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BRANDOM'S LX THEORY OF LOGIC AND THE CHALLENGE OF AUTONOMOUS VOCABULARIES WITHOUT SUBSENTENTIAL STRUCTURE

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Abstract. In this paper, I discuss one of John MacFarlane's objections to Robert Brandom's elaborating-explicating (LX) theory of logic, an objection concerning the logical character of quantificational vocabulary. After introducing Brandom's theory, I analyze two response strategies to MacFarlane's objection, a transcendental one, and the other one extending the notion of autonomous vocabulary as to incorporate ascriptional locutions and the practice of explicitly rejecting all or just some of the a speaker's commitments. I argue that, in the end, both strategies are problematic and, thus, Brandom faces a dilemma if he wants to explain the logicality of quantificational vocabulary.

Keywords: analytic pragmatism, the elaborating-explicating theory of logic, quantificational vocabulary, autonomous vocabulary, assertion, Robert Brandom, John MacFarlane.

I.1. THE LX THEORY OF LOGIC

According to Robert Brandom's expressive theory of logic, as stated in his 1994 book *Making It Explicit* (henceforward „MIE"), and in his 2008 John Locke Lectures – *Between Saying and Doing: Towards an Analytic Pragmatism*,[1] logical vocabulary enables us to make explicit, in the form of claims, what we are doing when we engage in certain practices constitutive for deploying any autonomous vocabulary, i.e. any discursive practice whatsoever the deployment of which does not require a prior ability to use any other vocabulary and that includes the acts of asserting and inferring. Asserting, in Brandom's deontic skorekeeping framework developed in MIE, is a speech act that can

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[1] The 2006 Locke Lectures were published in 2008 as a book with the same title as the Lectures, along with a *Preface* and a substantial *Afterword*. I will refer in what follows to this book, rather than the Locke Lectures, and I will use the „BSD" abbreviation.

be defined in a deontic functionalist manner as follows: A is an assertion if the scorekeepers of the language game treat the speaker uttering A as undertaking a commitment C, as committed to the related set of commitments {C'}, as prima facie entitled to C and {C'}, and as undertaking the responsibility to provide reasons for C when challenged by any other speaker.[2] Inferring, in turn, is a language move consisting of a particular transition from one deontic status to another: from commitment to commitment (i.e. commitment entailment relation), from entitlement to entitlement (i.e. entitlement entailment relation), or from one commitment to the deontic status of not–being–entitled-to (i.e. incompatibility entailment relation). The conditional, for example, is a paradigmatic logical expression because it lets us make explicit the material inferences constitutive for discursive practice. Using the expression „If…, then…" we can state what the consequences of assertions are, and in this way, we can examine, challenge, and modify all material inferences that make the conceptual network of any language. According to Brandom's layer-cake picture of sapience, one need not master logical locutions in order to count as a (rational) speaker of a language.[3] However, logical vocabulary is not autonomous: in order to learn how to use logical expressions one needs, first, to learn how to use non-logical vocabulary. Logical vocabulary allows rational beings that master the game of giving and asking for reasons involving only non-logical vocabulary to become semantically self-aware by making explicit the meaning-constitutive inferential network.

The process of learning to use logical locutions, Brandom claims, can be rigorously described using the conceptual resources of analytic pragmatism, more precisely his theory of practical elaboration. Analytic pragmatism is a philosophy of language project born from an effort to clarify, using a special metaconceptual apparatus, some general commitments regarding the relations between practices or abilities (pragmatics) and vocabularies (semantics) that were first developed in MIE (BSD, 234). The basic relations are the following. A vocabulary is VP-necessary for some practices just in case we cannot theoretically specify (i.e. describe and explain) these practices without it; if the vocabulary permits us to fully specify some set of practices, then it is VP-sufficient. Some practices, in turn, are PP-necessary for other practices if it impossible for someone to do something unless he is able to engage in some other practices (e.g. knowing how to subtract is PP-necessary for knowing how to divide). If engaging successfully in some set of practices is enough for someone to be able, in principle, to engage in other set of practices, then the first set of practices is PP-sufficient for the second. If engaging in some practices is enough for

[2] Brandom's account of assertion is influenced by David Lewis' suggestion that we can understand speech acts relative to how they change the „conversational score" (1979). According to John MacFarlane (2011, p. 17), the tradition of conceiving assertion as a kind of commitment „has its roots in Peirce, who said that 'to assert a proposition is to make oneself responsible for its truth' (Peirce 1934, p. 384)."

