

WITTGENSTEIN, CARNAP, & COPERNICUS: ADAPTING THE *A PRIORI*

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My point of departure is a passage in which Coffa claims: “Wittgenstein’s and Carnap’s insights on the *a priori* belong in the same family as Kant’s... What we witness circa 1930 is a Copernican turn that, like Kant’s, bears the closest connection to the *a priori*; but its topic is meaning rather than experience” [Coffa, 1991, p. 263]. I draw out Kantian resonances in Wittgenstein’s and Carnap’s work on logic, grammar, and theoretical frameworks. In the end, Coffa’s remark comes out as significantly illuminating for a variety of questions, issues, and dynamic historical trends.

Keywords: a priori, Wittgenstein, Carnap, epistemology

ВИТГЕНШТЕЙН, КАРНАП И КОПЕРНИК: АДАПТИРУЯ *A PRIORI*

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Моей отправной точкой является отрывок, в котором Коффа (1991) утверждает: «Взгляды Витгенштейна и Карнапа на априори принадлежат к той же семье, что и взгляды Канта... То, что мы наблюдаем примерно в 1930 г., – это коперниканский поворот, который, подобно кантовскому, имеет самую тесную связь с априори; но его темой является скорее смысл, чем опыт» [Coffa, 1991, p. 263]. Я выявляю кантианские резонансы в работах Витгенштейна и Карнапа по логике, грамматике и теоретическим основам. В конце я показываю, что замечание Коффы проливает свет на множество вопросов, проблем и динамичных исторических тенденций.

Ключевые слова: априори, Витгенштейн, Карнап, эпистемология

This paper is an attempt to unpack the following, somewhat obscure, passage:

Wittgenstein’s and Carnap’s insights on the *a priori* belong in the same family as Kant’s. One could, in fact, mimic Kant’s famous “Copernican” pronouncement to state the point: If our *a priori* knowledge must conform to the constitution of meanings, I do not see how we could know anything of them *a priori*; but if meanings must conform to the *a priori*, I have no difficulty in conceiving such a possibility. What we witness circa 1930



is a Copernican turn that, like Kant's, bears the closest connection to the *a priori*; but its topic is meaning rather than experience [Coffa, 1991, p. 263].

My goals are partly exegetical (e.g., *What on earth does Coffa mean by this?*), but they lead into more general, substantive questions (*How plausible or helpful is Coffa's use of this Copernican lens to illuminate these 20th century developments?*) Unavoidably, the endeavor is wide-ranging – first and foremost, it spans an overlap between epistemology and the philosophy of language; it also entails forays into the history of philosophy, the philosophy of logic, and the philosophy of science. However, the end is worth the means. Coffa's remark comes out as incisive and illuminating in relation to a variety of questions, issues, and dynamic historical trends.

Section 1 discusses Kant's Copernican pronouncement (**CT2** – the second Copernican turn). Section 2 is focused on various moments from Wittgenstein's work on the *a priori* (**CT3i** – the third Copernican turn, version one). Section 3 ties in resonances from Carnap's work (**CT3ii**). Finally, section 4 summarizes and draws out some morals.

1. (CT2): Kant, Copernicus, and *A Priori* Rules

Kant's Copernican pronouncement occurs in the (1887, 2nd ed.) B-preface:

Hitherto it has been assumed that all our knowledge must conform to objects. But all attempts to extend our knowledge of objects by establishing something in regard to them *a priori*, by means of concepts, have, on this assumption, ended in failure. We must therefore make trial whether we may not have more success in the tasks of metaphysics, if we suppose that objects must conform to our knowledge. This would agree better with what is desired, namely, that it should be possible to have knowledge of objects *a priori*; determining in regard to them something prior to their being given. We should then be proceeding precisely on the lines of Copernicus' primary hypothesis. Failing of satisfactory progress in explaining the movements of the heavenly bodies on the supposition that they all revolved around the spectator, he tried whether he might not have better success if he made the spectator to revolve and the stars to remain at rest. A similar experiment may be tried in metaphysics, as regards to the intuition of objects. If intuition must conform to the constitution of the objects, I do not see how we could know anything of the latter *a priori*; but if the object (as object of the senses) must conform to our constitution of our faculty of intuition, I have no difficulty in conceiving such a possibility [Bxvii].



