

A Paradox of Inferentialism

Giacomo Turbanti

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Abstract

John McDowell articulated a radical criticism of normative inferentialism against Robert Brandom's expressivist account of conceptual contents. One of his main concerns consists in vindicating a notion of intentionality that could not be reduced to the deontic relations that are established by discursive practitioners. Noticeably, large part of this discussion is focused on empirical knowledge and observational judgments. McDowell argues that there is no role for inference in the application of observational concepts, except the paradoxical one of justifying the content of an observational judgment in terms of itself. This paper examines the semantical consequences of the analysis of the content of empirical judgments in terms of their inferential role. These, it is suggested, are distinct from the epistemological paradoxes that McDowell charges the inferentialist approach with.

Keywords: Inferentialism · Experience · Disjunctivism · Defeasible reasoning · Default entitlement · Inferential perspectives

1 Introduction

Inferentialism is a theory about how to understand conceptual content: according to the inferentialist, conceptual content has to be understood *primarily* in terms of inferential relations between concepts. This is the inferentialist idea at its bare bones. There are several ways to put some flesh on it. The proof-theoretical tradition, for instance, maintains that the content of an expression ϕ is to be determined in terms of the proofs we have for it. The idea is that, when inferential rules are *properly*¹ defined, proofs provide the epistemic guarantee that ϕ has been introduced on its justificatory grounds which, in this sense, account for ϕ 's *epistemic* content. Robert Brandom's *normative* approach, instead, gathers inferentialism in a triptych together with a pragmatist thesis and an expressivist thesis. The pragmatist thesis is the idea that the inferential role of an expression ϕ must be defined in terms of the normative relations that the use of ϕ binds speakers to in discursive practices. The expressivist thesis amounts to the claim that the deontic statuses that speakers acquire by engaging in discursive practices can be made explicit by deploying particular linguistic resources. Thus, in the framework of this normative inferentialism, linguistic expressions acquire the content they have because speakers use them to engage in normative discursive practices, and these contents are expressed by various semantically explicating vocabularies that allow to *say* what people *do* while engaging in discursive practices. Logical vocabularies are

¹Of course, the whole Gentzen-Prawitz enterprise consists in the attempt to formally cash out this adverb.

just a case in point. So, for instance, in Brandom's view to assert the conditional "if ϕ then ψ " is to say that whoever is committed to ϕ ought to be committed also to ψ , i.e. that the inference from ϕ to ψ is to be treated as a valid one.

Inferentialism, as a semantic theory, is alternative to traditional representationalism, according to which the content of conceptual episodes has to be understood *primarily* in terms of what they designate in the world. There are many wrong ways to draw a comparison between representationalism and inferentialism. One of these is to look at the formal apparatus for a distinction to make. Thus, one might erroneously believe that the inferentialist is not entitled to deploy certain semantic tools, like set-theoretical models, or that the representationalist is compelled to accept certain logical properties, like multi-consequence inference or classical contraposition. Another problematic way to understand the comparison between inferentialism and representationalism that is likely to lead to serious puzzlements is to look at it from an epistemological point of view. Representationalism holds that to grasp a concept is to know what it represents, for its content is a *representing thing* isomorphic to a *represented thing*. This idea inherits the Cartesian distinction between a mental *res*, which is immediately known, and a physical *res*, which is known through the mediation of the representational relation. Inferentialism holds that to grasp a concept is to master its inferential use, for its content is the role it has in reasoning. This idea characterizes the delimitation of the Sellarsian space of reasons, as opposed to a space of nature where episodes are causally determined. The epistemological concern might be raised at this point that both representationalism and inferentialism run the risk of excavating an epistemic gulf between conceptual episodes, like perceptions and thoughts, and non-conceptual entities, like cabbages and kings. The dreadful consequences of this picture are familiar. On the one hand, one might attempt to build illicit foundational bridges between the two spaces. For instance, one might accept that certain causally determined episodes in the space of nature could directly provide epistemic foundation for non-inferential knowledge. Such an idea, typical of traditional empiricism, Sellars himself stigmatized as the *myth of the given*. On the other hand, one might yield to the idea that thoughts are epistemically detached from how things are in the world, in the Davidsonian sense that beliefs are the only answer to other beliefs, and accept that coherence is only reasonable requirement for knowledge. This prefigures the Hegelian picture of knowledge as a wheel spinning in the void. If the ship of semantics is compelled to navigate in such an epistemic strait, representationalism seems to drive it to a foundationalist Scylla, inferentialism to a coherentist Charybdis.

In the last 20 years Robert Brandom has been pursuing the ambitious enterprise of developing a normative form of inferentialism, according to which conceptual content can be represented in terms of inferential relations that are grounded in the normative relations established by speakers who engage in discursive practices. This project has been discussed at length. In this paper I will consider in particular the criticism raised by John McDowell. I will not try, however, to adjudicate the debate between the two authors. My more modest purpose is to consider just a small comment made by McDowell as part of his replies to Brandom's remarks on *Mind and World*. Although the comment is somehow secondary to the overall discussion, nonetheless it presents an interesting paradox in the inferentialist analysis of empirical content. The comment is the following one:

In the conceptual activity I am mainly concerned with, that of making obser-

vational judgments, what matters is the rationality exemplified in judging whether things are thus and so in the light of whether things are (observably) thus and so. The content of the item in the light of which a judgment of this kind has its rational standing is the same as the content of the judgment itself. The only inferences corresponding to the rational connection in question would be of the “stuttering” form, “P; so P.” (McDowell, 1998b, p. 405)

In order to evaluate this paradox I will proceed as follows. First I will present both Brandom’s and McDowell’s theories of observation. These are two refined attempts to lead the analysis of meaning out of the perils of epistemology, respectively from an inferentialist and a representationalist point of view. Then I will consider the details of McDowell’s criticism against normative inferentialism. This will allow to distinguish between two sorts of problems of experience for the inferentialist: an epistemological problem and a semantic problem. I will concede, for the sake of the argument, that McDowell’s answer to the epistemological problem is fundamentally correct. And eventually I will proceed to consider McDowell’s paradox in the context of the semantic problem of experience.

2 A “two-ply” reading of Sellars’s account of observation

As a part of the ambitious recollection of inferentialist themes in the history of philosophy that Brandom put together in his *Tales of the Mighty Dead*, he also proposed an interpretation of Sellars’s account of observational knowledge (Brandom, 2002b). If such a contribution is read against the epistemological background just described in Section 1, arguably it is questionable both as an interpretation of Sellars’s views and as a theory in itself.

Brandom’s reading begins with a demarcational interpretation of the space of reasons. According to his view, rational beings are essentially characterized (and therefore distinguishable from non-rational beings) by their ability to play the game of giving and asking for reasons. The idea is that concept users are not merely endowed with capacities to discriminate aspects of reality and to classify them, but also with the ability to comply with the normative consequences of doing so. Thus, Brandom notices, a chunk of iron classifies environments with respect to their degree of humidity by exhibiting a differential response: it rusts in some and not in others. And although it only provides a rough classification, it is reliable in doing so. Differential reliable responses do matter for concept use. In fact, as for humidity reports, we rely on hygrometers which exhibit fine grained dispositions to differentially respond to the degree of water vapor in the air. What an hygrometer can’t do, however, is using a report to make a move in a language game. As Brandom puts it, for Sellars concept use is a linguistic affair: to understand the conceptual content of a response is to understand its role in the web of inferential relations that are established by the dynamics of the deontic statuses of those who take part in a discursive practice. So, for instance, what makes of an observer’s report of “it’s humid here” an application of the concept of humidity is the observer treating it as entailing something like “there’s water vapor in the air” and as entailed by something like “I am a reliable reporter of humidity in standard conditions and I reported ‘it’s humid’”. Part of what such a treating amounts to is providing premises, when asked, as reasons to justify one’s commitment to the report “it’s humid here”.

Traditional empiricism has always been fascinated by the possibility to connect concept use with the reliable differential responsive dispositions that rational beings share with inanimate, non-personal ones. But of course the temptation to think of an epistemic bridge between the realm of nature and the realm of reasons that might directly provide with observational knowledge is part of the mythology of the *given*. That is what the inferentialist is supposed to avoid by endorsing the view that conceptual knowledge is inferentially articulated.

