Kant's Dialectic

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Kant has produced a criticism of the employment of *analytic* principles of the understanding (logical laws) as well as of proof methods of pure reason which is a companion to his theory of limitations of the employment of *synthetic* principles a priori of these two faculties. These critical endeavors belong to that part of logic which is called *dialectic* or *critique of dialectical illusion*. Kant's dialectic is, accordingly, not a separate theory but an integral part of logical theory itself, on the same footing as the other part of it called analytic. It is just as a priori demonstrated and free from empirical contents and principles as is the latter (see B 78).

FORMAL ANALYTIC

As I have just indicated, Kant divides logic into analytic and dialectic. Both are, moreover, divided into formal (general) and transcendental. Formal analytic can be characterised as an a priori *canon* of the understanding and reason (B 77). By an a priori canon Kant understands "the sum-total of the a priori principles of the correct employment of certain faculties of knowledge" (B 824). The formal analytic is accordingly an a priori theory of rules of the correct employment of the understanding and reason while executing logical (discursive) operations which generate concepts, propositions ("judgments") and proofs (syllogisms and other kinds of proof). Examples of such rules are the principles of excluded middle and non-contradiction (which are employed by the understanding as well as by reason (see L, §§ 48, 49 and 78), and the apogogical proof method which is a device of pure reason as such.

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FORMAL DIALECTIC

Formal dialectic, on the other hand, studies incorrect employment of understanding and reason and, in particular, the employment of their logical rules *not* as canonical precepts but as a *formal organon* for acquiring material knowledge about objects. By organon of a cognitive faculty Kant means the sum-total of those principles by means of which all modes of objective knowledge of which this faculty is capable "can be acquired and actually brought into being" (B 24-5). To apply logical rules as an organon means, therefore, to try to acquire *by means of them alone* new material, i.e., objective or synthetic knowledge.

Consider first the analytical principles of the understanding, such as the principle of double negation, of excluded middle and of non-contradiction. These formal logical laws are no doubt universal and necessary criteria of truth. "Whatever contradicts these rules is false", writes Kant, "[f]or the understanding would thereby be made to contradict its own general rules of thought, and so to contradict itself" (B 84; see L, A 75). The same laws are moreover entirely sufficient criteria for the truth of all analytic propositions (B 191). However, they are only necessary but not sufficient conditions of the truth of synthetic propositions (B 84, 189). "For although our knowledge may be in complete accordance with logical demands, that is, may not contradict itself, it is still possible that it may be in contradiction with its object" (B 84). In this case, formal logic cannot go further than to give a negative condition of truth. It has no touchstone "for discovery of such an error that concerns not form but the content" (B 84). For instance, "even if a proposition contains no contradiction, it may connect concepts in a manner not borne out by the object" and accordingly be consistent and *false* (B 190). Or else, it may connect concepts in a manner "for which no ground is given, either a priori or a posteriori, sufficient to justify such proposition" in which case it is consistent and "groundless" (B 190) or *undecidable*.

The case of consistent false propositions shows that the mere logical form of a proposition, even if it stands in complete agreement with logical laws, is far from being sufficient to determine its objective truth, so that "no one can venture *with the help of logic alone to judge* regarding objects, or to make any assertion" (B 85, my italics). If we do so, we fall into *formal* dialectical illusion. But not only logical or analytical principles of the understanding give rise to such an error. Logical laws of reason, that is, formal rules of inference, and logical proof methods, if employed as a formal organon, also lead to dialectical fireworks. Here again, the agree-

ment with *received* logical procedures cannot guarantee the soundness of arguments in general. Thus, for instance, formally correct apogocial proofs are not sufficient to establish the truth of transcendental propositions of pure speculative reason and cannot thus be viewed as an organon for solving transcendental or metaphysical problems (B 817ff). Cases in point are the propositions of the first antinomy. All that the employment of the apogogical method in an attempt to prove any of them can achieve is to show that their opposites do not satisfy formal conditions of truth, because they lead to contradictions. The possibility of deriving false consequences from each of these propositions as well shows that in their case we cannot conclude from the falsity of their opposite to their truth on purely logical grounds; that is, by simply employing the principle of excluded middle. The apogogical method of proof is in fact the deluding device *par excellence* of all those who uncritically try to solve transcendental or metaphysical problems (B 821). The correct procedure for proving a synthetic proposition as objectively or materially true is the following:

> We must first, *independently of logic*, obtain reliable information; only then are we in a position to enquire, in accordance with logical laws, into the use of this information and its connection in a coherent whole, or rather to test it by these laws. (B 821, my italics)

Thus a correct proof of a synthetic proposition is necessarily based on synthetic objectively valid premisses and on objective connections between the information which they convey and the information described in the proposition to be proved. These considerations imply that purely formal rules of the understanding and reason which belong to the canon of their formal employment, when used as purely formal organon for deciding the truth value of synthetic propositions, give origin to dialectical illusion. There is, accordingly, place in general logic for a *formal* dialectic or critique of formal dialectical illusion as based on logical form of propositions and proofs.