As for present aims, it is important to set the bar at an appropriate height, before attempting to clear it. My question is not purely one of Kant scholarship:

[Kant Q] *What exactly is Kant up to, at [Bxvii]?*

Rather, it is a question of Coffa scholarship:

[Coffa Q] *What is the reading of Kant's move at [Bxvii] which Coffa takes to anticipate or*

illuminate what Wittgenstein and Carnap were up to, around 1930?

Toward that end, I am taking one paragraph from Kant's corpus out of context and reading it extremely anachronistically – as if it were specifically and exclusively about future trends on the *a priori*. I am using a lens constructed centuries later, bringing to bear some interests which are decidedly post-Kantian.¹

The familiar background story has it that (CT2) Kant's Copernican turn is an attempt to show the way beyond past "failures" in epistemology, by blazing a trail between the empiricists' daunting project of trying to account for how knowledge is built from impressions upon a blank slate and the rationalists' commitment to obscure, supernatural faculties of mind. On the specific matter of *a priori* knowledge, Kant's commitments include that: (i) anything which is universal in scope or necessarily true can only be known *a priori* [A2, B4],² and (ii) such knowledge exists [B5, B15]. I will steer away from talk of 'necessity', and take 'immunity to counterexample' to be the distinctive feature of *a priori*.³ What then is Kant's Copernican alternative to the empiricist and rationalist accounts of immunity to counterexample?

I will take Kant's *tertium quid* to be the notion of an *a priori* rule – where 'rule' connotes regulative, normative, guiding as opposed to

¹ Similar qualifications apply to the material on Wittgenstein and Carnap below – I make no pretense of attempting a balanced, comprehensive account of their sprawling oeuvres; but rather, using Coffa's lens, I focus on a specific aspect of their work, which connects back to Kant.

² I myself am a firm believer in Kripke's [1972] necessary *a posteriori*; but that will play little role in this paper. It lurks in the background as yet another reason to talk of 'immunity to counterexample' as opposed to 'necessary, eternal' as the mark of the *a priori*. Something which once had the status 'immune to counterexample' could subsequently come to be rejected, provided that there is a pertinent change of framework – e.g., 'Whales are fish', in which case there is a change in the operative concept 'fish'.

³ The point of switching to "immunity to counterexample" is to hone in on one among several different aspects that had previously been connected, or conflated. Like most any pre-20th century philosopher, Kant lumps various things together under terms like "necessary" or "*a priori*". For important pre-Kripkean discussions of this point, cf. [Reichenbach, 1920; Pap, 1958].



merely describing or predicting. Immunity to counterexample is not something we have to *discover* or *earn* (that would be pre-Copernican thinking); but, rather, an integral part of the process of inquiry is that certain contents (judgements, propositions) have that status (role, function). That would explain, in a novel way, how one might be able to “determine in regard to them something prior to their being given.” That objects conform to our knowledge is no accident and no mystery; this is rather constitutive of what it means for something to be a candidate for our knowledge in the first place.

So, for present [Coffa Q] purposes, I take this notion of an *a priori* rule to be the core of Kant’s Copernican turn (CT2):

(CT2): There are *a priori* rules that are immune to counterexample because they are **constitutive of experience** of reality, not inductions from experience of reality, or rationally-intuited laws that govern mind-independent reality. **Example:** Events are caused.

