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Brandom, Peirce, and the overlooked friction of contrapiction

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Abstract Robert Brandom holds that what we mean is best understood in terms of what inferences we are prepared to defend, and that such a defence is best understood in terms of rule-governed social interactions. This manages to explain quite a lot. However, for those who think that there is more to making correct/incorrect inferences than obeying/breaking accepted rules, Brandom's account fails to adequately capture what it means to reason properly. Thus, in an effort to sketch an alternative that does not rely primarily on peer pressure, I draw on the work of C. S. Peirce. Peirce argued that, when we reason, we manipulate abstract diagrams in order to observe what results. Since some manipulations are barred by the self-same nature of the diagrams, I try to show that this qualitative incompatibility, which I dub "contrapiction," is a good (non-social) reason to regard some reasoning as bad.

Contra Rorty, we cannot do everything—and more—with the Wittgensteinian notion of language-game that the pragmatists were trying to do with experience.

Vincent Colapietro (2010, p. 20)

1 Introduction

Failure to live up to social expectations can have undesirable consequences. In that regard, some normativity undoubtedly comes from our peers. Building on this, Richard Rorty suggested, quite provocatively to many ears, that "there are no constraints on

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inquiry save conversational ones" (1982, p. 165). Brandom, however, has tried to take the edge off of his teacher's reliance on social accountability. Knowing is, according to Brandom (1994), a preparedness to defend the inferences implicit in one's assertion(s). This is considered pragmatist (or "expressivist") because it is only by "doing" certain licensed things in public contexts that a subject becomes entitled to what she asserts. Yet, if Brandom is right that reasoning is normative and that "[a]ll normative statuses are in the end social statuses, the products of reciprocal recognition" (in Williams 2013, p. 379; see Brandom 2009, pp. 52–77), then his account leaves us unable to distinguish a valid rule of logic from a permissible spell of *Dungeons and Dragons*.

Clearly, justifications that employ proper logic tend to attract a greater consensus among whoever interprets them. The question is: why? Turning to social consensus in order to explain such a consensus would beg the question. I have no doubt that, for some topics, a circular appeal is germane. However, when it comes to partitioning good and bad inferential moves, the collective interpretations are ostensibly drawn by an attractor external to them.

I am not the first to express dissatisfaction with inferentialist accounts. Fodor and Lepore (1992) argue that, since no two holistic networks of concepts are likely to be the same, inferential role semantics makes it unlikely that two subjects ever mean the same thing. There is also a general worry that reliance on rules is susceptible to a regress (for a prescient statement, see Sellars [1963] 1991, p. 321). Brandom has developed replies to these and other charges (see Maher 2012, pp. 53–55), but since the epicycles have gotten quite complex, I propose to make a fresh start. Breaking from the neo-pragmatism of Rorty, I propose to take my lead from the classical pragmatism of Charles S. Peirce.

Peirce suggests that, when we make an inference, "we construct an icon of our hypothetical state of things and proceed to observe it" (1998, p. 212). What distinguishes good and bad inferences, on this view, is our taking stock of certain qualities exhibited by diagrams. For example, "cuts," a common device used by Peirce, place distinct limits on what counts as inside or outside. One can attempt to transgress these limits, but the sign-vehicles will simply repel conflicting depictions. I propose to call this repellent "contrapiction." The familiar Venn diagrams exploit this to prove categorical syllogisms, but Peirce takes the method further, thereby giving a novel justification for the normative force of logic.

I will start by looking at the problem of distinguishing between good and bad reasoning. I will then walk slowly through a case study to show that some qualities cannot be combined (on paper or "in the mind"). Having done this, I will return to my starting question and contrast constraints that come from diagrams and those that come from other people. My hope is that diagrammatic constraints will provide a better account for those who think good reasoning involves more than skilful abidance by established conventions.

2 What distinguishes good and bad reasons?

Brandom is grappling with some "big" questions: What does it mean to be right and wrong in matters of knowledge? What is the difference between a good and a bad reason? In sum, what, if anything, gives those labels a normative force? These

are perennial philosophical questions, but they gain renewed urgency from recent advances in science.

Aided by symbolic logic, computer science has shown that deductive inferences (and maybe even inductive inferences; Gillies 2009, pp. 105–107) can be carried out purely mechanically. Likewise, cognitive scientists have become increasingly capable of describing various mental functions in purely causal terms. Such results threaten to expel a dimension of *normativity* that is (or seems to be) distinctive of human affairs. Even if we come into this world equipped with an innate disposition to acquire a language, parents still have to correct children when they misuse a word. This introduction into a community never really ends, since later on professors correct students whenever they draw the wrong conclusion from a body of premises. Is there any sense to these practices? What could possibly make some sounds or written marks inappropriate? Unless we recapture some plausible grip on a sense of responsibility that involves more than differential responses, we can no more blame a person for endorsing a contradiction than we can blame her for sneezing. The human aspiration to get things right thus becomes justified only by a long and implausible appeal to evolutionary pressures that are themselves purely causal.

In a way, the issue boils down to a choice between two worldviews, both of which were expressed by Wilfrid Sellars in his paper "Empiricism and the Philosophy of Mind." On the one hand, there is the view that "in the dimension of describing and explaining the world, science is the measure of all things, of what is that it is, and of what is not that it is not" (1956, p. 303). This is Sellars' famous "passage 41." On the other hand, there is the view that "in characterizing an episode or a state as that of *knowing*, we are not giving an empirical description of that episode or state; we are placing it in the logical space of reasons, of justifying and being able to justify what one says" (ibid., pp. 298–299). This is his even more famous "passage 36."

