Paul Franco on Nathaniel Goldberg's "Kantian Conceptual Geography"

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By Paul L. Franco

In his *Kantian Conceptual Geography*, Nathaniel Goldberg groups together diverse analytic philosophers whose positions, he argues, inhabit distinctly Kantian territory. Within the territory that Goldberg maps and explores are major figures from philosophy of language, philosophy of science, history of science, and metaphysics and epistemology, such as Philip Pettit, Thomas Kuhn, Donald Davidson, W.V.O Quine and Rudolf Carnap (among others).[1] Goldberg takes the main aim of his book to give a general sense of the lay of the Kantian land, and he refrains from arguing for the truth or falsity of the positions he places within Kantian territory. As he puts it, he is "a Kantian conceptual geographer rather than a settler" (p. 187). Still, Goldberg holds that his conceptual geography proves useful for understanding past and present, Kantian and non-Kantian positions in metaphysics, epistemology and the philosophy of language.[2]

To accomplish his aims, Goldberg marks the external borders of Kantianism and charts the contours of its internal space. According to Goldberg, the border of Kantian territory is marked by a commitment to

> DUALISM: All empirical concepts, terms, or properties are linked essentially to subjective and objective sources. (p. 7)

Within the borders set by Dualism,Kantian settlers are distinguished by commitment or lack of commitment to a claim about that which links the objective and subjective sources of empirical concepts, terms or properties. This commitment mainly takes the form of

> PRINCIPLISM: The subjective source of all empirical concepts, terms, or properties takes the form of subjective principles. (p. 7)

When combined, we get

> KANTIANISM: All empirical concepts, terms, or properties are linked essentially to subjective and objective sources. The subjective source may take the form of subjective principles. (p. 7)

Dualism,then, is "necessary and sufficient for a view to be Kantian […] while Principlism is neither" (p. 7). Finally, following the metaphysical and epistemological readings of Kant's transcendental idealism—principally represented by Paul Guyer and Henry Allison, respectively[3]—Goldberg identifies two possible forms of Kantianism:

> ONTOLOGICAL KANTIANISM: All empirical concepts, terms, or properties are constituted essentially out of subjective and objective sources. The subjective source may take the form of subjective constitutive principles. (p. 10)
>
> EPISTEMOLOGICAL KANTIANISM: All empirical concepts, terms, or properties are acquired by a subject's appealing essentially to subjective and objective sources. The subjective source may take the form of subjective acquisitive principles (p. 12)

Goldberg's conception of Kantianism, then, seemingly entails taking a certain stance on Kant's Copernican Revolution: that "the objects [of experience] must conform to our cognition" (Bxvi). Namely, a settler in Kantian territory holds that Kant was largely correct in claiming that a knowing subject is, in some sense, responsible for at least part of the construction or acquisition of all empirical concepts, terms or properties. However, following the intertwined developments in logic, mathematics and physics subsequent to Kant, most recent settlers hold that Kant was probably wrong that the principles guiding such construction or acquisition take the particular form of Kant's purportedly necessary and unique synthetic a priori judgements. A Kantian settler, then, either offers subjective principles different from Kant's, or denies that any such explicit principles linking the subjective and objective sources of all our empirical concepts, terms or properties are necessary.

Goldberg's book covers a wide swath of Kantian territory, and weaves together themes in philosophy of language, epistemology, metaphysics and the philosophy of science.[4] He first carefully situates the views of Philip Pettit (Chapter 2), Kuhn (Chapter 3), Davidson (Chapter 4), and Hans Reichenbach, W.V.O. Quine, Rudolf Carnap and Michael Friedman (Chapter 6) within the external borders and internal divisions established by the dual theses of Kantianism. Goldberg next defends Dualism from the (internal) challenges raised by Davidson's two-pronged criticism of both sides of the scheme-content

distinction (Chapter 5); and he defends Principlism from criticisms implicit in Quine's attacks on the notion of truth by convention and the analytic/synthetic distinction (Chapter 6). Next, Goldberg develops a Kantian account of meaning that grows out of the landscape charted in previous chapters;[5] he then argues that this account of meaning does not suffer from the same weaknesses as do competing non-Kantian accounts of meaning (Chapters 7 and 8).[6] And, finally, Goldberg closes his book with a discussion of Kantian thoughts on the nature of truth (Chapter 9), and looks back at the expansive Kantian territory assiduously charted in previous chapters (Chapter 10).

In this critical discussion, I cannot cover in-depth many of the interesting and provocative claims Goldberg makes in his book. I only lightly touch on Goldberg's treatments of Pettit and Davidson, even though I learned a lot from Goldberg's reconstructions of their positions within Kantian territory. My relatively narrow focus also means I won't say much about Goldberg's novel development of a Kantian theory of meaning and the contrasts he draws between it and other theories of meaning. Instead, I focus on those questions that recurred throughout my reading that touched on my interests in the history of philosophy of science, another area that Goldberg's book explores. In Section 1, to understand Dualism more fully, I raise questions about Goldberg's understanding of the different scopes 'subjective' might take by looking at Reichenbach and Friedman's notion of coordinative principles in mathematical natural science. In Section 2, I challenge Goldberg's claim that Principlism is not required of a Kantian settler by emphasising the constitutive role of the synthetic a priori in Kant, and the endorsement of constitutive, non-empirical principles in empirical knowledge by later Kantians. Finally, in Section 3, I raise a more general methodological question about the benefits conceptual geography might have in contrast to a more historical approach to charting philosophical territory, namely historical epistemology.