To illustrate, compare three different readings of the proposition (or judgment) that events are caused: (i) the rationalist reading takes it to be an entailment of the Principle of Sufficient Reason, a universal, necessary, eternal truth; (ii) the empiricist reading takes it to be a humble inductive generalization – i.e., as far as I have been able to determine, all events to date have had a sufficient cause; (iii) the (CT2) Kantian-Copernican reading takes it to be an *a priori* rule: for agents like us, it is a condition for the possibility of experiencing something that is categorized as an event, that it be taken to have been caused.⁴

A key distinctive feature of this notion of an *a priori* rule is that it spans at least two factors, which I will call ‘content’ and ‘status’. On this usage, ‘*a priori*’ does not solely mark off some special kinds of contents (e.g., timeless self-evident truths, fashioned from the hardest steel) but rather also essentially includes a special constitutive theoretical function

⁴ To the charge that I am reading Kant anachronistically, through the lens of Wittgenstein’s philosophy of logic, or Carnap’s philosophy of science: first, I plead guilty (my reading is especially influenced by Railton [2000] and Friedman [2013]); second, at the same time this reading is not without precedent in serious Kant scholarship. For example, Rohlf [2010] characterizes Kant’s categories as “*a priori* rules”, and Kitcher [2006] discusses something very much like this under the guise of “Kant’s ‘tacit’ (as opposed to his ‘official’) conception of a *priority*”.

Given this move to Railton’s ‘*a priori* rules’, or to Kitcher’s ‘tacit *a priori*’, there is a sense in which ‘*a priori*’ no longer modifies a sub-class of beliefs. For example, while the reflective, competent agent believes that $7+5=12$, that events are caused is not (merely) a belief – it is rather a transcendental condition for the possibility of experiencing something as an event. We will see echoes of this move in Wittgenstein and Carnap – e.g., for Wittgenstein [1974], that a double negation is equivalent to an affirmation is *a priori* but not really *a belief*; ditto for Carnap [1950] on the claims that numbers and physical objects exist.



or role. So, two agents could share a belief with the same content, but it be an *a priori* rule for one but not the other. In addition to the ‘events are caused’ case above, and the examples from the philosophy of logic and of science that are to come, cases like ‘Humans have free will’ or ‘Lying is wrong’ might also provide cases of contents that could be shared in common without the sharing of status, across different philosophical world-views. (Of course, not all contents are equally well suited to such status – cf. [reference removed for blind refereeing] for discussion.)

Bridging to what is to come, I’ll briefly describe a Wittgenstein-inspired metaphor for an *a priori* rule, and then introduce the Carnapian picture of *a priori* rules in science. First, consider Railton [2000, p. 180] on the construction tools *norma* (standard for a right angle) and *regula* (standard for a straight line):

...[T]he *norma* or *regula* are used to indicate how to ‘go on’, and if an actual cut fails to conform to the *norma* or *regula*, it is the cut that is corrected, not the tool [...except “in Chaplin comedies”]. Thus, the *norma* or *regula* are not vulnerable to a *posteriori* ‘disconfirmation’ by actual practice that fails to conform, but neither are they ‘confirmed’ by practice that does conform.

And yet, over time, there are various ways in which one could learn that one’s regulative, normative guide is flawed – herein too lies a reason why ‘immune to counterexample’ status, as opposed to ‘necessary, eternal’ content, is the mark of an *a priori* rule.

More concretely, Pap [1946, ch. 3, 4] discusses several similar cases, specifically with respect to the status of the instruments in the constitution of experimental data (e.g., the *a priori*-rule status of the thermometer in testing Boyle’s law, of spring balances in testing Hooke’s law, etc.) Friedman [2013: Part II] discusses in considerable detail an *a priori*-rule reading of Newton’s scientific advances, in which case there exist complex constitutive connections between the mathematics, the mechanics, and the gravitational physics. That some contents be given the provisional status of immunity to counterexample, allowing us to “determine in regard to [objects] something prior to their being given”, is an essential part of any experimental design.⁵ (As Carnap [1963b, p. 922] puts it, this is “practically indispensable.”) In Carnap’s (1950) terms, these *a priori* rules are framework-internal; there need not be anything magical about their content, but to tweak or alter their status is to change the framework.

