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THE OBJECTS AND THE FORMAL TRUTH OF KANTIAN ANALYTIC JUDGMENTS

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Introduction

In a Kantian analytic judgment, the predicate is contained in the subject-concept as part of its intension (A6/B10).[1] What is such a judgment about? Saying that it is about concepts would be a nonstarter, for, although it comprises two concepts, its predicate is not said of the subject-concept but of what the latter stands for.[2] It is not as easy as it seems, however, to defend the thesis that all Kantian analytic judgments are about objects ([AO]). H. J. Paton infers this thesis from Kant's following commitments:

(i) Analytic judgments can be true.

(ii) The truth of all judgments consists in agreement with objects.[3]

According to some recent commentators, however, Kant has independent reasons not to hold [AO], and it is doubtful that he really believes both (i) and (ii). Timothy Rosenkoetter, for instance, contends that [AO] contradicts Kant's view that

(iii) some analytic judgments (for example, "A two-sided polygon is two-sided") have no objects with which they could agree (but are not false for that reason).

Rosenkoetter suggests that Kant drop (i) and be content to treat analytic judgments as having no truth-values at all.[4] Clinton Tolley denies [AO] for its incompatibility with Kant's belief that analytic judgments make no substantive claims about objects in the world. Tolley rejects (ii), while keeping (i). In his view, Kantian analytic judgments are true but only in the "formal" as opposed to "material (objective)" sense of truth, which consists not in the agreement of concepts with objects, but in that of two concepts with each other—in virtue of their intensional relation plus some syntactical rules.[5]

I agree with Paton that Kant is committed to (i) and (ii) and hence to [AO]. But Rosenkoetter's and Tolley's arguments pose three exegetical challenges to this position. First, (iii) seems correct. If so, can we formulate [AO] in a cogent Kantian way to accommodate cases like "A two-sided polygon is two-sided"? Second, Kant does hold that analytic judgments make no substantive claims about objects in the world. How does [AO] square with such a view? Third, Kant generally characterizes analyticity in terms of the intensional relation between two given concepts. Why should he then account for analytic truths as agreement with objects, rather than taking the syntactical approach that Tolley ascribes to him? I shall address these challenges in two steps. In part 1, I clarify [AO] by teasing apart two theses: the *objectual purport thesis* that Kantian analytic judgments, qua judgments, are about objects in the sense of "object in general = *x*" and the *contentfulness thesis* that such judgments have no content in the Kantian sense unless the purported objects are also givable in our sensible intuition. A judgment like "A two-sided polygon is two-sided" has objectual purport but no Kantian content. In part 2, I explain that, even though analytic truths can be known solely on the basis of the intensional relation between the given concepts (together with certain Kantian-logical principles), they still consist in agreement with objects, only that they do not presuppose that the purported objects are givable in sensible intuition. Analytic truths are, thus, formal in a distinctively Kantian sense, a sense that also captures the gist of Kant's diagnosis of a Leibnizian illusion about acquiring objective truths analytically.

1. Objectual Purport versus Contentfulness

Paton developed the thesis that Kantian analytic judgments are about objects ([AO]) against the view that they are about concepts.[6] He contends that, although an analytic judgment "takes place by means of analysis of the subject-concept," it is not about the concept, but "about the objects which are supposed to fall under the concept" (*Kant's Metaphysic of Experience*, 84). Since, for Kant, an analytic judgment can be true and "truth is always correspondence with an object," Paton argues, it follows that the truth of such a judgment "depends on the supposition that there is an object corresponding to the subject-concept" (ibid., 214n3). Paton uses the term "supposition" to accommodate cases where no actual object falls under the subject-concept. He spells out the relevant supposition in terms of the judgment-makers' intention: "Some analytic judgments of metaphysics may have no object, but their authors *intend* them to refer to an object" (ibid., 84). The use of "intend" may be unfortunate, given its psychologistic undertone.[7] But it is possible to render Paton's thesis [AO] in a nonpsychologistic way.