Using a naturalized noumena/phenomena distinction, Sellars ([1968] 1992, p. 173) tried to have it both ways. Brandom (2015, pp. 56–87) rejects this distinction, so he thinks that only the second view about "justifying what one says" does justice to our situation as rational animals. Although I am less confident than Brandom (2011, pp. 30–31; 2000, p. 14) that language has a discernible core or "downtown," I agree with him that giving and asking for reasons is one of the most important games we play. Since this game includes, but is not limited to, natural science, I agree with Brandom that Sellars' passage 36 swallows passage 41.

As Lance points out (2000, p. 119), Sellars and Brandom tend to equate being rational with making inferences. The basic idea behind inferentialism is that if one doesn't know (at least some of) what is implicit in what one says, then one doesn't know what one is saying. For instance, if a subject says that a table obstructs the space between her hand and her knee, then she is implicitly committed to saying that a detour would be needed for her to scratch her knee. Failure to know that tables interrupt sweeping arms would betoken a failure to abide by rule-governed usage. Competent speakers should therefore stand ready to render explicit the absent premises that make ordinary dialogue so speedy. Others are keeping score (see Norman 2001), so if one fails to justify one's assertions, this will eat away at one's credibility in a community, eventually resulting in sanctions of some sort (Brandom 1994, pp. 159–175).

This is where normativity steps in. If by "table" you mean table, then you *should* be prepared to accept a cluster of other commitments. Upon witnessing your use of a word, others will expect you to suitably use a cluster of other words. Holism is said to follow, because "one cannot have *any* concepts unless one has *many* concepts" (Brandom 2000, p. 15). By tracking the systematic use of those concepts within a community, inferentialists hope to do without representations, since "[t]he capacity to use the underlying descriptive vocabulary can be straightforwardly (indeed, algorithmically) transformed into the capacity to use conditionals involving that vocabulary" (Brandom 2015, p. 191).

Brandom has given these inferentialist insights an unprecedented level of refinement. I nevertheless feel that, in Brandom's hands, the term "representation" is a straw man (a similar criticism has been voiced by McDowell 2009, p. 292). The "representationalists" he talks about were already concerned with the question of what is a reason for what. They just looked at *the constitution of objects, not the antics of subjects*, for their primary answer.

Like all games, the game of giving and asking for reasons requires players, rules, a shared understanding, and so on. But, in this inventory, observation tends to be forgotten. Consider chess. Knowing the rules and playing by those rules is not sufficient, one must also observe the state of the board. Cooperative rules and coordinated actions are possible precisely because the players triangulate on something beyond them. I therefore want to argue that, to properly understand what licenses normative judgements about inferences, we need to apply what Saint-Exupéry said about love: rational agreement is not looking at each other; it is looking in the same direction.

In ground-breaking papers (Peirce 2015a, b) that have until now influenced debates through the intermediary of specialists (e.g., Burch 1994; Pietarinen 2011; Roberts 1973; Shin 2002; Sowa 2011; Stjernfelt 2007), C. S. Peirce articulated a sophisticated account of logic that makes reason-giving practices less reliant on conventions. Instead, the rightness and wrongness of inferences is answerable to a *diagram*. A "diagram" is a sign-vehicle whose relations resemble the relations of its object (Peirce 1931–1958, vol. 2, para. 277). While not observational in the usual sense, scrutiny of such a relational skeleton counts as evidential (Stjernfelt 2000). Hence, what Brandom calls "entitlement" comes primarily from the self-same nature of certain signs, not from the agreement of a linguistic community. I thus want to draw on the work of Peirce to articulate my view.

3 From philosophy of language to philosophy of signs

Brandom (2015, p. 9) may have begun his academic career by studying Peirce, but the ideas of "the founding genius of American Pragmatism" (Brandom 2011, p. 37) barely figure in his account. Reading Brandom's (2015, p. 179) disparaging association of semiotics with Derrida, one would never suspect that Peirce made that discipline his lifelong preoccupation—and moreover drew on it to substantiate his pragmatist insights (see Peirce 1998, pp. 398–433).

Brandom's views (which mistake semiotics with "semiology") are arguably out of touch with current developments. Indeed, there is a growing appreciation of Peirce's

command of formal technique and respect for objectivity (Misak 2013). Brandom's neglect is thus particularly ironic, given that semiotic inquiry never takes apart "semantics," "syntactics," and "pragmatics"—an untenable division that was introduced at the height of logical positivism (see the 1938 essay in Morris 1971, pp. 13–71). Interestingly, despite juggling those three terms throughout his writings, Brandom never traces their lineage. However, if one holds that those disciplines concern a process that can never really be sundered, the idea of "solving" semantics by using pragmatics loses much of its effect. One is reminded of "the very complicated trick of the Chinese rings," which "consists in taking two solid rings linked together, talking about them as though they were separate—taking it for granted, as it were—then pretending to put them together, and handing them immediately to the spectator that he may see that they are solid" (Peirce 1992, p. 14).

When John Locke introduced the word "Semiotics" in the penultimate paragraph of his 1690 *Essay*, he surmised that such an inquiry, systematically pursued, might dramatically reshape how we view many long-standing philosophical problems. Semiotic inquiry has since acquired a solid foundation (see the annotated bibliography in Champagne 2014c), but it remains the least explored branch of philosophy ending in "-ics." This is unfortunate, because the symbols that hang together in linguistic systems are just one species of a broader genus "sign" that includes indices and icons as well. Suppose that, smelling the air around me, I take the odour as a sign that the turkey in the oven is ready. It would be implausible to gloss this as a linguistic act. Thus, Peirce—who was trained by a sommelier alongside his regular studies in science—became convinced, rightly I think, that "[t]here are countless Objects of Consciousness that words cannot express" (2015a, p. 728; I refer to a pre-publication version, so pagination might differ). Taking up Locke's coinage, Peirce wisely planted his flag in philosophy of signs—which includes philosophy of language as a part. Of course, we can always try to verbalize or narrate the incessant relays between our experiences, so Brandom (1994) may be right that "making it explicit" distinguishes us as sapient beings (see Wanderer 2008, pp. 7–94). However, because "nothing works so uniformly and smoothly as the Instinct of the lower animals" (Peirce 2015a, p. 49), logical notations that tap into channels shared with non-human animals (Stjernfelt 2014b, pp. 141–161) can maximize the perspicuity of our rational powers.