[3] „There is nothing incoherent about a language or stage in the development of a language in which the only vocabulary in play is nonlogical." (MIE, 384; cf. Brandom 2002, pp. 328-329)

someone to count as saying something, then we have a PV-sufficiency relation; if someone doesn't count as saying something unless he or she knows how to do something, then some practices or abilities are PV-necessary. Finally, if we can say in one vocabulary everything we were able to say using another vocabulary, it follows that the first vocabulary is VV-sufficient for the second; if we can't express something implicit in one vocabulary unless we use another vocabulary, then the second vocabulary is VV-necessary for the first. Brandom claims that this theoretical apparatus „recursively generates an infinite set of such pragmatically mediated semantic relations" (BSD, 11). Composing these basic relations we arrive at complex ones: the relation of being a pragmatic metavocabulary for another, the relation of semantic presupposition, the relation of one vocabulary being universally LX etc.[4]

Because of the self-reflecting theoretic strategy, the expressive theory of logic developed in MIE (labeled „the elaborating-explicating (LX) theory of logic" throughout BSD), gains clarity and precision when reframed in BSD's analytic pragmatism idiom. Focusing again on the conditional, the LX theory tells us that learning to use the conditional is a process whereby we elaborate basic practices or abilities necessary for any discursive activity, in this case the practice of inferring (and sorting good from bad material inferences), into complex ones that are explicating the basic practices. This process of practical elaboration can be algorithmically specified by showing how the simple practices are composed into complex ones using three meta-abilities, namely response substitution, arbitrary state-formation, and state-permutation.[5] Meta-abilities implement PP-sufficiency relations that result „when the capacity to engage in one sort of practice or to exercise one sort of ability is *in principle sufficient* for the capacity to engage in other practices or to exercise other abilities" (BSD, 33). Thus, algorithmic elaboration is supposed to explain how basic doings are combined in the elaboration of different vocabularies. The pragmatic explanation parallels Gentzen's method of specifying introduction and elimination rules for logical expressions. In the case of the conditional, Brandom gives the following analysis:

> „By hypothesis, the system has the ability to respond differentially to the inference from p to q by accepting or rejecting it. It also must have the ability to produce tokenings of p and q in the form of assertings. We assume that since it can produce those assertions, we can teach it also

[4] Complex meaning-use (or pragmatically mediated semantic) relations result by applying some operations specific to category theory. The first such relation, for example, is that of being a pragmatic metavocabulary: V1 is a pragmatic metavocabulary for V2 if V1 is VP-sufficient for specifying the practices P2 that are PV-sufficient for deploying V1.

[5] A system that has the response substitution meta-ability can substitute a response r1 to a stimulus s1 with another response r2 that is linked initially with another stimulus s2, forming a new system state. According to arbitrary state-formation, if a system in disposed to respond to a stimulus s1 with the response s1, and to the stimulus s2 with the response r2, then it can be made to enter a new state where it responds to s1 with r1 *and* to s2 with r2. Finally, if a system has the state permutation meta-ability, then it can respond to any stimulus by changing the state the system is in (see BSD, 38).

> to produce assertively tokenings of the new form „if p then q." What is required, then, is first that this new sort of response be hooked up responsively to the previously discriminable stimulus, so that it is asserted just in those cases where the inference from p to q would have been responded to as a good one. […] For the consequences of application, we need another bit of response substitution. The system can already, by hypothesis, respond to some stimuli by treating an inference as good or bad. We must now hook up that response to a new stimulus-kind. The system must respond to its assertion of the conditional «if p then q» by treating the inference from p to q as a good one—for instance, by being disposed to endorse q assertionally if it is disposed to endorse p assertionally. These new differential responsive abilities, achieved by reshuffling prior ones, then settle the statetable that specifies how the system is able to respond to different presented stimuli: non-logical sentences and inferences involving them, and now also conditional sentences and inferences involving them— paradigmatically, modus ponens. In a clear sense, then, the capacity to distinguish good from bad inferences involving non-logical sentences is (PP-) sufficient for the ability to deploy conditionals involving those sentences." (BSD, 45)[6]

Such relations can be diagrammatically represented, in the case of the conditional vocabulary, as follows:

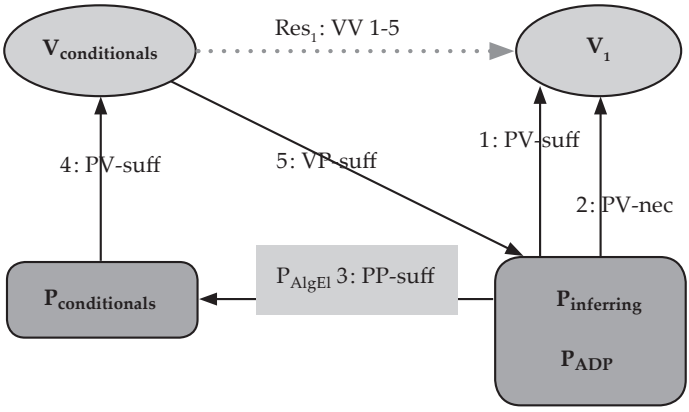

Fig. 1. Elaborated-explicating (LX) conditionals[7]

[6] Something is missing from this analysis. When accepting S's move from p to q, I can be in one of the two situations: on the one hand, I can be also committed to p; on the other hand I might reject p because, for example, p is incompatible with r, for which I have an entitlement. If I am committed to p, I will say „p, then q." This formulation is appropriate because in this way I make explicit the fact that I am committed to p. The use of the conditional locution „then," in addition, makes explicit the semantic connection between p and q. In the second case, what I want to do is to express the semantic connection from p to q, but not necessarily the fact that I am committed to p. This shows that besides acceptance and rejection, another attitude is needed, one that be the right target in order to attach the response „If p, then q." Lance and White (2007) calls such a speech act „hypothesizing," and argue that is essential in attributing intentional states.