Henry Allison, for instance, explicates [AO] in terms of the "basic schema" of analytic judgments qua judgments, which he thinks is suggested by Kant's following example of an analytic judgment: "To everything x, to which the concept of body $(a + b)$ belongs, belongs also *extension* (b)" (*Logik*, Ak 9, 111).[8] Kant contrasts this example with that of a synthetic judgment: "To everything x, to which the concept of body $(a + b)$ belongs, belongs also *attraction* (c)" (ibid.). The contrast, to be more specific, is that, while in the analytic judgment "the predicate (b) is related to the object x by virtue of the fact that it is already contained (as a mark) in the concept of the subject" (Allison, *Kant's Transcendental Idealism*, 91), in the synthetic one, the predicate relates to the object x by some way other than a containment relation with the subject-concept. But in both kinds of judgment, the predicate is regarded as somehow related to the object x thought under the subject-concept. This suggests that, in Kant's view, there is a sense in which analytic judgments are about objects as much as the synthetic ones are.

But in what sense shall we understand "object" here? For Allison, Kant's use of "x" suggests that he takes analytic judgments to be about objects broadly construed, including "non-existent, even impossible objects" (*Kant's Transcendental Idealism*, 92). The reference to nonexistent or impossible objects carries a risk, though: it can be misread as inflating Kant's ontology. Such a reading is the basis on which Rosenkoetter, for instance, dismisses the view that some analytic judgments—for example, "A two-sided polygon is two-sided"—are about impossible objects: he charges it for "imputing to Kant the view that there *are* objects such as the two-sided polygon" and thereby committing him to an ontology of impossible objects that violates "his own hard-won notion of objectivity" (Rosenkoetter, "Are Kantian Analytic Judgments about Objects?" 192–93). As an alternative to Allison's reading, some supporters of [AO] have restricted the objects that analytic judgments are about to objects of experience, that is, objects that can be "given" in our intuition (A51/B75). This restriction, according to Jeremy Heis, follows from "Kant's deeply-held view that all cognitions must be related to objects if they are to be contentful at all"—where "cognitions" are, in the proper Kantian sense, unifications of intuitions and concepts.[9] Similarly, John MacFarlane argues that analytic judgments are about objects (as opposed to concepts) in that they, qua cognitions, must be somehow related to objects of intuition:

> The subject concept in every judgment must relate finally to a representation that is "related immediately to the object" (A68/B93)—that is, to a singular representation, or intuition. Otherwise, there would

> be nothing—*no thing(s)*—for the putative judgment to be *about*, and it would not be a cognition at all. (MacFarlane, "What Does It Mean to Say That Logic Is Formal?" 50–51)

On this reading, it is in virtue of being "cognition" or having "content" in the strictly Kantian sense that analytic judgments are about objects; accordingly, the objects they are about must be objects of intuition. The thesis [AO] is thereby turned into a claim about the conditions under which analytic judgments are contentful cognitions.

Allison was right, I think, to invoke the schema of analytic judgment to interpret [AO]: the presence of the variable x in the schemata of analytic and synthetic judgments alike signals that there is a minimal sense in which both judgments are about objects. I also agree with Heis and MacFarlane that the contentfulness of analytic judgments qua cognitions requires a certain relation to objects of experience. These two views regarding the objects of analytic judgments are not incompatible, though. What Allison argued for may be called an "objectual purport thesis": analytic judgments, qua judgments, are about objects in general = x. But what Heis and MacFarlane defended was a separate thesis about the conditions under which such judgments are contentful: if they are to have cognitive content in the proper Kantian sense, their concepts must somehow be related to objects of experience. [AO] is none other than the objectual purport thesis. As such, it is logically independent of the conentfulness thesis, in that an analytic judgment can have objectual purport without being contentful—though not vice versa. We may appreciate this point by fleshing out the two theses in terms of two Kantian notions: an object in general = x and the possibility of an object as is thought under a concept.

Kant has a notion of an object in general = x, to begin with, that explains the sense in which all (categorical) judgments have objectual purport. Recall the schemata of analytic and synthetic judgments mentioned above, which can be more generally expressed as, respectively, "to every x, to which belongs the concept F ($a + b$), belongs also the concept G (a)" and "to every x, to which belongs the concept F ($a + b$), belongs also the concept G (c)." These schemata exhibit the similarity as well as the difference between the two kinds of judgments: they differ in how the two given concepts, F and G, are related—G is contained in F as part of its intension in an analytic judgment but not in a synthetic one;[10] but they share the form of a universal affirmative judgment, that is, "to every x, to which belongs F, belongs G." The variable x presumably stands for whatever object is thought under F, which becomes clear when we read the schemata in light of the following passage:

> an object [*Gegenstand*] is only a something in general [*ein Etwas überhaupt*] that we think through certain predicates that constitute its concept. In every judgment, accordingly, there are two predicates that we compare with one another, of which one [*a*], which comprises the given cognition of the object [*x*], is called the logical subject, and the other [*b*], which is to be compared with the first, is called the logical predicate. . . . Now *a* as well as *b* belongs to *x*. Only in a different way: either *b* already lies in that which constitutes the concept *a*, . . . or *b* belongs to *x* without being contained and comprised in *a*. (R4634, Ak 17, 616–17)[11]

Kant begins this passage by explicating the basic schema of judgments in general: to *x*, to which belongs *a*, belongs *b* ("*x-a-b* schema" for short). Noticeably, he uses the analytic judgment "A body is divisible" to illustrate such a schema: *x*, which is thought under the concept of body, is also thought under the concept of divisibility (ibid.). This schematic feature of an analytic judgment qua judgment is logically prior to its analyticity; for the distinction of *x-a-b* judgments into analytic and synthetic ones comes only later, in terms of whether *b* constitutes part of *a*. No matter how *a* and *b* are related to each other, the shared *x-a-b* schema shows that analytic and synthetic judgments alike have objectual purport in the sense of being about an object in general = *x*.

This notion of an object in general = *x* is what Kant deems as the highest and most general concept of thinking:[12]

> The highest concept of the whole human cognition is the concept of an object in general, not of a thing and non-thing, or of something possible and impossible, for these are opposites. Each concept that has an opposite always requires a yet higher concept that contains this division. (*Metaphysik* L_2, Ak 28, 543)[13]

Object in this general sense can be distinguished as "what is possible or impossible . . . for object can be thought through impossible predicates" (*Metaphysik Mrongovius*, Ak 29, 811); accordingly, it can be something or nothing.[14] When we think of such an object by means of concepts, we take it "problematically, leaving undecided whether it is something or nothing" (A290/B346). To take an object problematically is, in the terms in which Kant characterizes problematic judgments, to treat it as "a merely arbitrary admission [*willkürliche Aufnehmung*]" (A75/B100–1), no matter whether it is possible (something) or impossible (nothing). If [AO] says no more than that Kantian analytic judgments purport to be about objects in this "problematic" sense, then it does not, contra Rosenkoetter, carry any ontological commitment to impossible nonthings. For Kant, such notions as *possible*/*something* and *impossible*/*nothing* do not represent distinct ontological categories of objects. Rather, they express various modalities of the thought of an object in general = *x*, i.e., various ways in which such a thought "relat[es] to the faculty of cognition" (A219/B266).[15] Here, in a truly Kantian manner, we begin not with objects that exist independently of our thinking but with the thought of an object = *x* by means of given concepts—before we can inquire whether the object so thought is also something as opposed to nothing.[16]

By inquiring whether the object = *x* thought under the subject-concept of a judgment is something, we determine whether the judgment is a contentful cognition besides having objectual purport. Such inquiry involves two steps, in accordance with two conditions of the possibility of an object as is thought under a concept:

> (I) On the Principle of Contradiction, no two contradictory concepts can be said of the same thing. If a concept is self-contradictory (that is, contains contradicting components), the object thought thereby is logically impossible: for example, a four-cornered circle.[17] By contrast, if the concept contains no contradiction, the object thought thereby is logically possible, hence a logical something.
>
> (II) According to the Postulate of Possibility, the real possibility of an object "requires that [its] concept agree with the formal conditions of an experience in general"—to wit, with the conditions under which any object may be given to us in our sensible intuition (A220/B267). If a concept fails these conditions, the object thought thereby is really impossible, hence "nothing": "the object of a concept to which no givable intuition corresponds is = nothing" (A290/B347). In that case, the concept itself is devoid of any content in the Kantian sense; for the contentfulness of a concept presupposes "the possibility of giving it an object [of intuition] to which it may be related" (A239/B298; A240/B299

The logical possibility of an object holds independently of its real possibility, as the concept with which we think of the object may contain no contradiction and yet cannot possibly be instantiated. Take, for instance, the concept of a figure enclosed between two straight lines. Such a figure is logically possible, insofar as "the concepts of two straight lines and their intersection contain no negation of a figure"; yet it is not really possible, in that we cannot construct it in our pure intuition of space, intuition that, in turn, "[contains] *a priori* the form of experience in general" (A220–1/B268).[18]