Peirce is adamant that "All necessary reasoning without exception is diagrammatic" (1998, p. 212). Diagrams are similarity-based "iconic" signs, not convention-based "symbols." By exploiting icons instead of symbols, "Peirce's position shares a fundamental anti-psychologism with Frege and Husserl. But, unlike them, his is an *anti-psychologism without the linguistic turn*" (Stjernfelt 2014b, p. 4; emphasis in original).

This results in a decisive shift. Because symbols relate to their objects in virtue of systematic agreements between symbol-users, they allow a community to bestow rectitude on a given claimant or claim, with or without basis. After all, we can award the Nobel Prize to anybody—doing so will not violate the laws of physics. Brandom's philosophy of language is liable of veering into such conventionalist circularity. However, the triadic model of the sign used by Peirce shows how interpretations can subsume events (Champagne 2014a) and qualities (Champagne 2014b) that do not owe their existence to interpretations. To test/gauge the rectitude of a judgement, one

must consult these levels. Hence, we could say that, just as verbal considerations alone can prompt only mock-doubt (Champagne 2015a), so verbal considerations alone can generate only mock-certainty.

On the Peircean view I champion, "[t]he laws of logic are not positive laws (in a juridical sense), but known by observation" (Chevalier 2014, p. 721). Peirce developed an elaborate notation to illustrate this view of proper reasoning. While Brandom is aware that "Peirce independently achieved the bonanza of expressive power that Russell saw in Frege's logic" (2011, p. 21), I believe a close study of Peirce's diagrammatic logic shows that proper inferences ultimately derive their normative force from qualitative elements that are non-conventional. Let me now try to show this.

4 Reasoning as manipulating diagrams

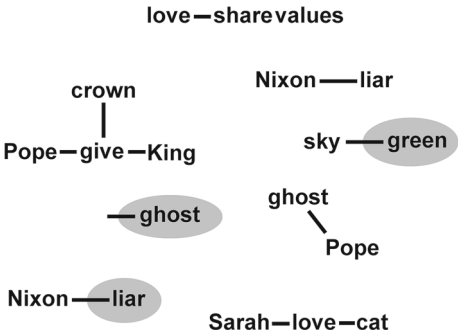
Imagine that you are having a conversation with someone you have just met. Let us call her Sarah. You are both learning about each other over an evening dinner, revealing little titbits about yourself in a nonchalant manner. Early in the exchange, Sarah mentions that she loves her cat. You nod politely, and the verbose *soirée* rolls on. Later, as the wine pours and the subject matters become less trivial, you find yourself engaged in a discussion of what constitutes the good life. Soon the playful associations and anecdotes lead you to discuss the importance of love. "I think that love," your new friend declares, "is the sharing of values." That is certainly a plausible candidate for a definition. Nevertheless, you suddenly recall that, earlier in the evening, your new friend had mentioned her love for her cat. Only a small illative movement is required to see what this entails: Sarah must share values with her cat.

Charging people with howlers may be how we do things in philosophy departments, but in most contexts it is a real conversation stopper. So, in a delicate tone, you remind your friend of her earlier expression of love for her cat and point out, quite charitably, that surely she did not mean to say that she "loves" her cat in the demanding sense of sharing values. "Oh, of course not," Sarah responds, "What I meant to say was I *like* my cat." And the conversation nicely moves on.

The retraction expressed by "Oh, of course not" only makes sense if the commitments made jointly exert some kind of pressure. I take it that the idea of sharing values with a cat is an unacceptable conclusion. Thus, in my example, Sarah's conversational partner gave her an easy exit strategy: retract the earlier claim and replace it with the weaker "I like my cat." There could have been other responses. The cat owner could have bitten the bullet and said: "Yes, I do share values with my cat." Or, instead of demoting her claim from "loving" to "liking," she could have retracted completely: "I guess you're right: I don't love my cat after all." Alternatively, she could have redefined "love" as "having a shared history," thereby restoring a plausible form of love for her cat. So, there are choices to be made, but those choices are nevertheless constrained. Indeed, underneath this informal dialogue there is, I think, some hard logic going on, much of which can be brought to light using a diagrammatic notation inspired by Peirce.

As McDowell puts it, "the topography of the conceptual sphere is constituted by rational relations" (2002, p. 5). So, imagine that, in a bid to foster clarity, our con-

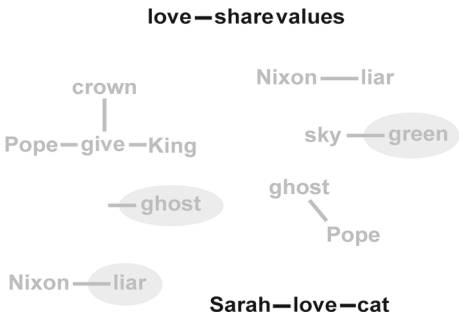
versational partners agree to record whatever they assert on the white table linen between them. By extension, they agree that anything written on a space cut from the linen is denied. Since "concepts are places in the space of reasons" (Brandom 1995, p. 896), our interlocutors can link the various concepts by connecting them with lines. Even if we disregard symmetry and asymmetry to keep things simple, these notational devices allow participants to trace relations between what they have said. If the conversation gets boring or the reasoning seems to go astray, Sarah and her friend can start doodling and find new connections between the concepts. Hence, an hour or so into the exchange, the two dinner guests have jotted down many things:



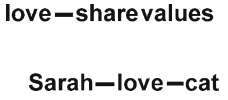
I am keeping the sophistication to a minimum, so all one is required to know here is that closed curves (or "cuts") are negations, lines are subjects, and the outer end of a line means existential quantification. These notational ingredients suffice to capture rudimentary logical relations. Diagrams like these show "only selected aspects of the territory," but the fact is that "*all* representations are bound to make such selections, without this in any way preventing them from potentially representing the aspects so selected in a truthful way" (Stjernfelt 2014a, p. 414).