But now, observational reports begin to look problematic for the inferentialist. Consider the following trivial example. I go for a walk on a misty evening in Pisa, I feel humid and I spontaneously claim "it's humid": do I know that it's humid? Of course the inferentialist wants to say that I do, but she can't concede that my perceptual report *per se* expresses knowledge, for it is elicited with no inferential justification. This is the explanatory difficulty that, according to Brandom, Sellars solves by distinguishing two moments in observational reports: the non-inferential dispositional response and its justification *ex post facto*. The idea would be that while certain responses may actually be elicited as the manifestation of certain dispositions (i.e. not as a consequence of an inferential process), these are truly to be treated as knowledge only when they come to be justified by a reliability inference. Thus, in our example, it is only when the inference is in effect drawn from "I am a reliable reporter of humid environments" and "I reported 'it's humid'" to "it's humid" that knowledge that it's humid can be ascribed to me. In other words, it is only when the inferential articulation of the concept of humidity is mastered that it can be applied to make observational reports. The point is that the inferential justification might be provided even after the dispositional response is elicited.

This account is completed by two collateral theses of Sellars's. The first one is a story about how observational concepts are learnt. Along the same lines as Wittgenstein, Sellars adopts a methodologically behaviorist stance on this point. In this view, a child is first trained by concept users to conform its differential responsive dispositions to the inferential rules that govern concept applications: thus, for instance, she is trained to report "it's humid" when she feels it. How much does this process differ from the calibration of an hygrometer? At a very early stage not much: both the child's and the hygrometer's performances are causally adjusted to the concept use of the trainers/calibrators. But it changes dramatically when the child learns to respond to the rules themselves as they are expressed in the rule-language of the trainers. At that point in fact the child will be able to master the inferential articulation of the linguistic moves that she has learned to unconsciously perform in certain ways, and thus, ultimately, to properly apply concepts.

The second thesis is the acknowledgment that concepts with observational role can be learned, just like theoretical ones, by learning the rules for their application. With respect to theoretical concepts, whose application is governed only by rules for intra-linguistic moves, rules for observational concepts allow what Sellars called language-entry transitions. A language-entry transition entitles one to move to a linguistic position from a non-linguistic one. Thus, for instance, one may apply the concept "red" to enter the linguistic practice with the observational report "that's red". Of course, for that move to be *really* the application of a concept, one ought to be able to inferentially justify the move by providing reasons for it, as e.g. "I am a reliable reporter of red stuff and I reported 'that's red'". In this sense the reporting role of observational concepts are not mysterious from an inferentialist point of view. As a matter of fact, Sellars noticed, certain

concepts that are initially introduced as theoretical may well later acquire reporting role and become observational concepts. That is possible if their application comes to be governed by rules for language-entry transition. Thus, for instance, physicists have recently begun to report the observation of Higgs bosons after their existence had been postulated in the 1960s to explain in the Standard Model how it is possible for other particles to have mass.

Brandom ascribes this “two-ply” account of observation to Sellars, but is that accurate? There is one main reason to doubt it, and it hinges on the understanding of the reporter’s mastering of the inferential articulation of empirical concepts. As we have seen, in Sellars’s view, for the tokening of an observational report like “it’s humid” to have epistemic authority it must be placed in the space of reasons, which, on the inferentialist reading, means for instance that it is correct to infer from it that it’s humid. Of course the epistemic authority of the report comes with the responsibility to give reasons for it. The problem with Brandom’s interpretation then has to do with the role of the reliability inference that justifies the tokening of an observational report in the space of reasons. In *Empiricism and the Philosophy of Mind* Sellars very explicitly requires that the reporter himself must be able to draw such an inference (Sellars, 1956, §35). Brandom, on the other hand, insists on the possibility that the reliability inference might be at someone else’s disposal.

To a first approximation, Brandom’s misalignment with Sellars’s point of view could be put as a difference between an externalist reliabilism and an internalist reliabilism (if there is any such thing). Maybe that could help catching a glimpse of the problem from an epistemological point of view. But it must be kept firmly in mind that Brandom’s analysis is mostly motivated by semantic reasons.² He ultimately aims to explain the content of the concepts applied in observational judgments, and of course he aims to do that in terms of his normative inferentialism. On his approach, the inferential relations that articulate conceptual contents are expressively grounded on the normative relations that are established by the activities of discursive practitioners who keep the score of each other’s deontic score. Practitioners are held responsible for their moves in discursive practices, in the sense that they are treated as endorsing commitments to justify their entitlement to their assertions. Such a responsibility is complied with by performing other assertions. The set of commitments and entitlements endorsed by a discursive practitioner constitutes her deontic score and the pragmatic significance of an assertion consists in its potential to alter deontic scores. Thus an assertion, like an observational report, is construed as having content *qua* having pragmatic significance. Since, however, deontic scores are kept by practitioners for each other, they most likely will differ from one perspective to another. The idea that the determination of the articulation of conceptual content is a perspectival, social and historical process is part and parcel of Brandom’s normative inferentialism.

Arguably, however, this is not Sellars’s view. He certainly maintains the thesis that linguistic utterances have conceptual content not because they are reliably elicited by speakers nor because they express their internal thoughts, but because they play certain roles in certain practices. This however does not imply that such contents are determined by the interaction of different deontic perspectives on linguistic performances. To the contrary, Sellars also holds that observational reports possess first personal epistemic authority: the myth of genius Jones in the last part of

²As McDowell puts it: «Brandom thinks Sellars imposes his internalist requirement with a view to securing that the reporter *understands* her reports [...] But its point is rather to secure that they have a specific kind of authority» (McDowell, 2002).

Empiricism and the Philosophy of Mind is just intended to explain how that is not incompatible with conceptual contents being acquired by engaging in linguistic practices. Sellars distinguishes in fact the primacy *in the order of being* of episodes of experience from the primacy *in the order of understanding* of the inferential articulation of their contents, that can only be mastered as a consequence of a proper training in linguistic practices. The latter semantic dependence of the content of an episode of experience from the social practices in which concepts are learnt is not quite the same thing as the second externalist step envisaged by Brandom in the process of application of observational concepts where dispositionally elicited reports are inferentially justified *ex post facto*.³ In effect, if Brandom's analysis of experience is read at face value from an epistemological point of view, the concern may be legitimately raised that it rules out epistemic first personal authority in principle.

3 Experience and second nature

All those who take on the notion of the space of reasons in order to characterize knowledge seem to be doomed to struggle against the dilemma between foundationalism and coherentism. All but John McDowell. His analysis of the epistemological perplexities resulting from the dichotomy between the two logical spaces of nature and reasons is essentially the analysis of an anxiety about the possibility of empirical knowledge that is in fact fostered by a blind-spot. In the obfuscated picture, as McDowell describes it in the introduction of *Mind and World* (1994), there are essentially two epistemological stances. The first one is a bald naturalism, that is committed to the rejection of the dichotomy between logical spaces and to the eliminativist program of reducing rational episodes to natural ones. The second one is a compelled idealism, that accepts to discard the empiricist requests as the unavoidable consequence of rigorous epistemology and commits to a coherentist picture according to which beliefs can only be justified by other beliefs. The attempt to accept the dichotomy and yet to bridge it, by postulating hybrid episodes or justificatory relations, is the epistemological blunder engendered by the mythology of the *given*. According to McDowell's reading, the Sellarsian alternative is to «delineate a concept of impression that is insulated from epistemology» (*ibi.*, p. xvii), i.e. to separate the dispositional occurrence of non-conceptual episodes in experience from their justificatory authority in the space of reasons. These episodes thus play the transcendental role of constraining the activity of concept application from the outside of the space of reasons. But McDowell considers the transcendental approach as an ultimately unsatisfactory answer, for it tries to look at the relations between conceptual activity and its subject matter from *sideways-on*, where in fact, he argues wittgensteinianly, no such a standpoint is available. In McDowell's view the transcendental perspective is the price that Sellars accepts to pay in order to explain experience without commitment to neither idealism nor the *given*. But it is not a price he is willing to pay himself, especially because he sees he doesn't have to. What he would see, and Sellars would not, is that conceptual capacities that are spontaneously deployed in judgments are also passively activated in sensibility. This is a lesson McDowell learns from Kant's "Clue" for the transcendental deduction of pure concepts: «[T]he same function which gives unity to the various representations in a judgment also gives unity to the mere synthesis of various representations in an intuition» (A79/B104-5). Hence, he

³On Brandom's misunderstanding of Sellars on the report of episodes of experience see (McDowell, 2009c).

extracts the idea that «if an ostensible seeing that... is a seeing that..., the very actualization of conceptual capacities that accounts for its “containing” its claim also constitutes—at least if the content of the claim deals with an ostensible object—its being an intuition in which an object is immediately present to the subject» (McDowell, 2009a, p. 48).