TRANSCENDENTAL ANALYTIC

Having examined formal or general analytic and dialectic, let us now consider their transcendental counterparts. In spite of Kant's efforts to explain the meaning of the term "transcendental", it has remained one of the most controversial novelties of his philosophical system. My interpretation of its meaning given here goes only as far as necessary for the purposes of this paper.[1]

The term "transcendental" applies, in Kant, to a special kind of a priori knowledge which is about *semantical* properties of our intuitions, concepts and propositions (B 80). As far as logic is con-

cerned, the semantical properties of intuitions can be neglected. Regarding, first, our a priori given or generated concepts, we know a priori, according to Kant, the manner in which they can relate to objects (B 117). In other words, we know a priori *that* and *how* they can be employed or are possible (B 80). As we see, from this transcendental, that is, a priori semantical point of view, the a priori possibility of a concept is synonymous with its a priori applicability to sensible objects, or, as Kant also says, to its objective validity, reality or truth [sic!] (B 788).

Kant also offered an a priori semantics of concepts in general, independent of whether they are a priori or a posteriori generated. It is very simple to state the main thesis of the Kantian a priori semantics of concepts: a concept is cognitively significant only if it has objective referents (A 95; B 178, 194 198), this thesis gains enormously in profile when it is considered jointly with Kantian views on possible referents. He generally refers to them as *possible objects*. According to the Kantian first postulate of empirical knowledge, a possible object is an entity which agrees with the conditions of intuition and of concepts, that is, which can be synthesized in pure or in empirical intuition according to universal conditions expressable by concepts. There are only two domains of such objects: the domain of empirical things and the domain of mathematical constructs. Clearly objects of both domains are adequately representable by empirical or pure intuitive data structures. The main thesis of Kantian semantics can now be stated in the following way: a concept is cognitively significant only if it can be related to intuitive representations of objects.

It is important to understand the nature of the manner in which concepts are related to intuitions. To that end a remark of Kant's, in his *Logik*, § 7, regarding the nature of concepts themselves is very helpful. The concepts are, says Kant, partial representations of things (objects) which are grounds of cognition of these things, that is, of the remaining representations of them, in accordance with a rule. This means that well formed concepts are always associated with rules for producing the remaining representations of the objects to which they apply, be these representations other derivative concepts, or intuitive and direct representations. But at the end of the chain of production there must always be only intuitive representations. We can now say that in Kant a concept is cognitively significant only if it is related to intuitive representations of objects by being a universal condition of a rule for the production of intuitive representations. In other words, a concept has meaning if it universally, that is, discursively, represents intuitive forms generatable over intuitive data by a rule associated with it. An immediate conse-

quence of this interpretation is that Kantian meaningful concepts represent *intuitively constitutable properties* (B 222). This consequence is one of the cornerstones of the Kantian constructivism.

In Kant the possibility, that is, the objective applicability of a concept cannot be ensured by showing that it is non-contradictory:

> It is, indeed, a necessary logical condition that a concept of the possible must not contain any contradiction; but this is not by any means sufficient to determine the objective reality of the concepts, that is, the possibility of such an object as is thought through the concept. (B 268)

The reason why this is so is that the proof of non-contradiction of a concept does not guarantee the constructability in empirical or pure intuition of objects which exemplify it. Thus the concept of a fundamental force, for instance, that of attraction, as employed in rational mechanics, is clearly non-contradictory and yet it cannot function as a universal condition for any rule for effectively constituting intuitive representations of an object. It is therefore an error to identify the logical possibility of a concept, or its agreement with the principle of non-contradiction, with its transcendental possibility or its applicability to an object synthesizable in the field of possible experience (cf. B 625n, 638).[2]

But we not only have a priori knowledge about general conditions of cognitive significance of our a posteriori as well as a priori concepts; we also have such knowledge about the general conditions of truth of all synthetic propositions, independently of whether they are a priori or a posteriori. This kind of transcendental knowledge is called by Kant a priori "logic of truth" (B 87). Taken together with the a priori "logic of significance", as one could call the a priori semantics of concepts in general which I have just explained, this doctrine constitutes that part of Kant's transcendental philosophy which is the transcendental analytic. Transcendental analytic is thus nothing other than an a priori theory of significance and truth.

The *most important question* of transcendental logic is "the explanation of the possibility of synthetic propositions" (B 193; cf. B 194). Transcendental logic is thus concerned with the possibility of both synthetic propositions a priori and a posteriori. As in the case of concepts, by "possibility" of a proposition is meant its objective reality or applicability to constitutable objects, that is, objects which can be given in the field of possible experience:

> If *knowledge* is to have *objective reality*, that is, relate to an object, and is to acquire *meaning* and *significance* in respect to it, the object must be capable of being in some manner given. (B 194, my italics)

The term "knowledge" in this passage obviously refers to synthetic propositional knowledge. A synthetic proposition a priori, for instance, is said to be "completely impossible" apart from the relation to constitutable objects. For if there is no possible object to which it refers, there is then "no third something . . . in which the synthetic unity of its concepts can exhibit [its] objective reality" (B 196).[3] An impossible synthetic proposition a priori is, accordingly, such that the connection of concepts which it generates has no interpretation in the domain of connections among objects.