In sum, a Kantian analytic judgment has objectual purport insofar as it has the *x-a-b* schema qua judgment, that is, is the thought of an object in general = *x* by means of two concepts. This is the gist of [AO]. So construed, [AO] neither presupposes nor entails that the judgment in question is a contentful cognition in the Kantian sense; for the purported object is first conceived problematically, regardless of whether it can also be given or constructed in our intuition. Rosenkoetter failed to recognize this logical independence of the objectual purport of a judgment from its contentfulness when he argued against [AO] from the case of "A two-sided polygon is two-sided." It is true that, in this case, the judgment is not about a really possible object: we cannot construct a two-sided polygon in our intuition—for the same reason that we were unable to construct a figure enclosed between two straight lines. But this shows only that the judgment is not contentful in the Kantian sense, not that it has no objectual purport whatsoever. It indeed has as much objectual purport as a synthetic judgment like "A body is extended" does—in virtue of sharing the same *x-a-b* schema with the latter—despite of its lack of content.

2. Kantian Analytic Truths as Formal Truths

The distinction between the objectual purport and the contentfulness of Kantian analytic judgments helps clarify the sense in which their truth is formal as opposed to material. I have argued that these judgments have objectual purport in that they are about objects in general $= x$. Now one might ask: Is this notion of object adequate for explicating the truth of analytic judgments, where truth consists in agreement with objects? Moreover, given that Kant characterizes analyticity in terms of the intensional containment relation between concepts, why should he account for the truth of analytic judgments as agreement with objects in the first place and not, à la Tolley, simply as formal (syntactical) agreement between concepts in respect of their intensions? I agree with Tolley that Kantian analytic truths are formal. But I am skeptical about reducing, as Tolley does, the relevant notion of formality to purely syntactical terms in a way that excludes all references to objects whatsoever. To construct an alternative account of analytic truths as formal truths, I shall draw attention to the fact that Kant presents certain logical relations between concepts in extensional as opposed to intensional terms, that is, in terms of the objects falling under each concept. These extensional relations can be formal in that they hold (i) regardless of any specific differences among the objects that constitute the extension of each concept and (ii) regardless of whether these objects can be given in our intuition.[19] Kantian analytic truths are formal, I shall argue, in the sense of both (i) and (ii)—that is, in that they consist in agreement with objects only as objects in general $= x$, no matter whether the objects can be given in our intuition.

In Kant's view, to begin with, the sense in which a judgment is true differs from the ground on which its truth may be determined. On the "nominal definition" of truth, to say that a judgment is true means that its predicate agrees with the object represented by the subject-concept

(A58/B82).[20] But this definition tells us nothing about the criterion that would allow us to determine, for any given judgment, whether it is, in fact, true. There is indeed no truth criterion for all judgments in general, if it is to include both necessary (negative) and sufficient (positive) conditions of truth; for analytic and synthetic judgments have different positive criteria of truths.[21] Especially,

> if the judgment is analytic, . . . its truth must always be able to be cognized sufficiently in accordance with the Principle of Contradiction. For the contrary of that which as a concept already lies and is thought in the cognition of the object is always correctly denied, while the concept itself must necessarily be affirmed, of it, since the opposite would contradict the object. (A151/B190–91)

In this statement, Kant makes two distinct points about an analytic judgment regarding its truth. First, if it is true, it is true in the same sense that any judgment of the same form may be true—to wit, in that its predicate applies to the object thought under the subject-concept.[22] Second, its truth can, nevertheless, be determined in a special way due to the analytical relation between the two given concepts. For, given the Principle of Contradiction, we can know a judgment to be true just by seeing that the predicate is intensionally contained in the subject-concept.[23]

But how would our faculty of understanding, in determining analytic truths, represent to itself the putative objects with which the predicates must agree, without having to go beyond the given concepts? To answer this question, let us consider the figures—such as squares and circles—that Kant uses to exhibit certain logical relations between concepts in judgments. For instance,

Figure 1 shows how two concepts, *a* and *b*, are logically related in respect of their extensions: "*x*, which is contained under *b*, is also under *a*" (*Logik*, Ak 9, 108). This figurative mode of representation fits with Kant's view that, in logic, every concept is treated in respect of its form, which consists in its generality, that is, in its capacity to "be related to several objects" or to be "a representation common to several objects" (*Logik*, Ak 9, 94). The multitude of objects thought under a concept constitutes its

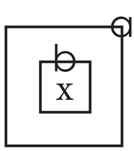

Figure 1: (R3096, Ak 16, 658;
Logik*, Ak 9, 108)*

extension (*Umfang*), which can be represented by an extended figure.[24] For any two concepts, then, we can represent their logical relations by arranging two figures in various ways.[25] In this fashion, Figure 1 shows that *a* and *b* are related, in respect of their extensions, as follows: every *x*, which falls in the extension of *b*, falls also in that of *a*.