So: **(CT2)** Kant’s Copernican turn on the *a priori* has it that *a priori* does not just have to do with content, but rather also essentially to do with status, role or function within the relevant operative framework.

⁵ For fuller articulations of this conception of an *a priori* rule in science, cf. [Friedman, 2000; Friedman, 2013; Stump, 2015].



I will take this notion of an *a priori* rule forward, and argue that it lies at the core of what Coffa takes to be a Kantian reorientation on “meaning rather than experience”, evident in Wittgenstein’s and Carnap’s thought around 1930. The third Copernican turn emerges as *a priori* rules germinate within Wittgenstein’s early philosophy of logic (CT3i), and as *a priori* rules are first manifest in Carnap’s notion of logical syntax (CT3ii).

2. (CT3i): Wittgenstein on Logic, Grammar, and Hinges

Next, to locate within Wittgenstein’s corpus certain Kantian resonances, when it comes to this notion of an *a priori* rule. To that end, I mine Wittgenstein’s early philosophy of logic [1921; 1961]. Subsequent to that, I trace our target notion as it is manifest in the notion of ‘grammar’ in the early 1930s, and as it endures into the language games and world-pictures of his latest work [1953; 1969].

Wittgenstein was fairly consumed by questions in the philosophy of logic during his first stay at Cambridge, from 1911 to 1913;⁶ and they continued to dog him for some time afterwards, forming one of the many complex interwoven threads in his early work. Some of these core question can be naturally phrased in terms of immunity to counterexample – for example, it seems evident that we are justified in believing that any instance of the following is valid, not at all vulnerable to refutation by contingent happenstance:

[&E] $\Phi \ \& \ \Psi; \therefore \Phi$

[MP] $\Phi \rightarrow \Psi, \Phi; \therefore \Psi$

The intuition that such patterns of inference are immune to empirical disconfirmation presents us with hard problems. Wherein lies our justification for these audacious beliefs? What exactly are the logical truth-makers?

In the *Notebooks* (1/6/15), Wittgenstein says: “The great problem around which everything that I write turns is: Is there an order in the world *a priori*, and if so what does it consist in?” Like Kant (whether or not it was explicitly inspired by Kant) Wittgenstein develops a novel, distinctive answer to that question. Or again at (1/5/15): “My method is not to sunder the hard from the soft, but to see the hardness in the soft”. (That could serve as an epigram for *On Certainty*, written around 35 years later.) One way to sunder the hard from the soft is to think that there are

⁶ There are some vivid anecdotes in Monk [1990, ch. 3, 4].



two very different sorts of propositions: the eternal necessary truths (fashioned from the hardest of steel), vs. the local fleeting empirical contingencies.⁷ One way to see the hardness in the soft is to build a philosophy of logic upon the notion of an *a priori* rule:

(CT3i): Logical truths are *a priori* rules which are constitutive of the meaning of the logical particles, not inductions from experience of reality, or rationally-intuited laws governing the whole of mind-independent reality. Example: [&E**] $\Phi \ \& \ \Psi; \ \therefore \Phi$**

Consider a few other quotes from the *Notebooks*, articulating this idea:

(2/9/14): It must in a certain sense be impossible for us to go wrong in logic.

(8/9/14): The ‘self-evidence’ of which Russell has talked so much can only be dispensed

with in logic if language itself prevents every logical mistake.

On into the *Tractatus* we get the following:

5.473: Logic must take care of itself... In a certain sense, we cannot make mistakes in

logic

5.4731: ...What makes logic *a priori* is the impossibility of illogical thought

That is a novel, distinctively Kantian account of the *a priori* status of logical truth. The reason why [**&E**] will never lead you astray is not that there is anything supernatural about its content, but rather that it encapsulates a rule which constitutes what it means to employ ‘&’. It is more like the exceptionlessness of generalizations regarding the movement of chess pieces, than like staking a claim which may be open to possible counterexample. Of course players could agree to different rules regulating the pieces, but they would no longer be playing chess.