Speaking of an “ostensible seeing” as “containing its claim”, McDowell is using the Sellarsian jargon of *Empiricism and the Philosophy of Mind*. Ostensible seeings are episodes, as it were, of *putative* visual experience: they are a superset of real seeings, which are episodes of *veridical* visual experience. Thus while a seeing of a pink ice cube is an experience in which there is a pink ice cube in front of one, an ostensible seeing of a pink ice cube is an experience in which it merely looks to one that there is a pink ice cube in front of one. According to Sellars, however, any seeing contains a claim in the sense that it “conveys” (Sellarsian jargon again) a content that could be expressed by an observational judgment. Of course the idea can be generalized to any sensorial episode.

McDowell, then, construes Kant as saying that *if* sensibility consists in the actualization of the same conceptual capacities that are otherwise paradigmatically actualized in judgment, *then* intuitions immediately provide with conceptually determined objects. Suppose, for instance, that one is perceptually confronted with a pink ice cube. Then one has the intuition of a pink ice cube. The content of such an intuition is the same as the content that could be expressed by the observational judgment “Here is a pink ice cube”. This reasoning is often popularized as the idea that the world is directly taken in in conceptual shape. In McDowell’s view this idea is not only compatible with, but it is in fact the proper way to vindicate the minimal empiricist requirement that empirical knowledge must answer to the tribunal of experience for its adequacy to how things are in the world.

The problem with wrapping one’s mind around this approach is to understand in what sense conceptual capacities might be actualized in sensibility, while granting the minimal empiricist requirement and avoiding the myth of the *given*. The first point to get clear of is what it means for an object to be conceptually determined. McDowell puts forward an example that is framed in a Russellian understanding of conceptual articulation: the intuition whose content is “Here is a *pink ice cube*” exhibits a different conceptual articulation with respect to the intuition whose content is “Here are a *pink* plastic pyramid, a white *ice* sphere and a gray iron *cube*” (cp. McDowell, 2009a, pp. 10–11). So the idea is that the conceptual capacities (*Funktionen*) that synthesize such a togetherness in an intuition are the same capacities that synthesize the same togetherness in a judgment (*ibid.*, p. 33).

The risk at this point, having acknowledged that an intuition is a conceptual representation of an individual, a *this*, is to draw the distinction between judgment and sensibility on something like the complexity of the categorial structure of the representation that they synthesize. In other words, one might think that while a judgment that there is a pink ice cube in front of one is the representation of a *this as a pink ice cube*, the intuition of a pink ice cube provides one with a simple, a *this-pink-ice-cube*. This move is just what Sellars accuses Kant of doing in his *Science and Metaphysics* (cp. Sellars, 1968, §§ 11–17). Of course the proto-conceptual notion of a *this-such* is a blind alley: either one accepts it as epistemically authoritative, thus committing to the myth of the *given*, or one renounces to use it to ground the justification of empirical judgments, thus giving up on empiricism. McDowell, in effect, doesn’t share this criticism against Kant and insists on

taking “the Clue” at face value: conceptual capacities are already fully at play in sensibility. On his reading, the difference between sensibility and understanding lies just in the fact that while in the latter conceptual capacities are spontaneously exercised, in the former they are only passively active. When one judges, one is free to make up one’s mind about an object as one wishes. When one intuits, one is necessitated by a perceived object. According to McDowell, the idea that these processes pertain to capacities that must be explained on different logical spaces is the consequence of a certain approach to scientific explanation according to which the realm of nature coincides with what is made intelligible in terms of natural sciences. It should be acknowledged instead that «we need not identify the dichotomy of logical spaces with a dichotomy between the *natural* and the *normative*» (McDowell, 1994, p. xix). To use another slogan, human beings also possess a *second nature*. This is the nature they acquire by partaking in linguistic practices where they learn how to apply concepts: among the conceptual abilities that they acquire there are those which are triggered in sensibility by the interaction with the world.

If one is willing to follow McDowell this far, one might be well convinced that his analysis of empirical knowledge is sound and avoids the myth of the *given*. The hardest hurdle for him still to clear, however, is to harmonize the idea that conceptual capacities are passively actualized in intuition with the idea that empirical knowledge answers for correctness to how things are in the world. In order to do that, to begin with, an account must be provided of perceptual mistakes. According to McDowell, the content of an intuition is *object-dependent*, because intuitions are «immediate sensible representation of objects» (McDowell, 2009a, p. 32). In an oft-quoted passage he makes his point crystal clear:

In experience one takes in, for instance sees, *that things are thus and so*. (McDowell, 1994, p. 9)

As far as the problem of vindicating minimal empiricism is concerned, however, what follows is more relevant:

Of course one can be misled into supposing that one takes in that things are thus and so when things are not thus and so. But when one is not misled, one takes in how things are. It does not matter much that one can be misled. (*ibid.*)

This last sentence has always given me a hard time, for it seems that the possibility to be misled is just the whole point about perceptual mistake. As a first preliminary step, the temptation must be resisted to picture McDowell’s proposal along the following lines: one’s episodes of experience are the result of the non-conceptual world causally activating one’s conceptual capacities. This view, that McDowell attributes to Davidson and diagnoses as the root of the coherentist approach, sees the constraint that reality exerts on experience as external to the conceptual realm and thus ultimately unaccessible to it. McDowell holds instead that the world is *really* in conceptual shape and that the constraint it exerts on thought is internal to the conceptual realm. By rehearsing Wittgenstein’s dictum that «[w]hen we say, and *mean*, that such-and-such is the case, we—and our meaning—do not stop anywhere short of the fact; but we mean: *this-is-so*» (Wittgenstein, 1953, §95), he claims that when one is not misled, what one takes in in experience—that things are thus and so—is just as such a fact, part of the world. As a second preliminary step, the fear of idealism must be kept at bay. That is the anxiety that if reality is in conceptual shape

and it does not exert an external constraint on thought, then the former would turn out to be dependent on the latter. According to McDowell this accusation hinges on a confusion. Here, as Sellars taught us, it's decisive to acknowledge the *ing/ed* ambiguity of intentional terms: in a sense, a thought is an act of thinking, in another different sense, a thought is the content of such an act. Now, to say that reality does not exert external constraint on thinking is compatible with saying that reality constrains thinking from within the realm of the contents of thought. In other words, to claim that the world is in conceptual shape does not imply that it can't properly constrain conceptual activity.

Once these two points are put in place, the problem of perceptual mistake in McDowell's account can be properly considered. Once again, his idea is that, when all goes well, if one has an intuition, for instance, that there is a pink ice cube in front of one, then there is a pink ice cube in front of one. Things go well when one is not misled, i.e. when one's ostensible seeing is in effect a seeing. But what if something goes wrong? Since there is nothing to mediate between conceptual contents and objects, the only reasonable conclusion to draw is that to be under the illusion of being perceptually confronted by a pink ice cube, as McDowell puts it, is to be under an illusion «about the contents of one's conceptually shaped consciousness» (McDowell, 2009a, p. 49). But now, what does such an illusion amount to? It is important (and yet hard) here to avoid any misunderstanding. In effect, philosophers have been traditionally puzzled by another question about mistaken perceptions: what does one perceive when one has an illusion or hallucinates? Of course, this is one of the sources that nourished the mythology of the *given*: sense data theories, for instance, were designed just as a solution to this puzzlement. A tentatively better answer might be: "nothing". In the sense that in the case of mistaken perceptions one has no real intuition at all, since one's conceptual capacities have failed to be actualized. This is not what McDowell has in mind however. An illusion about the contents of one conceptually shaped consciousness is for him, in Kantian terms, an appearance of the sensible manifold being synthesized into a representation. Let us suppose one is hallucinating a pink ice cube. In such a case, one's concepts of "pink", "ice" and "cube" are activated. These concepts are the same as those that are activated both in the judgment "here is a pink ice cube" and in the intuition of a pink ice cube. However, while in these cases the concepts are activated with a certain «"logical" togetherness» (*ibid.*), in the case of hallucination the togetherness of the representation is merely apparent because there is no object with such a togetherness. In this sense McDowell accepts that seeings and ostensible seeings may share the activation of certain conceptual capacities, but denies that they are the same sort of internal episode of experience. Still, this view is often characterized as a form of epistemological disjunctivism. As an account of perceptual mistake, it must be acknowledged that it implies the mind-independency of the objects of experience and that it is essentially compatible with the demands of minimal empiricism.