Brandom is right that "[t]he responsibility one undertakes by applying a concept is a task responsibility: a commitment to *do* something" (2011, p. 2). Yet, because the application of a concept draws on the hybrid faculty of judgement, one cannot rely solely on an economy between general concepts to determine the fit with a particular case. Assuming responsibility for judgements is great, but it is not enough. For instance, members of a hiring committee can agree never to hire a professor who makes blunders, but such coordinated gatekeeping efforts will not tell them whether a given candidate has indeed made a blunder. To assess whether social sanctions are in order, at least one person must read the candidate's work—the verdict will ultimately answer to what is actually on the page. In fact, at the limit, directing the attention of peers to the evidence may be all that one is responsible for. Likewise, the conversational partners I am envisioning can be committed truth-seekers, but their laudable mindset, left to its own devices, will be like a gyrating compass in want of an attractor. Toying with diagrams lets one *see* what claims can and cannot be related.

Thus, at some point in the exchange, Sarah's new friend decides to attend to a couple of claims at the expense of the rest, which recede in the background:



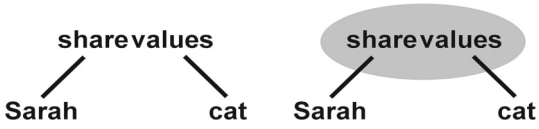
This selective focus is already an important diagrammatic manipulation. With the clutter removed, the two claims come into view:



Dragging relata closer in a field of awareness fine-tunes the judgements we can render. The upper portion claims that "To love is to share values." So, in principle, the rendering could be altered to this:

This in turn permits a detour: instead of saying that Sarah loves her cat, we can say that Sarah and her cat share values:

Now, what if, having made these connections explicit by toying with the relations shown, Sarah was to deny that she shares values with her cat? A discursive anaphora links past and present claims about the cat. So, by "talking against herself" over time, Sarah fails to live up to an ideal of personal consistency. We can, if we want, duplicate the tokens and illustrate the situation as follows:



When Brandom writes that "[i]t is not that one *can*not [*sic*] undertake incompatible commitments, make incompatible assertions" (2008, p. 120), he is discussing contradiction. However, a genuine illustration of clashing commitments would require the simultaneous presence of two mutually-exclusive tones in the same token.

What is wrong with clashing commitments is not that one changed one's mind over time—surely we can allow that—but rather that one wants to have it both ways. To realize *that*, the table linen would have to be both present and absent on the same spot.

Or, to put it in terms that fit with the diagrammatic notation employed, the oval that marks negation would have to be both white and grey.

Naturally, the scenario I have presented could be finessed. There is certainly no shortage of technical resources in Peirce (2015a), who offers us a vast system from the bare sheet of assertion to the strategies of multi-agent deliberation. A tutorial fit for newcomers (covering propositional logic) would be Ketner (1981, pp. 58–77). An intermediary presentation (covering predicate and modal logic) would be Pietarinen (2007). An advanced discussion of the whole shebang (game theory included), would be Pietarinen (2006). I cannot do justice to such a wide vista. My goal in this section has only been to show that, when we try to depict conflicting commitments using diagrams, the qualities that we manipulate *stop* us—in a way closer to a brick wall than a referee's whistle blow (see Champagne 2015b).

5 A good reason to regard some reasoning as bad

Brandom briefly discusses incompatible properties, noting that the fact "[t]hat a monochromatic patch is red rules out its being blue" (2008, p. 47; see also his 2015, p. 200). However, this makes no noticeable impact on Brandom's inferentialist views, since he converts the phenomenon into yet another implicit conditional a competent speaker should be prepared to endorse: "If a monochromatic patch is red, then it is *not* blue" (2008, pp. 47–48; Peregrin 2001 makes a convincing case that Brandom is returning to a "structuralist" view where there are only differences). I, on the other hand, hold that diagrams exercise a distinctive form of constraint on reasoning. Hence, just as Brandom uses Sellars' passage 36 as his lodestar, I propose to use this passage of Peirce's *Collected Papers* as my slogan:

> Any object, *A*, cannot be blue and not blue at once. It can be blue and hard, because blueness and hardness are not thought of as joined in *quale*-consciousness, one appealing to one experiment and the other to another. But *A* cannot be blue and yellow, because these would blend and so the color would cease to be blue or yellow either. Thus, the positive truth in the principle of contradiction is that *quale*-consciousness has but one element (Peirce 1931–1958, vol. 6, para. 231).

Peircean exegesis can get tricky, so I would not want to let my philosophical arguments hinge on a single textual citation. Still, as Brandom proves, having an emblem helps. With that in mind, I think Peirce's "passage 6.231" is the missing piece of Sellars' passage 36: *what enables us to truly justify the inferences we draw is the inability of some qualities to simultaneously inhabit some regions in the space of reasons*. I propose to call this "contrapiction."

