists" (2007: 662).

Brandom as not content-constitutive, and this is a feature very interesting for another view that can be introduced into the discussion.

I want to use counterfactually non-robust inferences to try to rescue IRS from F&L's claim by which it necessarily entails the strong form of holism that seems to make it an unreasonable view. I do not want to directly face the WI problem but instead, the strong holistic consequences it is supposed to entail. My proposal is the following: inferences that are non-counterfactually robust (or better, *modally ruled out*, or MRO)[18] are not content-constitutive (and therefore, not all the good material inferences are content-constitutive). This is sufficient, I claim, to stop the holistic regress and to save IRS. But how exactly does this account permit us to eliminate the unacceptable consequences of SSH?

First of all, if we cannot say which inferences are content-constitutive, then we are obliged to conclude that all materially good inferences must be content-constitutive. This is the main reason to infer SSH from IRS. Consider now the following opportunity: inferences that are not counterfactual-supporting are not content-constitutive. This means that we have a smaller set of inferences (MRO) that can be subtracted from the greater (holistic) set of content-constitutive inferences that the inferential role theorist—who cannot say which inferences are content-constitutive—is ipso facto compelled to accept (with the entailment of SSH). In contrast, if we are able to eliminate MRO inferences from the inferentialist account of content, then we can weaken the threat of SSH on IRS. This means that we have no direct answer to the WI problem, but nonetheless, we have one for the converse question about which inferences are *not* constitutive (and that, by the way, for our purposes means that we can say which inferences are not analytic).

Now, to master, grasp, and have content would mean to master, grasp, and have *many* constitutive inferences, but this option would also avoid the requirement of mastering, grasping, and having *all* the inferences as constitutive. The inference from IRS to holism is still sound, but that from IRS to SSH is blocked. The worst entailments of semantic holism, especially problems with stability of content, would be avoided, and IRS would be safe from the SSH objection (see below).

5a) Why are MRO inferences not constitutive?

[18] I mean those inferences whose goodness is ruled out by counterfactual patterns of inference (see below for examples).

To claim that counterfactually non-robust inferences are not content-constitutive can be considered as something independent of the evaluation of the account about counterfactually robust inferences. Someone demonstrating that it is false that counterfactually robust inferences are content-constitutive will not prove by this that MRO inferences are content-constitutive. We have, by assumption, two separate sets: what is content-constitutive and what is not. This proposal focuses only on what is *not* content-constitutive to show that *not all* is content-constitutive (even independently of which particular account of content-constitutiveness one endorses in general).

The main basic argument is that I cannot find any MRO inference that is content-constitutive of anything, and thus, it is a challenge to the opponent of IRS to provide examples of counterfactually ruled out inferences that are instead content-constitutive.[19] The general form of this proposal is the following:

- If an inference involving *C* is not counterfactually robust, then it is not constitutive of *C*.

Let us look at some examples:

- The inference from a T-shirt being in my wardrobe to its being red is not constitutive of red, because if this black T-shirt were in my wardrobe, it would not be true that it is red.

Indeed "being in my wardrobe" is not content-constitutive of red. Circumstances do exist in which the inference from the T-shirt being in my wardrobe to its being red is a good one. However, circumstances do *not* exist where it is content-constitutive of red. This is a crucial difference. Counterfactuals like this form a semantic device that is useful in excluding inferential connections as constitutive of conceptual content. But let us look at some other examples.

[19] This challenge directly depends on the following examples (see below).

- The inference from this table being inside my office to its being round is not constitutive of round, since if the table had been inside another office, it would not follow that it is rectangular.

Therefore, we have now an inferential constraint for the application of the concept round. ("Being in my office" is not content-constitutive.) It is a negative way of determining concepts. Step by step, it is possible to indicate which inferences are *not* content-constitutive of a given concept. Let us try, then, to focus on more ordinary counterfactual conditionals to check whether these are more challenging for this view.