1. Subjective and Objective Sources

1.1. A variety of subjective sources and principles

Recall that Goldberg thinks a necessary and sufficient condition for being Kantian is Dualism, which maintains that all empirical concepts, terms or properties have subjective and objective sources. To understand Dualism, we need to understand Goldberg's account of subjective and objective sources. A subjective source, for Goldberg, encompasses "the specific conceptual, linguistic, or perceptual capacities in an individual subject's mind, shared across a group of subjects' minds, or encoded in a subject's or subjects' language or

(other) conventions" (p. 8). An objective source is defined negatively; it is one "that is not subjective", which "might include objects in the world" and "sensations deriving from those objects" (p. 8).

One of Goldberg's more interesting claims is embodied in his disjunctive characterisation of a subjective source. He thinks that there are "potential scopes of the subjective" (pp. 5, 237) within Kantianism's borders. For Goldberg, subjective sources might take the following scopes: anthropocentric (capacities of subjects *qua* humans, as in Kant and Pettit), ethnocentric (capacities of subjects *qua* members of communities, as in Kuhn and Friedman), idiocentric (capacities of subjects *qua* individuals, as revealed in Davidson's account of language learning), or logocentric (capacities of subjects *qua* language users, as revealed in Davidson's account of radical interpretation).

This disjunctive understanding of the potential scope of subjective sources groups together the following items under the heading 'subjective':

1. In Kant, the subjective source is "the subject's transcendental mind" (p. 16), which, among other things, issues subjective, a priori concepts like substance. Such concepts guide us in our construction of phenomenal objects from the data of sensation.
2. In Pettit, we are told, "the subjective source are paradigmatically human responses (and ultimately capacities)" (p. 44), e.g. "responses of a perceptual or affective character" (Pettit, quoted at p. 40) of normal humans under normal conditions to objects in the world (where 'normal' is specified in a non-trivial way).
3. In (later) Kuhn, the subjective source is a particular "[scientific] community's lexicon" (p. 64), which is an agreed-upon "set of kind terms figuring as nodes in a network structured according to the species–genus relations of objects in the world to which scientists in particular historical communities respond" (p. 68).[7]
4. In Davidson, Goldberg claims that the principle of charity that underwrites the process of radical interpretation is "subjective in the sense of being methodological or conventional, and relying on genetic mechanisms" (p. 98). Thus, methodological principles and genetic mechanisms underwriting our responses to linguistic behaviour count as subjective.
5. In characterising Quine's radical holism, Goldberg writes: "Science, which consists of empirical concepts and terms used to conceive of and name empirical properties, depends on something subjective (for Quine, language and so our linguistic capacities) and something objective (experience)" (p. 113).[8] Language, in a general sense, then, counts as subjective within Goldberg's conceptual geography.

6. According to Goldberg, Carnap's linguistic frameworks and the conventions they encode also count as subjective "[b]ecause that language or framework articulates the legitimate linguistic capacities of that community" (p. 149). This entails that any other principles derivable purely from the conventionally adopted rules of a linguistic framework, like geometric principles, are subjective in Goldberg's sense (cf. Goldberg on Reichenbach [1965] for more on this claim about geometric principles).
7. In Friedman, according to Goldberg, 'subjective' encompasses "historically situated" "conventions upon which members of a community agree" (p. 155). Since, for Friedman, Newton's calculus and his principles of mechanics, and the non-Euclidean geometries and light principle of Einstein's relativity are such historically situated, agreed upon conventions, they count as subjective in Goldberg's sense.

Given such a wide scope for 'subjective', what it means for a concept, term or property to be "constituted essentially out of subjective and objective sources"—as in Ontological Kantianism—and what it means for a concept, term or property to be acquired by a subject's "appealing essentially to subjective and objective sources"—as in Epistemological Kantianism—will look quite different from Kantian to Kantian. The way in which agreement among a scientific community constitutes part of our empirical concepts and/or makes possible the acquisition of such concepts cannot be the way in which a transcendental mind constitutes part of our empirical concepts and/or makes possible the acquisition of such concepts, which in turn cannot be the way in which the methodological principle of charity and genetic mechanisms make possible and constrain the meaning a radical interpreter assigns to linguistic behaviour. As such, I'd like to hear more about the senses of "conceptual, linguistic, or perceptual capacities" that render, say, the following all subjective in relevantly similar senses: a transcendental mind, genetic mechanisms shaped by (objective?) processes of evolution, linguistic conventions, and agreement/consensus among a scientific community.

1.2. 'Subjectivity' in Reichenbach and Friedman

In order to motivate (and hopefully sharpen) my request a bit more, I shall canvas the views of two Kantian settlers whose work I'm most familiar with, Reichenbach and Friedman. In the process, I show how the question above can be framed specifically in the context of Reichenbach and Friedman's Kantianism. [9] I do this to draw out what I find odd about calling the central elements of Reichenbach and Friedman's Kantianism subjective, that is, so-called constitutive principles of coordination. My treatment will also lead into the questions of the next section concerning Goldberg's claim that a Kantian settler need not be committed to Principlism.