In passage 6.231 and elsewhere, Peirce uses the word "contradiction" to describe the pervasive fact that "nothing at once possesses any character and possesses the negative of that character" (Peirce 2015b, p. 885). I am introducing contrapiction, not so much because I am dissatisfied with the regular notion of contradiction, but because that regular notion comes with two supplements I do not want. First, contradiction is too closely linked with linguistic discourse. Taken literally, it signals that one is "talking

against oneself." This obscures just how general the mutual incompatibility really is. My word "contrapiction" is meant to evoke "depiction" and thus "picture," but since it pertains to incompatible qualities, its range of application is broader than vision (for a discussion of how this constraint relates to hearing, see Champagne 2015d). Even so, I like "contrapiction," because it resembles the word contradiction just enough to signal a kinship, which there certainly is.

The second supplement I do not want comes from the fact that spotting a contradiction is usually a "Gotcha!" moment. Indeed, proofs like the indirect method of derivation originally sprang from the confrontational disputations of medieval philosophers. There may be ways to tame this approach, but to this day, in many philosophy departments, nothing quite matches the thrill (and bragging rights) of spotting a contradiction in the claims of a speaker. My idea of contrapiction aims to capture a constraint on inference without this policing by others. This differs from Brandom, who thinks that "[w]hat people actually *do* is adopt, assess, and attribute such standings [of commitment and entitlement]—and if they did not, there would be no such standings" (1995, p. 898). Of course, spotting a contradiction can be taken as "the proper mark of a refutation" (Aristotle 1984, pp. 169a6–169a21; for a balanced discussion, see Rescher 1987). But, seeing how logic can serve purposes besides refutation, an impersonal constraint seems in order.

6 "See, you said this, and I hold you to what you said."

According to Brandom, making inferences answerable to representations has long been "the traditional order of explanation" (1994, p. 92). Until, that is, we get to a "minority inferentialist tradition that looked at what was a reason for what" (in Williams 2013, p. 384). Brandom (2011, pp. 160–161) sees Wittgenstein as a key protagonist in this "pragmatist critique of semantics." According to this narrative, Wittgenstein began with a picture theory of meaning ([1921] 1974), saw the error of his ways during self-imposed exile, then returned to teach us how language works more like tools and games ([1953] 2001). However, the game-theorist Pietarinen surmises that Wittgenstein might not have been so quick to discard his picture theory of language "had he known of Peirce's diagrammatic logic of [Existential Graphs]" (2006, p. 267; for a similar claim, see Legg 2008).

For Brandom, the friction on our thinking comes from a host of scorekeeping practices that have been "instituted by the attitudes of linguistic practitioners" (2000, p. 203). Normativity, in my picture, comes from a different source. When Sarah asks us to conceive of a contrapiction, she basically asks us to do the impossible. Moreover, she asks us to perform a mental or graphical operation which even she, *ex hypothesi*, cannot do. Trying to accomplish the impossible is a waste of time. Hence, I submit that contrapiction supplies a good reason to regard some reasons as bad. If nothing else, it absolves an interlocutor of any further responsibility.

When Brandom asserts that subjects "are *obliged* to reject or resolve incompatible commitments" (2008, p. xv; my emphasis), he takes a deontological framework for granted. I agree that partitioning "good" and "bad" inferences makes theoretical philosophy bleed into practical philosophy. Meaning, as the Pittsburgh slogan goes,

is "fraught with ought" (Brandom 2015, p. 3). Yet, I see no independent reason why one should accept duty as the best way to unpack the normativity proper to reasoning. After all, "[g]iven a rule or a requirement, we can ask whether you ought to follow it, or whether you have a reason to do so" (Broome 2007, p. 162). McDowell makes essentially the same point:

> It is only in the scorekeeping context, for instance in challenges to entitlements and responses to challenges, that Brandom's game specifically provides for moves to be addressed by one player to another. The deontic-structural description does not display players as taking an interest in anything beyond the deontic status of the players (themselves and others). Nothing in the deontic-structural description ties this interest to a concern with how things are outside the game, except in so far as how things are outside the game affects a player's deontic status, specifically her entitlements (McDowell 2009, p. 297).

Making incompatible commitments may be akin to "making two promises both of which cannot be kept" (Brandom 2000, p. 44) but, if a person does not care about engaging in practices that are frowned upon, why should she worry about sinning against the rules of inference and language? Being inconsistent may annoy others, but it takes a battery of enthymemes to turn social annoyance into a binding account of logic.

Maybe Brandom's (2009, pp. 52–60) study of Kant has convinced him that there exists some independent commandment to be consistent. Normative language is often couched in monadic operators like "You ought to x" (White 2003, pp. 569–570), so this surface feature can give the appearance of an obligation. However, it seems more prosaic to gloss the demand for personal consistency as a "hypothetical" imperative: *if* you want to be regarded as consistent by your peers, *then* you should avoid making incompatible commitments. Affirmation of this antecedent need not be expressed grammatically, since it can be signalled by the very decision to take a given language game seriously. But, Peirce (1998, p. 459) agrees with me that the guidance of logic is robust but freely sought (see Chevalier 2014, pp. 727–728). Reasoners are not duty-bound to any conversation, so contrapiction can sometimes serve as good grounds to walk away.

Like the Pittsburgh School, Peirce saw that "[t]he phenomena of reasoning are, in their general features, parallel to those of moral conduct" (1998, p. 249). In fact, in a move reminiscent of Brandom, Peirce defined "affirmation" as a willingness to accept sanctions in the event that a proposition turns out false and "the utterer believed the proposition to be false at the time he uttered it" (1998, p. 313). Yet, Peirce realized that there is more involved than just deontic scorekeeping: "It has been supposed that the laws of logic might be broken," he writes, "That they [the laws of logic] say 'Thou ought' not 'thou shalt,' that in short they are statements not of *fact* but of *debt*. But what page of man's ledger does this 'ought' refer to? Thought *debtor* to what? It is impossible to say" (Peirce 1982, p. 166). The social approach favoured by Brandom actually asks us to construct a ledger (see the example in Maher 2012, p. 68). However, such detailed scorekeeping will amount to little if there is more to being right than being *deemed* right.