4 McDowell's criticism against inferentialism

Is McDowell's theory of empirical knowledge sound, or is it just an overeager attempt to have the cake and eat it? I do not intend to put forward any answer to questions of this sort, nor my purpose in this paper is to evaluate McDowell's theory. I would be content with having presented it correctly and clearly enough in such a short space. Indeed, for the sake of the argu-

ment I will assume that it is correct and take up the challenge that it poses to the inferentialist. It's worth being clear, however, that McDowell intends to raise no challenge at all: instead, he argues explicitly against normative inferentialism. In order to properly present the paradox of inferentialism, McDowell's criticism must be rehearsed. The main points of his dissatisfaction with Brandom's approach are presented in a diptych of essays directly addressed to Brandom and conveniently collected in the volume *The Engaged Intellect: Philosophical Essays* (2009b).

One of these, *Motivating Inferentialism* (2005), is purported to show that, whatever the merits of inferentialism may be, Brandom fails to provide really convincing reasons to adopt it. McDowell's argument consists in what looks like a lethal combination of hits: (i) Brandom advertises inferentialism as the reversal of the representationalist tradition according to which designational relations have explanatory priority over inferential ones, but such a tradition is in effect a chorus of straw men; (ii) although inference might have explanatory priority over designation, it has no priority over representation; (iii) scorekeeping practices, as Brandom describes them in deontic terms, are not sufficient to ground inferential relations; (iv) the authors, like Sellars and Frege, to whom Brandom ascribes inferentialist theses in the attempt to retrace an alternative inferentialist tradition in the history of philosophy, do not really maintain them; (v) although logical vocabularies make explicit the inferential properties of linguistic expressions as contents in the space of reasons, these properties depend on expressions having semantic content beforehand; (vi) Brandom fails to cash out the alleged virtues of inferentialism into a substantial semantic account of a whole language in inferentialist terms.

The climactic series (i)–(iii) is particularly illuminating with respect to McDowell's view on inferentialism. He begins by highlighting a problematic argumentative strategy on Brandom's part. Brandom presents the contrast between representationalism and inferentialism as consisting in the choice of their primitive semantic notion: representationalists take designation as a primitive and try to explain inference in terms of it, inferentialists to the contrary take inference as a primitive and try to explain designation in terms of it. Yet, he argues, the inferentialist approach is more promising. On the one hand, as Ryle, Wittgenstein and Sellars have noticed (among many others), a semantics based on the name-bearer relation makes it mysterious that linguistic expressions may have meanings. On the other hand, a pragmatic story could be told about how the notion of inference is grounded in a deontic analysis of social discursive practices. Therefore, Brandom contends, inferentialism is worth at least giving a chance. McDowell proceeds to demolish this reasoning. He (i) insists that the idea that the name-bearer relation is to be taken as a primitive in semantics is in no sense representative of representationalism. This may sound weird: after all designation, as it is realized in the function of interpretation, *is* a primitive in model theory and model-theoretic semantics *is* a representationalist theory, and of course it *is* the standard approach in semantic theory. Still, what is required for Brandom's argument to hit the target is that the relation of designation characterize the theoretical core of representationalism rather than the technical core of model-theory. In other words, the question is whether any representationalist would agree that what it is for any linguistic expression to have meaning is to be the name of something. And this, of course, is different from saying that the meaning of any linguistic expression can be theoretically represented by something for which it stands for in a model. Representationalists, McDowell claims, just purport to explain how expressions are meaningful in terms of a notion of representation. That in effect is what model-theoretic seman-

tics tries to capture in terms of the formalization of a correspondentistic notion of *truth*. So even if designational relations could be defined in terms of inferential ones, that would be no reason to favor inferentialism over representationalism.

But maybe the notion of representation itself could be defined in term of inference. McDowell (ii) denies that. What McDowell has in mind as a paradigm of a use of expressions with representational purport is judging: «representing that things are thus and so in the way one does when one asserts that things are thus and so» (*ibid.*, p. 114). He concedes for the argument's sake that Brandom might be right in maintaining that representational locutions, like 'that'-clauses, could be introduced as explicating devices in a discursive practices in which speakers already master inferential relations. Yet he points out that those representational locutions are not the same things as judgments, if only because they can't be used by themselves to make a judgment, an assertion, a language move. Besides, according to Brandom himself, asserting and inferring are not intelligible the one apart from the other.

This simply cuts the whole point about the choice of semantic primitives loose. In a sense, however, it enhances the role of Brandom's normative pragmatics, which is purported to explain how inferential relations are grounded in discursive practices: if Brandom were successful with that, he would in effect secure, both from an inferentialist and from a representationalist point of view, the connection between semantic significance and pragmatic significance that is encapsulated in his slogan "semantics must answer pragmatics". McDowell himself recognizes that:

Perhaps the more we should extract from Brandom's acknowledgment that inferring is not prior to asserting is that "inferentialism" is, after all, not a good label for the position he means to recommend. What he really wants us to see as a primitive is the idea of a deontic structure of commitments and entitlements with rationality consequential relations between them (*ibid.*, p. 115).

In effect, his criticism of Brandom's approach in this paper mainly hinges on this point (iii)—subsequent points (iv)–(vi) being essentially corollaries and collateral remarks. It is also worth remarking that, in this sense, the criticism doesn't really addresses inferentialism as a semantic theory *per se*, but the possibility to satisfactorily account for conceptual content in the socio-deontic terms on which Brandom bases his normative approach to inferentialism. So, the question is whether the "deontic structure of commitments and entitlements with rationality consequential relations between them" that Brandom describes essentially involves conceptual contents. McDowell denies that. He contends that a practice whose characterization is exhausted by such a deontic structure may well be just a game, in which moves are normatively determined and still devoid of content. Brandom's own response against this proposition consists in rehearsing his expressivist project in *Making it Explicit* and compiling the list of the expressions whose role he managed to reconstruct in the second part of the book as making explicit features of the discursive practices that he analyzes in the first part: logical connectives, normative vocabulary, semantic vocabulary, singular terms and predicates, etc. Brandom's view is that since no one doubts that these expressions have conceptual content and they are shown in *Making it Explicit* to express features of normative discursive practices (which McDowell acknowledges), then the idea that these practices do not involve conceptual contents must be wrong (Brandom, 2008b). This however doesn't sound like a satisfactory answer to McDowell's concern. In fact it might be insisted that the reason why the

linguistic expression that are shown to express features of the discursive practices have conceptual contents is because discursive practices do involve conceptual contents, except Brandom's socio-deontic characterization is not sufficient to provide them with it.

My impression is that in his answer Brandom is intentionally refusing to acknowledge the difference between his and McDowell's notion of conceptual content. In fact, while they both endorse Sellars's normative characterization of conceptual content as what is trafficked in the space of reasons, they differ in the interpretation of his functionalism. To the contrary of Brandom, McDowell believes that a purely functional definition of conceptual content falls short of providing a characterization of its being about how things are in the world. This is why he says that in Brandom's socio-deontic practices it may be not the case «that the behavior has meaning, except in the sense in which, say, chess moves have meaning» (McDowell, 2005, p. 115). In fact, in McDowell's view chess moves have no meaning because they are not related to the extra-chess world.

It's worth recalling here Sellars's non-relational analysis of meaning statements like "... means ..." or "... stands for ...". In the standard Tarskian account these are metalinguistic statements of relations between an expression in the object language on the left-hand side and the object referred to by the metalinguistic expression on the right-hand side. Sellars construes instead what stands on the right as the peculiar use of a linguistic expression as an illustrative sample exhibiting the role that the sampled sort of expressions play in the metalanguage. He typographically singles out such a use by employing dot-quotes: thus, for instance "•cat•" is interpreted as a distributive singular term referring to the expressions that in any given language play the role that "cat" plays in English. The role an expression plays in a language can be functionally determined with respect to the relations it stands to other expressions. These relations in Brandom's normative inferentialism are established by the normative attitudes that discursive practitioners adopt towards each other's linguistic performances and can be represented in terms of inferential relations. In this sense, "«gatto» stands for cat" is to be analyzed as saying that "gatto", in Italian, plays the same role "cat" plays in English. In this sense, again, semantic statements are not relational statements at all: they do not relate expressions to things in the world. To the contrary, they are specialized copular statements, signaling practical properties of use of expressions: thus, for instance, that "gatto" is a •cat•. Of course in this sense, chess moves *do* have meaning: the very same sort of meaning that language moves have.