Logical truth has the status of the cement holding together the foundations of a language game, of thereby defining what counts as an intelligible move within the game. The justification for immunity to counterexample in logic is a matter of understanding the status of certain contents; similar to **(CT2)**, this orientation stiff-arms many traditional questions which tend to force a tired old choice between Platonism and relativism. Immunity to counterexample in logic is not something we have to earn or discover (that would be pre-Copernican thinking); but rather that some

⁷ Russell [1919], among other places, espouses such a binary, Platonic philosophy of logic. Wittgenstein abhorred it.



things will have such a status is inevitable (for intelligible conversation, let alone productive inquiry).

Many things changed within Wittgenstein's philosophy, over his dynamic career. However, these meaning-constituting *a priori* rules is one of the things which remain constant, underneath these changes. Coffa's target date is 1930, which would point us toward explorations in Wittgenstein's middle works of the myriad ways in which these (CT3i) *a priori* rules are manifest within everyday grammar. Indeed, as Coffa [1991, ch. 8] traces, there are evident links between what is called "the form of objects" in the *Tractatus* and what is called "grammar" in the middle works. "Grammar" is what you get when you take the notion of hardness-in-the-soft logical form and apply it beyond the scope of logic, across the varied tapestry of ordinary language.⁸

Consider the following passages from Wittgenstein [1974], dating from the early 30s:

§14: Grammar as (e.g.) the geometry of negation. We would like to say: "Negation has the property that when it is doubled yields an affirmation". But the rule doesn't give a further description of negation, it constitutes negation.

§133: Grammatical rules determine a meaning and are not answerable to any meaning that

they could contradict... The rules of grammar are arbitrary in the same sense as the choice

of a unit of measurement.

§134: ...The rules of grammar cannot be justified by shewing that their application makes a

representation agree with reality. The analogy between grammar and games.

The former is a clear articulation of the conception of ([DN] $\sim\sim\Phi$; $\therefore\Phi$) as an *a priori* rule. The next two passages generalize the notion beyond the bounds of logic, expanding into conditions for the possibility of intelligible discourse. Here we see the dawning of the multi-faceted potency of the notion of a language game.

"Grammar" is used more sparingly in the later works; though where it is invoked, it has serious potency. For example, in the course of a discussion about privacy and mental terms we get: "a whole cloud of philosophy condensed into a drop of grammar" [1953, II, xi, p. 222]; or: in a discussion of connections between pain and pain-behavior, the reader

⁸ "When the metaphysics of logical atomism fell apart, it became clear that the very idea of logical form amounted to no more than the grammar of expressions, the rules for their use" [Hacker, 1996, p. 80].



is warned about “the grammar which tries to force itself on us here” [1953, §304]. There are also a few enigmatic, Tractarian-style pronouncements:

§371. *Essence* is expressed by grammar.

§373. Grammar tells what kind of object anything is.

I won't try to paraphrase these; for present purposes, it suffices to point to the evident resemblance between grammar and (CT2) Kantian *a priori* rules (as well as (CT3ii) Carnap's logical syntax, and the role of internal questions in theoretical frameworks – for “what kind of object anything is” is surely a paradigmatic internal question for Carnap [1950]).

Right to the end, *a priori* rules are still there in Wittgenstein [1969], his last written work and most sustained treatment of epistemological themes. Consider the discussion of the notion of a hinge proposition:

§341. [T]he *questions* that we raise and our *doubts* depend on the fact that some propositions are exempt from doubt, and are as it were like hinges upon which those turn.

§342. That is to say, it belongs to the logic of our scientific investigations that certain things are *in deed* not doubted.

§343. We just *can't* investigate everything... If I want the door to turn, the hinges must

stay put.

