

What is a “Representation-in-Itself”? Kant, Bolzano, and Anti-Psychologism

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This science of the necessary laws of the understanding and of reason in general, or what is one and the same, of the mere form of thought as such, is what we call *logic*. . . . Some logicians, to be sure, do presuppose *psychological* principles in logic. But to bring such principles into logic is just as absurd as to derive morals from life. If we were to take principles from psychology, i.e., from observations concerning our understanding, we would merely see *how* thinking does take place and *how* it is under various subjective obstacles and conditions; this would lead then to cognition of merely *contingent* laws. In logic, however, the question is not about *contingent* but about *necessary* rules; not how we do think, but how we ought to think. The rules of logic must thus be derived not from the *contingent* but from the *necessary* use of the understanding, which one finds in oneself apart from all psychology. (*JL* 9: 13-14, underlining added)

Anything that can be part of a proposition in itself, without itself being a proposition, I wish to call a *representation in itself* (*Vorstellung an sich*), or simply a *representation*, or *objective representation*. This will be the quickest and easiest way of conveying my meaning to those who have understood what I mean by a proposition in itself. Thus, the combination of words ‘Caius has wisdom’ expresses a complete proposition. The word ‘Caius’ itself expresses something that can be part of a proposition, as we have seen, although it does not by itself form a proposition. This something I call a representation. Similarly, what is designated by the word ‘has’ and indicated by the word ‘wisdom’ I call representations. . . . By objective representation I mean the certain something which constitutes the immediate matter of a subject representation, and which is not to be found in the realm of the real. An objective representation does not require a subject but subsists, not indeed as something *existing*, but as a certain *something* even though no thinking being may have it. . . . [T]here may be objective representations which are not present in the mind of any thinking being except God. (*TS* §48, 2-3, pp. 61-62)

Enter by the narrow gate; for wide *is* the gate and broad *is* the way that leads to destruction, and there are many who go in by it. Because narrow *is* the gate and difficult *is* the way which leads to life, and there are few who find it. (Matthew 7: 13-14)

I. Introduction: Psychologism as an Evil Many-Headed Philosophical Monster

It is an interesting & even important fact that the philosophical debate about Logical Psychologism has often been framed in moralistic terms. Simply put, the “sin of Logical Psychologism” is to reduce the pure or non-empirical science of logic to the impure or empirical science of psychology. But like the mythical Hydra, Logical Psychologism is an evil philosophical monster with many heads. (For more details on Logical Psychologism, see my book *Rationality & Logic*, ch. 1.)

One Hydra-head is, obviously, *empiricism*—the reduction of the a priori to the a posteriori.

Another head is *anti-modalism*—the reduction of logical necessity to some weaker kind of necessity (e.g., nomological necessity) or to contingency.

Another head is *relativism*—the reduction of logical truth to individual or communal belief.

Another head is *subjective idealism*—the reduction of logical objectivity to subjectivity & consciousness.

Another head is *naturalism*—the reduction of categorical, non-instrumental, or unconditional logical normativity to hypothetical, instrumental, or conditional normativity, or even to value-neutral facts.

And finally, the last head of the Hydra is *nominalism & ontic bias*—the reduction of logical abstractness & universality to concrete, spatiotemporal facts or individuals.

In this paper I want to compare & contrast Kant's & Bolzano's approaches to anti-Psychologism, & focus particularly on two points.

First, I want to focus on Kant's appeal to the strictly categorical, non-instrumental, or unconditionally normative character of logic, which is missing in Bolzano's anti-Psychologism.

Second, I want to focus on Bolzano's appeal to the strict *ontic exclusion* or *ontic resistance* (a.k.a. to use Ryle's term, the "topic-neutrality") of logic, built into his conception of a "representation in itself" and the corresponding notions of a "proposition in itself" and a "truth-in-itself," which is missing in Kant's anti-Psychologism, even as regards Kant's notion of *pure general logic*, not to mention his notion of *transcendental logic*.