In the example I used earlier, the conversational partners were not keeping tabs on each other, but rather scrutinizing diagrammatic signs to see what can and cannot be done with them (see Pietarinen 2006, p. 136). True, it was another person who pointed out the unforeseen entailments and inconsistencies implicit in what Sarah said, so cases like these are tailor-made for Brandom's work. Yet, what distinguishes Peirce from Brandom is that Peirce does not require a dialogical format to involve the actual participation of different persons. Rather, the cut-and-parry can unfold with only one participant, provided "[t]he person divides himself into two parties [called Graphist and Grapheus by Peirce] which endeavour to persuade each other" (Peirce 2015b, p. 885). This split may seem unusual, but Peirce believed it was a constitutive feature, since "every thought must address itself to some other" thought (1931–1958, vol. 5, para. 253). This explains why Sarah can come to realize, by solitary deliberation, that she does not love her pet in the manner she originally thought. She might never have the occasion or motive to say so in public but, using the impossibility of contrapiction as her compass, she nevertheless learned something new.

Brandom, by contrast, writes that "[t]o ignore the social articulation of standings in the space of reasons is to leave out what makes it possible to understand such standings as answerable for their correctness to how things actually are" (1995, p. 907). I do not think this follows. Surely, rules must be instituted before they can be broken. Yet, even in the absence of any pact or authority, the qualities of diagrams ensure that not everything goes. Unlike codified systems of algebraic notation, the diagrams used by Peirce to flesh out logical inferences can even house relations which neither the user nor anyone else has foreseen. This allows for what Shimojima (1996, pp. 89–95) calls "free rides." In fact, Peirce believed that one of the distinguishing traits of icons is that by scrutinizing such a sign "other truths concerning its object can be discovered than those which suffice to determine its construction" (1931–1958, vol. 2, para. 279). This is why Ancient Egyptian architects were able to manipulate the right-angled triangle for so long without knowing the Pythagorean Theorem. It also explains why critics can say Gotcha!: we are surprised to discover a new relation.

A reasoner making inferences in a playful manner (Sebeok 1981) can thus sometimes draw conclusions that have never before been drawn. Epistemologically, this has the virtue of explaining a phenomenon rendered inexplicable or even impossible on Brandom's account: *justified* dissent in the face of majority opposition. Peirce, who did pioneering work on the topic of scientific discovery (Paavola 2011; Psillos 2011), would say that, to know whether a novel diagrammatic manipulation is permissible, one must look to the sheet before one, not any community. A community can eventually corroborate what a discoverer found, but such corroboration will only confirm that rectitude was present from the get-go. Peirce does not mince words: "If the entire human race were unable to see the connection [between a conclusion and its premise(s)], the argument would be nonetheless sound, although it would not be humanly clear" (1998, p. 212).

Semiosis, the action of signs, is usually a complex affair. Hence, like all iconic signs, diagrams need the assistance of symbols in order to be useful. For instance, to properly deploy and enjoy the fruits of Peirce's organon (like the "Beta graphs" loosely mimicked in this paper), one must know beforehand that a word like "love" is a two-place relation. Employing Peircean graphs also requires that one follow a

handful of well-chosen notational permissions that specify which parts can be erased, duplicated, and so on (see Peirce 2015b, p. 922). Reasoning by diagrams is therefore not an activity one could perform without mastering other language games. We thus come to that regulative space from the outside-in, with a "natural history" (Pietarinen 2006, p. 197) already replete with meaning. Even so, when the exercise in refinement goes well, it becomes regulative precisely because what transpires on the sheet is not up to the participant(s).

The signs laid out on a sheet of assertion are something inquirers can rally around. Since "two opponents perhaps detect more errors than one does" (Lumer 1988, p. 463), peers can help one recognize mistakes in one's reasoning—especially when those interventions do not come with a Gotcha! However, the constraint of contrapiction comes from the self-same character of qualitative signs, not from the expectations of other people. So, while one might worry that "[w]ith the increasing number of participants of a discourse [...] the problems of coordination are aggravated too and they must be stemmed by additional standing orders" (ibid.), such inflation is nicely avoided when participants direct their gaze at the diagrams instead of at each other.

Given this role of observation, one might wonder whether my proposal endorses "the given" (Sellars 1956). It is worth pointing out that neither Brandom nor Sellars reject observation outright, provided it is construed as a "language-entry" move (see Sellars [1963] 1991, p. 343). As Brandom explains,

> Sellars always accepted that observation reports resulting noninferentially from the exercise of perceptual language-entry capacities play both the privileged epistemological role of being the ultimate court of appeal for the justification of empirical knowledge claims and therefore (given his inferentialist semantics) an essential semantic role in determining the contents of the empirical concepts applied in such judgments (2015, p. 120).

I must say I find this a bit disingenuous. If switching to language-entry moves really preserved appeals to observation while accommodating technical misgivings about the given, there would be no need to ambitiously go *From Empiricism to Expressivism* (*pace* the title of Brandom 2015). In any event, if Brandom can have his given and repudiate it too, I can too.

In the end, Brandom and I both urge Sarah's interlocutor to tap on the table and say, in effect, "See, you said this, and I hold you to what you said." For Brandom, the normative force comes from the "I hold you" part. My suggestion has been that if the "See" part does not hold, the "I hold you" part has no rational force (although the injunction can be socially enforced, regardless).