Or, also, the riverbed metaphor around §§98–99:

...if someone were to say “So logic too is an empirical science” he would be wrong. Yet

this is right: the same proposition may be treated at one time as something to test by

experience, at another as a rule of testing. And the bank of the river consists partly of

hard rock, subject to no alteration or only to an imperceptible one, partly of sand, which

now in one place now in another get washed away, or deposited.⁹

⁹ Cf. §§309-319 for another related discussion of how “rule and empirical proposition merge into one another”. Compare another contemporary proponent of *a priori*-rule-status, Pap [1946, p. viii]: “...[A] *priori* is characterized in terms of functions which propositions may perform... A proposition which is *a priori* in one context of inquiry may be *a posteriori* in another context.”



Again, we see very clearly (albeit, as ever, metaphorically) the *a priori* rule status – all language games and world-pictures are bolstered by them. (“[A] language game is possible only if one trusts something...” [1969, §509].) So, though Kantian style *a priori* rules (as pertaining to “meaning rather than experience”) originally germinate in Wittgenstein’s early philosophy of logic, they may be seen to cement a foundation holding together the various time-slices of Wittgenstein’s diverse philosophical careers.

3. (CT3ii): Carnap, Logical Syntax, and Internal Questions

The basic links between (CT3i) and (CT3ii) are: (i) what Carnap [1932; 1937] calls “logical syntax” is analogous to Wittgenstein’s “grammar”;¹⁰ and (ii) Carnap’s [1946; 1950] frameworks are analogous to Wittgenstein’s more metaphorical “language games” or “world-pictures”. All things considered, Carnap [1950] is the work which I take to most comprehensively link up with [Coffa Q]. The driving idea is that in Carnap’s frameworks, Kantian-style *a priori* rules are broadly evident – in the 20th century guise of conditions for the intelligibility of discourse itself, as opposed to 18th century conditions for the possibility of empirical knowledge.¹¹

¹⁰ “I thought of the logical syntax of language in the strictly limited sense of dealing with the forms of the expressions of the language” [1963a, p. 54]. There is no doubt as to whether Carnap [1932] takes logical syntax to have serious potency – it does a fair share of the heavy lifting in the argument for the “meaninglessness of all metaphysics”. Less extreme versions of the sentiment endure: “[T]he investigation of philosophical problems was originally the main reason for the development of syntax” [1963a, p. 55].

Allegedly, the cause for Wittgenstein’s discontinuing his meetings with the Vienna Circle was the conviction that Carnap was stealing his ideas (letter to Schlick, 5 January 1932; cf. Coffa [1991, p. 404–408] for discussion). While I find this rather uncharitable, I does rather accord with this present paper’s overall thesis.

¹¹ Among the many obvious contrasts between Wittgenstein and Carnap, one is that it is relatively easier to trace the historical influences on Carnap’s work. Some essential antecedents of Carnap’s Copernican Turn include Poincaré’s [1902] integration of non-Euclidean geometries into a broadly Kantian philosophy of science, and similar work by Reichenbach [1920] on how Kantians could absorb the theory of relativity. Carnap [1963a, p. 10] expressly lists these thinkers – who are clearly working on a conception of *a priority* as a dynamic, adaptable matter of status – among his semi-early influences.



To illustrate how Carnap's [1950] work toward the end of "overcoming nominalistic scruples" within a scientific philosophy is easily situated within this ongoing Kantian project, consider next a few choice excerpts:

(From the opening paragraph of §2) If someone wishes to speak... about a new kind of entities, he has to introduce a system of new ways of speaking, subject to new rules; we shall call this procedure the construction of a linguistic framework... And now we must distinguish two kinds of questions of existence: first, questions of the existence of certain entities of the new kind within the framework; we call them internal questions; and second, questions concerning the existence or reality of the system of entities as a whole, called external questions. Internal questions and possible answers to them are formulated with the help of the new forms of expressions. The answers may be found either by purely logical methods or by empirical methods, depending upon whether the framework is a logical or a factual one. An external question is of a problematic character which is in need of closer examination.