[7] Diagram taken from BSD, 46. Given the resultant relation 5, the conditional vocabulary is a *pragmatic metavocabulary* for the inferential practice.

In contrast to the conditional, an expression like „X promises…" makes explicit a practical commitment one undertakes, but it is not a logical expression in a strict sense because there could be autonomous discursive practices (ADPs) that do not include the practice of promising. Thus, promising is not a constitutive speech act for discursive practices.[8]

Logical vocabulary is a species of *universal* elaborating-explicating vocabularies: *elaborating* vocabulary because it can be introduced in a discursive practice by algorithmically elaborating simple practices into complex through meta-abilities; *explicating* vocabulary because it makes explicit the proprieties of the simpler implicit practices used in the process of elaboration; and *universal* because these practices are essential for any authentic discursive practice. In Brandom's own words, ordinary logical vocabulary is a species of a genus that is distinguished by three features:

1. being deployed by practices-or-abilities that are algorithmically elaborated from
2. practices-or-abilities that are PV-necessary for every autonomous vocabulary (and hence every vocabulary whatsoever) and that
3. suffice to specify explicitly those PV-necessary practices-or-abilities. (BSD, 47)

The first and the second requirements are the L part of the LX theory of logic, the third one being the X part. Logical vocabulary is not to be identified in BSD with this genus, given that there are also vocabularies that have the three characteristics mentioned above, but are not commonly viewed as logical, e.g. the vocabulary of propositional attitudes or the normative vocabulary (containing also locutions such as „commitment," „entitlement" etc.). Classical logical expressions, on the one hand, according to Brandom, make explicit semantic proprieties. Ascriptional locutions or normative vocabulary, on the other hand, make explicit pragmatic features of the assertional-inferential practice (MIE, 530; Brandom 2008b, 140).

I.2. MOTIVATING THE LX ACCOUNT OF LOGICAL VOCABULARY

Although the pragmatic expressive approach to demarcating logic is not something new in the philosophy of logic, the LX theory is important because it is framed using, and deepened by, the analytic pragmatist meta-conceptual apparatus. This apparatus allows us to speak in a very precise manner about key features of logical expressions, like universality, analytic efficiency, and transparency. The last two features are essential in motivating the development of the LX theory of logic in BSD. According to Brandom, the LX theory has the merit that it solves what he takes to be „the logicist's dilemma" and thus it validates the central role logical vocabulary plays in the classical analytic project, a role expressed in the theoretical commitment to semantic

[8] For other examples and a discussion of this point, see Wandered 2008, ch. 3.

logicism (the view that logical vocabulary is a legitimate auxiliary vocabulary in the process of semantic analysis). The dilemma is built around to opposing requirements that the auxiliary vocabulary has to satisfy the classical analytic project. First, it has to be semantically transparent: auxiliary vocabulary should not add semantic content to the process of semantic analysis.[9] If it were to do that, then the claim that the target vocabulary is contained in the base vocabulary would be compromised. According to the second requirement, logical vocabulary must be analytically efficacious, i.e. it must make possible the elaboration, or construction, of the target vocabulary from the meanings available in the base vocabulary.

Brandom's focus on the logicist's dilemma derives from his claim that an account of logical vocabulary should not focus only on the „the circumstances of appropriate application of the term 'logical vocabulary'," (the necessary and sufficient conditions), but also on the „consequences of application being associated with the expression at issue." (BSD, 48) What are, asks Brandom, the implications of defining logic in this or that way? His rather non-orthodox claim is that some consequences might be so important that it might determine our choice between several sets of conceptions of the role of logical vocabulary:

> The demarcational question can sensibly be addressed only if we address also the (at least co-ordinate, perhaps even prior) question concerning the theoretical, explanatory, argumentative, or constructive role logic or logical vocabulary is being envisaged as playing in some larger philosophical enterprise. (BSD, 48)

Thus, Brandom's concern is to investigate the consequences of the LX theory of logic in the context of the classical analytic project and, more precisely,

