WHAT IS AN EPISTEMIC PERSPECTIVE?

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ABSTRACT: In this paper I examine the opposed approaches to perspectivity found in A. W. Moore’s representationalist and Robert Brandom’s inferentialist approaches to mental content, and argue that despite their opposition, they share an underlying rejection of Kant’s distinction between intuitive and conceptual forms of representation. Then, drawing on Ronald Giere’s “model-theoretic” approach to science, I argue that something like the distinction between intuitive and conceptual representational genres should be reinstated, and that this move allows the nature and limits of the perspectival metaphor to be more clearly appreciated.

The terms “perspective,” “point of view” or “viewpoint,” “standpoint,” “horizon,” etc., are commonly encountered in contemporary philosophical attempts to capture something about the way that knowledge about the world might be shaped, structured, or otherwise conditioned by factors relating to the knower rather than to that which is known about. Typically, such talk appears in the context of a dispute that has in many ways dominated epistemology and philosophy of science for the past two or three decades, the dispute between forms of perspectival anti-realism or relativism and their “realist” opponents. But despite the ubiquity of these terms, relatively little attention has been paid to these notions themselves. Such attention might, at least, shed light on exactly what is at issue in these disputes.

The perspectival trope can be traced back at least as far as Leibniz’s “point de vue,”1 but Kant and his idealist and romantic successors, among whom we can count Nietzsche, probably provide the classical sources of this type of talk.2 If we take Henry Allison’s approach to Kant and focus
on the role given there to the “epistemic conditions” governing the formation of coherent experience and knowledge, then the appeal of such locutions within that philosophy is not difficult to appreciate. In visual experience, perceived objects are presented within co-ordinates that are “subject-centered” in the sense of relative to the physical location of the experiencer. From one position in the room the chair will be seen to be in front of the desk, from another it will be to its left, from yet another to its right. This idea of a subject-centered reference system or set of co-ordinates then seems easily extendible to, say, something like a language or a “conceptual framework” within which objects can be discussed or thought about.

The use of such perspectival figures of speech here is so common and seemingly natural that it easy to forget the figurative nature of these terms, and in such discussions the question of the consequences of posing such epistemological questions in such ways is rarely asked. Where there is allusion to this form of speech, it is commonly assumed that it is metaphor that is being employed, but in fact this assumption depends upon a distinct theoretical presupposition. In particular, to think of the perspectival figure as metaphor is to understand such a spatial conditioning of experience forming the “vehicle” of this metaphor as in some relevant sense different to other forms of “perspectivity” in which the conceptual articulation is explicit. But if such spatio-temporal forms of the conditioning of experience were to be themselves understood as basically conceptual, then the figure of speech might be more correctly described as “synecdoche”—the substitution of part (one specific form of conceptual determination, here, the form found in determinations of spatial relations) for the whole.

This point might best be made by appealing to a framework within which the perspectivity trope does, in fact, seem to come out as straightforwardly metaphorical—that of Kant’s transcendental idealism, within which Kant makes a clear distinction between intuitive and conceptual forms of representation as belonging to what John Haugeland describes as different “representational genera.” Crucially, for Kant, spatial and temporal relations are fundamentally presented within intuitive forms of representation that, in contrast to conceptual representations, are immediate and singular. Thus, while we might describe some perspectively grasped array—the chair is to the left of the desk—in terms of general concepts (“chair,” “desk,” “... is to the left of ...”), such concepts must be understood as themselves applied to the singular, immediate contents of intuitions. And the form of such empirical intuitions, for example, the particular spatial form of this desk in front of me, must be understood as determinations of singular and global pure intuitions, in this case, the pure intuition of space.

As Kirk Dallas Wilson has pointed out, this all means that, for Kant, different, in fact, inverse, part-whole relations must hold within the realm
of intuitive representation than hold within the domain of purely con cep tual representation. Accepting Aristotelian logic, Kant thinks of con cep tual relations as containment relations—one concept contains another in the way that the concept “mullet” contains the concept “fish.” But this means that containment relations among conceptual contents (intensions) are the reverse of those which hold among the extensions of those con cepts—the set of all mullets is contained within, is a subset of, the set of all fish. In contrast, Kant seems to think of the intuitive form of repre sentation of space (and time) as like that found in a map, where the re la tions among the parts of the representation are typically isomorphic with the relations among the parts of that which is represented in the map.

It might be thought, then, that these structural differences between intuitive and conceptual forms of representation are relevant to understanding the limits of the perspective trope. For Kant, in being projected onto the realm of the conceptual, the figure of a perspective would seem to be projected into a realm whose structure is quite different, in fact the inverse, from the one in which it received its fundamental meaning. In contemporary discussions, the perspective trope is generally used in a way that suggests that the more general (less perspectival) representation will be seen as “containing” the less general (more perspectival), but perhaps this is not an appropriate way to proceed in all cases of “perspec tival” phenomena.