Both Reichenbach and Friedman take as the starting point for their Kantianism Kant's "new 'transcendental' inquiry into the *conditions of possibility* of our first-level knowledge of objects in space and time […] supplied by mathematical natural science" (Friedman 2001:9). However, Reichenbach—and Friedman apparently follows him in this—maintains that Kant's (purportedly psychologistic) search for the conditions of the possibility of empirical knowledge in a knowing subject's unchanging transcendental mind starts off on the wrong foot. This is because Reichenbach was keenly aware of the ways in which developments in the foundations of mathematics and in physics challenge Kant's claims about, for example, unchanging forms of sensible intuition and the categorial forms of the understanding that constrain our empirical judgements about spatial and temporal relations. So, Reichenbach claims, "[i]f [Kant] searched for the conditions of knowledge, he should have analyzed *knowledge*; but what he analyzed was *reason*"; yet, such an analysis is impossible from a logical point of view since "reason is not a system of fixed propositions" (1965:72). For both Reichenbach and Friedman, Kant's brand of transcendental inquiry is better framed as aimed at uncovering the conditions of certain secure and dependable bodies of knowledge in a way that avoids references to a transcendental mind; as such, I take Reichenbach and Friedman as reluctant to appeal to things like conceptual, linguistic or perceptual capacities.[10]

Mathematically formulated spacetime theories like those of Newton or Einstein, however, comprise systems of propositions that admit of logical analysis. They also represent our most secure, precise, determinate, and dependable bodies of knowledge about objects in space and time (or spacetime). Inquiring into their possibility, then, will reveal important conditions for the possibility of any type of precise and determinate knowledge about objects. In such an analysis of the propositions of mathematical natural science, we find, "[i]t is characteristic of modern physics to represent all processes in terms of mathematical equations" (Reichenbach 1965:34). That is, "[t]he physical relation can be conceived as coordination: physical things are coordinated to equations" (1965:37). Thus, at one level of our physical knowledge, abstract mathematics are conditions of the possibility of forming mathematically expressed empirical laws—e.g., non-Euclidean geometries are necessary for formulating statements about the metric of relativistic spacetime; Newton's calculus is necessary for formulating claims about instantaneous rates of change. In this sense, abstract mathematical principles are partially constitutive of the possibility of forming determinate judgements about objects in spacetime.

However, conceiving of mathematical physics in this way gives rise to an immediate puzzle. As Friedman understands it, in both Newton's and Einstein's physics, "the mathematical representations employed […] have become

increasingly abstract in relation to concrete sensory experience" (2001:76).[11] This problem became especially acute in the early twentieth century given the purely formal, axiomatic understanding of mathematical principles "associated with David Hilbert" and developed "to overturn the connection between mathematics and sensory experience once and for all" (Friedman 2001:78). How, then, are we to coordinate completely abstract mathematical equations to our sensed experience of the world?

The answer, according to Friedman and Reichenbach, lies in "a special class of non-empirical physical principles […] whose function is precisely to establish and secure the required connection between abstract mathematical structures and concrete sensory experience" (Friedman 2001:79). In Newtonian physics, Newton's laws of mechanics play this role by defining an inertial frame of reference "in which the modern concepts of space, time, and motion […] unambiguously apply" (Friedman 2001:76). In relativistic physics, "the required coordination is established by […] the light principle and the principle of equivalence" (Friedman 2001:79). These non-empirical, coordinative physical principles are distinct from purely formal mathematical principles. Thus, at another level of physical knowledge, we have coordinative principles that are constitutive of determinate empirical knowledge in the sense of making possible the application of abstract mathematics to empirical phenomena.

The precise details of the coordination in these cases need not concern us. The important thing to note is that Friedman conceives of these coordinative principles as "non-empirical *physical* principles" that play a constitutive role in making possible mathematically expressed empirical knowledge; that is, they are "fundamental mathematical-*physical* presuppositions without which the properly empirical laws [of our mathematical physics] […] have no empirical meaning at all" (2001:79; emphasis added). We are now in a position to more fully understand my concerns with the wide scope Goldberg gives to 'subjective'. Within Goldberg's conceptual geography, 'subjective' is a label applying to both the purely mathematical elements of our physical theories and the mathematical-physical coordinative principles. The key to understanding my concern with calling a principle like the light principle subjective is in how Friedman (and Reichenbach, though not as explicitly) conceives of it as *physical, but non-empirical*. In conceiving the light principle as *physical*, Friedman is claiming it has "empirical content", since it is clear that had the Michelson-Morley experiment turned out differently, we would be more likely not to subscribe to claims about the constancy and invariance of the speed of light across inertial frames (Friedman 2001:86–7).

However, although such a principle is physical, within the framework of relativity theory, the light principle is *non-empirical* in the sense that it is not susceptible to empirical testing because its use as a coordinative principle is what makes the empirical testing of claims within the framework possible in the first place. For example, "Einstein uses his light principle *empirically to define* a fundamentally new notion of simultaneity and, as a consequence, fundamentally new metrical structures for both space and time" (Friedman 2001:88; emphasis in original). And it is only within this structure that Einstein's specific, mathematically formulated empirical claims about sensible phenomena within spacetime have any empirical meaning at all. Hence, so long as the light principle functions as a coordinative principle to make empirical testing within relativity theory possible, the light principle, despite being a physical principle, is immune to empirical testing.

Now, it seems to me the light principle is not subjective in the same way that, say, the principle of cause and effect rooted in the unchanging structure of the understanding is subjective for Kant. The source of the light principle seems objective in Goldberg's sense of being mind-independent, that is, it is derived from the nature of light. Moreover, we seem to have empirical reasons for accepting the principle as true, as opposed to, for example, the transcendental reasons Kant gives for our application of the category of cause and effect to sensory data. As such, I find it odd to call Friedman's physical, but non-empirical coordinative principles subjective in the sense of being traceable back to our specific conceptual, perceptual or linguistic capacities. Further, as a physical principle that we have empirical reasons to accept, but which also functions within a physical framework non-empirically, the light principle also seems importantly different from, say, Davidson's principle of charity. Davidson's principle seems distinctly methodological and without empirical content or physical reasons to accept, even if, in ways analogous to the role the light principle plays, it is constitutive since it makes possible the activity of radical interpretation.