There are two more questions about propositions which have to be answered by transcendental logic. The first concerns the conditions of their objective validity or truth and the second the domain of their applicability (B 194). If we consider, which is very natural indeed, that the last two questions do nothing other than develop the one about the possibility of synthetic propositions, we can say that the most important of all questions of transcendental logic is also "the *only question* with which it is concerned" (B 194, my italics)

The possibility of synthetic propositions, even taken in this extended sense, must be distinguished from their provability or demonstrability. Kant is not always very explicit about this important distinction, although there are a couple of texts which decide the matter. In commenting on propositions which refer to merely intelligible concepts, Kant remarks that they "can never be proved [*bewiesen*] (B 223). No doubt, the conditions of "significance and validity" of a synthetic principle of the understanding are the same as conditions of its possibility and truth. The text quoted implies that these two properties of principles must be established previously to any attempt to proving them. There are analogous remarks in Kant about mathematical principles or axioms. Their "correctness and apodictic certainty" do not need to be established by transcendental logic. This is a problem of mathematical demonstration and as such internal to mathematics. Mathematical axioms are derived (*gezogen*) from intuition (B 188), that is, "by means of the construction of concepts in the intuition" (B 760). So are all other demonstrably evident and apodictically certain mathematical propositions. For in mathematics to demonstrate or to prove means to derive (*ableiten*) a proposition "not from concepts but from the construction of them, that is, from intuition, which can be given a priori in accordance with the concepts" (B 762). The possibility, however, of mathematical axioms and theorems, as cases of evident a priori knowledge, "has to be rendered conceivable, and to be deduced" (B 189; cf. B 761), and the conditions of their objective validity established (B 199), by transcendental logic:

> While, therefore, I leave aside the principles of mathematics, I shall none the less include those principles upon which the possibility and the a priori objective validity of mathematics are grounded. These latter must be regarded as foundation of all mathematical principles. (B 199)

Clearly, what Kant means by foundation of all mathematical principles is not their demonstration or proof. The so-called mathematical principles of the understanding are not first premises for deriving mathematical propositions. The principle of axioms of intuition, for instance, "serves only to specify the principle of possibility of axioms in general" (B 761), and not to demonstrate them. In other words, it is an a priori semantical or transcendental principle and not a part of the body of mathematical objective knowledge. The distinction between the possibility and the provability of a synthetic proposition can thus be considered as established beyond doubt. This does not mean, however, that the two properties are independent. It is indeed one of the most important results of Kant's proof theory that a proposition is provable if and only if it is possible.[4]

There is another analogy between Kant's treatment of concepts and of propositions. Just as the problem of a priori conditions of the significance of concepts in general can be reduced to the problem of finding a priori conditions of the applicability of concepts given a priori, that is, of categories, the problem of a priori conditions of truth is solved as soon as we have established the a priori conditions of the applicability of the pure principles of the understanding. For these synthetic principles are not only true a priori, but are

> the source of all truth (that is, of the agreement of our knowledge with objects), inasmuch they contain in themselves the ground of the possibility of experience viewed as the sum of all knowledge wherein objects can be given to us. (B 296)

Thus, for instance, the relation of cause to effect, described by the principle of causality, is

> the condition of objective validity of our empirical judgments, in respect of the series of perceptions, and so of their empirical truth. (B 247)

Transcendental analytic can also be viewed as a canon, not of course, of formally, but of materially correct employment of the understanding (B 170, 824). This canon is nothing other than the set of a priori known rules for application of categories to possible appearances. These rules fix up the "transcendental truth which precedes all empirical truth and makes it possible" (B 184). In other terms, the a priori principles of the understanding are rules which

provide universal conditions of synthesis of sensible objects of which all non-philosophical synthetic propositions can be said to be true or false. They are general rules of Kantian a priori semantics of empirical and mathematical synthetic propositions.[5]

One can ask whether there is also an a priori canon of material employment of propositions of pure speculative reason. The answer is no, because there is no possible transcendental analytic, that is, a priori semantic of these propositions. For the ideas of pure reason are not objectively valid or possible concepts.

TRANSCENDENTAL DIALECTIC

Yet, if we employ the principles of the understanding not as a canon for evaluating the empirical truth of synthetic propositions but as an organon, and consequently "venture, with the pure understanding *alone*, to judge synthetically, to affirm, and to decide regarding objects in general", our employment of the pure understanding becomes dialectical (B 88). It cannot be otherwise, because, as we have just seen, the a priori principles of the understanding provide universal conditions of synthesis of sensible objects and as such cannot offer the necessary basis for "passing judgments upon objects without distinction—upon objects which are not given to us, nay, perhaps cannot in any way be given" (B 88).