- The inference from a tree being in my garden to its being an elm is not content-constitutive of elm, because if an oak were in my garden, it would not follow that it is an elm.

Again, "being in my garden" is not a relevant connection for the inferential role of elm. Another example:

- The inference from dinosaurs being extinct to their being reptile is not content-constitutive of the concept reptile, because if cats were extinct, it would not be true that they are reptile.

"Extinct" is not content-constitutive of reptile, and so forth.

I do not know how long we can go on providing such examples without finding more or less crucial counterexamples. It seems to be a quite regular conceptual phenomenon, and in case we find some counterexamples or cases of ambiguity, we should also evaluate its real burden for the general pattern of MRO inferences (as not being content-constitutive). I believe that, in the light of the examples provided here, as I said before, this is a viable option to stop the inference from adopting IRS to the endorsement of SSH, which would entail problems.[20] However, I think that this is not enough to fully establish the point.

5b) The argument from analyticity, and back to the holism challenge

[20] Furthermore, this idea can be used in a negative way to determine the content of our concepts, thanks to these counterfactuals, by eliminating the inferences that are not content-constitutive.

Finally, a decisive argument in support of this view is that I cannot provide conditionals of this kind by using inferences that contain analyticities[21] (which are ipso facto content-constitutive) or inferences already known to be content-constitutive,[22] and this is further evidence that they yield entailments that are not content-constitutive. The following can be considered as a stronger argument against the content-constitutiveness of MRO inferences:

- If MRO inferences were content-constitutive, then they could be expressed by means of analytic inferences (or inferences known to be content-constitutive). Since this is not possible, MRO inferences cannot be content-constitutive.

Indeed there is, embedded in this proposal, a further challenge for theorists who claim that IRS is forced to entail SSH: they should find an MRO inference built from conceptual connections that are manifestly analytic or content-constitutive.

Let us go back to the problem of stability. Here, we may distinguish at least three different ways to approach the issue.

The first is based on a minimum level of grasp. Since we have to minimally grasp *C* to achieve the linguistic/conceptual competence of a simple speaker about *C*, and since we all are generally trained to endorse the same basic judgments and inferences involving *C* (by belonging to the same culture, speaking the same language, and obeying the same norms), we have a globally stable and shared basic standard of linguistic performance. The individual differences may arise when some of us begin attaching to *C* inferences and judgments that are specialist, or more idiosyncratic, that do not belong to the basic set we are trained to endorse. But these are differences in knowledge and understanding of *C*, that are independent of the stability of conceptual content.[23] It is one thing to say that "copper is a metal," which may

[21] Imagine codifying such conditionals using conceptual connections between "bachelor" and "unmarried" or between "square" and "having four sides." These conditionals would be weird, and seen as something standing in between meaninglessness and falsity. For example: "The inference from being a square to having four sides is not content-constitutive of square, because if this square were (whatever but four-sided [e.g., three-sided]), it would not be a square(!)." (But then, "having four sides" *is* constitutive of square.) "The inference from his being a bachelor to his being unmarried is not content-constitutive of bachelor, because if this bachelor were (whatever but unmarried [e.g., a widower]), he would not be a bachelor(!)." (But then, "unmarried" *is* constitutive of bachelor.) The fact that we cannot use these examples, in order to say that content-constitutive traits are non-constitutive, means that MRO inferences—the inferences ruled out thanks to these conditionals—are not content-constitutive. Otherwise, these attempts would have been successful.

[22] This is meant to work independently of having a tenable notion of analyticity (the target is just content-constitutiveness).

[23] Actually, problems about stability deal only with the inferences that *we take to be* good, and not with those that *are* good. However, even if the expert level of grasp may be wrong or misleading from a fallibilist point of view, it

belong to the standard set of basic resources; it is quite another to say that "copper is the metal used, for the most part, to produce bronze alloy." The first judgment does not entail individual differences for linguistic competence, while the second is suitable to give rise to those differences, that ultimately depend on the division of linguistic labor, and that can be solved by asking an expert or consulting an encyclopedia. That would be a problem only if we were unable to spell out and revise our individual inferential dispositions.