Yet, Friedman does say "that Einstein has 'elevated' an empirical law to the status of a convention—or [as he prefers] to the status of a coordinating or constitutive principle"; this is what it means for Einstein to use the light principle "*empirically to define* a fundamentally new notion of simultaneity" (2001:88). Further, doing so involves "an essentially non-empirical element of 'decision'" since "what is at issue […] is giving a radically new space-time structure a determinate *empirical meaning*" (Friedman 2001:88). Perhaps, then, it is in this sense that Goldberg wants to claim Friedman's (and Reichenbach's) coordinative principles are subjective: Their use as coordinative principles mediating between abstract mathematical structures is a free choice on the part of the knowing

subject (and/or the scientific community). I grant that such free choice, and conventions more generally, are non-empirical in the sense of not being fully determined by experience. But it does not seem to me to be the case that 'non-empirical' (or 'not determined by experience') and 'subjective' (in Goldberg's sense of being traceable back to specific linguistic or conceptual capacities) are co-extensive, especially in the case of the principles Friedman calls mathematical-physical presuppositions of our empirical knowledge.[12]

So, in a spirit similar to the question with which I ended Section 1.1, I'm interested in hearing more about the unity of principles Goldberg calls subjective. What unifies non-empirical and non-physical principles (like geometrical conventions), physical principles that function non-empirically within empirical theories (like Einstein's light principle), methodological principles (like Davidson's principle of charity), and principles like Kant's cause and effect that are explicitly traced back to a transcendental mind? Here's another way to put this question that is in the spirit of questions raised in Section 2.3: Why think the subjective/objective distinction is the relevant one for charting Kantian territory and uniting the disparate positions Goldberg canvasses, instead of, say, other Kantian distinctions that may (or may not) map directly onto the subjective/objective distinction like the constitutive/empirical distinction, the form/content distinction or the passivity (sensation)/spontaneity (convention) distinction?

2. Is Principlism Optional?

2.1. Two un-Principled Kantians

So far my remarks have focused on the Dualism component of Goldberg's conception of Kantianism rather than what he takes to be the optional part, Principlism. Recall that Principlism is the thesis that the "subjective source of all empirical concepts, terms, or properties takes the form of subjective principles" (p. 7). Because it is optional, Goldberg holds that there are "un-Principled kinds of Kantianism" within Kantian conceptual territory. Un-Principled Kantians are committed to the view that "empirical concepts, terms, or properties [are] linked essentially to subjective and objective sources holistically" (p. 7). However, the subjective sources—our conceptual, linguistic and perceptual capacities—are not manifested in the form of explicit principles.

Goldberg identifies two un-Principled Kantians: Pettit and Quine. Pettit qualifies as an un-Principled Kantian given his commitment to Epistemological Dualism —"All empirical concepts, terms, or properties are acquired by a subject's appealing essentially to subjective and objective sources" (p. 44)—and his denial that there are any subjective acquisitive principles guiding our acquisition of empirical concepts and terms. As an example that can be extrapolated to all

empirical concepts for Pettit, consider the response-dependent concept 'red', which is "linked essentially to responses of normal human beings under normal conditions of observation to objects in the world" (p. 34).[13] On Goldberg's gloss of Pettit, we come to master or acquire the concept 'red' via "paradigmatically human responses (and ultimately capacities)"—which are anthropocentric in subjective scope—and that are directed to "objects in the world" (p. 44). However, though "we […] identify and name red *via* its effects on us", that is, via subjective responses grounded in our capacities (p. 48), Pettit does not think there exist explicit principles that guide or link our subjective responses to objective sources in the world. For Goldberg, Pettit "has no correlate of Kant's synthetic *a priori* judgments"; instead, "[s]ubjective capacities operate holistically in response to objects in the world in general" (p. 45).

We can get an idea of what it might mean for subjective capacities to operate holistically in response to objects in the world by looking at Goldberg's other un-Principled Kantian, Quine. Goldberg takes Quine's discussion of holism in the last two sections of 'Two Dogmas of Empiricism' to evidence Quine's commitment to Dualism. There, Quine claims, "[t]aken collectively, science has its double dependence upon language and experience; but this duality is not significantly traceable into the statements of science taken one by one" (1980:42; quoted by Goldberg, p. 113). Since language is subjective in Goldberg's sense of depending on our linguistic capacities, experience is something objective in Goldberg's sense of being independent of the knowing subject, and scientific statements or theories are dependent upon both, Goldberg understands Quine as committed to Dualism (p. 113).

Yet, though Quine thinks that scientific theories are dependent upon what Goldberg takes to be subjective sources—language—and objective sources—experience[14]—maintains there is no principled way to distinguish such sources as responsible for this or that individual statement. For Quine, this means we cannot single out any particular statement or principle as being acquired or constituted essentially out of merely a subjective source; that is, there are no purely subjective principles. Nor can we single out any individual statement as being wholly empirical or constituted from merely objective sources. As such, Goldberg takes Quine to advance the claim that "the subjective source, along with its objective dual, is holistically distributed across the whole of one's theory or language" (p. 150).