II. Kant's Anti-Psychologism: Pure General Logic

According to Kant, logic is the science of the strictly universal, unrestrictedly necessary, pure a priori, and formal rules of all thinking. Or in other words, logic is the science of the absolute principles—or *laws*—of thought. But logic in this sense is to be divided into two parts:

(i) *analytic* logic, which is the logic of truth, consistency, logical consequence or entailment, and valid inference,

and

(ii) *dialectical* logic, which is the logic of illusion, inconsistency, non sequitur, and fallacy (*CPR* A57-62/B82-86.)

Kant also distinguishes between

(i) *general* logic, which is logic, whether analytic or dialectical, whose consistency/inconsistency, conceptually necessary truth/falsity or illusion, and validity/fallacy does not metaphysically depend on, and therefore is not necessarily

determined by, the comprehensions or *Umfangen* of objects or states of affairs designated by propositions, singular terms, concept-terms, or discourse more generally, but which, at the same time, necessarily comprehends, or is synoptic over, all actual or possible topics of discourse,

and

(ii) *particular* or *special* logic, which is logic, whether analytic or dialectical, whose consistency/inconsistency, conceptual necessary truth/falsity or illusion, and validity/fallacy *does* metaphysically depend on, and therefore *is* necessarily determined by, the comprehensions of objects or states of affairs designated by propositions, singular terms, concept-terms, or discourse more generally, and therefore is necessarily *non-comprehensive*, or *non-synoptic*, over all actual or possible topics of discourse (CPR A52/B76).

And finally, Kant also distinguishes between

(i) *pure* logic, which is *a priori* logic, i.e., logic insofar as its meaning, truth, and justifiability are all underdetermined by/non-supervenient on sensory experience, and furthermore none of its semantic constituents are directly related to sensory experience, so pure logic is *completely a priori*,

and

(ii) *applied* logic, which is the empirical psychology of logic (CPR A52-55/B77-79).

These three distinctions naturally lead to the idea of a *pure general logic*. Here is what Kant says about pure general logic in the *Critique of Pure Reason*:

[The logic of the general use of the understanding] contains the absolutely necessary rules of thinking, without which no use of the understanding takes place, and it therefore concerns these rules without regard to the difference of the objects to which it may be directed.... Now general logic is either pure or applied logic. In the former we abstract from all empirical conditions under which our understanding is exercised.... A **general** but **pure** logic therefore has to do with strictly *a priori* principles, and is a **canon of the understanding** and reason, but only in regard to what is formal in their use, be the content what it may.... A **general logic**, however, is called applied if it is directed to the rules of the use of the understanding under the subjective empirical conditions that psychology teaches us.... In general logic the part that is to constitute the pure doctrine of reason must therefore be entirely separated from that which constitutes applied (though still general) logic. The former alone is properly science.... In this therefore logicians must always have two rules in view. 1) As general logic it abstracts from all contents of the cognition of the understanding and of the difference of its objects, and has to do with nothing but the mere form of thinking. 2) As pure logic it has no empirical principles, and thus draws nothing from psychology.... It is a proven doctrine, and everything in it must be completely *a priori*. (CPR A52-54/B76-78)

So Kant's pure general logic is the completely a priori, strictly universal, absolutely necessary, topic-comprehensive or topic-synoptic science of the absolute principles or laws of thought. In this way, pure general logic is absolutely binding on any rational human cognizer and provides an unconditional theoretical and logical *ought*. Like the unconditional practical and moral *ought*, as expressed by the Categorical Imperative, the

theoretical and logical *ought*, as expressed by, e.g., the Law of Non-Contradiction, is rarely correctly obeyed in the real world by finite flawed cognizers like us, who commit logical fallacies and moral sins with comparable frequency: sadly, *ought* does not entail *is*, either in theory or in practice. Still, Kant's pure general logic is irreducible to all contingent facts and especially to all empirical psychological facts; hence his logic is thoroughly anti-Psychologistic, which exploits the flip-side of unconditional obligation, whether logical or moral: happily, *is* does not entail *ought*, either in theory or in practice.