A second strategy is directly based on MRO inferences. This proposal allows contents to be stable, even without directly solving the WI problem. MRO inferences, in fact, are stable in their being modally ruled out and not content-constitutive. The inference from "this tree is an elm" to "this tree is in my garden" will not become constitutive of elm with the passing of time; it will remain non-constitutive (unless, for some reason, people will redefine our vocabulary in order to make it constitutive, and will begin keeping only elms in their gardens—it can happen, but just by virtue of *stipulation*).[24] But this, in a negative way, is proof that there is stability of content. (How can the non-constitutive traits be stable without the constitutive traits being stable as well?) This also means that constitutive traits have to be stable (whatever they are). This is the negative route to stability.

A third strategy comes from pragmatics. The "game of giving and asking for reasons", with its general scheme of claims and challenges, tends to conform the inferences that we draw to the inferences that are actually good. By critically assessing our mutual ways of inferring, we thereby also assess the inferences that are constitutive of our concepts, indeed revising, when it is the case, our conceptual competence.[25] These dynamics are further constraints that tend to

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nonetheless is a (stable) reference point for the linguistic community. In cases of doubt and controversy, we may always ask an expert, and then defer to her statements. Worries about stability at the basic level, in principle, are solvable at the expert one. See Putnam (1975) and Burge (1979) for the idea of "deference to experts."

[24] I have to thank an anonymous reviewer for pointing this out. Stipulation entails *changing the rules*, and thus we will have in such cases new traits to be considered as constitutive (and others to be considered as non-constitutive). Stipulation is also the simplest case: actually, meanings/concepts change over time within a community, depending on many complex factors. However, in principle, every new usage entails a new *stable* constitutive set of conceptual traits and a new stable non-constitutive set. Moreover, since the rate of these changes is not anything that can be noticed in a lifetime, this is not a worry for speakers.

[25] Here, further help from pragmatics is possible, for example, thanks to the *de re/de dicto* distinction about ascribing propositional attitudes, which may be helpful with these challenges, since this distinction lets the facts of the matter count objectively in a substantially perspectival doxastic context. For example, using *de re* ascriptions of propositional attitudes, which are referentially transparent, permits us to bind discourse to factual aspects, and to use "the way things are" in order to assess the commitments that people undertake (regarding the same facts). Furthermore, these ascriptions are crucial in highlighting the specific aboutness of our commitments, and in using this feature to distinguish, in a subtle way, who is committed to what. For example, a *de re* ascription could be the following: "George III believed *of* Ben Franklin that he was dangerous." I can use it in order to distinguish the commitments that I undertake about Ben Franklin from those of George III. See Brandom (1994: 513–585). For a criticism of this supplementary strategy (taken in isolation) against holism, see Whiting (2008).

limit the proliferation of individual inferences and commitments, and indeed permit a certain degree of admissible stability for our inferential habits.

The three strategies are not mutually incompatible, and we can use them as an ensemble of resources that can make our contents stable in holistic contexts (which, thanks to MRO inferences, are not of the SSH kind). And so we can sum them together in a three-layer explanation of stability of content. Contents are stable because we grasp them generally in a regular way, because we can infer their stability from the stability of non-constitutive inferences, and finally, because our discursive practices tend to limit, by means of rational norms, the proliferation of individual and idiosyncratic inferential patterns.[26]

Grasp can easily be explained, since, as we know, it is granted by the small set of inferences statistically relevant for our common sense inferential skills. Since grasp is a gradual process, and full grasp is expertise, here there are no relevant problems.

Learning can be explained as well, on the basis of our anti-individualist conception of grasp, as a role of concepts in basic judgments; we do not need to learn inferential roles as whole sets to enter the process of learning. Learning can be safely holistic, once it is stated that it is gradual. To learn that "water is a fluid," one does not have to learn soon that "water boils at 100°C." "Water is wet" and "you can drink water when you are thirsty" are surely better candidates to belong to the basic set.