I wonder if Quine's remarks about holism made in the context of denying the analytic/synthetic distinction should be read as committing Quine to *Dualism*. After all, Quine (1980:46) goes on to claim that he "espouse[s] a more thoroughgoing pragmatism" than Carnap and C.I. Lewis. This position, which

Quine takes to follow from his holism, might be read as denying the usefulness of the linguistic/empirical distinction when it comes to understanding the different strands of our web of beliefs. Indeed, insofar as such a distinction is not traceable back to or revealed by the behaviour of scientists in the face of recalcitrant experiences arising during scientific practice, Quine rejects its usefulness (1980:43). And if Quine denies the usefulness of this distinction, he would seemingly deny the usefulness of Goldberg's subjective/objective distinction. If this is right, then Quine seems closer to Goldberg's "Hegelian pragmatist[s]" who "agree that all empirical concepts, terms, or properties are inextricably tied to human practices embedded within a naturally evolving world", which "afford us no legitimate notions of subjectivity or objectivity" (pp. 21–2).[15]

Thus, I worry that the holistic sense in which Goldberg understands Quine as committed to Dualism for concepts and terms, but not committed to Principlism, collapses into a non-Kantian position.[16] I'm not sure if the same or a similar worry extends to Goldberg's understanding of Pettit, that is, that "[s]ubjective capacities operate holistically in response to objects in the world in general" (p. 45). However, with these thoughts as a starting point, my remarks in the next section expand upon why, even if both Pettit and Quine are committed to Dualism, it seems to me odd to call them Kantians given their holistic construal of Dualism, and hence their denial of Principlism.

In this way, the worries I have here are motivated by my sense that a key, rather than optional, part of Kantianism is Principlism, or at least an amended version of it. The reasons I offer in support below are mainly historical in nature, and Goldberg does point out that "views that satisfy Dualism and Principlism treat them both as indispensable" (p. 7). However, in light of the points of Sections 1 and 2.1, I do think that these historical considerations and the basis they provide for unifying disparate Kantian positions point to a way in which we can make a case that Principlism, in some form, is necessary to being Kantian.

2.2. Kant on the synthetic a priori

As evidenced by the centrality he assigns to the question about the grounds of their possibility in his Critical philosophy, Kant took his main philosophical innovation to consist in his discovery (invention?) of the synthetic a priori judgement. Kant begins the *Prolegomena* by lauding David Hume's denial that experience and a priori reasoning about relations between ideas are potential sources of our notion of cause and effect. In short, Kant thinks Hume is right that neither pure reason nor sensed experience (inner or outer) supplies the relevant idea of necessary connection we take our causal judgements to represent. Yet Kant thinks Hume erred in claiming that his futile search for the idea of necessary connection in reason or experience entails we must settle for "subjective

necessity (i.e., habit)" (Prol, AA 4:258) in our reasoning concerning cause and effect. That is, Kant declares himself "very far […] from taking the necessity represented in [the concepts of cause and effect] to be falsely imputed and a mere illusion through which long habit deludes us" (Prol, AA 4:311).

Why? Because Kant thinks Hume fails to consider another possible subjective source for our idea of necessary connection besides habit or custom. Namely, Hume fails to examine the forms our cognitive faculties of the sensibility and the understanding take. Such an examination will reveal the possibility of a heretofore unnoticed category of judgements that are necessary, but that nonetheless concern the objects of experience and their possible relationships, namely synthetic a priori judgements. One such judgement is: "All alterations occur in accordance with the law of the connection of cause and effect" (B232), which falls under the relational category of the understanding, cause. From here, Kant shows that this judgement plays a constitutive role in relation to any empirical judgement we might make about the objective time-order of passively received sensory data (which is already partially organised temporally by the form of inner sense, time).

The point of this discussion is to highlight that not just any characterisation of the subjective principles or sources underwriting our empirical concepts, terms or properties count as in the spirit of Kant's Copernican Revolution. Custom and habit—seemingly rooted in our perceptual capacities (?)—are apparently subjective in the relevant sense of Dualism.[17] But, for Kant, they fail to illuminate the sense in which "the objects [of experience] must conform to our cognition" (Bxvi). After all, custom and habit do not provide the proper type of necessity required for our causal judgements to represent objective relations between events. Synthetic a priori judgements derivable from the forms our cognitive faculties take, however, do offer just such an explanation in the sense that Kant reveals them to be constitutive of the possibility of making any empirical judgement at all.

2.3. Why think Principlism necessary?

Given the centrality of synthetic a priori judgements and the role Kant thinks they play in assuring that the objects of experience must conform to our cognition of them, Principlism seems to me to be a key part of being a Kantian. Reichenbach echoes these thoughts. He says: "In this discovery [of the constitutive role of synthetic a priori principles] lies Kant's superiority to Hume, for Hume did not know what to do with his discovery of non-empirical principles in knowledge, and could only characterize them as habit" (Reichenbach 1978:44).

Now, I need to be careful in formulating this point and the challenge it might present to Goldberg's conceptual geography. After all, there is a sense in which self-proclaimed Kantians privy to the developments in logic, mathematics and physics subsequent to Kant, like the early Reichenbach, Kuhn and Friedman, all deny the existence of synthetic a priori judgements in the sense that they are principles derivable from the forms that our subjective cognitive faculties necessarily take. And, as Goldberg points out (pp. 145–6), the claim that there are no synthetic a priori judgements is central to Carnap's brand of logical positivism, which nonetheless has deep Kantian influences (Richardson 1998), and whose treatment of linguistic frameworks seems Kantian in spirit (Friedman 2001). So, being committed to the existence of synthetic a priori judgements derivable from the forms that our subjective cognitive faculties take cannot be the sense in which Principlism is central to being Kantian for these folks. In what sense might it be, then?