[9] Formality is usually thought of as satisfying this requirement. However, Brandom argues that there are no adequate ways of distinguishing the form from the content. One of the best strategies seems to be the Frege-Bolzano identification of formality with semantic invariance under substitution. But it turns out that this criterion rather presupposes a prior criterion of demarcating logical vocabulary. This is because „we can pick any vocabulary we like to privilege substitutionally: an inference is good and a claim true in virtue of its theological or geological form just in case it is good or true and remains so under all substitutions of non-theological for non-theological vocabulary, or non-geological for non-geological vocabulary. Theological and geological formality will not just depend upon, but will express an important aspect of, the content of theological and geological concepts." (BSD, 51) Brandom's theory of logic does not assume formality, but still has the resources for accounting for semantic transparency. This is because the content of logical terms is a function of practices that are to be found (PV-necessity claim) in all vocabularies. Hence, when proceeding with an semantic analysis, we use something that is not added as something extrinsic to base and target vocabularies, but is intrinsic to the two vocabularies: „The capacity to deploy logical vocabulary (or any universally LX-vocabulary) is in this sense always already implicit in the capacity to deploy any vocabulary at all that might be chosen to serve as the base vocabulary of a semantic analysis or explication of any target vocabulary (whether those appropriate to empiricist, naturalist, functionalist, or any other sort of analysis)." (BSD, 53)

on the central question Why logical vocabulary is regarded as the legitimate tool of semantic translation, one that is never the target of semantic elaboration, but that makes possible any semantic analysis? This question is implicit in the logicist's problem. Brandom's claim is that being an universally LX-vocabulary is at least sufficient (and maybe necessary) for playing the legitimate role that auxiliary vocabulary plays in the analytic project of semantic translation. The transparency requirement present in the formulation of the dilemma is satisfied, it turns out, because logical vocabulary is elaborated from inferential practices universal PV-necessary. This represents the elaborative dimension of logic vocabulary. Thus, these practices are implicit in any target of the analytic process. In turn, the analytic efficacy requirement is satisfied because, according to Brandom, logical vocabulary has an expressive function.[10]

According to MacFarlane, the LX theory's is important because it contains an „argument that these basic abilities [used in the process of algorithmic elaboration of logical locutions] are essential to anything that can count as discursive activity at all." This is especially important in the Gentzen-inspired expressivist philosophy of logic, given the fact that the proposals of Popper, Kneale, and Hacking, lack exactly such an argument (2008b, 58). But Brandom does more that to provide a new pragmatic theory of logical vocabulary. Besides the fact that he shows in BSD how different logical expressions are introduced in a language, he also demonstrates how one can compute the value of the expressions introduced by algorithmic elaboration. Developing a formal semantics complements his normative pragmatics and, according to Mark Lance, is the missing piece in Brandom's philosophy of language project. The expressivist conception of logic developed in MIE, he argues, is fundamentally incomplete as long as there is no accompanying semantics that would formally make explicit how logical expression allow as to compute the semantic value of assertions:

> „Brandom has a philosophical account of content as updating potential – that is, as inferential potential understood in the sense of commitment or entitlement preservation – and says that the point of logical vocabulary is to make available the expressive resources to make explicit such semantic structures as arise from discursive scorekeeping practice. Thus, one would expect an account of the updating or inferential potential of sentences involving logical vocabulary, an account which is such as to assign to those sentences the inferential significance necessary for this expressive job. *In short, one would expect a semantics of logical vocabulary in terms of the difference an*

[10] According to Bernard Weiss, the dilemma is central to Brandom's argumentative strategy: „In *Making it Explicit* logic enables the expression of inferential commitments as claimings and thus as subject to the business of asking for and giving reasons. It thus exposes those commitments to the glare of reflective rationality. In the later *Between Saying and Doing* the interest shifts to resolving what Brandom calls the logicist's dilemma […]." (2009, p. 58)

> *assertion of a sentence involving it makes to the atomic score of a linguistic agent, and a completeness proof for the logic generated by this semantics*. Despite this, no such semantics is given in MIE. Without in any way attempting to minimize the striking achievements, both philosophical and technical, of MIE, I do find that the lack of a formal treatment of logical vocabulary in Brandom's terms leaves him rather in the position of someone advocating a truth conditional theory of meaning prior to the invention of Boolean logic." (Lance 1996, 441-42)

Thus, the LX theory is not just a reiteration, using the semi-formal apparatus of meaning-use analysis, of the expressive conception of logic first developed in MIE. Because it comes with an incompatibility semantics, the LX theory of logic provides an essential missing piece that shows us what exactly is the expressive power of Brandom inferential expressivist conception of logic.

II. MACFARLANE'S OBJECTION TO THE LX THEORY

All natural languages contain linguistic performances that have internal structure. Nonetheless, Brandom argues that there could be languages consisting of a finite set of sentence types with no internal structure. This allows MacFarlane to raise his challenge to the LX theory of logic. Commenting on the LX theory, MacFarlane asks, without further elaboration:

> „[I]f quantifiers are to count as logical, on Brandom's view, it must be the case that any autonomous discursive practice must include subsentential structure. But why should that be the case? (2008b, p. 58)

This question was left unanswered by Brandom in his response to MacFarlane's comments (see 2008b). This is puzzling, because the objection contained in this question seems to the point to a simple and real difficulty for Brandom's theory. This is due to the following argument I take to be implicit in MacFarlane's question:

(1) Quantificational vocabulary (Vq) is logical vocabulary;

(2) A finite propositional vocabulary with no internal (subsentential) structure (Vp) is an authentic autonomous vocabulary;

(3) Thus, the practice PV-sufficient for Vq has to be elaborated from practices PV-necessary for every autonomous vocabulary, including Vp. But Vp has no subsentential structure, so the LX relation necessary for claiming that Vq is logical vocabulary does not obtain because:

- *(i) the L part of the relevant LX relation is not obtained given that there is no set of practices PV-necessary for Vp that can be used to successfully elaborate the practices PV-sufficient for deploying Vq and*
- *(ii) the X part is problematic because there's no implicit quantificational practice PV-necessary for every language that Vq is explicating.*

In order to understand the key premise of the argument, namely the second premise, we have to remember that, according to Brandom, subsentential structure is not a datum, but something that can be discerned in linguistic sentences in a number of ways. At the syntactic level, the inferentialist can say that two expressions share the same syntactic category if substituting one expression for another in a sentence preserves the status of being a well-formed sentence, one that counts as a possible move in a language game (i.e. changes in some way the deontic statuses of the speakers). Semantically, two expressions are semantically equivalent if, in substituting one expression for the other in a sentence, the deontic score in the language game remains unchanged. Using this Fregean idea of invariance under substitution, Brandom is able to develop in MIE an inferentialist subsentential semantics. In the context of our discussion, such an account allows us to understand what it actually means to imagine a vocabulary without internal structure. It would be one where there are no sentence parts that can be substituted so that the sentence in which the substitution occurs remains a valid move in the language game. The expressive power of such a vocabulary would be, no doubt, extremely small, compared to that of any natural language. However, there is nothing incoherent here. In fact, Brandom's skorekeeping game, constructed as a model for his normative pragmatics, is played using counters that do not have parts:

> „Suppose we have a set of counters or markers such that producing or playing one has the social significance of making an assertional move in the game. We can call such counters 'sentences'. Then, for any player at any time, there must be a way of partitioning sentences into two classes, by distinguishing somehow those that he is disposed or otherwise prepared to assert (perhaps when suitably prompted). These counters, which are distinguished by bearing the player's mark, being on his list, or being kept in his box, constitute his score. By playing a new counter, making an assertion, one alters one's own score, and perhaps that of others." (BSD, 112)

Bandom's conjecture is that such game is in fact the core of any authentic discursive practice. Making an assertion, in this „toy practice," means playing a counter with the effect that one becomes committed to playing others (i.e. adding them to one's score). Why? „Because to be recognizable as *assertional*, a move must not be *idle*, it must make a *difference*, it must have *consequences* for what else it is appropriate to do, according to the rules of the game." (BSD, 112) It is clearly possible to extend the game of attributing deontic statuses sketched above in such a way as to have counters with parts that can be combined, and call them „subsentential expressions," „predicates" and „singular terms." However, my point is that such a move is optional and we should see Brandom as committed to a 'monistic' conception about assertions and beliefs, according to which the content of assertions is not necessarily

structured. Whereas in the traditional semantic paradigm an assertion has the content it has because the way the internal parts of a proposition are connected, Brandom understands the content of an assertion as derived from its links with others assertions. It is difficult to assess here if such account of assertion is acceptable.[11] In what follows, my purpose is rather to explore the consequences of Brandom's monistic conception in relation to his expressive theory of logical vocabulary. I will first argue, in the next section, that two possible response strategies to MacFarlane's objection, what I call the „transcendental strategy" and the „vocabulary extension strategy," are problematic. This leaves the LX theory in a position where an appeal to some basic abilities essential to anything that can count as discursive activity at all –- in order to account for the logicality of quantificational vocabulary –- becomes problematic.

III. THE TRANSCENDENTAL STRATEGY

A straightforward response available for the friends of analytic pragmatism in order to deal with MacFarlane's objection would be to try to reject the claim that the finite language with no internal structure is an authentic autonomous discursive practice (the second premise of the argument). For this strategy to work, it would be necessary to formulate a kind of transcendental argument to the effect that if something is an autonomous discursive practice, then it has to have internal structure.

One place to look for such an argument is chapter VI of MIE, where Brandom works out „an expressive deduction of the necessity of basic

[11] There are other accounts in literature that assume the monistic view that propositions, as the content of assertions, are not structured entities. Matthew McGrath, in his (2011) article on propositions, finds two simple ways in which one can individuate propositions as non-structured entities: „First, identity conditions [for propositions] might be specified in terms of possible attitudes. One possibility is this: P=Q if, necessarily whoever believes (asserts, denies, etc.) P believes (asserts, denies, etc.) Q, and vice versa. Second, proposition identity might be reduced to property identity in the manner of Myhill (1963) and Zalta (1983). Thus, Zalta (1983, p. 72) offers the following definition of proposition identity: <p>=<q> if and only if the property of being such that p is identical to the property of being such that q." One could also refer, in this context, to Gareth Evans „generality constraint" in order to argue for the fact that the content of assertions are necessary structured because thoughts are necessary structured. „Thus," Evans writes, „if a subject can be credited with the thought that *a* is *F*, then the must have the conceptual resources for entertaining the thought that *a* is *G*, for every G of which he has a conception. This is the condition that I call 'The Generality Constraint'." (1982, p. 104) This is a complex discussion of the relations between thoughts and language, one that has to be the subject of a separate paper.