In the third of his *Woodbridge Lectures, Intentionality as a Relation*, McDowell directly tackles this Sellarsian non-relational reading of semantic analysis:

How can a statement that relates an expression only to another expression serve to determine an intentional character associated with the first expression, a role it plays in enabling linguistic acts it occurs in to be determinately directed towards elements in the extra-linguistic reality? (McDowell, 1998a, p. 478)

McDowell can't accept a non-relational analysis of intentionality: to him, it would be like spoiling good epistemology with bad semantics. In fact the authority of the outer world, to which conceptual contents must answer for their objectivity, is seriously at risk to get lost if contents are treated to be related only with each other. From this point of view, Sellars's transcendental and Brandom's socio-historical perspectives are just frantic strategies to put objectivity back in

the picture.

If my recollection is correct, this first part of McDowell's criticism to Brandom's semantic approach is essentially directed against his strategy to ground conceptual contents on normative discursive practices and to treat intentionality as an expressive side-product of their socio-deontic dynamics. In this sense, however, it does not amount to a rejection much of inferentialism *qua* semantic theory as of Brandom's socio-deontic analysis of conceptual content. Of course the two are deeply intertwined in Brandom's normative inferentialism, but still it is important to mark off precisely the point that McDowell addresses. Semantic analysis is concerned only to the extent that it might support (or at least suggest) wrong approaches to epistemological questions. In this sense, the problem is particularly acute in the case of observational content: here semantic analysis must be consistent with a solution to the epistemological problem of experience, which consists in explaining how we take in how things are.

5 Externalism and default entitlement

No doubt representationalism fits McDowell's account of conceptual content and his concern with the epistemological problem of experience better than inferentialism. It is important to acknowledge, however, that McDowell does not burden the representationalist semantic analysis with any explanatory task in epistemology. He does not intend the interpretation function to ground an expression's content into what it stands for in the world. That would be a rather twisted exploitation of representational semantics on his part. In model-theoretic semantics, representational relations only make explicit the content of linguistic expressions. The same applies to inferentialist semantics: inferential relations do not ground an expression's content into anything linguistic or non-linguistic, they only make explicit the content of linguistic expressions.

The reason why this point is worth remarking is that it helps to avoid a certain misunderstanding of the paradox of inferentialism we will deal with. Recall that the paradox presented by McDowell consists in the claim that the conceptual content of an observational judgement is not inferentially related to anything but itself. It would be a mistake to read this as the one horn of a dilemma that the inferentialist would be forced to face: either to recognize that inference does not play any substantial role in the semantic analysis of empirical content or to concede that empirical content may receive inferential justification from the empirical realm. Of course the latter option is just off the table for anyone who is enough aware of the pitfalls of the myth of the *given*, while the former amounts to a debacle of the inferentialist project. But the two horns of such dilemma pertain in effect to different problems about empirical content: on the one hand there's the semantic problem of defining the content of observational judgments, on the other hand there is the epistemological problem of grounding an observational judgment's content on what in the world exerts the authority on which its justification must be adjudicated. In fact, the inferentialist is in no sense committed to inference being an epistemological bridge. Just like the representationalist is not committed to representation being any such bridge.

This preamble on the distinction between semantic and epistemological problems of experience is useful as an introduction to the analysis of a second substantial part of McDowell's criticism of inferentialism, in which the risk to confuse the two planes is quite high. The theses that I want to consider are contained in McDowell's *Knowledge and the Internal Revisited* (McDowell,

2002), which is basically just a rejoinder to Brandom's comments on his original paper (Brandom, 1995; McDowell, 1995). There, he deals with the proper place of Sellars's normative characterization of knowledge along the axis of the debate between internalism and externalism. According to Sellars episodes of knowing belong to the space of reasons, in the sense that the notion of knowledge is a normative notion, the deployment of which introduces a framework in which episodes are properly treated as requiring justifications rather than empirical descriptions. But what does a justification amount to? In this regard, it is expedient to keep in mind the traditional platonic definition of knowledge as *justified true belief* (JTB). On the internalism-externalism axis just like on the coherentism-foundationalism one, the notion of the space of reasons seems to introduce a dilemma. On the one horn there's a purely internalist account of empirical knowledge in which justifications spin in the empirical void. Such sort of internalism fails to vindicate the *factivity* of knowledge: if the content p is *known*, then it must be *true*.⁴ On the other horn, a stark externalist stance according to which, for instance, the justification for one knowing that there is a pink ice cube in front of one is the empirical fact that there is a pink ice cube in front of one. Such sort of externalism seems to opt out of the very idea of the space of reasons. According to McDowell, however, the dilemma is the result of an unquestioned dualistic proclivity to internalize the space of reasons and to believe that it is in some sense autonomous and detached from the *outer* world. This approach obfuscates the commonsensical truth that «[t]he entitlement consists in the visual availability to her of the fact she would affirm in making that claim» (McDowell, 2002, p. 98). And thus it makes it mysterious how one can be entitled to justify one's perceptual knowledge that there is a pink ice cube in front of one by claiming "I see that there is a pink ice cube in front of me".

When confronted with this picture, on his part, Brandom tries to supply an externalist alternative to the internalization of the space of reasons by mobilizing his social account of discursive practices:

[C]ognitive locutions such as "knows", which include both factive and warrantive dimensions, can all be understood as standings in a socially articulated space of reasons: standings that incorporate what are with respect to *individual* knowers internal and external epistemic considerations in the form of the distinct *social* perspectives of attributing and undertaking commitments. (Brandom, 1995, p. 907)

His way to cash out JTB requirements is in terms of his analysis of the speakers' normative statuses in linguistic practices. So, in his view, for S to believe that p is for S to be committed to the content that p , and for S to be justified in believing that p is for S to be entitled to the content that p . Of course the crux of the analysis concerns the truth requirement. According to Brandom, for S to believe truly that p is for S 's *interpreter* to be committed to p herself. Here is where, with the introduction of a second perspective, the social dimension comes directly to the fore. But it is important to acknowledge that the whole analysis is essentially social: the score of commitments and entitlements that constitute deontic statuses is reciprocally kept by discursive practitioners. So to sum up, according to Brandom, the content of a knowledge attribution like " S knows that p " on the part of an interpreter of S is fully unpacked into three parts: (i) the interpreter *attributes*

⁴The contrapositive is, to a certain extent, clearer a statement of the principle to grasp: nothing false can be known.

to S the commitment to p , (ii) the interpreter *attributes* to S the entitlement to p and (iii) the interpreter *acknowledges* herself the commitment to p .

McDowell (2002) protests against this deployment of social perspectives in order to characterize epistemic entitlement. First, in his view, Brandom's attempt to fulfill the JTB requirements through the interplay between a knower and an interpreter shares just the internalizing proclivity that he criticized in the first place, to the extent that Brandom doesn't conceive the knower's entitlement (ii) to be sufficient to guarantee truth (iii) and advocates for the necessity of a mediating element, provided by the interpreter's commitment, that is not at the knower's disposal. Second, on Brandom's analysis entitlement (ii) is also externalized on the social framework, in the sense that it is attributed to the knower by a scorekeeper. This, as Brandom puts it, allows for the possibility of being justified while not being able to justify. As we have seen in Section 2, Brandom explicitly admits that an episode may be one of knowledge even if the knower herself is not able to draw the inferences that would justify her knowledge, provided that such inferences can be drawn by the interpreter who keeps her score.

Patently, the whole discussion gravitates around the interpretation of the notion of entitlement. While both Brandom and McDowell recognize that a knower's entitlement does not depend only on herself, they disagree about the status a knower acquires by being entitled to her beliefs. On Brandom's view entitlement is essentially perspectival (even when it is ascribed to oneself), therefore it does not guarantee *per se* the objectivity of the correctness of concept application. McDowell considers such a defeasible entitlement as no entitlement at all, just because it does not provide objective justification. The distinction between a semantic and an epistemological problem of experience, however, allows to contemplate the possibility that they might be both right. Brandom's notion of entitlement is essentially semantic: according to his pragmatic analysis of discursive practices, entitlements and commitments constitute the attitude-dependent normative statuses that are established by discursive practitioners and that define the pragmatic content of the linguistic expressions they deploy. McDowell's notion of entitlement is thoroughly epistemic: it characterizes the status of being justified in entertaining empirical knowledge.⁵ Let me try to shed some light on the point by means of an example.