In denying the existence of Kant's synthetic a priori in the strict sense Kant uses it, the thinkers just mentioned follow the early Reichenbach's (1965) separation, in light of the relativistic revolution in physics, of two ways in which Kant uses 'a priori'. Goldberg glosses the two uses of 'a priori' Reichenbach identifies and separates like so: "(a) necessarily true or true for all times (for human beings); and (b) constitutive of all empirical concepts, terms, and properties" (p. 147). To divorce these two uses, but still hold to the insight behind the Copernican Revolution, involves first eschewing Kant's apparent psychologism—his investigation into reason—and denying Kant's claims about the ways in which the forms of the cognitive faculties of sensibility and understanding necessarily constrain the construction or acquisition of empirical concepts, terms or properties. Second, it involves maintaining Kant's view that certain principles play a non-empirical, constitutive role in relation to the possibility of empirical knowledge. These principles are discoverable through a modified transcendental method that involves a close examination of the relationships between the propositions that comprise our best, historically situated physical knowledge while eschewing appeals to our conceptual, linguistic or perceptual capacities.[18]

This relates back to Section 1.2, where I raised a worry about calling all such constitutive principles 'subjective' in the sense that they are derived from subjective sources. One way to restate that worry is to press the claim that being a Kantian, at least for some in the early twentieth century and nowadays, entails a commitment to the centrality of the notion of *constitutive principles* in one's account of empirical concepts, terms or properties, rather than the notion of being derivable from a subjective source. After all, as I argued in Section 1.2, the light principle seems a physical, rather than subjective principle that nonetheless plays a constitutive non-empirical role within relativity theory by empirically

defining a new notion of simultaneity central to our understanding of the structure of spacetime. But, in the spirit of Reichenbach's separation, to deny the light principle's subjectivity and to call it non-empirical is not to deny that it functions *constitutively* in relation to the possibility of making empirically testable claims about the time-order of events. Thus, it seems to me that for the more recent Kantians that Goldberg considers, the important insight behind Kant's conception of synthetic a priori judgements is not that such principles are rooted in certain subjective sources or capacities, but that they play a non-empirical, constitutive role within empirical knowledge. Someone like Quine, who would deny that we could identify, in any meaningful sense, constitutive principles distinct from empirical ones, would not qualify as a Kantian on this view.

Certainly, as we saw with Friedman, such principles play a constitutive role given a conventional decision on the part of the knowing subject or the community of scientific practitioners. Moreover, given (a) the problem of underdetermination, (b) that adopting constitutive principles is what first makes empirical testing possible and (c) the existence of competing constitutive principles, such decisions to adopt this or that constitutive principle are not fully determined by experience. Perhaps in this sense they can be said to be subjective. But given the rejection of Kant's faculty psychology by recent Kantians—which would seem to entail, at the very least, a hesitancy to appeal to conceptual, linguistic or perceptual capacities— I'm inclined to think those who subscribe to such principles have Kantian credentials given their commitment to an amended version of Principlism that emphasises constitutivity and the role of the non-empirical in physical knowledge, while downplaying subjectivity.[19]

Moreover, I think foregrounding in Kantianism the type of constitutive role that certain non-empirical principles play in making possible forms of empirical knowledge, like mathematical natural science, would also allow us to unite some of the disparate items highlighted in Section 1.1. Goldberg unites those items under the banner of 'subjective' and the different scopes it might take. I find it, *prima facie*, odd to call all of the following 'subjective' in similar senses: Kuhn's lexicons and paradigms, Davidson's principle of charity, Reichenbach's geometric conventions, Carnap's linguistic frameworks and Friedman's mathematical-physical presuppositions. But on a very general reading of 'constitutivity', they all seem constitutive in the relevant Kantian sense. In some way or another, the authors just mentioned all take these items to be necessary to a knowing subject's ability to possess certain empirical concepts, terms or properties, or to engage in certain empirical activities like radical interpretation. Whether or not such principles are subjective in a relevantly similar sense to the ways in which Kant thinks his synthetic a priori judgements are subjective is a separate question.

For the reasons articulated in this section, I think Principlism, suitably adjusted to account for my concerns with labelling certain types of constitutive principles subjective, is a bigger, more central part of Kantianism than Goldberg claims. Not only does thinking so have the counterintuitive (on my reading of Quine's holism) consequence that Quine comes out as a Kantian settler, but I also think rendering it optional undersells what Reichenbach identifies as Kant's "eminent philosophical achievement", namely "the discovery of the constitutive component" in empirical knowledge (1978:44). Moreover, by taking Principlism as opposed to Dualism as the central thesis of Kantianism, we can make sense of how Kantians like Reichenbach, Carnap and Friedman disavow talk about capacities of the knowing subject in their accounts of constitutive principles. With this in mind, I would like to hear more from Goldberg about the ways in which he thinks Principlism optional to Kantianism.

3. Conceptual Geography and the History of Philosophy

Before closing my discussion, I want to briefly discuss the methodology at the centre of Goldberg's *Kantian Conceptual Geography*. I agree with Goldberg that one way to "make contemporary philosophical views more comprehensible" is by "drawing on our own history" (p. 3). I also agree that focusing on Kant—"a pivotal, perhaps *the* pivotal, figure of the past several centuries in the Western tradition"—might prove especially fruitful in doing so (p. 3). And, along with Goldberg, I think that a "thing at which philosophers are not quite so bad is engaging in […] 'conceptual geography'", that is, "exploring, surveying, and mapping how concepts relate to one another and the broader conceptual world" (p. 4).

Goldberg's book combines these two methods in a way that focuses on conceptual geography more than the history of philosophy. As I understand Goldberg's methodology, he extracts a few distinguishing themes of Kant's philosophy, formulates general Kantian principles/theses that capture the general thrust of those themes, and then uses those principles/theses to situate certain influential thinkers within Kantian conceptual territory. For Goldberg, the history he does is in service of finding general principles that can guide the charting of Kantian territory, and then locating key thinkers from central philosophical disciplines therein.