7 Conclusion

Brandom's chief contribution, to my mind, has been to call attention to the idea that judgements are acts we are in a distinctive sense responsible for. However, I have argued that, at least in the case of some claims, such responsibility terminates in issuing an invitation to contemplate qualitative features which preclude some inferential moves. Brandom discusses qualitative incompatibility, but he overlooks its potential

as a source of friction on our inferences. So, whereas Brandom turns to social pressures in order to ground norms, I have called on the Peircean idea of diagrammatic reasoning to craft a different story.

Unlike Brandom, Peirce is not afraid of the concept of representation. In fact, Peirce defined logic as "the formal science of the conditions of the truth of representations" (1931–1958, vol. 2, para. 229). In order to explain what makes this formal science worthy of the title, I have endorsed Peirce's passage 6.231. It states that iconic signs with different qualities cannot simultaneously occupy the same region of awareness. Moving from discursive contradiction to qualitative contrapiction is a way to maintain a friction on reasoning without making assumptions about personal consistency and peer pressure.

The constraint that arises from the self-same character of qualities raises interesting issues that call for future work. Discussing iconicity, Coltheart (1980, p. 184) has recommended that we distinguish between "phenomenological," "neural," and "informational" persistence. Yet, as Clark and Chalmers (1998, p. 8) point out, in playing a diagrammatic video game like Tetris, a subject can rotate a mental tile or an on-screen tile—it really makes no difference. As a philosopher of signs, I am interested in the idea that, in principle, the shared quality of an iconic sign can skewer all such levels (Champagne 2015c).

Like the conversational partners who let many contents drift into the background, I have deliberately played up the differences that separate me from Brandom. Truth be told, there is also a lot of philosophical common ground. Brandom reports that, in private conversations, Sellars "remained convinced that the dimension he called 'picturing' must play an absolutely central role in our world-story of ourselves as knowers-and-agents-in-the-world" (Brandom 2015, p. 13). So, to end on a conciliatory note, I suggest that, if the Pittsburgh school were to incorporate Peirce's diagrammatic approach, it would see that Sellars' passage 36 should be taken literally, insofar as the logical space of reasons might very well be a space.

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References

Aristotle (1984). In Barnes, J. (Ed.), *The complete works of Aristotle* (2 Vols). Princeton, NJ: Princeton University Press.

Brandom, R. B. (1994). *Making it explicit: Reasoning, representing, and discursive commitment*. Cambridge, MA: Harvard University Press.

Brandom, R. B. (1995). Knowledge and the social articulation of the space of reasons. *Philosophy and Phenomenological Research*, *55*(4), 895–908.

Brandom, R. B. (2000). *Articulating reasons: An introduction to inferentialism*. Cambridge, MA: Harvard University Press.

Brandom, R. B. (2008). *Between saying and doing: Toward an analytic pragmatism*. Cambridge, MA: Harvard University Press.

Brandom, R. B. (2009). *Reason in philosophy: Animating ideas*. Cambridge, MA: Harvard University Press.
Brandom, R. B. (2011). *Perspectives on pragmatism: Classical, recent, and contemporary*. Cambridge, MA: Harvard University Press.
Brandom, R. B. (2015). *From empiricism to expressivism: Brandom reads sellars*. Cambridge, MA: Harvard University Press.
Broome, J. (2007). Is rationality normative? *Disputatio*, *2*(23), 161–178.
Burch, R. W. (1994). Game-theoretical semantics for Peirce's existential graphs. *Synthese*, *99*(3), 361–375.
Champagne, M. (2014a). Just do it: Schopenhauer and Peirce on the immediacy of agency. *Symposium: Canadian Journal of Continental Philosophy*, *18*(2), 209–232.
Champagne, M. (2014b). Referring to the qualitative dimension of consciousness: Iconicity instead of indexicality. *Dialogue: Canadian Philosophical Review*, *53*(1), 135–182.
Champagne, M. (2014c). Semiotics. Oxford Bibliographies in Philosophy. doi:10.1093/OBO/9780195396577-0179.
Champagne, M. (2015a). Disjunctivism and the ethics of disbelief. *Philosophical Papers*, *44*(2), 139–163.
Champagne, M. (2015b). Experience and life as ever-present constraints on knowledge. *Metaphilosophy*, *46*(2), 235–245.
Champagne, M. (2015c). Poinsot versus Peirce on merging with reality by sharing a quality. *Versus*, *120*, 31–43.
Champagne, M. (2015d). Sound reasoning (literally): Prospects and challenges of current acoustic logics. *Logica Universalis*, *9*(3), 331–343.
Chevalier, J.-M. (2014). Why ought we to be logical? Peirce's naturalism on norms and rational requirements. In J. Dutant, D. Fassio, & A. Meylan (Eds.), *Liber Amicorum Pascal Engel* (pp. 716–740). Geneva: Université de Genève.
Clark, A., & Chalmers, D. J. (1998). The extended mind. *Analysis*, *58*(1), 7–19.
Colapietro, V. M. (2010). Peirce today. *Pragmatism Today*, *1*(2), 7–24.
Coltheart, M. (1980). Iconic memory and visible persistence. *Perception and Psychophysics*, *27*(3), 183–228.
Fodor, J. A., & Lepore, E. (1992). *Holism: A shopper's guide*. Oxford: Blackwell.
Gillies, D. (2009). Problem-solving and the problem of induction. In Z. Parusniková & R. S. Cohen (Eds.), *Rethinking Popper* (pp. 103–115). Dordrecht: Springer.
Ketner, K. L. (1981). The best example of semiosis and its use in teaching semiotics. *The American Journal of Semiotics*, *1*(1–2), 47–83.
Lance, M. (2000). The word made flesh: Toward a neo-sellarsian view of concepts, analysis, and understanding. *Acta Analytica*, *15*(25), 117–135.
Legg, C. (2008). The problem of the essential icon. *American Philosophical Quarterly*, *45*(3), 207–232.
Lumer, C. (1988). The disputation—a special type of cooperative argumentative dialogue. *Argumentation*, *2*(4), 441–464.
Maher, C. (2012). *The Pittsburgh school of philosophy: Sellars, McDowell, Brandom*. New York: Routledge.
McDowell, J. H. (2002). *Mind and world*. Cambridge, MA: Harvard University Press.
McDowell, J. H. (2009). *The engaged intellect: Philosophical essays*. Cambridge, MA: Harvard University Press.
Misak, C. (2013). *The American pragmatists*. Oxford: Oxford University Press.
Morris, C. W. (1971). *Writings on the general theory of signs*. The Hague: Mouton.
Norman, A. P. (2001). The normative structure of adjudicative dialogue. *Argumentation*, *15*(4), 489–498.
Paavola, S. (2011). Diagrams, iconicity, and abductive discovery. *Semiotica*, *186*(1–4), 297–314.
Peirce, C. S. (1931–1958). *The collected papers of Charles Sanders Peirce* (Vols. 1–6 edited by C. Hartshorne and P. Weiss, Vols. 7–8 edited by A. W. Burks). Cambridge, MA: Harvard University Press.
Peirce, C. S. (1982). In Fisch, M. H. (Ed.), *The writings of Charles S. Peirce: A chronological edition* (Vol. 1). Bloomington: Indiana University Press.
Peirce, C. S. (1992). In Houser, N., et al. (Eds.), *The essential Peirce* (Vol. 1). Bloomington: Indiana University Press.
Peirce, C. S. (1998). In Houser, N., et al. (Eds.), *The essential Peirce* (Vol. 2). Bloomington: Indiana University Press.
Peirce, C. S. (2015a). In Pietarinen, A.-V. (Ed.), *Logic of the future: Peirce's writings on existential graphs*. Bloomington: Indiana University Press (in press).
Peirce, C. S. (2015b). Two papers on existential graphs by Charles Peirce. Edited by Ahti-Veikko Pietarinen. *Synthese*, *192*(4), 881–922.