(Toward the end of §3) From the internal questions we must clearly distinguish external questions, i.e., philosophical questions concerning the existence or reality of the total system of the new entities... An alleged statement of the reality of the system of entities is a pseudo-statement without cognitive content. To be sure, we have to face at this point an important question; but it is a practical, not a theoretical question; it is the question of whether or not to accept the new linguistic forms. The acceptance cannot be judged as being either true or false because it is not an assertion. It can only be judged as being more or less expedient, fruitful, conducive to the aim for which the language is intended. Judgments of this kind supply the motivation for the decision of accepting or rejecting the kind of entities.

Carnap [1950] did not think it worthwhile to try to prove to the skeptics that numbers really exist, or that ordinary physical objects are mind-independent – that would be pre-Copernican thinking. To do so would be to mistake the status of certain elements of the relevant operative framework. And, so, consider:

(CT3ii): there are **rules** that are immune to counterexample because they are **constitutive of the frameworks of inquiry** – not inductive generalizations about reality or universal eternal laws governing reality. **Example:** There are physical objects.

Carnap's internal questions are largely a function of the framework-relative *a priori* rules – if you have the framework's constitutive grammar correct, you generally thereby have the determinants of the answer to any internal question. Considered internally, from within the frameworks, these standards are **(CT3)** rules with the status of immunity to counterexample – solid seams in the web of belief, simply not subject to empirical



disconfirmation. They are constituent elements of the rules of the game, without which various sorts of questions could not be posed, or conjectures could not be tested.¹² *A priori* is status; holding something to that status is “practically indispensable” [Carnap, 1963b, p. 922] in systematic inquiry.

External questions are harder to generalize about. Here, the ultimate arbiter is practical, instrumental, abductive reasoning (above all else: “expediency”); the weighting of criteria can and should change from context to context. The spectre of relativism stalks (the ever-tolerant¹³) Carnap here, as it does the later Wittgenstein. In the case of Wittgenstein, there are some fairly categorical disavowals of any strong form of relativism (e.g., [1969, §108, p. 317, 336] – though they sometimes occur beside statements which lean to the contrary. In Carnap’s case, the crucial notion of cross-framework comparative judgement gets developed in the post-positivistic neo-Kantian line in the philosophy of science which builds on his work (cf. note 5).

4. Summary and Morals

Let us recap, and draw out some conclusions. Our goals are (i) to try to make sense of a certain passage in which Copernicus, Kant, Wittgenstein, and Carnap are bound together, along a certain dimension, and (ii) to see what that labor can yield, or repay, when it comes to illuminating substantive issues and improving our understanding of developments in philosophy.

To summarize, then:

Kant [1787, p. Bxvii]: “If intuition must conform to the constitution of the objects, I do not see how we could know anything of the latter *a priori*; but if the object... must conform to our constitution of our faculty of intuition, I have no difficulty in conceiving such a possibility.”

¹² [For Carnap in this period] “All standards of ‘correctness’, ‘validity’, and ‘truth’... are relative to... a linguistic framework... Such rules are constitutive of the concepts of ‘validity’ and ‘correctness’...” [Friedman, 2000, p. 371]. I am *not* claiming that, for Carnap, any particular framework is itself immune to counterexample. (He is too tolerant and exploratory for that sort of dogmatism.) Rather, any inquiry takes place within a particular framework, and any particular framework involves according the status of immunity to counterexample to something or other. (Riffing on the above quote from [1969, §509] – A framework is possible only if one trusts something.)

¹³ The last line from Carnap [1950] advises: “Let us be cautious in making assertions and critical in examining them, but tolerant in permitting linguistic forms.”



Coffa [1991, p. 263]: “If our *a priori* knowledge must conform to the constitution of meanings, I do not see how we could know anything of them *a priori*; but if meanings must conform to the *a priori*, I have no difficulty in conceiving such a possibility.”