In these terms, we can say that, given the nominal definition of truth, if a judgment of the form "Every *x*, which is *b*, is *a*" is true, it is true in the sense that whatever object falls in the extension of *b* indeed also falls in that of *a*. Now, such truth is guaranteed when the judgment is analytic, simply because *a* is intensionally contained in *b*. This has to do with the following Kantian-logical Law of Extension: for any two concepts, F and G, if G is contained in F as part of its intension, then all the objects constituting F's extension are also part of G's extension. The "extension" of a concept is here taken in a purely logical sense, as comprising all the objects that can fall under the concept,[26] whereas its intension consists of all the concepts that are contained in it. In Kantian logic, the intensional containment relation between two concepts first determines their relative positions in a conceptual hierarchy (that is, whether one is a higher or lower concept than the other), which, in turn, determine their extensional relations. More specifically, insofar as G is contained in F as part of its intension, F is subordinate to G, relating to the latter as a lower to a higher concept. As a relatively higher concept, G is also relatively broader, representing a greater multitude of possible objects than F does—to the extent that G's extension comprises all the objects falling under F plus more.[27] Thus, every object in F's extension is also in G's.

To illustrate, let G = *animal*, A = *rational*, and A' = *nonrational*. Adding A and A', respectively, to G, we can obtain F (*man*) = *rational animal* and F' (*beast*) = *nonrational animal*. G is contained in F and F'; F and F' are, in turn, subordinate to G. Figure 2 makes these relations transparent.[28]

As a higher concept than both F and F', G is also broader than each of the latter concepts. Given that A and A' are contradictorily opposed, the extension of G—that is, the multitude of objects thought under G—can be divided into the multitude thought under F and the multitude

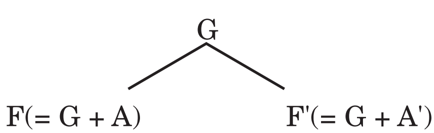

Figure 2

thought under F'. Using a circle to represent the extension of G, we can express this division by Figure 3.[29]

As Figure 3 makes clear, whatever is in the extension of F is necessarily also in that of G. Since this extensional relation between F and G is determined by their subordination relation shown in Figure 2, which is, in turn, determined by the fact that G is intensionally contained in F, we may say: G applies to every object thought under F precisely in virtue of its intensional containment relation with F.

This illustration provides a model both for representing the objects that Kantian analytic judgments purport to be about and showing how their truth (= agreement with the objects) can nevertheless be established solely on the basis of the analytical relation between the given concepts plus some Kantian-logical laws. Consider again "All bodies are extended." To determine whether this judgment is true is to determine whether the predicate *extended* applies to the objects thought under the subject-concept *body*, so that every object in the extension of *body* is also in that of *extended*. Now, since *extended* is intensionally contained in *body*, by the Law of Extension every object in the extension of *body* is indeed also in that of *extended*. This extensional relation between *body* and *extended* is analogous to that between *F* and *G* shown in Figure 3. By the Principle of Contradiction, then, for any object = x thought under *body*, *extended* must be ascribed to it; for it would be contradictory otherwise—just as it would be impossible, with respect to Figure 3, to place what is already inside the extension of F outside that of G. "All bodies are extended" is thereby established as necessarily true. The knowledge of this analytic truth comes easily: all it requires is that we recognize the analytical (intensional containment) relation between *body* and *extended*, together with the Law of Extension and the Principle of Contradiction. And, even though truth in this case still consists in the predicate agreeing with the objects thought under the subject-concept, to represent such objects, we need not go beyond the given concepts: they are whatever objects = x can be thought under those concepts; as such, they can be adequately represented by such figures as squares (Figure 1) or circles (Figure 3).