The history of philosophy has not, of course, been kind to Kant’s basic distinction between intuitions and concepts. The distinction was criticized in various ways by his immediate idealist successors such as Fichte and Hegel, by neo-Kantians of the later nineteenth century, and by early ana lytic philosophers like Russell at the turn of the twentieth century. Within analytic philosophy, Russell’s criticism has largely stood: the need for an intuitive form of representation distinct from the conceptual has been seen as undermined by developments in mathematics and logic in the late nine teenth century. Limited as he was to Aristotelian logic and Euclidean geometry, Kant had no way of logically representing the divisibility or the singularity of space, for example. For this task he would have re quired the resources of polyadic predication and quantification theory. This meant that for Kant, a priori geometrical truths could not be ana lytic, and so the idea of a distinct intuitive form of representation was brought in to allow these truths to retain their a prioricity while still being synthetic. Moreover, this move accounted for what Kant took to be the essential role of diagrams in geometric proofs. On our side of Frege’s revolution in logic and Hilbert’s axiomatization of geometry, however, Kant’s justification of the idea of “pure intuition” does not seem so pressing. But even in the case of Kant’s own philosophy, any clear distinction between intuitive and conceptual levels of representation seemed hard to sustain. The content of an empirical intuition was supposed to be thought
of as an indeterminate “etwas” or “something,” but it is hard to maintain this notion of any kind of separate “thing” that appears in intuition in a way that does not involve at least the concept “thing,” and, in turn, the categories or “pure concepts of the understanding.”

What, then, of the use of this array of perspectival terms in a context which has eschewed any commitment to Kantian intuition? In the following two sections I examine two recent philosophical approaches to “perspectival” phenomena that, while adopting different strategies and arriving at different conclusions, nevertheless seem to share the underlying assumption that the “perspective” idea can be applied to the realm of conceptual determination in a relatively unproblematic way. In his book, Points of View, A. W. Moore takes the “literal” model of visual perspectival as manifesting a type of implicit conceptual structure and then uses this model as the basis on which quite different types of conceptual “perspectivity” might be understood. In contrast, in his books, Making It Explicit and Articulating Reasons, Robert Brandom largely abandons the model of visual experience for a pragmatist conception of perspective rooted in a model of linguistically communicative behavior. While the starting point of each pulls each in opposed epistemological and metaphysical directions, both, nevertheless, share the modern presupposition of disregarding the possibility of a non-conceptual vehicle for the perspectival trope. In the third section, however, I question this presupposition and appeal to an analysis of perspectivity based on what I take to be a retrieved version of the Kantian distinction between intuitive and conceptual forms of representation. This is found in the “perspectival realism” of philosopher of science Ronald Giere, who presents a model-theoretic approach to science as a third way between the extremes of perspectival relativism and objectivist realism. Giere’s approach to science, with its roots in the model-theoretic tradition in logic, adds to a mounting body of evidence that the standard twentieth-century dismissal of Kantian “intuition” has been premature. With the Kantian distinction, or something like it, reinstated, a much clearer sense might be given to exactly what is at issue in claims as to the “perspectivity” of knowledge.

I. MOORE’S GENERALIZATION OF LOCATION-DEPENDENCE

In Points of View, A. W. Moore introduces his key idea of a “point of view” by first considering the ways in which the spatial location from which a judgment is made can affect its content. If one person says, “It is snowing,” and another says, “It has stopped snowing,” it may be that there is no conflict involved simply because each speaker is located in a different place. That is, for each speaker, what they say is true there. “This unremarkable fact,” he tells us “illustrates the way in which the content of a true judgment can depend quite literally on its location.” But this idea
of location can be extended. For example, the apparently conflicting utterances, “This box is light enough to lift,” and, “This box is too heavy to lift,” can be thought of as, in a way, analogous to that involved in the case of the different spatially located claims about the weather, as involving no actual conflict. Both claims can be true if it is the case that they are uttered by individuals with relevantly different physical capacities. But while truth can be accommodated within a specific “location” in this way, objectivity cannot be. The utterance, “This box is light enough to lift,” said by a particular person, may be true, but, like the sentence, “It is raining here,” it is not objectively true.13

By pursuing this extended sense of location (an extension that Moore describes as “metaphorical,”14 but that, on my account, is actually synecdochal) Moore is led to the use of “point of view” as a generic term meant to account for the variety of forms of “location” dependence capable of compromising the objectivity of a judgment but not its capacity for truth:

By a point of view I shall mean a location in the broadest possible sense. Hence points of view include points in space, points in time, frames of reference, historical and cultural contexts, different roles in personal relationships, points of involvement of other kinds, and the sensory apparatuses of different species.15

Thus, we can think of a “frame of reference,” that of Newtonian in contrast to relativistic physics, say, or of a range of possible color concepts restricted by the physiology of human color vision, or of some culturally specific pattern of aesthetic concepts, all as “locations” in this extended sense, and all contributing their distinctive points of view to the judgments made from within them. The common element here is that all are locations from which representations are produced, representations that are perspectival rather than absolute.