Once you give up SSH, communication is not a problem. The level of common sense linguistic competence entails that even if people may diverge in some inferential dispositions, these do not amount to the serious differences given by radical holism. Once we have the ability to use and understand a concept in specific basic judgments (and inferences), together with a common sense mastery of the inferences which constitute the basic level of competence of normal speakers, communication is not only possible, but it also easily becomes the vehicle of mutual doxastic updating. We can learn new inferences that our interlocutor draws from the concept *C*, and he, as well, can learn new judgments and inferences about *C* from our own repertoire.[27] Of course this poses a challenge, but our discursive practices are suitable, once all our resources (viz., pragmatics) are deployed, to revise our mistaken conceptions and to clarify potential equivocations.

[26] If the view that Brandom attributes to Sellars were right about counterfactually robust inferences, then we could also explain *why* MRO inferences are stable: they are stable thanks to different kinds of necessity.

[27] Let *C* be the concept, arthritis. A patient who wrongly believes that the pain in his thigh is due to arthritis (like Burge's Bert) could learn from the doctor that his belief is actually wrong. See Burge (1979). Here, the example is about experts revising wrong conceptions, but we should also say that when normal speakers face inferential disagreements they are motivated to understand what is going on.

Let us look, finally, at psychological generalization. Since we share some of the uses of singular terms in judgments and inferences, I can attribute to *S* thoughts about water, even if she does not share any of the features I know to be true of water.[28]

The problem about which inferences are content-constitutive stays open (after eliminating MRO inferences as not content-constitutive). For this problem, the latter view would suggest testing the content-constitutiveness of inferences in a complementary manner with respect to inferences that are not content-constitutive. But it would be a test of content-constitutiveness for every single inference and not a general principle. However, if it is true that MRO inferences are not content-constitutive, we can ask, in virtue of what? The first answer, prima facie, is this: in virtue of the fact that counterfactual supporting inferences presumably *are* content-constitutive, and this would count as a preliminary reason, or at least as a clue, in support of the Sellarsian account. Since MRO inferences are not counterfactually robust (and we know that for this very reason they are not constitutive), we should expect that counterfactually robust inferences, which explicitly lack the requirement for not being constitutive, could count, at least putatively, as content-constitutive. Moreover, *some* content-constitutive inferences actually *are* counterfactually robust (as the examples about bachelor show). But this hypothesis, as it stands, requires further work.

Things become easier, in addressing the WI problem, if we consider further resources. In particular, I refer to those coming from pragmatics, resources that enable us to specify the context in which certain inferences are more compelling in spelling out the content of a given concept, or even in terms of social practice, where the doxastic and epistemic perspectives of various speakers can provide further help.[29]

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[28] See Brandom (1994: 360–404), for an account of the role of singular terms within judgments and inferences in terms of "substitution." To cut a long story short, singular terms are substitutable for their synonyms according to good substitutional inferences, like the one from "Ben Franklin invented bifocals" to "the first Postmaster of the United States invented bifocals." Here "Ben Franklin" can substitute "the first Postmaster of the United States" and vice versa, without altering the goodness of the inference. These inferences are ruled by "simple material substitution-inferential commitments" (SMSICs), the commitments that we use in practice to distinguish good and bad substitutional inferences. Predicates, such as "invented bifocals," compose the frame where substitutions of singular terms may occur. While the SMSICs governing the substitution of singular terms are symmetric, those that govern predicates are often asymmetric: the inference from "Ben walked" to "Ben moved" is a good one, but not vice versa. When we disagree about the features that we attribute to water, we are focusing on which substitutional inferences involving water are good and/or bad. Therefore, we may attribute thoughts about water to other speakers, right or wrong as they may be.

[29] Brandom, for example, greatly trusts such perspectives. See, for example, note 25.

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