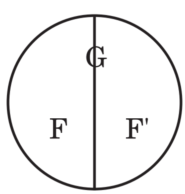

Figure 3

On this account, analytic truths are formal first in the sense of being determined in abstraction from any specific differences among objects of thinking. For, if the truth of an analytic judgment consists in the predicate applying to the objects thought under the subject-concept, the objects in question are taken only in the generic sense of objects = *x*, regardless of their specific characteristics. This is why we could borrow Kant's figurative means (Figure 1 and Figure 3) to represent the extensional relation of two concepts that are analytically related: all objects falling in the extension of each concept can be regarded as the homogeneous points on a plane that stands for the extension. But analytic truths are formal also in the sense that they do not presuppose that the purported objects are givable or constructible in our intuition. For we can know them solely on the basis of the intensional containment relation between the given concepts together with the Law of Extension and the Principle of Contradiction. "A two-sided polygon is two-sided" is a clear example in this regard. Insofar as *two-sided* is intensionally contained in *two-sided polygon*, whatever object = *x* falls in the extension of the latter also falls in that of the former; to that extent *two-sided* applies to the object thought under *two-sided polygon*, in which sense the judgment is true. This "agreement with an object" holds even though the purported object, that is, whatever is thought as a two-sided polygon, cannot be constructed in our intuition.[30]

The second sense in which analytic truths are formal is especially significant for Kant. Analytic truths do not presuppose any reference to objects of experience or intuition. It is thus "easy" to make analytically true judgments: we need "only go through concepts and see what lies therein"; for that reason, Kant cautions, analytic judgments should not be "falsely presented as propositions of experience" (*Metaphysik Mrongovius*, Ak 29, 789). This warning is necessary only because analytic judgments have the *x-a-b* schema and hence purport to be about objects in some sense. Precisely by sharing this objectual purport with synthetic judgments, analytically true judgments may be mistaken for material truths about objects of experience. Borrowing Béatrice Longuenesse's terminology, we may refer to such mistakes as "Leibnizian illusions"—illusions that we can obtain material truths just by conceptual analysis. As Longuenesse puts it,

> Kant's introducing the term "x" in his explanation of the logical form of judgments [—which is the form of *synthetic* as much as of *analytic* judgments—] is precisely due to his awareness that contrary to Leibnizian illusions, not all true judgments can be reduced to analytic judgments or judgments that are true by analysis of the subject-concept. (Longuenesse, *Kant and the Capacity to Judge*, 86n10)

Longuenesse has in mind analytic judgments that turn out to be true about objects of experience (for example, "Bodies are extended"), her point being that not all true judgments of experience are true by analysis of concepts.[31] Given the separation of the truth—and, relatedly, the objectual purport—of analytic judgments from their contentfulness, however, Kant's warning against mistaking them for claims about objects of experience gestures a more radical move: even if we grant the Leibnizians as many analytically true judgments as they would like, such judgments are not contentful—have no relation to objects of experience—simply on account of being true. For analytic truths, though they consist in agreement with objects, can be established independently of whether the purported objects are givable or constructible in our intuition; hence, analytically true judgments may very well turn out having no relation to objects of experience and hence no content in the Kantian sense. This logical independence of the truth of analytic judgments from their contentfulness holds for "Bodies are extended" as well as for "A two-sided polygon is two-sided." To determine the truth of the former judgment, as I have explained, we need only recognize the analytical relation between *body* and *extended*, without referring to the objects of experience that *body* does represent.[32] Such reference becomes relevant when we raise the further question: Is the judgment also contentful? Is it also true about objects of experience? As Kant puts it, "nobody can dare to judge of objects [that can only be given to us in intuition] . . . without having drawn on antecedently well-founded information about them from outside" (A60/B85). Yet there is something so seductive about analytic truths as agreement with objects that one may get the illusion that analytic judgments, on account of being true, teach us something about the world. By separating the truth of such judgments from their contentfulness, we have an antidote to such illusions. Or so Kant would say.

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NOTES

1. References to the *Critique of Pure Reason* are given by the standard A and B paginations corresponding to the first and second editions of the text.

2. Geach, "Subject and Predicate," 462.

3. Paton, *Kant's Metaphysic of Experience*, 214n3.

4. Rosenkoetter, "Are Kantian Analytic Judgments about Objects?"

5. Tolley, "Kant's Conception of Logic," chap. 5, §§40–1; see also chap. 2, §§13–15 ("Logical Form as the Syntax of Thought").

6. Paton (*Kant's Metaphysic of Experience*, 84n2) attributes this view to Hermann Cohen and Walter Kinkel. The targeted view goes hand in hand with Cohen's and Kinkel's shared interpretation of Kantian formal logic: (1) this logic is only about analytic judgments, and (2) it treats thinking as totally objectless; hence, analytic judgments are about concepts and not about objects (Cohen, *Kants Theorie der Erfahrung*; Kinkel, "Einleitung"). Paton gives separate reasons for rejecting (1) and (2) (213–15, 187–92).