What then is a representation? Moore tells us that a representation is “anything which has content—that things are thus and so—and which, because of its content, is true or false.”16 Thus: “Whenever we think about how things are, or say how they are, or reveal that we take them to be a certain way, whether we do so verbally, pictorially, inwardly to ourselves, or simply through the way in which we behave, then we can be said to have produced a representation.” While admitting that there is “a major philosophical difficulty, or family of difficulties, about what counts as a representation,” Moore adds that he “shall simply bypass these difficulties,” and “take the idea of a representation as given.”17

In short, Moore’s approach to the idea of perspectivity is tethered to his basic notion of representation, a notion which is in turn connected to that of truth. Representations, he tells us, “are defined to be either true or false.”18 But the truth or falsity of perspectival representations will thus
be dependent on the point of view from which they are produced, in the way that the truth or falsity of “It is snowing” is dependent on how the weather is at the location from which it is uttered.\textsuperscript{19} It is this intimate connection of the fundamental notions of representation and truth that would seem to imply that representational contents are \textit{propositional} (they represent “that things are thus and so”) and, hence, \textit{conceptual}, although Moore does not use the notion “propositional” in that way. (In Moore’s terminology, propositions just \textit{are} linguistic representations—“A proposition that \textit{is} either true or false \textit{is} a linguistic representation”\textsuperscript{20}—and not all representations, for example, those we produce “pictorially, inwardly to ourselves, or simply through the way in which we behave,” rather than verbally, are linguistic.) Thus, in line with the general twentieth-century turn against Kant’s idea of “intuition,” Moore’s basic thought seems to be to take all representations as, in some sense, conceptual. But if non-verbal representations, pictorial ones for example, are somehow \textit{implicitly} conceptual, this would suggest that their verbalization is really a matter of making explicit a structure that is already implicitly contained in them. This presupposition, concerning the intrinsically conceptual nature of all representation, finds expression in Moore’s projection of the “point of view” and “locatedness” tropes to explicitly conceptual realms.

As I have suggested, those \textit{vehicles} for Moore’s metaphor, the very notions of location-dependence and point of view, are drawn from a realm of representations that in the strictly Kantian framework are, at their basis, fundamentally \textit{non-conceptual} and \textit{non-propositional}. Consider one of Moore’s basic examples of a perspectival representation that is utilized in his attempts to define perspectivity \textit{per se}, an example that concerns an astronaut capable of reasoning about his spatial relations in an objective way.\textsuperscript{21} Being less than 50 miles from the surface of the moon, Moore’s astronaut is able to produce the representation, “The moon is less than fifty miles away.” This “space man,” however, is capable of grasping how the truth of \textit{this} perspectival spatial representation is compatible with the truth of another one, made from a different location, the location of the earth, for example, from which it might be said that “The moon is nearly a quarter of a million miles away.” This example seems to lay down the template, as it were, for what for Moore is to count as the human capacity for the (at least partial) \textit{transcending} of perspective, a capacity to move stepwise in the direction of objectivity and, ultimately, absoluteness. It is from this capacity that Moore will extrapolate the possibility of non-perspectival or “absolute” representations of reality.

As mentioned, Moore employs this example in the context of attempting to specify exactly what it is for a representation \textit{to be} perspectival. In his first attempt Moore suggests that a perspectival representation is one that could not always be endorsed by another by the production of a representation of what he calls the same “type.” (For the moment, we can
restrict ourselves to linguistic representations and take linguistic representations of the same type to consist simply of the same string of words.) It is the location dependence of representations like, “The moon is less than fifty miles away,” that means that endorsement by a differently-located person, a person on the earth, say, would require the use of different words, for example, “The astronaut is now within fifty miles of the moon.” Although this second representation has the same content as the first—they say the same thing—it is of a different “type.” Finding difficulties with this way of posing the question of perspectivity, however, Moore moves on to the idea of self-conscious endorsement. For the space man to self-consciously endorse his own subjective spatial representation he has to do so in a way that allows coherence with representations made from elsewhere. That is, self-consciousness here involves being self-conscious about the subjective perspectivity of one’s own representation. This, according to Moore, requires making explicit the implicit relativization of the utterance “The moon is less than fifty miles away” to the space man’s own location:

He may continue to think in perspectival terms: “The moon is less that fifty miles away from me.” But . . . the astronaut must supplement this with a conception of himself as one item among others, occupying a particular position in space. Eventually he must produce a representation in which the original element of perspective is superseded.22

Trying to avoid what he takes to be a problematic reference to self-consciousness, Moore finally formulates the criteria for perspectivity in a third way, although he believes that the new formulation makes much the same point as that concerning self-conscious endorsement. In this third formulation the focus has shifted to the capacity to integrate two representations into a third, “whose content is the product of theirs, in other words a representation which is true if and only if they are both true.”23

The idea of integrating two representations essentially extends the original idea of endorsement. Analogous to the way in which a perspectival representation could not always be endorsed by a representation of the same type, so too, two differently perspectival representations cannot be integrated into a third by “simple addition.” Since “given any point of view, there are bound to be others incompatible with it . . . , [i]t follows that, given any perspectival representation, it is bound to be possible to produce a representation with which it cannot be integrated by simple addition.” This gives Moore his definition of perspectivity: “A perspectival representation is a representation such that there is some possible representation with which it cannot be integrated by simple addition.”24 All this is directed to securing for Moore the possibility of an “absolute representation,” a possibility to which he holds in order to prevent a nihilistic slide into relativism. My interest however is not in the success or
otherwise of Moore’s attempt to establish the cogency of this idea. Rather, it is in the consequences of Moore’s having grounded his general idea of perspectivity in the idea of the capacity for the integration of spatial representations. Before turning to this point, however, I wish to examine Brandom’s rival strategy for accounting for the nature of conceptually articulated representations in a way which bypasses the whole issue of perceptual experience.