subsentential structure taking the form of terms and predicates" (MIE, 401). However, Brandom also claims that „it is coherent to interpret a community as using (its practices conferring content on) sentences but not subsentential expressions" (MIE, 399). The fact that he is offering an „expressive deduction" is essential. Explaining linguistic productivity, the fact that finite creatures can produce and understand an infinite set of new sentences, is what forces an inferentialist (that could happily live at the sentential level) to investigate subsentential expressions. [12] Therefore, subsentential carving is needed in order to explain an optional linguistic feature that natural language display (and that is the source of the extraordinary expressive power they poses). In order to account for such discursive features one needs to postulate an ability to learn to identify, and to use correctly, some basic finite set of expressions that are parts of sentences. This, in turn, will enable one to project the use of subsentential expressions in such a way as to be able to produce correctly, and understand, an infinite set of linguistic constructions.

III.1. EXTENDING THE PROPOSITIONAL VOCABULARY

According to Brandom, „universal and particular quantifiers are logical locutions that have the expressive function of making propositionally explicit conjunctive and dis-junctive substitutional commitments." Thus, „[a]ttributing commitment to a claim of the form (x)Px is attributing commitment to all claims of the form Pa." (MIE, 434) Such view assumes that we could discern in the sentences of a vocabulary repetitive locutions that play some inferential-substitutional role. However, if the sentences have not subsentential structure and have no parts in common, then quantificational expressions cannot be introduced via algorithmic elaboration.

Still, there might be a solution. The starting point for the second strategy is Daniel Laurier's argument that ascriptional vocabulary ("X is committed to…," „X says…" etc.) is a (pragmatic) logical vocabulary (i.e. universally LX) given the fact that it makes explicit pragmatic features of any discursive practice. It has to be mastered by the speakers of any autonomous vocabulary because without ascriptional locutions a speaker cannot make the distinction between his own commitments and what he takes himself as being committed to. This, in turn, means that he cannot make the difference between what he actually believes and the truth. Brandom is committed to the objectivity of

[12] One could also further contest, as Jaroslav Peregrin does (personal communication), the claim that accounting for linguistic productivity forces one to semantically investigate subpropositional expressions, given that any finite propositional language with logical propositional connectors allows us to produce infinitely many new linguistic structures. If this is correct, then linguistic productivity is a feature available to any ADP with no subsentential structure supplemented with logical connectors.

conceptual content, but he is also committed to reducing content to deontic attitudes, to what speakers take one another as being committed and entitled to. De dicto and de re ascriptions make explicit the different deontic scores one keeps track in a discursive practice: the commitments one undertakes and those he attributes without undertaking. But without ascriptional locutions such partition is impossible to make. „If this is right," Laurier writes,

> „then it looks as if Brandom would have to give up either the claim that ascriptional locutions are optional and that there may be 'merely rational' agents, or his account of what the institution of deontic statuses and objective conceptual contents consists in (or at least that part of his account which calls for the rejections of the idea that merely rational agents are capable of higher-order practical attitudes). If practical deontic attitudes turned out to be conceptually contentful (as I have suggested above), then the claim that no one could have higher-order practical attitudes without possessing the concepts of attribution and acknowledgment would appear to be mandatory. One would have to deny that there could be merely rational but not fully logical creatures, or else find an account of the institution of deontic statuses and conceptual contents, which does not depend on the capacity for higher-order practical attitudes." (2005, pp. 152-153)

If we accept that ascriptional structures are universally PV-necessary, then we can take another step in order to develop the extension vocabulary strategy. The general idea is the following. The speaker T of a language can have normative attitudes towards all, or just some of the linguistic commitments of speaker S. T can implicitly accept or reject all or just some claims S makes (his doxastic commitments) in a context C by saying something incompatible with every such commitment (this is possible if the language has a finite set of sentences) or just by reasserting the claims S makes. But, if Laurier is right, he ought to be able, also, to attribute normative attitudes like „S says that p" and „I do not believe that p." If he accepts all of S's commitments, then instead of reasserting each and every one of such commitments, he can just say „I believe ALL that S says"; if he accepts just some of S' commitments, then he can say „I believe SOME of what S says." What we arrive at is an explicit quantificational vocabulary that represents an extension of the finite vocabulary with no subsentential structure. The quantifiers can be introduced through algorithmic elaboration, by using the response substitution meta-ability. This practice of rejecting or undertaking all or just some of one's commitments is based on inferential and assertional abilities that are PV-necessary for every language, so the relevant LX relation seems to hold. If this is correct it follows that, from the assertional-inferential practice (asserting and sorting inferences into good and bad) and the ascriptional practice that are both universally PV-necessary, we can elaborate a quantificational practice consisting in undertaking or rejecting all or just some of one's

claims. This optional practice would then be PV-sufficient for deploying the vocabulary of quantifiers.