Bolzano—and later Husserl, Frege, Moore, & Russell—all regarded Kant's pure general logic as Psychologistic, but this is clearly a misinterpretation, merely repeated in Apostolic succession in the history of 20th century philosophical logic. Notably, early Wittgenstein in the *Tractatus* did *not* make this interpretive mistake, & even went to so far as to assert that *logic is transcendental*:

6.13 Logic is not a theory but a reflexion of the world. Logic is transcendental. (*TLP* 169)

For Kant, as we have just seen, pure general logic is the topic-comprehensive or topic-synoptic categorically normative a priori science of the laws of thought, & pure general logic is about analytically necessary truth, consistency, validity, & soundness. More precisely, pure general logic is specifically anti-Psychologistic in all of the senses implied in section **I**: pure general logic is a priori, strictly necessary, anti-relative or absolute, objective, anti-naturalistic, anti-nominalistic, & not ontically biased.

Why then did Bolzano & the others make the mistake of thinking that Kant's logic is Psychologistic? Two reasons.

First, Kant's thesis that logic is *transcendentally ideal* was almost completely misunderstood. According to Kant, X is transcendentally ideal iff X necessarily conforms to the non-empirical formal structures of our innately-specified rational human cognitive faculties. In other words, X is *necessarily isomorphic with* our mentalistic structures.

But it does not follow from this that X is *identical* to anything that is *occurrently conscious or mental*. Following Hegel's misreading, Kant's Transcendental Idealism was then mistakenly taken to be a version of subjective idealism, & then later, following the neo-Kantians, Transcendental Idealism was mistakenly taken to be an empirical, or at any rate anthropological and species-specific, hence quasi-empirical, psychological thesis.

Second, Kant's conception of apriority was almost completely misunderstood. According to Kant, X is a priori iff X's form or content is strictly underdetermined by all actual or possible empirical facts (= contingent facts &/or sensory experiences). In other words, apriority is non-supervenience on all actual or possible empirical facts. Apriority does *not* entail any metaphysical or ontic exclusion of empirical facts, *nor* does it entail any sort of "armchair inquiry," i.e., inquiry that consistently disregards empirical evidence.

On the contrary, for Kant necessarily "all our cognition begins *in* experience," which is to say that necessarily, all our cognition starts with empirical facts. But given that, necessarily, all our cognition begins in experience, it does *not* follow that it all "arises

from,” i.e., is strictly determined by or supervenient on, anything empirical. Thus apriority in Kant’s sense is fully consistent with empirical triggering of the cognitive faculties & also fully consistent with empirical objectual reference of the content of cognition. Kant’s pure general logic was & is mistakenly taken to be psychologistic because it was & is simply not understood how a non-platonic theory of logic could *also* hold that logic is strictly underdetermined by all actual or possible empirical facts, i.e., that logic is fully a priori. But strict underdetermination of X by the empirical is possible even if X is not outside of spacetime & the causal order, provided that X is also an immanent structure of the spatiotemporal & causal order, & that is precisely Kant’s view. Kant is an *Aristotelian* about formal or structural & thus a priori properties, not a *Platonist*. Formal or structural & thus a priori properties, especially including the properties of pure general logic, are also *in rebus* for Kant (i.e., in the appearances, not in the things-in-themselves), not *ante rem*.

III. Bolzano’s Anti-Psychologism: Representations-in-Themselves, Propositions-in-Themselves, & Truths-in-Themselves

According to Bolzano, logic is the “theory of science,” i.e., the universal meta-science, i.e., *the science of science*. Its topic is the total set of universal, abstract, necessary, objective, non-relative or absolute, logical relations holding between truth-bearing (or falsity-bearing) propositions in themselves, including consistency, deducibility or consequence, & equivalence. Propositions in themselves, in turn, are all composed of *representations-in-themselves*, or *objective representations*.