II. BRANDON’S LINGUISTIC-PRAGMATIST APPROACH TO SOCIAL PERSPECTIVE

While Moore starts from the primitive notion of contentful representation, and then appeals to the issue of the capacity for representations to be integrated among themselves in an effort to pin down the idea of perspectivity, Brandom arranges these ideas in the reverse explanatory order. First, Brandom is critical of the tradition (one to which Moore clearly belongs) that has accepted the notion of representation (and truth) as basic in accounting for human awareness. Rather than think of “integration” as something that can be done to representations whose capacity to represent is independently conceived, Brandom makes the inferential integration of representations primitive: the capacity to be inserted into inferential relations is invoked as a central part of the explanation of how representations come to have a representational content. That is, while Moore accepts the starting point of what Brandom calls the “representational paradigm,” Brandom locates himself within an alternative “inferentialist” tradition, running from the rationalists through their German idealist successors to modern pragmatists.25

Basically, the representations, be they mental or linguistic, at the center of the representationalists’ account of cognition, are fundamentally conceived in mind-world terms. For a representationalist, the content of a representation is simply how it represents the world as being, this representational function supposedly being understandable independently of whatever is done with those representations. In contrast, Brandom thinks of our thoughts or assertions as gaining their representational contents “horizontally,” as it were, in virtue of their inferential relations to other thoughts or assertions, rather than in “vertical” relations to the world. One only understands what it is to make an assertion if one understands the intersubjective practices within which the act of asserting has a role, and here Brandom follows Wilfrid Sellars in conceiving of asserting as adopting a position within the “logical space of reasons,” and in appealing to the practice of the asking for and giving of reasons as the basic game within which the making of an assertion constitutes a move.26 In this he conceives himself as following rationalists like Leibniz and Spinoza who “developed... an account of what it is for one thing to represent
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another, in terms of the inferential significance of the representing. . . . Their idea was that the way in which representings point beyond themselves to something represented is to be understood in terms of inferential relations among representings.”

Significantly, Brandom restricts all consideration to representations with propositional content, the propositional form of such representations being a reflection of the representation’s capacity for insertion into inferential relations. Thus there is clearly no place within his account for Kantian “intuitions”: for Brandom, concepts go “all the way down.” Intuitions, or anything like them, constitute just the remnant of the “bottom-up” representationalist story from which Hegel liberated Kant, and so Brandom rejects those approaches to linguistic indexicals or demonstratives that construes them as establishing word-world links in ways that bypass conceptual involvement. And without the priority of representation to inference, Brandom will, of course, give a different meaning to the notion of truth to that which it has within Moore’s representationalist framework. Rather than thinking of inference in terms of a prior and independently understood notion of truth, Brandom, seeing himself here as following Frege in the Begriffsschrift, for whom conceptual content was defined in terms of inferential role, seeks to define truth “as what is preserved by good inferences.”

For Brandom, being critical of the representationalist starting point does not, as it does for his fellow pragmatist Richard Rorty, for example, involve rejecting the idea of representations “representing” the world as meaningless. The Brandomian inferentialist does not object to representational locutions per se, only to the treatment of representational locutions “as basic in the order of semantic explanation.” In contrast, inferentialism is a strategy for understanding what is said by the use of such locutions, “what we are doing and saying when we talk about what we are talking about,” and it is in the context of his theory of the meaning of our representational idiom that he introduces the idea of “social perspectivity.”

Adopting the representational locution, we might think of understanding representational content as having two aspects—understanding what is being talked about (the representational aspect of the understanding involved), and understanding what is said of that which is talked about (its propositionally contentful aspect). The question for Brandom is the role of such “about” talk, given that, from the pragmatic approach of the game of the asking for and giving of reasons, it is not initially clear why the representationalist locution would be used at all. What speakers are responding to in his account are their own and their interlocutors’ assertoric commitments and entitlements within the game of the giving and asking for reasons. The need to think of the assertions as having representational as well as inferential aspects in fact comes from the recognition that speakers
can occupy different “social perspectives,” that is, from the understanding of “how a propositionally contentful belief or claim can have a different significance from the perspective of the individual believer or claimer, on the one hand, than it does from the perspective of one who attributes that belief or claim to the individual, on the other.”

To grasp Brandom’s point here we must reflect on the fundamental pragmatics of the game of the asking for and giving of reasons. For each of two interlocutors, A and B, it will be important to establish whether or not the other is justified in or “entitled to” their claims, and for each speaker the pragmatic point behind establishing this will concern whether or not each can use the claims of the other as premises for their own theoretical or practical inferences. “The context within which concern with what is thought and talked about arises is the assessment of how the judgments of one individual can serve as reasons for another.” But to accept another’s claim so as to use it as a premise in one’s own inferences, one must first extract it from the particular perspective within which it functioned in that other’s own reasoning processes.