Let us consider a certain John (maybe a necktie seller) who is at the shooting range shooting clay pigeons. For the sake of the example let's consider "to shoot" as a resultative verb, just like "to see": in an episode of shooting something is shot down. Now, suppose also that John is quite good at shooting clay pigeons, and yet sometimes he fails. When he misses the clay pigeon, his shooting capacities fail, they are not actualized: the clay pigeon is not shot down. In Sellars's deceptive jargon, in that case the shooting would be just an *ostensible* shooting. In fact, there is no shooting at all. Similarly, McDowell's disjunctivism suggests that a case of mere ostensible seeing is no seeing at all, in the sense that the conceptual capacities that would be actualized in an episode of seeing to return empirical knowledge of what is seen are not in fact actualized *in the same way* in a case of perceptual mistake.

Let us suppose now that John is back at the shooting range on a windy day. Unbeknownst to

⁵Of course there is no misunderstanding on this point on these authors' part: they know what they are doing just too well. Brandom is pushing the idea that epistemological problems have a "soft underbelly" to be accounted for (cp. Brandom, 2002a, p. 23). In fact, his story about the objectivity of conceptual content has to be found not in his two-ply account of observational reports, but in his analysis of German idealism. McDowell instead, in his debate with Brandom, is trying precisely not to be enrolled in his Hegelian ranks (cp. McDowell, 2002, 98).

him the range operator substitutes clay pigeons with real ones, which however happen to fly just on the same trajectory of the clays. Then, when John performs his shooting, he shoots down the poor animals. How can he do that? Is his ability to shoot clay pigeons the same as his ability to shoot real ones, just like his ability to shoot green clay pigeons is the same as his ability to shoot orange ones? Let now the cruel man be caught and get what he deserves. Clay pigeons are put back in their places and John goes for his shootings again. He now misses almost every time. Let us suppose that in fact clay pigeons, as opposed to real ones, fly with a certain spin which interacts in certain ways with the wind, thus producing certain modifications in their trajectories. John doesn't know how to deal with that and he misses clay pigeons in windy conditions. In a sense, it would be correct to say that John doesn't really have the capacity to shoot clay pigeons. Which capacity does he have then? ⁶

Again, this is not a ballistic (or, *mutatis mutandis*, an epistemological) problem, but a semantic one. It is not a problem that McDowell doesn't see, but it is one that he is not really concerned with. As he makes clear in plenty of occasions, he is committed to the idea that the possession of conceptual capacities is acquired by being taught to take part in the social practices in which those capacities are exerted and concepts applied (cp. McDowell, 2002, pp. 104–105). He just doesn't see how this could provide any answer to the epistemological problem of experience he is concerned with.⁷ Still, the problem of the determination of conceptual contents is an interesting one. As far as concept-use is concerned, representationalism tends to harmonize with the Carnapian two-step analysis famously criticized by Quine: first concepts are grasped and then they are applied. In such a picture the problem of how conceptual contents are determined is clearly distinguished from the problem of whether they are applied correctly. To the contrary, inferentialism, at least in Brandom's normative version, runs together the processes of determination and application of conceptual contents. The latter are established by the normative attitudes that discursive practitioners take towards each other with respect to their moves. Of course, semantic analysis is to be understood as representing the conditions for the correct application of conceptual contents. This must be true for both representationalism and inferentialism. Yet, in normative inferentialism, since conceptual contents are attitude-dependent, one's entitlement to the application of a conceptual content is intrinsically defeasible. Moreover, since conceptual contents are represented in functional terms as roles in the web of inferential relations that express the normative relations established by discursive practitioners, there is a clear way to account for such a defeasibility directly on the semantic plan in terms of defeasible inferences.

⁶Of course it's easy to adapt the example to the case of empirical knowledge. In fact, Sellars's original example of the tie shop in section III of *Empiricism and the Philosophy of Mind* would do the job just as well. The reason why I didn't pick an epistemic example in the first place is because it might have suggested that this point should count somehow against McDowell's theory of experience. It does not. In the case of shooting clay pigeons there are some capacities that are actualized and many others that are not. An episode of shooting clay pigeons in which a clay pigeon is not shot down is not, in fact, an episode of shooting clay pigeons, just like an episode of seeing a pink ice cube in which a pink ice cube is not taken in in perceptual experience is not an episode of seeing. Hence, there is no question that John can justify the fact that he shot down a clay pidgeon by claiming that "I shot a clay pigeon". The point of the example is rather to raise a different sort of question, a question about the determination of the episode's content.

⁷The failure to distinguish between these two sorts of problems may engender the misunderstanding that the debate between Brandom and McDowell on experience is to be construed as hinging on the distinction between a social and an individualistic approach. In effect, Brandom explicitly charges McDowell of individualism (Brandom, 1995, pp. 904–908). But again his concern is mostly semantic, along the lines of Wittgenstein's objection to the idea of a private language: he accuses McDowell of individualizing the space of reasons and transforming it into something private, impervious to the normative analysis of conceptual content that he endorses. McDowell, on his part, is concerned instead with the epistemological entitlement of a concept user to empirical knowledge.

6 A few logical remarks on defeasibility

As we have seen, in McDowell's view the justificatory role of an observational report can only be played by the fact it reports. But the justification a fact provides is not of the inferential sort. The content of an observational report is inferentially related to nothing: the only sense in which inferential relations could come into play in this picture is by connecting the content with itself. Let's now assume for the sake of the argument that McDowell's account of empirical content is correct. That implies that Brandom's two-ply account has to be rejected as a rival epistemological explanation. However, this is actually a relatively cheap move from an inferentialist perspective, since McDowell's theory is not really much committing on the semantic side. Let us now look back at the paradox of inferentialism pinpointed by McDowell from the point of view of the semantic problem of experience. Recall that the paradox amounts to the remark that the only content in virtue of which an observational judgment has its standing in the space of reason is the content of the judgment itself, so that the only inference involved in its determination would be:

$p, \text{ therefore } p$

To begin with, I would say that rather than a "stuttering" form of inference, this is a quite respectable instance of the *identity axiom*. No matter how trivial it might sound, in many calculi this is necessary to define the deducibility relation that is intended to be formalized. Let us ask however how trivial it actually is from the inferentialist perspective.

In effect, logicians know that in the neighborhood of the identity axiom lies another sort of paradoxes. These affect the classical formalization of the conditionals in terms of *material implication*. A formula whose principal connective is a material implication, $\phi \rightarrow \psi$, is true for any combination of the truth values of the component formulas, ϕ and ψ , except in the case in which the antecedent is true and the consequent is false. Of course, this semantic definition of the implication connective validates the identity axiom, but it also validates more controversial formulas, as for example $\phi \rightarrow \psi \rightarrow \phi$ or $\psi \rightarrow \phi \rightarrow \phi$. The reason why some logicians view these as problematic is that they don't seem to express any interesting relation of entailment between the premisses and the conclusions.⁸ To accept them is to accept the following arguments, for instance, as valid:

If there is a pink ice cube in front of one, then if McDowell is the author of *Making it Explicit* then there is a pink ice cube in front of one.

If Brandom lives in Pisa, then if there is a pink ice cube in front of one then there is a pink ice cube in front of one.

These formulas are known as "paradoxes of material implication", and the problem they raise is quite distinct from the paradox of inferentialism that we are considering. Nonetheless there are some interesting relations between them that can be highlighted by looking at how the paradoxes of material implication are generated from a proof-theoretical point of view.

It is common for a proof system to have a deduction theorem that relates its deduction relation with a connective of implication. Thus, let a proof system \mathbf{P} be a couple $\langle Fm, \vdash \rangle$, where Fm is a set

⁸As it is well known, this approach to the analysis of implication and entailment was pioneered by C.I. Lewis and led to the modern systems of modal logics. Later, the same vein has been exploited to develop relevant logics. For a *locus classicus* of the discussion on the paradoxes of implication see (Anderson and Belnap, 1975), in particular §1.1 and §5.1.

of well formed formulas of a given language \mathcal{L} (containing a connective “ \rightarrow ”) and $\vdash \subseteq Fm \times Fm$ a relation on Fm . Let also Γ, Δ be sets of formulas in Fm , and ϕ, ψ, χ be formulas in Fm . Then the deduction theorem for \mathbf{P} can be expressed as follows:

Deduction Theorem. $\Gamma, \phi \vdash \psi$ iff $\Gamma \vdash \phi \rightarrow \psi$

The deduction theorem essentially states that relations of deduction among formulas in Fm can be made explicit as implicative formulas. And *viceversa*.