Goldberg's conceptual geography is modelled on Gilbert Ryle's idea of a logical geography. Ryle says:

> To determine the logical geography of concepts is to reveal the logic of the propositions **in which they are wielded**, that is to say, to show with what other propositions they are consistent and inconsistent, what propositions follow from them and from what propositions they follow. (2009:lxi; emphasis added).

One way to understand Ryle's project is that it takes as its preliminary starting points the actual ways in which certain concepts are used throughout ordinary discourse with an eye to charting the relationships between their possible uses. [20] This, of course, recalls the ordinary language methodology Ryle shares with his colleague, J.L. Austin, from whom, according to Ian Hacking, we have learned "how to study words in their sites" (2015:25). Hacking suggests that one way to extend Ryle and Austin's methodological suggestion to "study words in their sites" rather than in the abstract, is to look beyond current uses and also take into account the historical sites in which certain concepts have been used. Hacking thinks this project would resemble what has been called historical epistemology (2015:25).[21] Historical epistemology looks at "the historical development of key concepts of epistemology"; for example,

> [r]ather than taking […] the notion of 'matter of fact' or 'experience' for granted and theorising the transhistorical role of matters of fact or experience in knowledge, historical epistemology looks into the historical development of concepts of matter of fact and experience. (Tsou et al. 2015:5)[22]

In historical epistemology, the history is not in service of conceptual geography. Rather the history *is* the conceptual geography.

In the context of our current discussion, before arriving at general characterisations of their meaning, we might examine the use of 'subjective' and 'objective' in their respective sites, that is, the historical contexts in which they are invoked and the problems they are meant to address. To do this in a Kantian way would involve looking at Kant, self-conscious/self-proclaimed Kantians and the folks they influenced to chart the ways in which their use of 'subjective' and 'objective' or cognate concepts resemble and come apart from one another. Doing this would involve situating the terms in relation to the different historically situated problems they are meant to address, and perhaps tracing avenues of influence from lesser-known figures to those more well-known using traditionally historical methods (who read/studied with/acknowledges/cites whom?).

Just like Goldberg's conceptual geography does, historical epistemology might yield somewhat surprising results and help us understand the conceptual space current philosophers operate in. For example, Scott Edgar argues in his

examination of neo-Kantian conceptions of objectivity in the 1850s to the 1870s that "neo-Kantians [e.g., Hermann von Helmholtz, F.A. Lange and Otto Liebmann] […] reject the view that our knowledge's objectivity consists in resembling or being determined by mind-independent objects" (2015a:103).[23] Historical epistemology might also yield new ways of organising Kantian territory that focus on doctrines other than Dualism and Principlism around which Kantians have organised. Recent historical investigations reveal among some Kantians a shared conception of experience as consisting in mathematical natural science (cf. Richardson 2003), and a shared understanding of Kant's transcendental method among some Kantians as investigating the conditions of the possibility of experience construed as such (cf. Matherne 2015).

I'd be interested, then, in hearing from Goldberg about the ways in which he thinks his form of conceptual geography is similar to and different from the very brief and rough characterisation of historical epistemology that I have given here. One possible way in which the two are distinct is that historical epistemology appears more contextual than conceptual geography in the sense that it looks to situate certain key epistemological terms in their historical sites and contexts. Another possible and related difference is that Goldberg's conceptual geography is guided from the start by a substantive, though fairly broad and disjunctive, conception of theses central to Kant. Though historical epistemology might arrive at a similar substantive and disjunctive characterisation of Kantianism as does Goldberg's conceptual geography, it would come at the end of charting Kantian territory rather than at the beginning.

Since I take myself to be a methodological pluralist, I do not intend this section as a challenge to, or criticism of, conceptual geography. Instead, my question in this section concerns the benefits and/or differences in focus Goldberg takes his approach to have over and above another that combines history and logical geography in ways similar to historical epistemology.

Conclusion

Goldberg's *Kantian Conceptual Geography* is an original and lively book. My discussion has focused mainly on a couple of broad questions about the theses Goldberg holds to be at the heart of Kantianism. And I have done this through the lens of the history of philosophy of science. As such, I have glossed over those interesting parts of Goldberg's book that focus on Pettit and Davidson, and on issues in the philosophy of language not directly related to the territory explored here. To those who are interested in the details of how Pettit and Davidson are situated within Kantian territory, and also to those interested in a Kantian account of meaning, I recommend they take a look at Goldberg's *Kantian Conceptual Geography*.

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Notes:

1. Goldberg is not the first to group together such a diverse group of thinkers under the banner of Kantianism. Lewis White Beck thought a group of Kant's "analyst critics", which included "positivists, pragmatists, conventionalists, language analysts, and sociologists of knowledge", shared in common a commitment that "Kant was correct in insisting upon the subject's activity in the construction of phenomenal objects", even if they "den[ied] that [Kant's] rules for such construction are necessary and unique" (1968:272).↩

2. Indeed, Goldberg says: "One might think of Kantian conceptual geography as a prolegomenon to any future epistemology, philosophy of language, or metaphysics—Kantian or otherwise" (p. 250; see also p. 29 for this claim).↩

3. Goldberg also touches on Rae Langton's and Robert Hanna's respective interpretations of transcendental idealism.↩

4. Goldberg claims that these domains are ultimately united for the Kantian since a "single set of [subjective] capacities plays a central role in each"; that is, a Kantian's answers to the questions: "1. *What can I empirically think?* 2. *What can I empirically say?* 3. *What empirically exists?*" will appeal to the same set of subjective capacities (p. 212).↩