Brandom’s inferentialism implies a holistic approach to concepts, as concepts are what articulate inferential relations between propositional representations. Furthermore, like Quine, Brandom rejects the idea that inferential goodness of some $p \rightarrow q$ could be determined by a combination of abstract logical laws together with some abstract meanings or intensions of “$p$” and “$q$.” What counts as a good inference from a particular claim will importantly involve other “collateral commitments,” that is, other beliefs, r, s, and so on, to which the reasoner is committed. This means that, while it may be the case that in the mouth of speaker A a doxastic commitment to $p$ will entail a commitment to $q$, this might not be the case in the mouth of speaker B. Such considerations had led Quine to shift the focus of attention away from meaning or intension to reference or extension, but Brandom, of course, rejects the primacy of referential relations. For him, the same considerations invoke an interest within a reasoner in the representational aspects of their interlocutor’s speech. “Talk about representation is talk about what it is to secure communication by being able to use another’s judgments as reasons, as premises in our own inferences, even just hypothetically, to assess their significance in the context of our own collateral commitments.” In order for A to be able to use the claims of her interlocutor B within her own (A’s) inferences it is important that A export B’s claims out of his (B’s) particular web of beliefs. The way to do this is to adopt the representational orientation and grasp B’s beliefs as saying something about those objects to which A has independent access. But of course, this must be understood to be a matter of A taking B’s beliefs to be about those objects about which A herself has beliefs. For an inferentialist there can be no sense in thinking
of objects in such a way that can be thought to be neutral between the perspectives or belief-webs of A and B.

We might now think of this need to export one’s interlocutor’s sentences out of their belief-web as playing a role in Brandom’s picture that is analogous to the need in Moore’s account for a speaker to export their own sentences out of their deictic spatio-temporal co-ordinates. But Brandom now has a way that avoids Moore’s equivocation between Kant’s two forms of representation (intuition and concept) in that he can appeal to what he takes as a fundamental and general feature of language as relevant to this capacity—the ability to transform de dicto into de re forms of expression.

To understand how this works we must appreciate what, in Brandom’s account, is involved in understanding another’s assertion. First, one must be able to ascribe to another an array of beliefs or, more properly, “doxastic commitments,” to which their utterances have committed them. That is, one has to know something about the inferential relations within which their sentences stand, the relations that constitute the context of that person’s own belief-web. But one must also keep separate tabs on what one would oneself be inferentially committed to if one accepted that assertion, and this may be different, owing to differences in collateral commitments. The distinction between de dicto and de re locutions allow just this. When A adopts a de dicto form of belief ascription, as in “B believes that \( \phi(t) \),” all the terms coming after the term “that” will be terms articulating B’s own commitments. But, of course, A’s ascribing a belief to B in no way commits A to that belief, rather, A is only committed to the particular claim about B. But A can extract something out of the embedded clause of the de dicto ascription by employing a de re ascription, “A believes of t that \( \phi(\text{it}) \).”42 In doing this, A employs a term \( x \) that will have appropriate inferential relations within A’s own web of beliefs. This will be a way of A now expressing A’s own commitments.

Thus Brandom’s alternative explicitly conceptually-based, inferentialist approach to representation and perspective provides another way of thinking about the decontextualizing reinterpretations of representations that form what we might think of the individual rungs of Moore’s transcending ladder. Moreover, within Brandom’s account, one seems less likely to be led to the imagery of this transcending ladder itself, and without the image of the transcending ladder, one may not be tempted to ask Moore’s question of the possibility of absolute representations. This is because from Brandom’s inferentialist account, the representational outlook—the outlook from which one adopts a type of “side-on view” to another’s representations such that they are thought of as representations of independently perceivable objects—is deprived of the metaphysical significance that it has for Moore. The adoption of this outlook becomes
a move explainable within the more general inferentialist approach to the semantics of our utterances.

In summary then, we might characterize Moore and Brandom as developing inversely related approaches to epistemic perspectivity, an inversion deriving from that between their respective primary foci on the “vertical” representation-world and “horizontal” inter-representational relations. This difference is reflected systematically in different ways, for example, the ways in which each conceives of the relations between representation and truth. For Moore, truth is simply a matter of a representation’s properly performing its essential function—that of representing: a representation is true when it represents how the world in fact is, when it “answers to” the world. And while combinability among representations relies on the capacity of representations to be true or false, this latter capacity can be understood independently of such a capacity to combine. In contrast, for Brandom it is the capacity of representations to horizontally integrate among themselves—to enter into inferential relations—which is fundamental to their status as representations. In comparison, “truth” has a comparatively minor role. For him, the attribution of “truth” to a representation will mean one of two things: either it will indicate that which is preserved in good inference, or it will indicate a speaker’s endorsement of that which is expressed in another’s representation, that is, indicate a certain identity of doxastic commitment of one speaker with another. It is just this that has led otherwise sympathetic commentators to worry about the fate in Brandom’s account of just that “answerability to the world” from which Moore’s thoughts about representation commence.

III. THE RETRIEVAL OF KANT’S NON-CONCEPTUAL FORM OF REPRESENTATION IN GIERE’S PERSPECTIVAL REALISM

Ronald Giere offers his “perspectival realist” approach to the philosophy of science as providing a third way between warring perspectival non-realist and aperspectival realist accounts that have dominated that area, and that, in some ways, mirror the opposing stances of Brandom and Moore. Here I am not concerned with defending Giere’s general claims so much as reflecting on the degree to which his intermediate position between perspectival relativism and orthodox realism might be seen as purchased by his use of a contemporary version of intuition/concept distinction central to his characterization of perspectives. While critical of any representationalist understanding of scientific objectivity, and so in this sense sharing the generally anti-representationalist outlook of Brandom, Giere is also critical of a common assumption prevalent within the philosophy of science that conceives of theories as statements, and this is what separates his approach from that of Brandom. In contrast to
what we might term the “pan-conceptualism” of this more usual position, Giere appeals to the role of those “intermediate representational entities” he refers to as “models.” By providing a role for a distinctly non-conceptual representational genus, models, I want to suggest, play a role in model-theoretic philosophy of science analogous to that played by intuitions in Kant’s account of knowledge, and with his own equivalent of Kant’s intuition/concept distinction, Giere is able to apply the “perspective trope” in a more consistent manner than is possible for frameworks within which such a distinction has been lost.