Classical proof systems also have another interesting property that characterizes monotonic reasoning:

Monotonicity. If $\Gamma \vdash \phi$ and $\Gamma \subseteq \Delta$, then $\Delta \vdash \phi$

Monotonicity states that if a relation of deduction is valid, the addition of extra premisses does not invalidate it.

Clearly, these properties together with the identity axiom generate the paradoxes of implication:

- (1) $\vdash \phi \rightarrow \phi$ Ax.
- (2) $\phi \vdash \phi$ 1, Ded. Th.
- (3) $\psi, \phi \vdash \phi$ 2, Mon.
- (4) $\phi \vdash \psi \rightarrow \phi$ 3, Ded. Th.
- (5) $\vdash \phi \rightarrow \psi \rightarrow \phi$ 4, Ded. Th.

Similarly, for $\psi \rightarrow \phi \rightarrow \phi$ by applying commutativity in the premisses of the deduction relation.

Among the ingredients blent together here, the most obvious suspect for spoiling the recipe is monotonicity. In effect, with the exception of certain highly specialized fields like mathematics, monotonic reasoning is anything but evidently sound. Our everyday reasoning is essentially non-monotonic: adding premisses does make a huge difference as for the validity of an inference. Just to stick to our examples, consider:

If John shoots a clay pigeon, then a clay pigeon is shot down.

If John shoots a clay pigeon on a windy day, then a clay pigeon is shot down.

Nothing seems to guarantee that if the first inference is valid, then the second one must be valid too. To the contrary, our previous example just shows a case in which the former is valid and the latter fails. In order to cope with these intuitions, proof systems have been developed that lack the property of monotonicity.⁹

There is however another less noticeable responsible for the derivation of the paradoxes of implication from the axiom of identity. In effect, it is somehow hidden in the deduction theorem

⁹Non-monotonic logics are a wide and varied family, for failure of monotonicity can be obtained in a number of ways. Relevant logics for instance are *in a sense* non-monotonic since they reject the rule of weakening (or thinning): $\Gamma \vdash \Delta \Rightarrow \phi, \Gamma \vdash \Delta$. This is known as a structural rule of Gentzen’s sequent calculus for classical logic **LK** and intuitionistic logic **LJ**. Systems that reject any of the structural rules are known as *substructural* logics. In this sense relevant logics can be construed as substructural logics. There are other substructural logics that reject weakening, like linear logic or Lambek calculus. These are non-monotonic in the same sense as relevance logic. For a presentation of substructural logics see (Restall, 2000). All these logics are contained in classical logic in the sense that any substructural consequence of a set of formulas is also a classical consequence, but not *viceversa*. However, non-monotonicity has been thoroughly explored also in another direction, by weakening the Tarskian properties of the classical consequence relation and obtaining relations that extend the set of consequences that can be drawn from a set of formulas beyond classically valid ones. In this sense, these non-monotonic logics are said *supraclassical*. For a comprehensive review of non-monotonic supra-classical logics see (Makinson, 2005).

and it takes some algebraic elaboration to bring it into plain view. Let $\mathfrak{A} = \langle A, \leq \rangle$ be the *Lindenbaum Algebra* determined by the set of theorems of the system \mathbf{P} . In algebraic semantics it is usual to interpret entailment in terms of the ordering relation “ \leq ”. Thus, if the deduction theorem is valid for \mathbf{P} , it is easy to show that \mathfrak{A} has the following property of residuation:¹⁰

Right Residuation. $\phi \wedge \psi \leq \chi$ iff $\psi \leq \phi \rightarrow \chi$

Residuation shows that there is an interesting relation in \mathfrak{A} between the algebraic operators that interpret conjunction and implication. In algebra, “ $\phi \rightarrow \chi$ ” is called the *right residual* of χ by ϕ : it can be thought as what remains of χ after “ \rightarrow -ing” it by ϕ .¹¹ In algebraic semantics it is common to think of implication as a right residual because this guarantees certain basic properties. In fact, it follows from *Right Residuation* that

$$\phi \wedge \phi \rightarrow \chi \leq \chi$$

The conjunction of two formulas ϕ and ψ instead is usually represented as the *greatest lower bound* of their interpretants, i.e. the greatest $x \in A$ such that $x \leq \phi$ and $x \leq \psi$. That also makes some standard properties of conjunction valid, such as:

$$\text{if } \Gamma \vdash \phi \text{ and } \Gamma \vdash \psi \text{ then } \Gamma \vdash \phi \wedge \psi$$

$$\text{if } \Gamma \vdash \phi \wedge \psi \text{ then } \Gamma \vdash \phi \text{ and } \Gamma \vdash \psi$$

Let us ask now what would happen if the operator right-residuated by implication does not represent conjunction. Let us suppose in other words that there is another binary logical operator that binds premises together and that is related to implication in the way residuation laws prescribe, but doesn’t behave like conjunction.¹² Let us call it *fusion* and let us denote it by “ \circ ”. So, conjunction and fusion are two ways to take contents together and are differently related with implication and inferential relations:¹³ from an inferentialist point of view this means that they make explicit two different ways to define inferential roles and thus ultimately conceptual contents. The interaction of these two inferential perspectives may well produce defeasible inferences. A good way to see how that happens is to consider a four-valued algebraic semantics for a logic that contains such two inferential perspectives. Thus, consider the following Hasse diagram:

¹⁰In the following, members of A and the operators defined on them will be indicated with the same notation as the formulas of \mathbf{Fm} and the operators in the system \mathbf{P} that they interpret.

¹¹In the algebra of arithmetics, for instance, where conjunction is multiplication, the residual is what remains of χ after *dividing* it by ϕ : in fact, $\phi \times \psi = \chi$ iff $\psi = \chi \setminus \phi$.

¹²A similar strategy has been applied for relevant logics: see (Dunn, 1973; Mints, 1976).

¹³A right residual for conjunction might be added as well to complete the picture, but that does not really add anything relevant to the point being made here.

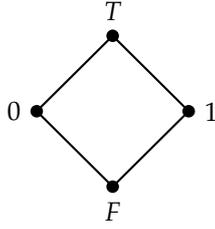


Figure 1

The algebraic structure pictured in Figure 1 is a bilattice \mathfrak{B} .¹⁴ A bilattice can be seen as a doubly partially ordered set, thus $\mathfrak{B} = \langle B, \leq_1, \leq_2 \rangle$. In this sense, \mathfrak{B} can be read as follows: nodes are ordered from bottom to top according to \leq_1 and from left to right according to \leq_2 . Intuitively, a bilattice-based algebraic semantics is just suitable to represent a logic in which two inferential perspectives interact. Let us consider \mathfrak{B} as representing the algebra of a four valued semantics for such a logic. Let \leq_1 represent the inferential perspective determined by conjunction, and \leq_2 the inferential perspective determined by fusion: in more formal terms, given that \mathfrak{B} is a bilattice, for any $x, y \in B$ let

$$x \leq_1 y \text{ iff } x \wedge y = x$$

$$x \leq_2 y \text{ iff } x \circ y = x$$

Let the algebraic equivalent of conjunction and fusion be both greatest lower bounds with respect to their order. Thus, for example, $0 \wedge 1 = F$ and $T \circ F = 0$. That is easy to read off from Figure 1.

This algebraic semantics allows to see what happens when reasoning is performed while two inferential perspectives interact. Let us define again, standardly, entailment in terms of the ordering relation \leq_1 , and let us consider, for instance, just the paradoxes of material material implication. Recall that the problematic steps are (i) the move from $\phi \vdash \phi$ to $\psi, \phi \vdash \phi$ and then (ii) the move to $\phi \vdash \psi \rightarrow \phi$. First consider move (ii). For it to be valid in the present semantics the coma that takes premises together on the left of the turnstile can't be interpreted in terms of conjunction. In fact we have stipulated that implication is the right residual of fusion. But then move (i) turns out to be problematic. In fact, while $\phi \wedge \psi \leq_1 \phi$ is always valid, $\phi \circ \psi \leq_1 \phi$ could fail. For a counterexample just consider the case in which ϕ is F and ψ is T : then $\phi \circ \psi$ is 0 , and 0 is greater than F .