An analogous dialectical illusion is generated through attempts to decide synthetical propositions regarding objects in general by employing solely formal logic and the transcendental principles of pure speculative reason (B 353). In this case the illusion originates from the fact that we mistake the subjective necessity or the a priori necessary task of pure reason to produce maximal possible extension of empirical knowledge (B 498, 536, 671) for an objective necessity of things themselves (B 353). One such subjective condition of thought—this is the birthplace of all necessary pure reason problems—is the fundamental principle of pure speculative reason. It is expressed by Kant in the following way:

> *To find* for the conditioned knowledge obtained through the understanding the unconditioned whereby its unity is brought to completion. (B 364)

Clearly, this principle is not a proposition but a postulate (B 526) or maxim (B 364) or precept (B 365). Moreover, it is not an empirical or synthetic postulate, but a logical or analytical one. For "the conditioned" is "analytically related to some condition" (B 364). Or, as Kant explains it in more detail,

> ". . . it is involved in the very concept of the conditioned that

> something is referred to a condition, and if this condition is again itself conditioned, to a more remote condition, and so through all the members of the series. (B 526)

The fundamental logical postulate of pure reason possesses accordingly the same certainty as any other analytical principle:

> In the first place, it is evident beyond all possibility of doubt, that the conditioned is given, a regress in the series of all its conditions is *set* us *as a task*. (B 526)

This entirely evident logical postulate of pure reason is, however, dependent on one logical presupposition, namely, "that all the members of the series on the side of the conditions are given (totality in the series of *premisses*), for only on this presupposition is the judgment before us possible a priori" (B 388, my italics). This presupposition, explains Kant, is "simply the logical requirement that we should have adequate premisses for any given conclusion (B 528). Clearly, this requirement does not posit any objective totality of things but only the logical completeness of explanans of any given explanandum. As Kant says,

> what reason is really seeking in this serial, regressively continued, synthesis of conditions, is solely *the unconditioned*. What it aims at is, as it were, such a *completeness in the series of premisses* as will dispense with the need of presupposing other premisses. (B 443-4, my italics)

In Kant, a property is absolute if it applies without restriction and relative if its validity is restricted by conditions (B 382). The completeness of the series of conditions sought under the guidance of the fundamental postulate is therefore absolute. The knowledge-seeking activity of the understanding is directed thereby

> solely towards absolute totality in the synthesis of conditions, and never terminates save in what is absolutely, that is, in all relations, unconditioned. (B 382)

What must be absolute is thus not at all the class of premises conceived as given in itself independently of any synthesis but the synthesis of the understanding which can generate the complete series of premises or this series itself. The fundamental postulate is not concerned with things themselves but "exclusively with absolute totalities in the employment of the concepts of the understanding". (B 383) Kant adds:

> the reason accordingly occupies itself *solely with the employment* of understanding, not indeed in so far as the latter contains the ground of possible experience . . . , but solely in order *to prescribe* to the understanding *its direction* towards a certain unity of which it has itself no concept (my italics).

Absolute wholes or totalities of premises are thus only prescribed but actually never attained by the synthesis of mere understanding.

By now I have described the *subjective* employment of the idea of absolute synthesis and of absolute totality. These ideas can also be employed to refer to intelligible *objects*. Such objective employment is necessarily always *transcendent* which means that it "takes away" the limits of possible experience and "commands us actually to transgress them" (B 353). Thus, for instance, the absolutely complete synthesis of appearances in the formulation of cosmological problems is "again only an idea; for we cannot know, at least at the start of the enquiry, whether a synthesis is possible in the case of appearances" (B 444). In the formulation of cosmological problems the employment of ideas of absolute or complete totality and synthesis is thus transcendent. Whether their completeness is sensibly possible is another problem.

The series of premises of any given item of knowledge may be of two kinds. It may either have a first member, as its highest condition, or it may have no such member, in which case it is without limits *a parte* a priori" (B 389). In other words, the unconditioned postulated by pure reason may consist either in a potentially infinite series of true premises or in a first premise considered as determined a priori and as necessary (B 389; see 445). The latter case is particularly interesting, because such a premise cannot possibly be an "empirical" one (B 397), but must of necessity employ ideas of reason. Yet, whatever view we take on the unconditioned postulated by the fundamental principle of reason, we are allowed to posit for it an object and represent this object by means of an idea. Just as the logical unconditioned may be of two kinds, the objective unconditioned may be either the first member of a series or the entire series itself. The employment of ideas in representing such objects is of course not immanent to the field of possible experience but transcendent. Such a procedure is legitimate under one condition, namely, that we admit that for the rest we have no knowledge in regard to the object represented and that "it cannot be thought as a determined thing in terms of distinctive inner predicates" (B 593). The prohibition against thinking of a transcendent object as a thing determined in terms of inner predicates prevents the commision of an error in reasoning, namely, that of saying that if it is in itself (*interne*) possible, it is also possible in every relation, and in that sense absolutely possible (B 381). This proposition is false, for, as a transcendental object "is independent of all empirical concepts, we are cut off from any reasons that could establish the possibility of such an object" (B 592). In other words, the determination of a transcendent object by means of predicates

internal to its idea is purely logical and is only necessary but not sufficient to guarantee its possibility *as a real thing.*

We are not only prohibited from assuming that intelligible objects of ideas are absolutely possible things but also from supposing that they exist absolutely or in themselves (*suppositio absoluta*, B 704). We are only allowed to assume that they exist in a relative sense, that is, relatively to a certain mode of giveness. Moreover the only legitimate purpose of such a supposition is to help the understanding to advance in the direction of "systematic unity of the world of sense" (B 707).