Legend: Kant’s “object” = Coffa’s “meaning”; Kant’s “knowledge of objects” = Coffa’s “constitution of meaning”; Kant’s “intuition” = Coffa’s “*a priori* knowledge”

The Kantian move from which we begin is: given the transcendental turn to taking objects as “conforming to our constitution of our faculty of intuition”, *a priori* knowledge of objects is seen in a completely new light. Coffa’s extension then goes: once we take meanings as constituted by *a priori* rules, we see *a priori* itself in a completely new light. Intuition plays a constitutive role in *a priori* knowledge of objects for Kant; *a priori* rules play a constitutive role in the constitution of meaning for Wittgenstein and Carnap. **(CT2)** says: the reason we can have *a priori* knowledge of objects is that they are, in part, constituted by how we represent them; **(CT3)** says: the reason we can have *a priori* access to meanings is that meanings conform to *a priori* rules.

And so, consider again:

(CT2 Kant): There are **rules** that are immune to counterexample because they are **constitutive of** experience of reality, not inductions from experience of reality, or rationally-intuited laws governing experience of mind-independent reality. **Example:** Events are caused.

(CT3i Wittgenstein): There are **rules** which are **constitutive of the meaning** of the logical particles, not inductions from experience of reality, or rationally-intuited laws governing the whole of mind-independent reality. **Example:** [$\&E$] $\Phi \& \Psi; \therefore \Phi$

(CT3ii Carnap): There are **rules** that are immune to counterexample because they are **constitutive of the frameworks of inquiry** – not inductive generalizations about reality, or universal, necessary laws governing reality. **Example:** There are physical objects

With Kant’s transcendental turn, some traditional issues in epistemology are transformed; with **(CT3)** we see a very similar move (i.e., *a priori* is in large part a question of status, function, or role) extrapolated from epistemology to the philosophy of logic and of science – via the philosophy of language. Logics, language games, world-pictures, and theoretical frameworks can all be seen as built upon such constitutive, transcendental conditions for intelligible discourse.

As the philosophy of language, logic, and science grow, as 20th century descendants of modern epistemology, Kant’s constitutive powers of mind are extended and transformed. In this respect the move from **(CT2)** to **(CT3)** is a function of the increased semantic sophistication



which occurs across the board in philosophy, during this time frame. In particular, it is an inexorable organic step from “status: immune to counterexample” to questions about the contents which are afforded this status. With progress, the philosophy of language is able to take over and underwrite much of what was historically supposed to be done by “the ‘self-evidence’ of which Russell talked so much”.¹⁴

And so Coffa’s lens shines some new light on some old terrain. One of the many complex things which occur within Coffa’s semantic tradition is that Kantianism itself gets adapted and extended (from “experience” to “meaning”). This neo-Kantian reading of commonalities between Wittgenstein and Carnap amounts to a transcendental turn whose scope is not merely knowledge of objects, but the whole of intelligible, rational discourse, within and beyond philosophy, logic, and science. *A priori* rules are constitutive ingredients of meaning itself, and thereby establish transcendental conditions for inquiry.

Even further, this proposed answer to [Coffa Q] results in a meta-philosophy that Wittgenstein and Carnap can agree upon. It is not the old fashioned ‘Queen of the Sciences’ line, with the philosopher in the position of Executive in Charge of Scientific Research, keeping the worker-bee scientists focused on their proper tasks. It is also not the Quinean naturalistic, keep-out-of-the-scientists’-way and try to find a useful way to follow their lead. The role of *a priori* rules in inquiry points to a *tertium quid*, in which philosophy plays constant, dynamic, diverse important roles in the process of inquiry. Philosophy without science might tend toward seeming somewhat empty, but science without philosophy is blind.

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¹⁴ Cf. [Boghossian & Peacocke, ed., 2001; Kompa, Nitmz, & Suhm, ed., 2009; Schaffer & Weber, ed., 2011].



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