Peregrin, J. (2001). *Meaning and structure*. Aldershot: Ashgate.
Pietarinen, A.-V. (2006). *Signs of logic: Peircean themes on the philosophy of language, games, and communication*. Dordrecht: Springer.
Pietarinen, A.-V. (2007). Getting closer to iconic logic. In G. D. Crnkovic & A. J. Stuart (Eds.), *Computing, philosophy, and cognitive science: The nexus and the liminal* (pp. 53–74). Cambridge: Newcastle upon Tyne.
Pietarinen, A.-V. (2011). Existential graphs: What a diagrammatic logic of cognition might look like. *History and Philosophy of Logic*, *32*(3), 265–281.
Psillos, S. (2011). An explorer upon untrodden ground: Peirce on abduction. In D. Gabbay, S. Hartmann, & J. Woods (Eds.), *Handbook of the history of logic, vol. 10: Inductive logic* (pp. 117–151). Oxford: Elsevier.
Rescher, N. (1987). How serious a fallacy is inconsistency? *Argumentation*, *1*(3), 303–316.
Roberts, D. D. (1973). *The existential graphs of Charles S. Peirce*. The Hague: Mouton.
Rorty, R. M. (1982). *Consequences of pragmatism*. Minneapolis: University of Minnesota Press.
Sebeok, T. A. (1981). *The play of musement*. Bloomington: Indiana University Press.
Sellars, W. (1956). Empiricism and the philosophy of mind. In H. Feigl & M. Scriven (Eds.), *Minnesota studies in the philosophy of science* (Vol. 1, pp. 253–329). Minneapolis: University of Minnesota Press.
Sellars, W. ([1963] 1991). *Science, perception, and reality*. Atascadero, CA: Ridgeview.
Sellars, W. ([1968] 1992). *Science and metaphysics: Variations on Kantian themes*. Atascadero, CA: Ridgeview.
Shimojima, A. (1996). *On the efficacy of representation*. Doctoral dissertation, Indiana University.
Shin, S.-J. (2002). *The iconic logic of Peirce's graphs*. Cambridge, MA: MIT Press.
Sowa, J. F. (2011). Peirce's tutorial on existential graphs. *Semiotica*, *186*(1–4), 347–394.
Stjernfelt, F. (2000). Diagrams as centerpiece in a Peircean epistemology. *Transactions of the Charles S. Peirce Society*, *36*(3), 357–392.
Stjernfelt, F. (2007). *Diagrammatology: An investigation on the borderlines of phenomenology, ontology, and semiotics*. Dordrecht: Springer.
Stjernfelt, F. (2014a). Diagrams, narratives and 'reality'. *Sign Systems Studies*, *42*(2–3), 412–416.
Stjernfelt, F. (2014b). *Natural propositions: The actuality of Peirce's doctrine of dicisigns*. Boston: Docent Press.
Wanderer, J. (2008). *Robert Brandom*. Durham, UK: Acumen.
White, H. (2003). Brandom on practical reason. *The Philosophical Quarterly*, *23*(213), 566–572.
Williams, J. J. (2013). Inferential man: An interview with Robert Brandom. *Symploke*, *21*(1–2), 373–397.
Wittgenstein, L. ([1921] 1974). *Tractatus logico-philosophicus* (D. F. Pears & B. F. McGuinness, Trans.). London and New York: Routledge.
Wittgenstein, L. ([1953] 2001). *Philosophical investigations* (G. E. M. Anscombe, Trans.). Oxford: Blackwell.