Here are some of the things that Bolzano says about logic, representations-in-themselves, propositions-in-themselves, and truths-in-themselves, (including the second epigraph of this essay again).

It is the task of logic to give rules which apply simultaneously to several truths or, what amounts to the same, to a whole class of truths. For this reason, the theorems... of logic never concern a particular, fully determinate proposition, i.e., a proposition in which subject, copula and predicate are all given. Rather, theorems concern a whole class of propositions at once, i.e., propositions some of whose parts are determined, while the remainder is undetermined.... If these classes of propositions are to be called general *forms* of propositions, then it is permissible to say that logic is concerned with forms rather than with individual propositions.... Furthermore, if we want to call what is left indeterminate in such a class of propositions the *content* of the propositions in the class ... then we may say that logic is concerned merely with the form, and not the content, or propositions. (*TS* §12, 2, 13-14)

[B]y *proposition in itself* I mean any assertion that something is or is not the case, regardless whether or not somebody has put it into words, regardless even whether or not it has been thought. In the following example, the word ‘proposition’ occurs in the sense I have here laid down for it: ‘God, being omniscient, is cognizant not only of true but also false propositions; not only of those which are held true by created beings, but also of those propositions which nobody holds to be true or even conceives of or will ever conceive of’. (*TS* §19, 1, pp. 20-21)

We can think the concept of a proposition in itself without reminding ourselves that it has the property of being thinkable. This makes it sufficiently clear that the indication of this property does not belong in the definition of this concept. (*TS* §23, 1, pp. 26-27)

I shall mean by a truth in itself any proposition which states something as it is, where I leave it undetermined whether or not this proposition has in fact been thought or spoken by anybody.... Truths in themselves are a kind of proposition in itself.... It follows indeed from God's omniscience that each truth is known to him and is continually represented in his understanding, even if no other being is acquainted with it or thinks it. Consequently, there is actually no truth which is recognized by nobody at all. This, however, should not keep us from speaking of truths in themselves, since their concept does not presuppose that they must be thought by someone. The fact that they are thought is not contained in the concept of such truths, but it can nevertheless follow from some other circumstance (in this case the omniscience of God) that they must be recognized by God himself. (*TS* §25, pp. 32-33)

Anything that can be part of a proposition in itself, without itself being a proposition, I wish to call a *representation in itself* (*Vorstellung an sich*), or simply a *representation*, or *objective representation*. This will be the quickest and easiest way of conveying my meaning to those who have understood what I mean by a proposition in itself. Thus, the combination of words 'Caius has wisdom' expresses a complete proposition. The word 'Caius' itself expresses something that can be part of a proposition, as we have seen, although it does not by itself form a proposition. This something I call a representation. Similarly, what is designated by the word 'has' and indicated by the word 'wisdom' I call representations.... By objective representation I mean the certain something which constitutes the immediate matter of a subject representation, and which is not to be found in the realm of the real. An objective representation does not require a subject but subsists, not indeed as something *existing*, but as a certain *something* even though no thinking being may have it. ... [T]here may be objective representations which are not present in the mind of any thinking being except God. (*TS* §48, 2-3, pp. 61-62)

In his very useful 2007 SEP article on Bolzano's logic, Jan Sebestik correctly notes that

Bolzano points out that 'to be in itself' is not a new property of propositions or [representations]; it means simply to take a proposition or [a representation] as it is, independently of its being grasped or expressed by a human being.

The best approach to Bolzano's concept of proposition (and of [representation] in itself) is to consider them as forming the universal realm of abstract meanings, from which each language selects specific meanings and associates sounds with them.

and that

Bolzano's arguments in favor of the existence of propositions invoke the existence of unknown truths or of truths that nobody except God will ever know.