However, there are a few problems. First, a certain difficulty (formulated by Jaroslav Peregrin [personal communication]) concerning infinite sets of commitments is legitimate. It is one thing to have a finite set of commitments and to introduce in this context a universal quantifier, and quite another to have a possible infinite set of commitments and to say with the help of a quantifier something about it. The second practice is more complex and the introduction/elimination rules for the universal quantifier cannot be formulated just by appeal to the fact that I can reject/accept individually all the commitments one has.

Another difficulty is this: the quantifier vocabulary specifies what seems to be an optional quantificational practice consisting in undertaking or rejecting all or just some of one's claims. While being capable of *saying* that one rejects or accepts a commitment is, plausibly, necessary for mastering a language, rejecting or accepting *all or just some* of someone's commitments does not seem to be a practice universally PV-necessary. However, this is what Brandom's LX account of logical vocabulary requires, namely that (a) the quantifier vocabulary should be deployed by practices that are algorithmically elaborated from practices that are universally PV-necessary and (b) *suffice to specify explicitly those PV-necessary practices-or-abilities*. The first condition is satisfied, but the second is not: the practice of rejecting all or just some of one's commitments is not PV-necessary. Only the practice of ascribing or undertaking doxastic attitudes is universally PV-necessary (again, if we accept Laurier's argument).[13] This contrast with the paradigm case of the conditional, where the conditional vocabulary specifies the universal PV-necessary assertional-inferential practice.

III.2. BACK TO THE TRANSCENDENTAL STRATEGY?

What if having sentences with internal structure is necessary for something else than explaining linguistic productivity? Danielle Macbeth (personal communication) writes in this regard:

> „But perhaps having internal structure is not an optional feature of an ADP because it is relevant for something much more important that explaining linguistic productivity. A necessary feature of an ADP is that there are assertions and inferences, in particular material inferences. What I am interested in here is what is necessary for something to be an inference. Philosophers since Aristotle have taken an inference, in actual reasoning practice, to be invariably an

[13] Same thing applies, it seems to me, in the case of other expressions like AND or OR, but not in the case of negation. Negation is similar to the conditional in not needing an in-between practice.

> instance of something more general, as a move that is valid not just in this case but also in other cases. Suppose that I infer from the fact that Felix is a cat that Felix is a mammal. Arguably this inference is good because it is good generally to infer from something's being a cat to its being a mammal. Of course, essentially the same could be said of a bad inference, that it is bad because one cannot infer generally from something's being X that it is Y. If this is the right way to think about inference, if inference constitutively involves doing something that is an instance of a more general pattern, then given that inference is necessary for any ADP, some kind of internal articulation of sentences is also necessary for any ADP. The question is, could there be an inference, rather than just one sentence following another, if it was good only in the particular case. It is not at all clear to me there could. Inference is not just a psychological move but a rational one, and its rationality (arguably) lies in its applying also to other cases. This feature of inference is evident already in Aristotle. It is an important theme in Peirce, and Gilbert Ryle has a nice discussion of it in „'If', 'So', and 'Because'", in Philosophical Analysis, ed. Max Black (Cornell UP, 1950). If this is right then Brandom is wrong to think that there could be an ADP without subsentential articulation, but right to think that quantification is LX because it is necessary, along with the conditional, in the expression of the rules that govern inferences. The conditional alone is not enough to express the rule, though it can make explicit the good inference in a given case: if Felix is a cat then Felix is a mammal. To express the rule you need both the conditional and a means of expressing the generality of the rule."

Of course, if such an analysis is correct, the transcendental strategy might work after all. But the price is high: what counts as an autonomous discursive practice is something more complex than Brandom allows us to think. However, even if Brandom develops a response along the above suggestion, there still is a problem relating to the way conditional are elaborated in the LX theory.

According to Sebastian Rödl, if language is described in terms of elaboration of responsive dispositions, then the vocabulary of conditionals (and modal vocabulary) cannot be properly introduced into an ADP. The reason is that the transition from the disposition to correlate a stimulus ϕ and a response ψ to saying „If p then q" misses the fact that a conditional is not just an expression of what here-and-now is correlated, but a claim that expresses some generality of the king expresses by „whenever." From a correlation of ϕ and ψ we can elaborate only something like „When ϕ, ψ". But „If p then q" expresses a generality associated with eternity (as expressed by the term „always") or atemporality (i.e. temporal concepts are not applicable), and not with „when" (as in „at the time when"). Referring to the conditional, Rödl writes:

> „In consequence, the «when» in the formulation of the [inferential] rule does not mean «at the time when». There is no time when an inference is good, and there is no time when one would treat a move as valid. So the conditions under which it is correct to use a conditional do not specify a stimulus to which the use of the conditional is a response. It is not possible to introduce logical vocabulary by algorithmic elaboration from a system of responsive dispositions. For, the use of a conditional constitutes consciousness of something general. And while any algorithmic elaboration from responsive dispositions is a responsive disposition, consciousness of the general is not an act of responding to a stimulus, for the general is no stimulus." (2008, p. 132)[14]

Such an analysis claims something much stronger than Macbeth's argument: even if every autonomous vocabulary contains subsentential structure and quantificational and conditional locutions needed in order to express the rules that govern inferences, then it might still be true that analytic pragmatism lacks the conceptual resources to account for the generality constitutive of conditionals. This is because there is no algorithmic elaboration path from stimuli and response dispositions (via meta-abilities) to the universally quantified conditional locutions present in natural languages.

IV. CONCLUSION

Given that the transcendental strategy for dealing with MacFarlane's objection is problematic, and that the extended vocabulary strategy that tries to elaborate a quantificational practice PV-sufficient for deploying the quantificational vocabulary (in accord with the LX requirements) fails, I conclude that Brandom could choose one of the following two options.

On the one hand, he can modify the LX theory in such a way as to avoid the reference to practices-or-abilities that are PV-necessary for *every* autonomous vocabulary. Instead, he might explore the idea that different logical vocabularies are deployed by using complex practices elaborated from practices necessary not for every autonomous vocabulary, but just for some vocabulary. This is not to deny that there are some specific basic universal PV-necessary

[14] This problem projects itself into Brandom's account of intentionality. Modal concepts are elaborated, in BSD, from the practice of associating with each inference a set of counterfactually robustness, i.e. further inferences that specify in what circumstances an inference holds. Nevertheless, if the language of conditionals cannot be algorithmically elaborated, then this is also true of modal vocabulary. In this connection, Brandom writes: „Taking an inference to be a good one even in counterfactual circumstances by endorsing an appropriately modally qualified conditional is what one needs to do in order to say that a law holds objectively." (BSD, 131)

practices. The point is that the demarcation line for logical vocabulary should not be draw by focusing primarily on universally PV-necessary practices. Instead logical vocabulary could be conceived as elaborated from practices that are PV-necessary for a certain subset of vocabularies. Quantifiers, for example, might be elaborated from practices available just in the case of vocabularies with subsentential structure. Quantificational vocabulary would still have an expressive function, and the general (weak) account of logicality would still satisfy Brandom's self-imposed adequacy condition of solving the logicist's dilemma. However, the weak version of the LX theory sketched so far has one important backdrop: it lacks the one thing that made it special, according to MacFarlane, in the pragmatism camp, namely the fact that logical locutions were built up starting from abilities essential for speaking per se.

On the other hand, Brandom can try to hold on to his initial strong formulation of the LX theory, while adopting another conception about autonomous vocabularies. This, in turn, amounts to providing a different account of assertion, one that rejects Brandom's monistic thesis (i.e. the semantic content of assertions is not necessarily structured). This is not such a radical move as it might look because one can still be committed to the weak layer-cake picture of sapience according to which one can speak (be rational) even though one has no logical vocabulary, and to the expressive theory of classical logic vocabulary. (Laurier argument, if correct, forces one to accept only that some pragmatic logical locutions, i.e. ascriptional locutions, are necessary for every autonomous vocabulary.) However, the real problem is to find good reasons for rejecting the monist view of assertion. Making linguistic productivity a feature of any discursive activity would do the job: it would restrict the set of autonomous vocabularies only to those that have internal structure. But it is hard to see why ADPs ought to have to display such linguistic feature. Another option, less ad-hoc, is to claim that not any inferential relations are meaning-constitutive, but just the ones that display the right sort of generality that license particular inferences. As Macbeth pointed out, this means a rejection of the monistic thesis, but it also paves the way to an adequate universally-LX treatment of quantificational locutions. This option is arguably an interesting strategy for dealing with MacFarlane's objection, but it is hard to evaluate its prospects. The problem is not only what Rödl sees as the problematic restriction to algorithmic elaboration, one that makes generality difficult to explain starting from a system of responsive dispositions, but also the revisionist character of such proposal in the context of Brandom's analytic pragmatist commitments. Brandom's project has other spotlights besides his LX theory. It is also an account of meaning, intentionality, mind, truth and practical reasoning (just to name a few very broad areas). There are many other sub-theories in his philosophy of language project and probably all will be affected by changing his account of assertion, given that it is the core of his normative pragmatics. However, I think that the latter is a route worth pursuing, not least because of the philosophical pedigree associated

with the thought that particular inferences are governed by rules whose expression requires the use of conditional and quantifiers. It is an open question if this rationalist idea usually developed in the representationalist semantic paradigm is compatible with Brandom's inferentialist rationalism.

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