5. Goldberg states the Kantian account of meaning as follows: "KANTIAN MEANING: For any empirical term in L, the term means what it does if and only if a suitable subject under suitable conditions would take it to have that meaning" (p. 172).↩

6. Principally: Frege's Platonic account of sense, Saul Kripke and Hilary Putnam's Aristotelian causal theory of reference and H.P. Grice's Berkeleiean idealist account of speaker meaning.↩

7. Similarly, Kuhn's paradigms—"a set of shared examples embodying problems, solutions, methods, and values around which a scientific community coalesces" (p. 67)—count as a subjective source for Goldberg.↩

8. Related to the main question of this section: Would experience, for Quine, rely on perceptual capacities? And would, then, experience not count as (partially) subjective in Goldberg's sense?↩

9. For how the framing might look in relation to Carnap's linguistic frameworks, and Kuhn's paradigms, see note 12 below.↩

10. I think we can safely say something similar about Carnap. One way to look at Reichenbach and Friedman's understanding of the transcendental method is that they prefer the analytic method of the *Prolegomena* to the synthetic method of the First *Critique*. For more on the transcendental method in the strands of late nineteenth and early twentieth centuries neo-Kantianism influencing Reichenbach and Friedman, see Matherne (2015, §4). For the different guises the transcendental method takes throughout the philosophy of science in the twentieth century, see Pihlström and Siitonen (2005). I say more about this point in Section 2.3; see also note 18 below.↩

11. Friedman (2012) backs off this claim about the abstract nature of the mathematical elements.↩

12. I think this same point holds for something like Kuhn's paradigms, and the values that Kuhn thinks guides theory choice during periods of revolutionary science (cf. Kuhn 1977:320–39). While the reasons given for adopting this or that paradigm are partially non-empirical given that they involve conventionally adopted extra-empirical values, it seems misleading to say that such decisions are (completely) subjective. After all, as Carnap points out in his similar account of linguistic frameworks, the pragmatic, non-cognitive (or non-empirical) decision to adopt this or that linguistic framework according to how well it satisfies certain pragmatic values "will […] usually be influenced by theoretical knowledge, just like any other deliberate decision concerning the acceptance of linguistic or other rules" (1950:23).↩

13. A helpful way to understand response-dependent concepts is to think of them as modelled on Locke's secondary qualities. See Goldberg (pp. 34ff.) for a helpful explanation of response-dependence.↩

14. See note 8 above.↩

15. A possible case for Quine's Kantianism might be made historically. Robert Sinclair (2012) traces C.I. Lewis's influence on Quine, and Lewis was a self-identified Kantian. Also, Davidson, in an interview, says: "[Y]ou can find most of Quine's epistemology in C.I. Lewis minus the analytic-synthetic distinction. Epistemology naturalized is very close to the heart of C.I. Lewis. I don't think Quine knows the extent to which *there really is a sequence that starts with Kant and goes through C.I. Lewis and ends with Quine*" (2004:237; emphasis added).↩

16. Another worry related to this point and my sense that Principlism is an important part of Kantianism is given in Colin Marshall's review of Goldberg's book. Marshall says: "Given these definitions [of 'subjective' and 'objective'], one might think that it is trivially true that, setting aside properties, empirical terms and concepts have subjective and objective sources in Goldberg's sense. On any familiar sense of 'empirical', empirical terms and concepts depend essentially on subjects' linguistic and conceptual capacities (subjective sources) and on objects or sensations deriving from objects (objective sources)" (Marshall 2015).↩

17. Does Hume's sceptical solution to induction and/or his psychologistic definition of necessary connection commit him to something like Dualism? Both seem to appeal to subjective sources—habitual associations rooted in subjective feelings of being carried from the thought of one event/object to the thought of another event/object—and both seem central to Hume's account of our acquisition of certain empirical concepts and terms. See also note 16 above.↩

18. For more on the anti-psychologism that was part and parcel of the major strands of Kant interpretation in the thirty or forty years prior to Reichenbach (1965), see Anderson (2005), Edgar (2008) and Konstantin Pollok (2010). A key part of one influential school of neo-Kantianism, the Marburg School, was that they adopted a certain understanding of Kant's transcendental method, namely, that it involves an investigation into the conditions of the possibility of experience understood as consisting in mathematical natural science (see note 10). For discussions of these points, see Richardson (2003, §2) and Matherne (2015, §4); cf. Friedman (2001:9).↩

19. Influenced by the Kantian C.I. Lewis and Reichenbach, Arthur Pap (1944; 1946) adopts a similar point of view in his account of the *functional* a priori. Like the view I'm pressing here, Pap's view is recognisably Kantian given the centrality he assigns to the constitutive role that certain principles—even empirical statements—might play in experience, rather than any claims about the subjective and objective sources of our empirical concepts, terms or properties. For recent treatments of Pap's theory of the functional a priori, see Stump (2003; 2011; 2015).↩

20. See Julia Tanney's introduction to Ryle (2009). At one point, she says the philosopher as logical cartographer "constructs her map of the logical geography […] by using actual and possible sayings as her data" (Tanney 2009:lvi).↩

21. First dubbed by Lorraine Daston according to Tsou et al. (2015:5).↩

22. For an exercise in historical epistemology as it relates to Kant's conception of experience, and also the neo-Kantian background of Carnap's philosophy, see Richardson (2003).↩

23. See also Edgar (2015b) for later neo-Kantian views on intersubjectivity and physical laws.↩

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