In other words,

(1) Bolzano is a Platonist about representations-in-themselves & propositions-in-themselves in particular, including all logical truths-in-themselves.

and also

(2) Bolzano's representations-in-themselves, propositions-in-themselves, and logical truths-in-themselves have the basic properties of *things-in-themselves* or *positive noumena* in Kant's sense, namely:

(i) they are inherently non-spatiotemporal,

(ii) they are inherently non-sensory,

(iii) they are inherently constituted by intrinsic non-relational properties,

which directly entails that

(iv) they are inherently constituted by properties that bear no necessary or essential relation to anything empirical (i.e., contingent, sensory-experiential, or apparent/phenomenal), & can exist even if empirical things are impossible,

and also directly entails that

(v) they are inherently constituted by properties that bear no necessary or essential relation to rational human minds, and can exist even if rational human minds are impossible,

which in turn entails that

(vi) they are inherently uncognizable & unknowable by rational human minds.

and also finally entails that

(vii) insofar as they are cognizable or knowable at all, they are cognizable or knowable only by a rational being with a capacity for “intellectual intuition,” i.e., by God.

In other words, Bolzano’s anti-Psychologism, via his notions of representations-in-themselves, propositions-in-themselves, and truths-in-themselves, entails that logic is both inherently uncognizable & unknowable by rational human animals, & also ontically exclusionary & ontically resistant.

Indeed, even over & above the positive noumenal character of all logical truths in themselves, such truths are also doubly uncognizable and unknowable by rational human animals, precisely because they are, in their very nature, *partially indeterminate*, & imply whole classes of propositions. Only a divine mind, intuitive intellect, or God could cognize or know such truths.

In this section I have ascribed both *Platonism* and also *noumenal realism* to Bolzano’s theory of representations-in-themselves, propositions-in-themselves, & truths-in-themselves. Interestingly, & also in a way that is directly relevant to what I want to argue in the next section, Rolf George says this in his Editor’s Introduction to the *Theory of Science*:

[I]t can be shown, and I intend to do so, that Bolzano’s postulation of propositions in themselves does not much differ from Carnap’s position as expressed, e.g., in *Empiricism, Semantics, and Ontology*. A brief account of Bolzano’s position will show why we should consider either both of them or neither of them to be Platonists. (*TS* “Editor’s Introduction,” p. xxx)

I fully agree with George. My own view, however, is that *both* Bolzano and Carnap are Platonists, but that Bolzano differs from Carnap precisely in that Bolzano is also a noumenal realist, whereas Carnap is not. But Bolzano & Carnap, via their shared Platonism, also share another basic doctrine about the nature of logic: the ontic exclusion or ontic resistance of logic, i.e., logic's "topic-neutrality."

IV. Why Kant's Anti-Psychologism is Better Than Bolzano's, & Two Logico-Philosophical Morals

As I said at the beginning of the paper, I've wanted to focus particularly on 2 points about Kant's and Bolzano's anti-Psychologism:

- (1) Kant's appeal to the strictly categorical, non-instrumental, or unconditionally normative character of logic, which is missing in Bolzano's anti-Psychologism.
- (2) Bolzano's appeal to the strict ontic exclusion, ontic resistance, or "topic-neutrality" of logic, built into his conception of representation-in-themselves and propositions-in-themselves, which is missing in Kant's anti-Psychologism, even as regards Kant's notion of pure general logic, not to mention his notion of transcendental logic.

I want to argue now that there is good reason to side with Kant against Bolzano on these two anti-Psychologistic points, & thereby

- (1) fully *accept* the Kantian thesis that logic is strictly normative, but also
- (2) firmly *reject* the Bolzanian thesis that logic is ontically exclusive, ontically resistant, or "topic-neutral."

My basic reason for fully accepting the Kantian thesis that logic is strictly normative is that this thesis connects logic directly with human rationality, especially including pure practical or moral rationality, & thereby connects logic directly with what matters most to us as morally autonomous rational human animals.

In short, pure general logic has an inherent theoretical teleology, or what in the Introduction to the *Jäsche Logic* Kant calls the "logical perfections" (*logische Vollkommenheiten*): i.e., logical truth, logical consistency, logical validity, & logical soundness (*JL* 9: 33-81). More specifically, then, logical truth, consistency, validity, & soundness all *really matter* precisely because they have their strict normative ground in human rationality, both theoretical and practical.