This last remark of Kant's indicates that the supposition of abstract transcendent objects of ideas may be useful in empirical research. Indeed, it is not only useful but even necessary for the maximal development of empirical research:

> For if the greatest possible employment of my reason rests upon an *ideal* (that of systmatically complete unity . . .), an *idea* which, although it can never itself be adequately exhibited in experience, is yet *indispensably necessary in order that we may approximate to the highest degree of empirical unity*, I shall not only be entitled, but shall also be constrained, *to realise this idea*, that is, *to posit for it a real object*" (B 705, my italics).

An idea thus contributes to the maximal extension of empirical knowledge and leads to its systematic unity in a more effective way "under the supposition of an *object in the idea*" (B 699) than without it. But, of course, on account of the condition which disciplines the operation of supposition I may posit an object for an idea "only as something which I do not at all know in itself" (B 705). For the idea is "really only a heuristic, not an ostensive concept" (B 705).

As regards ideas which are "realized" by means of relative presuppositions, reason invites us to venture a step further and to ascribe to their posits "such properties as are analogous to the concepts employed by the understanding in the empirical sphere" (B 705). By this operation, labeled by Kant as *symbolic schematism* or *schematism in accordance with analogy*, we give ideas an intuitive interpretation, which nevertheless always remains partial, indirect and inadequate. The main reason for schematizing ideas is again an *heuristic* one: schemata of ideas play the role of schemata of regulative principles "of the systematic unity of all knowledge of nature" (B 702).

In spite of the possibility of providing ideas with analogically schematized ideal referents, these representations of unconditioned things or absolute totalities of conditions remain essentially logical and methodological concepts, and continue to be applicable strictly

speaking only to unified systems of propositions:

> The unity of reason is the unity of system; and this systematic unity does not serve objectively as a principle that extends the application of reason to objects, but subjectively as a maxim that extends its application to all possible empirical knowledge of objects. (B 708)

We have considered two kinds of transcendental subreption, that of absolute presupposition of an object of an idea and that of its absolute possibility. There is another no less damaging kind of a priori semantical error. It leads to the illegitimate empirical employment of a transcenent synthetic a priori principle of pure reason. This principle is no other than the fundamental postulate itself yet interpreted objectively in an entirely abstract manner. Kant gives it the following phrasing:

> ": . . if the conditioned is given, the whole series of conditions, subordinated to one another—a series which is therefore itself unconditioned—is likewise given, that is, is *contained in the object and its connection*" (B 364); my italics. (see B 436).

This principle is obviously *synthetic*, for "the conditioned is analytically related to some condition but not to the unconditioned" (B 364). It is also *transcendent* in the sense explained above. In which domain of entities may this propositional version of the fundamental maxim of pure speculative reason legitimately be applied?

Nothing prohibits us from employing it in reasonings about things in themselves, that is, about abstract transcendent objects as such, and from generating arguments concerning them of the following kind:

> . . . . if the conditioned as well as its condition are things in themselves, then upon the former being given, the regress to the latter is not only *set as a task*, but therewith already *given*. And since this holds of all members of the series, the complete series of the conditions, and therefore the unconditioned, is given therewith, or rather is presupposed in view of the fact that the conditioned, which is only possible through the complete series, is given. (B 526)

Kant warns, however, against forgetting that the synthesis of the conditioned with the unconditioned asserted in this passage is not empirical nor any other intuitive one, but conceptual or intellectual:

> But synthesis of the conditioned with its condition is here a synthesis of the mere understanding, which represents things *as they are*, without considering *whether and how we can obtain knowledge of them.* (B 526-7; last italics are mine).

It could not be otherwise, because both the conditioned and the unconditioned are things in themselves and as such given only

abstractly in pure thought. This explains, moreover, why such transcendent employment, given the fundamental postulate, is legitimate. When in the present case we infer the giveness of the unconditioned from the giveness of the conditioned, we do not presuppose more than what is already assumed by the logical requirement on which the fundamental postulate in its original form is based, namely, that we should have adequate premises for any given conclusion.

However, there can never be any adequate employment of the same transcendent version of the fundamental postulate in relation to appearances For it is sheer nonsense to talk about appearances as if they were given in a synthesis of the mere understanding. The synthesis which gives us appearances and the series of their phenomenal conditions is necessarily an empirical one:

> The appearances are in their apprehension themselves nothing but an empirical synthesis in space and time, and are given only in this synthesis. (B 527)

This cannot be otherwise, because appearances are mere representations and

> *cannot be given save in so far as I attain knowledge of them*, or rather *attain them in themselves*, for they are nothing but empirical modes of knowledge. (B 527, my italics)

The difference in the constitution procedures for things in themselves and appearances, that is, the difference between their *modes of giveness*, imposes limits upon the correct employment of the transcendent version of the fundamental postulate. Thus, although it is legitimate to conclude, that if a conditioned thing in itself is given, all its conditions, considered as things in themselves, are also given, it is *not* legitimate to say, taking the term "given" in the same sense, that if a conditioned appearance is given, "all its conditions (as appearances) are likewise given" (B 527). For this implies that "if the conditioned, in the [field of] appearance, is given, the synthesis which constitutes its empirical condition is given therewith and is presupposed", which is obviously false. Such a synthesis, says Kant, "first occurs in the regress, and never exists without it" (B 527). One has no right to argue from the properties of absolute totalities to the properties of empirical or intuitive constitution procedures.