Giere is critical of “much philosophy of science” for presupposing: a framework in which the focus is on linguistic entities, statements, and in which the connection between statements and the world is understood in terms of the notions of reference and truth. . . . Models may be characterized using statements, but these function in this context merely as definitions. Models may also be characterized, often only partially, using nonlinguistic means, such as diagrams or physical scale models. With his account of models, Giere challenges the representationalist and pan-conceptualist assumptions of the standard view: models should not be thought of as either true or false representations of the world as it is anyway. Not being wholly linguistic, a model “cannot literally be true or false. We need another sort of relationship altogether.” Giere’s approach is exemplified in his treatment of the role of equations, such as those of Newton’s theory, for example, in the physical sciences. Equations should not be understood simply as the expression of natural “laws,” an interpretation presupposing the pan-conceptualist, representationalist assumption that “the various terms have empirical meaning and that there is an implicit universal quantifier out front.” In such a view “the connection to the world is relatively direct. The resulting statement is assumed to be either true or false.” Rather, equations are the materials for the construction of models that in turn stand in complex relationships to identifiable systems in the “real world,” “the behavior of the model provid[ing] a representation of the behavior” of that worldly system. For example, Newton’s equations of motion together with his formula for gravitational attraction can be used to construct a model for the behavior of a two-bodied gravitational system that can in turn be used to model the behavior of the Earth-Moon system. Rather than being thought of as something capable of truth or falsity, such a model is more properly thought of as “fitting” the system it represents. Here, “‘fit’ is not simply a relationship between a model and the world. It requires a specification of which aspects of the world are important to represent and, for those aspects, how close a fit is desirable.” In the actual world, moon and earth stand in gravitational relations to many more bodies than that single object to which each is related in this model. In the context of Newtonian science, the effects of these
other gravitational relationships must here be ignored, meaning that the isomorphism or “fit” of the model to the world is far from perfect. Such idealizations are necessary, however, for the equations to be solvable by any known analytical methods.  

Qua representations, models can be regarded as more akin to maps, non-linguistic representations with their own distinct “representational virtues.” Maps may be “more or less accurate, more or less detailed,” and they “do manage to correspond in various ways with the real world,” but it simply makes no sense “to question whether a map is true or false.” Together with this feature of maps, that they should not be standardly thought of as bearing a truth value, Giere posits what we might describe as their necessary non-comprehensiveness: “There is no such thing as a universal map.” It is just these features that constitute the perspectival character of maps.

Since no map can include every feature of the terrain to be mapped, what determines which features are to be mapped, and to what degree of accuracy? Obviously these specifications cannot be read off the terrain itself. They must be imposed by the mapmakers. Presumably which set of specifications gets imposed is a function of the interests of the intended users of the maps. . . . It is not stretching an analogy too far to say that the selection of scale and of features to be mapped determines the perspective from which a particular map represents the intended terrain.

Unlike many users of the perspectival trope, Giere does try to specify the ways in which the realm to which he applies the trope, the realm of models and maps, can be thought of as sharing features belonging to the “vehicle” of that trope, the perspectival nature of visual representation. Literal perspectives are characterized by their partiality—“there is no perspective from nowhere or from everywhere at once”—and their representationality or aboutness; each perspective is of something. Maps exhibit just these two characteristics: “First, they are always partial. There is no such thing as a complete map. Second, maps may be maps of something.”

With the distinction between sentences on the one hand, and maps and models on the other, Giere has essentially split the traditional representationalist’s identification of truth and correspondence. Something like correspondence holds between the model and the world, while truth, as a property of associated assertions, can be handed over to the inferentialist. Furthermore, he seems to have done this by reintroducing something of the classical Kantian distinction between conceptual and intuitive forms of representation. Maps can be thought of as exploiting something of the structural properties of Kantian intuition. They typically use a part of space to represent another part of space, thereby exploiting the same part/whole relations that structure the domain being represented.
And as Wilson has pointed out, conceptual representation for Kant is not like this. To the extent that the relation of containment holds among the contents of concepts, it does not map onto the “containment” relations that hold among their extensions. We can now see how these issues might bear on assumptions built into different treatments of perspectivity.

As seen in his astronaut example, built into Moore’s approach to perspectivity is the assumption that abstraction to a more general perspective involves a general decrease in perspectivity. In his account, the representations of our most abstract sciences, physics, for example, will be candidates for absoluteness. Giere’s map analogy, however, suggests the opposite. In creating a map, the map-maker, by abstracting away from certain determinate features of the environment mapped so as to highlight those features relevant to the purpose at hand, moves in the direction of greater perspectivity. So too with equations and models in physics. Moore thinks of equations as statements that, when compared with the ego-centricity of statements involving indexicals (“Today is Wednesday,” or, “The moon is fifty miles away”), are surely very minimally perspectival, if not absolute. For Giere, however, they are not to be thought of as statements, and so such a contrast loses its grip. In abstracting away from other features of the world so as to bring the relations among a very minimal set of features into focus, such equations and models are seen as more, not less perspectival. But this is a perspectivity that does not seem to threaten “answerability to the world,” given that the point of science is to find models that “fit” some portion of the world.