7. Rosenkoetter rejects Paton's version of [AO] partly by dismissing his allegedly psychologistic notion of "about objects" ("Are Kantian Analytic Judgments about Objects?" 198). The antipsychologistic thread in Kant's theory of judgment is clear (Hanna, *Kant and the Foundations of Analytic Philosophy*, 75–76). I doubt that a careful reader like Paton would have meant to contradict it.

8. Works from the *Akademie* edition of *Kants gesammelte Schriften* (Ak) are cited as follows: title, Ak volume, and page. For the ones with existing English translations, I use the translations. For the rest, translations are mine.

9. Heis, "The Fact of Modern Mathematics," 191–92n67. For "cognition" in the proper Kantian sense, see A51/B75.

10. In Kant's logic corpus, the term for "intension" is *Inhalt* (*Logik*, Ak 9, 95), usually translated as "content." In the *Critique of Pure Reason*, however, *Inhalt*—the standard translation of which is also "content"—acquires a special meaning, as the relation (*Beziehung*) of cognition (*Erkenntnis*) to an object (of intuition), in which relation lies the "objective validity," "meaning" (*Sinn*), or "significance" (*Bedeutung*) of thoughts (including concepts) (A55/B79; A239–41/B298–300). I use "intension" for *Inhalt* in the first, logical sense and reserve "content" for *Inhalt* in the second sense.

11. Also see R4674, Ak 17, 645; R4676, Ak 17, 657.

12. This notion of "object in general = *x*" differs from the "something in general = X" or "transcendental object = X" discussed in the Transcendental Deduction (A104; A109). The latter X (always capitalized by Kant) is introduced in connection with Kant's account of how the understanding, with its pure concepts, "brings a transcendental content [*Inhalt*]" into a given manifold of intuition (A79/B105) or "understand[s] something [*etwas*] in the manifold of intuition, i.e., think[s] an object for it" (A80/B106). The "object" in such a context is understood as "that in the concept of which the manifold of a given intuition is *united*" (B137).

13. Also see A290/B346; *Metaphysik Mrongovius*, Ak 29, 811; *Metaphysik Vigilantius*, Ak 29, 960–1.

14. Although it "seems striking to think of an object that comprises a nothing," Kant argues, "*a nothing* also *presupposes only a thought [of object] which then cancels itself*, {i.e., which contradicts itself}" (*Metaphysik Vigilantius*, Ak 29, 960–61).

15. This is part of Kant's remark about the categories of modality: "as a determination of the object they . . . express only the relation to the faculty of cognition. If the concept of a thing is already entirely complete, I can still ask about this object whether it is merely possible, or also actual" (A219/B266).

16. This view is suggested by Allison's remark that Kant makes a "Copernican turn" in the theory of object by replacing "first-order talk about objects . . . by second-order talk about the *concept* of an object and the conditions of the representation of an object" (*Kant's Transcendental Idealism*, 173).

17. *Metaphysik Mrongovius*, Ak 29, 812; *Metaphysik Vigilantius*, Ak 29, 961; A291–2/B348.

18. Though "pure intuition is possible *a priori* prior to the object, then even this can acquire its object . . . only through empirical intuition, of which it is the mere form" (A239/B298). In the case of geometrical concepts, this requirement is fulfilled "by means of the construction of the figure, which is an appearance present to the senses (even though brought about *a priori*)" (A240/B299). For a helpful reading about the relevant construction, see Friedman, "Kant on Concepts and Intuition."

19. In these terms Kant explains the formality of "general logic." Assuming (i) and (ii) to be incompatible, some commentators have debated about which one is the real sense that Kant considers logic to be formal. For a sample of the debate, see Paton, *Kant's Metaphysic of Experience*, 187–91, in favor of (i) over (ii) versus Tolley, "Kant's Conception of Logic" (chap. 2) in favor of (ii) over (i). Based on my own survey of the extensive evidence for both (i) and (ii) throughout Kant's logic corpus, I view them as complementary aspects of Kant's notion of logical formality.

20. I agree with Alberto Vanzo's analysis that this nominal definition of truth is meant to capture what Kant takes to be "ordinarily meant" by "is true" and, as such, differs from a full-blown theory about the truth conditions of any given judgment (Vanzo, "Kant on the Nominal Definition of Truth," 161–63).