Whereas the transcendent employment of the synthetic version of the fundamental principle is unobjectionable, its *empirical employment* is thus dialectical and leads to logical fallacies. It can be said that all of them rest on two subtle and therefore quite natural er-

rors of transcendental or a priori semantical *subreption*. By regarding appearances "both as things in themselves and as given to the pure understanding", that is, by treating them as being mere things of thought or conceptual entities, we make the first of these two errors: the subreption of the mode of existence. By assuming that the mode of givenness of the unconditioned is the same as that of the intuitively given conditioned and that the corresponding constitution procedures possess equal powers we commit the subreption mode of givenness.

This general criticism of the empirical employment of the transcendent version of the fundamental postulate applies of course to all particular dialectical arguments. For all of them originate from attempts at solving problems of pure reason about nature by applying this version as a non-formal inference rule or as a premise. Consider, for instance, the arguments which lead to the antinomies. All of them rest, says Kant,

> upon the dialectical argument: If the conditioned is given, the entire series of all its conditions is likewise given; objects of senses are given as conditioned; therefore, etc. (B 525)

The major premise of this argument is, of course, the transcendent version of the fundamental postulate. As Kant himself remarks, it "takes the conditioned in the transcendental sense of a pure category" (B 527), which means here that it is viewed as a transcendent thing in itself. In the minor premise, however, the conditioned, or the datum of the problem for the solution of which the whole argument is put forward, is taken "in the empirical sense of a concept of the understanding applied to mere appearances" (B 527).

There is an analogous ambiguity as regards the unconditioned. Whereas, in the major premise the unconditioned is a transcendent series introduced or synthesized "without any condition of time" from mere concepts of the conditioned and its conditions taken as referring to things in themselves, in the conclusion the unconditioned is an empirical series and, is therefore possible or synthetizable only in time, that is "through the successive regress, which is given only *in the process in which it is actually carried out*" (B 529, my italics).

The term "given" is accordingly employed in different senses. In the major it means given in pure thought, either to the mere understanding or in idea. In the minor, it means empirically given, either directly to the senses or in empirical regress.

The fallacious character of the whole argument is now obvious. As the middle term "given" is taken in two different meanings, the argument commits, Kant says, "that dialectical fallacy which is entitled *sophysma figurae dictionis*" (B 528). This rather subtle and

therefore quite natural error is produced in the following way. The major, as I have said, is the unobjectionable transcendent version of the fundamental postulate. It is interpreted over the domain of things in themselves and asserts a logical connection between the givenness (to the mere understanding) of any transcendent conditioned and the givenness (in the idea) of its transcendent unconditioned. The minor is based on evident experience and is concerned with the domain of empirical entities. The conditioned must therefore be thought of as being empirically given. By making the subreption of the mode of existence we can infer that the empirical conditioned is also a thing in itself. By making next the subreption of the mode of givenness, we can conclude that the empirical unconditioned is a thing in itself given in pure thought.

In order to illustrate how this mechanism works *in concreto*, let me reconstruct, or rather, construct, the dialectical argument which leads to the special version of the first antinomy, namely, to the conflict between the thesis "The world is finite as regards space" and the antithesis "The world is not finite but is infinite as regards space" (B 454). The conditioned or the datum of the necessary cosmological problem concerned here is any empirically given spacial quantum. The minor of our argument can thus be formulated as:

Empirically conditioned spacial quanta are given.

By allowing for the empirical employment of the transcendent version of the fundamental postulate, we obtain the following major premise:

If empirically conditioned spacial quanta are given, the magnitude (quantity) of the sensible world, that is of the absolute totality of spacial quanta, is also given.

By making the subreption of the mode of existence, we can infer that the magnitudes of the empirical spacial quanta referred to by the minor are things in themselves given to the understanding. By committing the second, we arrive at the conclusion that the magnitude of the sensible world is an absolute whole in itself given in pure thought, namely, in idea. Now, absolute wholes in themselves considered as given in idea may be logically divided into finite and non-finite, that is, into actually finite and actually non-finite or infinite. For as they are things in themselves no time condition can be imposed on their existence. If they are non-finite they must thus be entirely complete or actually infinite. Moreover, this purely formal division of the sphere of the transcendent concept of magnitude obeys, by definition, the formal logical principles of non-contradiction and of excluded middle. Thus, from the assertion that the sensible world is an absolute whole given in itself, it can correctly be con-

cluded that it is either actually finite or actually infinite. And this conclusion in turn implies that to say that the sensible world is actually finite is to deny that it is finite, so that the disjunction of these two propositions must be analytically true. Yet, by the minor of the argument, the datum of the problem is empirically given. By making again the subreption of givenness, we can say that the unconditioned must also be empirically given, which means, in this case, given in empirical regress. It follows that the sensible world as constitutable by empirical regress is either actually finite or actually infinite, *either of which is false*. As I have said above, we have no right to project properties of things themselves over constituted procedures which do not correspond to them. To put it otherwise, from the supposition that the cosmic whole is given in itself, it follows no doubt, that it has a certain magnitude given in itself. Yet, "we have" the cosmic totality "only in concept, never as a whole, in intuition". Therefore, whatever our idea (of the size of) its magnitude may be, we *cannot argue* "from the magnitude of the cosmic whole to the magnitude of the empirical regress" (B 546-7). For the same reason, we can draw no conclusion concerning properties of empirical totalities from premises which state properties of totalities given in themselves.