IV. CONCLUSION

I have described Giere’s model-theoretic approach to science as reintroducing, with its distinction between statements and models, a distinction between representational genres something like that employed by Kant in his distinction between concepts and intuitions. As mentioned earlier, Kant’s notion of pure intuition as a structurally distinct realm of representation had been cast aside at the beginning of the twentieth century seemingly because of the degree to which it had been linked to the logic, geometry, and physics of Kant’s day, and out of step with subsequent developments in all these fields. But in retrospect, it seems far from obvious that it was the nature of the sciences themselves that was crucial here, and not the way these sciences were understood within early analytic philosophy. For example, given that both in logic and mathematics there has been a revival of interest in the role of diagrams in proofs (conceived by Kant as conceptual constructions within the pure intuition of space) and a concomitant critique of the hitherto dominant assumption of the necessity of axiomatization in an explicitly symbolic medium, one may query whether it was not rather particular philosophical programs, such as Russell’s logicist program, that were behind this dismissal.
In this context, it is perhaps relevant to allude to the apparent provenance of Giere’s model-theoretic approach. In reaching back to model theory in logic, Giere’s philosophy of science connects up with the second of what Jaakko Hintikka has described as the two opposed and competing traditions, which, like the perspective trope itself, seem to stem ultimately from Leibniz, and which have structured much of twentieth-century discussion in philosophy: on the one hand, that of logic as a *lingua universalis*, a conceptually transparent universal medium for thought about the world; and on the other, that of logic as a *calculus ratiocinator*, a re-interpretable calculus applicable to a variety of domains of discourse. While Russell’s logicist program was rooted in the conceptions of the former, that of the semantic theorists of the 1930s like Gödel and Tarski, reaching back through Schröder and Peirce, to connect with the “algebraic” approach of Boole, was more rooted in the latter. It was the separation of semantic or model-theoretic from syntactic or axiomatic concepts with Gödel and Tarski that led to the later “semantic” challenge to the axiomatic and deductive-nomological approaches to theories of the logical positivists.

The unclarities and confusions inherent in the use of the perspective trope in much analytic philosophy in the second half of the twentieth century might then be the result of the inheritance of a particular prejudice, the “pan-conceptualist prejudice,” with its rejection of the very idea of a non-conceptual genus of representation, transmitted from an earlier period of analytic philosophy and rooted in its rejection of the Kantian notion of intuition as a distinct form of representation. Interpreted in this way, we might see the same prejudice manifest in the approaches of Moore and Brandom, but in inverse ways. In his account of perspectives, Moore trades on the assumption that one can move unproblematically from cases of spatio-temporal representation to other, more explicitly conceptual forms of perspectival phenomena. It may well be the case, however, that the capacity he draws on to exemplify the transcending step, is a capacity that has its roots in a very different form of representation that is then projected into the conceptual structures of language. For his part, Brandom has avoided such an untheorized sliding by reconstructing an *explicitly and fully conceptualized* account of the nature of perspectival phenomena. But with this he also seems to have abandoned the original perceptual vehicle that made the perspective trope appealing in the first place, and is in danger of losing hold of any sense in which knowledge claims are thought of as answerable to the world. I have suggested that the sort of approach adopted by Ronald Giere and other model-theoretic theorists in the philosophy of science may show how reconsidering the hitherto largely-abandoned distinction between concept and intuition as different representational genera might illuminate a discussion that otherwise tends to become polarized into uncommunicative extremes.
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ENDNOTES


2. See, for example, Stephen R. Palmquist’s exploration of this theme in Kant in his Kant’s System of Perspectives: An Architectonic Interpretation of the Critical Philosophy (Lanham, Md.: University Press of America, 1993).


6. While it is anachronistic to discuss Kant’s approach in exactly these terms, as Béatrice Longueness has pointed out in her, Kant and the Capacity to Judge: Sensibility and Discursivity in the Transcendental Analytic of the Critique of Pure Reason, trans. Charles T. Wolfe (Princeton, N.J.: Princeton University Press, 1998), Kant was nevertheless able to make the distinction that is now captured in these terms.

7. See, for example, Michael Friedman’s account in Kant and the Exact Sciences (Cambridge, Mass.: Harvard University Press, 1993), chaps. 1 and 2.


11. Giere refers to his as a “model-based” approach to scientific theories, but his approach, together with those of Bas van Fraassen, Nancy Cartwright, and others, constitute the view often referred to as the “model-theoretic” or “semantic” view, which can be traced to the work of Patrick Suppes in the 1950s. See Giere’s brief account of the provenance of this approach in Science without Laws, 251, n. 1, as well as in Explaining Science: A Cognitive Approach (Chicago: University of Chicago Press, 1988), chap. 3. Van Fraassen offers a short guide to the semantic approach in Laws and Symmetry (Oxford: Clarendon Press, 1989) chap. 8, section 2, and chap. 9; and Cartwright, an account of models in The Dappled World: A Study of the Boundaries of Science (Cambridge: Cambridge University Press, 1999). See also Frederick Suppe, The Semantic Conception of Theories and Scientific Realism (Urbana, Ill.: University of Illinois Press, 1989) for a comprehensive account of this tradition.