Correspondingly, my basic reason for firmly rejecting the Bolzanian thesis that logic is ontically exclusive, ontically resistant, or "topic-neutral," is that this thesis effectively drains logic of all determinate semantic content, & entails that logic is, ultimately, theoretically empty & trivial, i.e., logic is then in effect a *non-science*, & not the *science* of science, because it is *not about anything*.

From this rejection, there also follow two morals about logic: one that is merely ironic & ad hominem, and one that is of greater philosophical pitch & moment.

Ironically Bolzano's leading insight about logic—i.e., that logic is the “theory of science,” i.e., the universal meta-science, i.e., *the science of science*—can be preserved *only if* Bolzano also *gives up* his thesis that logic is constituted by representations-in-themselves, propositions-in-themselves, and truths-in-themselves. So Bolzano's anti-Psychologism is self-defeating, given the basic aims of his philosophical logic.

But far more importantly, we can now see that the very idea of the “topic-neutrality” of logic, which began with Bolzano, is in fact *the hidden snake in the logical garden of Eden*, precisely because it contains within itself the unhappy & incoherent implication, which has afflicted & haunted the history of logic and philosophical logic ever since Carnap's *Logical Syntax of Language*, continues right through *Meaning and Necessity* & its most important appendices, “Meaning Postulates” & “Empiricism, Semantics, & Ontology,” & which still afflicts & haunts contemporary philosophy of logic, that logic is at once the most universal & abstract theoretical science, & also, *for that very reason*, theoretically empty & trivial.

In other words, Logical Psychologism is the cardinal theoretical sin, but the topic-neutrality of logic is the hidden snake that lies waiting for unwary anti-Psychologicists in the logical garden of Eden, & puts logic on the road to perdition & self-destruction by a merely covert & roundabout route.

The only way out of this snake-in-the-garden problem, I think, is simply to reject Bolzano's anti-Psychologistic thesis of logic's *ontic exclusion* & *ontic resistance*, & replace it with Kant's anti-Psychologistic thesis of logic's *ontic comprehension*.

It is a Bolzanian fallacy, & later a Carnapian fallacy, to think that in order to secure logic's universality & abstractness, logic must be constituted by representations-in-themselves, propositions-in-themselves, and truths-in-themselves, & thereby ontically exclusive or ontically resistant. On the contrary, ontic comprehension & the strict underdetermination of logic's determinate content by all actual or possible concrete facts or individuals, is alone necessary & sufficient for logic's universality & abstractness, not to mention logic's apriority, strict necessity, anti-relativism or absolutism, objectivity, & strict normativity.

In other words, logic is *not* “topic-neutral,” i.e., logic is *not* about nothing determinate at all—on the contrary, logic is determinately *topic-comprehensive* or *topic-synoptic*. Logic is determinately about everything in general, not about nothing determinate at all. If logic were really about nothing determinate at all, then it would not be worth doing, because logic would then be theoretically & practically *pointless*. Only if logic is determinately about everything in general is logic worth doing, because logic is then *the science of science*, which places certain absolutely true minimal strictly normative constraints (e.g., non-contradiction or consistency, or logical validity) on every sort of representational content, & on every sort of proposition, & on every sort of rational relationship between

propositions, & on every sort of propositional intentional content, & on every sort of rational human intentional activity.

V. Conclusion

So in the end, in Kant's anti-Psychologistic theory of logic, but *not* in Bolzano's, the strictly normative character of logic and its ontic comprehension fully converge, & jointly suffice to keep logic on the straight & narrow way between the rock of Psychologism and the hard place of Topic-Neutrality, & ultimately lead to The Good Life of human theoretical & practical rationality—for “narrow *is* the gate and difficult *is* the way which leads to life, and there are few who find it.”

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