The dialectical illusion which leads to the antinomies in general is based on unobjectionable formal logical and a priori semantical principles, namely, on formal rules for proof by syllogism and for logical negation, and on the transcendent version of the fundamental postulate. The error is not in principles but in their employment based on subreptions in judgment: "All errors of subreption are to be ascribed to a defect of judgment, never to understanding or to reason" (B 671). The general nature of this error is now clear: purely formal rules of thinking combined with one purely abstract synthetic principle are employed as constitutive rules of connections among objective entities. Antinomies show that by means of these purely "subjective" devices alone our reason cannot solve any one of its necessary cosmological problems. Antinomies thus force upon us the conclusion that formal logical and purely abstract a priori semantics cannot possibly be combined in an organon sufficient by itself for acquiring and bringing into being new synthetic knowledge about nature.

Let me now sum up the main results of the preceding analysis of formal (syntactical) and transcendental (semantical) illusions of pure understanding and reason. All of them have a common ground: they arise from the employment of a priori given concepts, propositions or rules as organa for solving problems about nature. In the first place, *formal* dialectical illusion *of both* cognitive powers is due

to the employment of their logical rules as means for determining the truth value of synthetic propositions without taking into account any additional synthetic proposition. In that case, we employ formal logical rules as sufficient criteria of truth beyond the domain of analytic propositions in which they may be legitimately used to that purpose. Kant's critique of these rules shows that they are only necessary but not sufficient criteria of truth outside this domain. In the second place, *transcendental* dialectical illusion *of the understanding* originates from attempts at solving problems about things in themselves by means of categories. Kant's criticism warns that this procedure is a transcendental or a priori semantical misemployment of these concepts. In the third place, transcendental dialectical illusion *of reason* is due to its natural propensity to creep into new domains of synthetic knowledge by practicing transcendental subreptions. The necessary presence of the a priori semantical errors of absolute supposition, of absolute possibility and of identification of essentially different modes of existence and of givenness in attempts at solving dogmatically questions about the soul, the world and the supreme being, shows that such questions can only be solved critically. Kant's critique establishes that the combination of a certain kind of a priori semantics with purely formal logical laws and strategies is *not* a *sufficient base* for solving the basic problems of pure speculative reason.

TRANSCENDENTAL IDEALISM VS. TRANSCENDENTAL REALISM

The dialectical illusion of pure speculative reason is thus due to a combination of good formal logic and bad a priori semantics. Somebody who accepts this delusive semantics or reasons in accordance with it is called by Kant a transcendental realist:

> The realist, in the transcendental meaning of this term, treats . . . the modifications of our sensibility as self-subsistent things, that is, treats *mere representations* as things in themselves. (B 519)

In this text, transcendental realism is defined just by the transcendental subreption concerning the mode of existence of things. But the subreption of absolute supposition, of absolute possibility and of the mode of givenness can no doubt also be attributed to it (see B 571). Transcendent realists are thus all those who indulge in one or another of the a priori semantical errors which characterise the dialectical illusion of reason.

To realist semantics Kant opposes his own under the name of *transcendental idealism*. The basic tenet of this semantical idealism is

> that everything intuited in space or time, and therefore all objects of any experience possible to us, are nothing but appearances, that

> is, mere representations, which, in the manner in which they are represented, as extended beings, or as series of alterations, have no independent existence outside our thoughts. (B 518-19)

Kant explains in a footnote to this passage that his transcendental idealism is to be distinguished from "material" idealism, that is, "from the usual type of idealism which *doubts* or *denies* the existence of outer things themselves" (my italics). This material or dogmatic realism, which suspends or disputes propositions about the existence of things in themselves, is not only different from the Kantian, but is actually given a formal refutation in the second edition of the *Critique of Pure Reason*. Kant's idealism is indeed not a dogmatic or ontological one; it is semantical. It does not concern the existence of things but the modes of givenness of the referents of our empirical and pure concepts.

This transcendental idealism has been given a "direct proof" in the transcendental aesthetic (B 534). But does it mean that transcendental realism has been disproved? Is the conflict between the two decidable?

The answer depends on which point of the disagreement is picked up. The illegitimate character of absolute possibility and of the absolute supposition of the objects of psychological and theological ideas, for instance, cannot be established by any direct or indirect proof. Kant himself concedes that there is nothing whatsoever to hinder us from assuming that these ideas provided with relative posits "are also objective, that is, from hypostasing them—except in the case of the cosmological ideas, where reason, in so proceeding, falls into antinomy" (B 701). As ideas are abstract concepts, their synthesis in a proposition of pure reason is necessarily also abstract. It can never be given in any intuition. Propositions of pure reason are "so constituted that what is erroneous in them can never be detected by means of any experience". They consequently "admit of no other test than the endeavor to harmonise" them with each other (B 701). But propositions in which psychological or theological ideas occur are not antinomic and pass quite well the test of mutual consistency. How, then, can anyone dispute their objective reality, or, as Kant himself adds, the *objective reality* of ideas (absolute possibility of transcendent objects)? On what grounds can we, in addition, prohibit somebody from positing in the absolute sense referents for these ideas? Kant's own argument against absolute supposition in this case boils down to the methodological remark that it "is not a sufficient ground for assuming anything, that there is no positive hindrance to our doing so" (B 701). This is a reason against but not a refutation of the assumption of absolute possibility nor of the absolute supposition. If there were not difficulties revealed by the

case of cosmological concepts, the disagreement between transcendental idealism and realism could thus not be settled in a conclusive manner.