At this point it is worth pausing to sum up the line of thought pursued in this section. These brief remarks are intended to suggest that if the notion of defeasible entitlement is considered from a logical point of view, it unveils a number of deep and interesting questions about the structure of the inferential relations that are involved in defeasible reasoning. A paradigmatic example of this sort of reasoning is just empirical reasoning. In this sense, the paradoxical ring resonating around McDowell's analysis of the inferentialist account of the content of observational judgments is illusory. In fact, even an apparently trivial principle like the identity axiom may have profound consequences in the inferential behavior of the different systems to which it may belong. These consequences are of the utmost importance to the inferentialist, because they dramatically affect the inferential relations that are construed as defining conceptual contents.

¹⁴The study of bilattices in algebraic semantics was originally introduced by Ginsberg (1988) and later developed and systematized in (Fitting, 1990; Avron, 1996).

In particular, the role of non-monotonicity has to be reconsidered when a semantic approach is adopted.

7 Defeasibility and the articulation of conceptual content

Non-monotonic inferences are clearly defeasible, but there are several ways to construe their defeasibility. In an epistemological sense, defeasibility is usually explained in terms of partial information. Thus, non-monotonic inferences are construed as representing reasoning from a somehow epistemically defective knowledge base, so that the addition of new information may not only allow for new inferences to be drawn, but also invalidate inferences drawn before. The inferentialist, however, may also read defeasibility in a semantic sense. If contents are defined as inferential roles then defeasible inferences determine contents that vary dynamically by interacting with other contents in different contexts. It is important to acknowledge that in this reading what varies is not the definition of conceptual contents, but the contents themselves. From a technical point of view, the main difference between the epistemological and the semantic interpretation concerns the account of the defeased inference. Notice that, for an inference to be defeased, it must have been valid in some context. So, for instance, the inference “If John shoots a clay pigeon, a clay pigeon is shot down” is valid in the context in which it is originally drawn. Such a context does not include the content that results from the combination of the content “John shoots a clay pigeon” and the content “it’s a windy day”. In fact a context that contains such a combination invalidates the inference. Of course there are a lot of ways in which these intuitive notions of context and combination of contents can be formalized, but in general an inference can be said to be defeasible in this sense if it is valid in some but not in every context. An inference being defeased in a given context does not tell against the validity of the inference in other contexts.

Things change if contexts are organized into some preferential order. Then, if an inference is defeased in a *better* context we tend to look at it as somehow defective. That is exactly what happens in the epistemological interpretation of defeasibility, in which contexts are ordered according to the amount of information that is available in each of them. In such framework, it is reasonable to point out, along with McDowell, that if an inference can be defeased in a better epistemic context then it is not *really* valid after all. Let us consider a classical epistemic example. Thus, let us suppose that John sees a lit candle in front of himself in a dark room and reports “there is a lit candle in front of me”. Suppose however that, unbeknownst to him, he is facing a mirror reflecting the light of a candle that is positioned behind his back where he can’t see it. Suppose also that Mary knows of the mirror. Is John entitled, in his perspective, to the claim that there is a lit candle in front of him? And is he entitled to it, in Mary’s perspective? Clearly, one is willing to say that John only *believes* to be entitled while he actually is not. This is because Mary’s perspective is *epistemically* privileged. Among other things, that also means that if John were in Mary’s perspective he would not endorse his report himself. There is nothing wrong with this analysis. The point, however, is that it is not obvious at all how contexts should be ordered on a semantic interpretation of defeasible inferences.

Indeed there are two senses in which inferential relations can be construed as defeasible from an inferentialist point of view. They correspond to the two ways in which the generation of the

paradoxes of implication can be blocked that have been pointed out in Section 6. First, it could be argued that the inferential relations that define certain conceptual contents are intrinsically defeasible. This is all but a preposterous idea. Empirical concepts, as they have been molded by the rise of modern science, just provide a paradigmatic example. These concepts are embedded in a network of nomological relations whose validity essentially involves a number of potential defeasors. Thus Galileo, for instance, came to define the law that describes the behavior of fallen objects in gravity fields just by abstracting from potential defeasors like friction. In general, which potential defeasors are *relevant* to the validity of nomological inferences depends on the context in which the concept that they define is applied. Brandom's analysis of observational reports can be read as hinging just on this idea. In fact, part of the inferential content of the empirical concepts that are applied in an observational judgment deals with the reliability inferences that allow to infer the truth of the report from the reporter's dispositions to differentially respond to certain stimuli with certain pieces of linguistic behavior. So John, in the example here above, reacts to a certain stimulation of his retina by uttering "there is a lit candle in front of me", and, from the fact that he is a reliable observer of lit candles, draws the conclusion that there is in effect a lit candle in front of him. Such reliability inferences are defeasible: the reporter could be in anomalous perceptual conditions, she could be deceived, disabled, drugged, etc. Yet, such defeasible inferences define the content of the empirical concept applied in the reporter's judgment. In this sense, as far as the determination of which concept is applied in the report, it doesn't matter whom the reliability inference is performed by, whether by John or by Mary (Brandom, 2008a, pp. 102ff).¹⁵

A second sense in which the inferential relations that define conceptual contents can be construed as defeasible in the framework of Brandom's normative inferentialism deals with the interaction between the different perspectives of the discursive practitioners who keep each other's deontic score of commitments and entitlements. Brandom's normative analysis of discursive practices is perspectival through and through: each practitioner keeps the score of her peers in the context of her additional commitments. And of course there is no privileged perspective, so that the inferential relations that the scorekeepers' deontic attitudes establish are defeasible to the extent at which they can be considered from another deontic perspective. This means that the determination of conceptual contents is defeasible as well. In fact, Brandom sees the determination of conceptual contents, in Hegelian terms, as a process unfolding along the history of linguistic communities constructed by speakers who reciprocally recognize the responsibility towards each other's authority as concept users (Brandom, 2011). In this second sense, defeasibility does not intrinsically characterize the inferential relations that define the content of certain concepts. There are no *ceteris paribus* conditions implicit in the validity of the inferences essentially involving these concepts. It does not even directly deal with the correctness of concept application, as in the epistemological interpretation. There are no privileged contexts in which certain concept applications are discovered to be mistaken. Rather, here defeasibility results from the attempt of drawing inferences as from different perspectives. In order to understand what this means, consider again the example of John and Mary and think about what happens if John is not willing to recognize Mary's authority over his application of the concept "lit candle". Suppose, in other

¹⁵Of course this analysis belongs to a semantic account of the content of the empirical concepts that are applied in observational judgments. Brandom's theory of experience also contains the additional claim that the epistemological problems of observational judgments are essentially semantic ones. By accepting McDowell's analysis for the sake of the argument, the latter claim has been bracketed to focus on the inferentialist approach proper.

words, that he would not discard his report if he were in Mary's perspective. What is put into question, in this case, is neither whether potential defeasors of the inferences that define the contents of the concepts that John applies are relevant in the given context, nor whether John applies empirical concepts correctly, but whether he and Mary do apply the same concepts: in fact they are evidently defined by different inferential relations and their inferential role is different. This is why the inferences that characterize the content of John's concepts turn out to be defeasible once they are drawn in Mary's perspective. In this framework, to recognize the responsibility to each other's authority over concept application is part and parcel with the determination of conceptual content itself.

8 Conclusion

It is important to have a clear head on the scope of inferentialism while approaching the analysis of empirical contents from an inferentialist point of view. My purpose in this paper was to identify some of the landmarks and draw some of the distinctions that may help characterizing such a scope. In particular, I tried to show why McDowell's inferentialist rephrasing of his own theory of empirical knowledge may seem paradoxical when epistemological questions and semantic questions are run together. On the other hand, I also tried to show that the representation of different sorts of inferential relations and of the interaction of conceptual contents with different inferential perspectives is within the proper scope of inferentialism. And that is not an easy task to accomplish.

If there's a lesson to be drawn from the Brandom-McDowell debate on observation, I think it is the following: while the epistemological problem of experience might well be better exorcised away, the semantical problem of experience is as much as intriguing and it is still there to be solved.

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