12. Moore, Points of View, 3.

13. For Moore, as he notes, “objective truth” is not a pleonasm. Ibid., 4.

Representations, as has been suggested, can be both perspectival and true. What, as we have seen, may be ruled out by their perspectivity is their objectivity, but this for Moore is not necessarily the case. It might be the case that some representations are both perspectival and objective—the subjective/objective distinction does not coincide with that between perspectival and absolute.

20. Ibid., 241.


22. Ibid., 13. The role of self-consciousness here is another point at which the generally Kantian dimensions of Moore’s picture emerge.

23. Ibid., 13–14.

24. Ibid., 14.


29. See, for example, Brandom, *Making It Explicit*, 459–464. It is this conceptualized reading of demonstratives and indexicals that allows Brandom, in a review of Moore’s book (“Seeing Another Point of View: Review of A. W. Moore’s *Points of View*,” *Times Literary Supplement*, August 28, 1998) to endorse Moore’s initial way of applying the perspective trope. “When Moore’s notion of perspective is on its home ground, distinguishing indexical representations from non-indexical ones, we have a pretty good idea of what the space of possible ‘points of view’ is: it is defined by the possible places of utterance, times of utterance, utterers, and so on.” Brandom’s basic objection to Moore’s project has more to do with the way it promotes the notion of point of view “from indicating the standpoint of a particular utterance to indicating that of an entire conceptual scheme. Moore’s definition of what it is for something to be ‘from a point of view’ simply will not bear the weight of this transition.” But my question is directed to the legitimacy of the initial move that fully conceptualizes the notion of perspective “on its home ground.”

30. Ibid., 49–52. Later, however, as Brandom explains, Frege himself reversed this explanatory order, taking truth as primary rather than inference.

31. Ibid., 161.

32. See Rorty’s criticisms of Brandom on this point in “Robert Brandom on Social Practices and Representations,” in *Truth and Progress: Philosophical Papers*, Volume 3 (Cambridge: Cambridge University Press, 1998), 131. See also their further exchange on this point in Brandom’s “Vocabularies of Pragmatism: Synthesizing Naturalism and
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34. Ibid.

35. Again, we can see Brandom’s explanatory strategy here as the reverse of Moore’s. While Moore appeals to the capacity for integration among representations in order to specify what it was for a representation to be perspectival, Brandom will appeal to the more basic concept of perspectivity in an attempt to specify how one gets from thinking of representations as links in inferences to thinking of them in more standardly “representational” terms.


37. Ibid., 158–159.

38. Ibid., 159.

39. In invoking perspective in this way, Brandom invokes a notion that comes close to Moore’s use of perspective as some type of *conceptual network or framework*.

40. Ibid., 167.

41. Ibid., 167–168.

42. Ibid., 172.


46. Ibid., 73.

47. Ibid., 92.

48. Ibid., 92.

49. Ibid., 93. Giere is critical of van Fraassen’s idea that the relation between model and world is that of *isomorphism*, although that is at least “the right kind of relationship” (ibid., 92). Giere’s reservation about “isomorphism” has to do with the way van Fraassen, according to Giere, attributes some type of exactitude to this notion (ibid., 250, n. 17). What Giere means by “fit,” however, seems pretty much what is meant by “isomorphism” more generally.

50. All this means that Newton’s theory does not constitute some “universal law” of the behavior of the solar system so much as “the restricted generalization that various pairs of objects in the solar system may be represented by a Newtonian two-body gravitational model of a specified type. Restricted generalizations have not the form of a universal statement plus a proviso, but of a conjunction listing the systems, or kinds of systems, that may successfully be modeled using the theoretical resources in question, which, in our example, are Newton’s equations of motion and the formula for gravitational attraction.” Ibid., 93.

51. This is not to suggest, of course, that maps do not require linguistic labels to be intelligible. That maps can only function as maps in a conceptualized environment
does not detract from the claim that they nevertheless belong to a non-conceptual representational genus. Maps do not have the propositional content that enter into inferential relations with other such propositional contents.

52. Ibid., 214. See also the discussions at 25, and 81–82.

53. Ibid., 214.

54. Ibid., 80.

55. Ibid., 81. Giere adds, however, that “unlike perceptual experience or the operation of physical detectors (which he also describes as perspectival), however, the production of a map is an act of deliberate construction,” suggesting that maps have a normative or rule-governed dimension not found in other more immediate forms of perspectival representation—”Mistakes can easily be made.”

56. A similar move is made by Brandom’s mentor Wilfrid Sellars, in “Truth and ‘Correspondence,’” Journal of Philosophy, 59 (1962), and reprinted in Science, Perception and Reality (Asgadur, Calif.: Ridgeview, 1991), but this is a path that Brandom does not follow.

57. Cf. Cartwright’s characterization of the abstract nature of physical concepts in The Dappled World, 43–46.


60. For Peirce, contemporary developments in logic and mathematics did not demand the elimination of the Kantian notion of non-conceptual representation, as it did for Russell.


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