It could be argued that the question which separates transcendental idealism and realism is not a semantical or logical but an ontological one. For the antinomies lead, according to Kant, "to the discovery of the true constitution of things, as objects of senses" (B 535), and such a discovery can only be viewed as ontological. This objection, however, overlooks the fact that the discovery in question is only a consequence of the disproof, provided by the fourfold antinomy, of the realist thesis that "appearances, and the sensible world which comprehends them all, are things in themselves" (B 535). That is, the apparently ontological question about the true nature of things has been settled by solving the question about possible modes of existence and givenness of objects in general. And this question in turn has been formulated as concerning referents of ideas employed in formulating and solving necessary cosmological problems of reason and not in any other way. It was by studying the grounds of the impossibility of rationally deciding which side of different antonomic conflicts is right that Kant arrived at the discovery of the problem of the mode of existence and of givenness. It was thus from the very beginning a semantical problem:

> We have thus been led to what is at least a well-grounded suspition that the cosmological ideas, and with them all the mutually conflicting pseudo-rational assertions, may perhaps rest on an *empty and merely fictitious concept of the manner in which the object of these ideas is given to us*; and *this suspicion may set us on the right path* for laying bare the illusion which has so long led us astray" (B 518, my italics).

The conflict between transcendental idealism and transcendental realism concerning the modes of givenness of referents of ideas is not only the most fundamental one of the entire transcendental dialectic, but it is also an essential part of the rational basis of Kant's decision in favor of the former. The "direct proof" (B 532) which "sufficiently demonstrates" (B 518) transcendental idealism does not by itself refute its main rival. That is, we cannot apply the principle of non-contradiction to settle the matter. It is necessary to independently disprove the realism. And this is done by the discovery if *its* antinomies. Yet, again, the refutation of realism does not establish by itself its theoretical opposite. For, according to Kant, indirect arguments cannot decide any transcendental question (B 817), which means that the employment of the principle of excluded middle is also out of place in disputes of this kind. Only the combination of a direct proof provided by transcendental analysis with the indirect proof furnished by the dialectic can incline the balance

in favor of idealism. In this context, traditional ontological questions are dissolved into an intricate system of the question of a priori semantics and proof theory.

It is true that Kant, not infrequently, gives seemingly objective formulations to his views on the nature of things, for instance, when he states the central doctrine of transcendental idealism by saying that "objects of experience . . . are *never* given in themselves, but only in experience, and have no existence outside it" (B 521). Yet, here again, we do not really deal with an ontological thesis but a semantical thesis about the meaning of the words "real thing", as can be seen from this remark which immediately follows in the text:

> To *call* an appearance of a *real thing* priori to our perceiving it, either *means* that in the advance of experience we must meet with such a perception, or *it means nothing at all*" (my italics).

In this case, the fundamental question is obviously not, what are real things, but, what is the cognitive significance of the concept of real thing? And, according to Kant's theory of the significance of concepts, this question reduces to: what is the rule for obtaining empirical intuitions, the conditions of which are universally represented by the concept of real thing? Kant was entirely clear about the turn he was giving to theoretical philosophy. This comes out in his solemn remark that the doctrine of fundamental categories of human thought must give up "the proud name of an ontology" and remain satisfied with "the modest title of a mere analysis of pure understanding" (B 303), that is, of an a priori theory of cognitive significance and truth. Kant's entire transcendental philosophy contains just one part more: the transcendental dialectic, which, as I have also shown, is the critique of the understanding and reason as organa for solving problems about empirical objects and, so, for acquiring new objective knowledge.

Notes

[1]For a more detailed discussion of Kant's concept of transcendental knowledge, see Loparic 1983.

[2]It seems very plausible that Kant's views about the significance of concepts just explained is a generalization of the views about significance of mathematical concepts which have been adopted more or less explicitly by geometers since Antiquity. Kant himself stressed in the *Critique of Pure Reason* that his demand "that a bare concept be *made sensible*, that is, that an object corresponding to it be presented in intuition" (B 299), is traditionally met by mathematicians "by the construction of a figure, which, although produced a priori, is an appearance present to the senses," and that mathematical concepts (and propositions constructed by their means), albeit a priori as to their origin, are employed only with respect to objects given in mathematical experience and not in any platonic world of ideas.

[3]In my translation I am accepting a suggestion of Vaihinger which is different from the one followed by Kemp Smith.

[4]Loparic 1983.

[5]For a detailed discussion of this point, see Loparic 1983.

References

In making quotations, the English translation of the *Critique of Pure Reason* was always consulted but not always followed.

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