21. A58–9/B83; *Metaphysik Wrongvius*, Ak 29, 788–91.

22. We are considering only universal affirmative judgments.

23. On the Principle of Contradiction, no predicate that contradicts the concept of a thing can be ascribed to the thing. Kant states this principle differently in various texts:

> No predicate belongs to a thing that contradicts it. (A151/B190)
>
> Everything must be denied of the thing that contradicts the concept of the thing. (*Metaphysik Mrongovius*, Ak 29, 789; A151/B190–1)
>
> To no subject does there belong a predicate opposed to it. (*Metaphysik L_2*, Ak 28, 544; *Metaphysik Mrongovius*, Ak 29, 789)

I take these statements to mean the same; for a predicate "contradicts a thing" only by contradicting the concept by which the thing is thought. This is suggested by Kant's remark that "[a concept] *b* is always compared with the object *x* by means of [another concept] *a*" (R4674, Ak 17, 647).

24. In Kantian logic, the extension of a concept, when considered as a general representation, is always a multitude. By contrast, when a concept is used to represent exactly one individual (in a singular judgment), Kant treats it as having no extension at all and, accordingly, suggests that it be represented by a point (*Logik Dohna-Wundlacken*, Ak 24, 755).

25. Kant represents the four basic forms of judgment in the Aristotelian logic by arranging two circles in four ways, with the circles standing for the extensions of the logical subject and predicate, respectively.

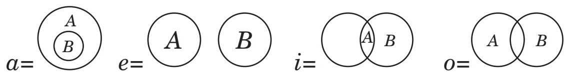

Figure 4: (R3215, Ak 16, 715; R3036, Ak 16, 627; R3063, Ak 16, 637)

26. Such objects are mere objects in general = x in the sense explained above. The alternative would be to say that the extension of a concept consists of the objects actually falling under it. The contrast between these alternatives is rarely appreciated among commentators on Kant's notion of extension. Some have rejected the interpretation that Kantian logical extension consists of objects by arguing that certain Kantian-logical laws—the Law of Extension being one of them—would fail on such an interpretation; but such an argument hinges on restricting "objects" to the actually existing ones (Anderson, "It Adds Up after All," 507–8, 512; Tolley, "Kant's Conception of Logic," 361–65; de Jong, "Kant's Analytic Judgments," 626–27).

27. *Wiener Logik*, Ak 24, 912; *Logik*, Ak 9, 98.

28. Kant treats the subordinate concepts of a given concept literally as its "branches [*Glieder*]" (*Logik*, Ak 9, 146; R3010, Ak 16, 612).

29. Kant himself suggests that we use a circle to represent the logical extension of a concept (*Logik Dohna-Wundlacken*, Ak 24, 755).

30. One might wonder about a sentence that shares the same syntactical structure with "A two-sided polygon is two-sided," but the subject term of which contains logical contradiction. For instance, "A square circle is square." There are two possible ways for Kant to treat this case. On the one hand, if the objects that constitute the logical extension of a concept are simply objects in general = x regardless of whether they are possible or not (even in the logical sense) and if "square circle" expresses a concept that, qua concept, has a logical extension, then "A square circle is square" is true in the same sense in which "A two-sided polygon is two-sided" is true—that is, in that whatever falls in the extension of *square circle* also falls in that of *square*. On the other hand, however, Kant might think that "A square circle is square" is a string of words that expresses no truth-evaluable judgment at all. For "square circle" would only express the thought of an object by the concept *circle* that cancels itself by conjoining with the concept *square* (see n. 14 above). Figuratively, then, it would be impossible to represent "A square circle is square" in the way that one can represent "A

two-sided polygon is two-sided" (in the fashion of Figure 1), since one would not be able to draw a logical extension for the purported subject in the first place.

31. Longuenesse refers to the same *x-a-b* schema that I mentioned earlier. But she interprets the *x* in this schema as objects of intuition. Her claim about how this notion of *x* figures in Kant's account of analytic judgments is rather like what I have presented as a claim about their contentfulness: "even though analytic judgments, unlike synthetic judgments, are true in virtue of the mere content of the concepts combined in the judgment, Kant makes the presence of the *x* to which the two concepts are attributed explicit *for analytic as well as for synthetic judgments*. This is because in both cases concepts have meaning only if they are 'universal or reflected representations' of singular objects (here, the objects of sensible intuition thought under the concept of body)" (Longuenesse, *Kant and the Capacity to Judge*, 87, in reference to *Logik*, Ak 9, 111).

32. With respect to an analytic judgment composed of empirical concepts, considering the empirical objects falling under them actually makes no contribution at all to determining its truth—insofar as such truth is necessary.

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