Kant on Intuition and Experience

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To my Father

Zusammenfassung

Anschauung ist einer der bedeutendsten, aber zugleich verwirrendsten Begriffe in Kants Transzendentalphilosophie. In dieser Abhandlung versuche ich die genaue Bedeutung dieses Begriffs zu erklären, indem ich seine systematische Rolle in Kants Theorie bzw. Metaphysik der Erfahrung untersucht. Der kantischen Unterscheidung zwischen Anschauung und Begriff liegt seine Unterscheidung zwischen Sinnlichkeit und Verstand zu Grunde, die m.E. dadurch erklärt werden soll, dass man sie mit derselben Unterscheidung bei zwei wichtigsten Vorgängern, nämlich Aristoteles und Leibniz, vergleicht. Sofern Kant Anschauung und Begriff deutlich entgegensetzt, scheint ihre Unterscheidung in naher Beziehung zu der aristotelischen zu stehen. Aber die aristotelische Unterscheidung führt zu vielen schwierigen Problemen, insbesondere dem Problem der Möglichkeit der rationalen Erkenntnisse von sinnlichen Gegenständen, welche Probleme im Rahmen einer strengen Entgegensetzung der Sinnlichkeit zum Verstand nicht zu lösen sind. Dagegen wird die Leibniz'sche Unterscheidung zwischen sinnlichen und intellektuellen Erkenntnissen häufig von Kant kritisiert. Es wird aber gezeigt, dass die meisten Kritiken Kants auf Missverständnisse basiert sind, und dass der Hauptzweck seiner Theorie bzw. Metaphysik der Erfahrung erst dann verständlich wird, wenn man die Leibniz'sche Unterscheidung und Humes Herausforderung an sie genauer betrachtet.

Auf den historischen Teil folgt eine kritische Prüfung von Kants Lehre der Wahrnehmungs- und Erfahrungsurteilen in *Prolegomena* sowie ihrer Verwandlung in der B-Deduktion. Es wird gezeigt, dass es trotz vieler wichtigen Einsichten dem gesamten Argument Kants nicht gelingt, eine zufriedene Erklärung für die Natur der bloß subjektiv gültigen und der objektiv gültigen Vorstellungen zu geben und Humes Herausforderung zu beantworten. Meine Kritik bezieht sich hauptsächlich auf zwei Punkte: erstens ist der Zusammenhang zwischen den logischen Formen der Urteilen und den Kategorien besonders fragwürdig, zweitens werden in Kants Argument unterschiedliche Ebenen des Ichs bzw. des Selbst involviert, die Kant nicht immer deutlich unterscheidet. Deshalb kann er die Existenz eines durchgängig identischen Ichs nicht einfach behaupten. Nach der Kritik an Kants eigenen Argument versuche

ich, ein neues, sich aus der Rekonstruktion anhand einiger zentralen Einsichten von Kant ergebendes Argument zu präsentieren, das von allen von mir genannten Problemen frei ist und eine Antwort auf Humes Herausforderung anbieten kann. Zum Schluss schlage ich vor, dass Kants Begriff der Anschauung nach dem Leibniz'schen verworrenen Begriff verstanden werden soll.

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References to the *Critique of Pure Reason* are to the pagination of the first (A) and/or the second (B) editions of it. Other references to Kant are to the volume and page of the *Akademieausgabe* (AA), i.e., *Kant's gesammelte Schriften*, edited by the Preussische (later Deutsche) Akademie der Wissenschaften (Berlin: Walter de Gruyter, 1900-), with the abbreviations suggested by *Kant-Studien*. All translations of Kant's works are from *The Cambridge Edition of the Works of Immanuel Kant* (Cambridge: Cambridge University Press, 1992-), with occasional revisions. Kant's original emphases are marked in **bold**, and the emphases added by me are in *italics*. A complete list of Kant's works quoted or referred to in the present study is the following:

A/B Kritik der reinen Vernunft

Anth Anthropologie in pragmatischer Hinsicht (AA 07)

Br Briefe (AA 10-13)

DfS Die falsche Spitzfindigkeit der vier syllogistischen Figuren erwiesen (AA 02)

FM Welches sind die wirklichen Fortschritte, die die Metaphysik seit Leibnizens und Wolff's Zeiten in Deutschland gemacht hat? (AA 20)

GUGR Von dem ersten Grunde des Unterschiedes der Gegenden im Raume (AA 02)

KpV Kritik der praktischen Vernunft (AA 05)

KU Kritik der Urteilskraft (AA 05)

Log Logik (AA 09)

MAN Metaphysische Anfangsgründe der Naturwissenschaft (AA 04)

MSI De mundi sensibilis atque intelligibilis forma et principiis (AA 02)

Prol Prolegomena zu einer jeden künftigen Metaphysik (AA 04)

R Reflexion (AA 14-19)

UD Untersuchung über die Deutlichkeit der Grundsätze der natürlichen Theologie und der Moral (AA 02)

V-Lo/Blomberg Logik Blomberg (AA 24)
V-Lo/Wiener Wiener Logik (AA 24)

References to Other Authors:

DA Aristotle. *De Anima*. Books II and III. Translated by D. W. Hamlyn. Oxford: Clarendon Press, 1993.
Other references to Aristotle are to Aristotle. *The Complete Works of Aristotle*. Edited by Jonathan Barnes. Princeton: Princeton University Press, 1984. All references to Aristotle are according to the Bekker pagination.

ST Thomas Aquinas. *Summa Theologiae*. Translated by Fathers of the English Dominican Province. Available on-line. References are to part, question, and article.

PPL Gottfried Wilhelm Leibniz. *Philosophical Papers and Letters*. Edited by Leroy E. Loemker. Dordrecht: Kluwer Academic Publishers, 1973.
NE Gottfried Wilhelm Leibniz. *New Essays on Human Understanding*. Edited by Peter Remnant and Jonathan Bennett. Cambridge: Cambridge University Press, 1996. References are to book, chapter, paragraph, and page.

EHU David Hume. *An Enquiry concerning Human Understanding*. Edited by Tom L. Beauchamp. Oxford: Oxford University Press, 1999. References are to section and paragraph.
THN David Hume. *A Treatise of Human Nature*. Edited by David Fate Norton and Mary J. Norton. Oxford: Oxford University Press, 2000. References are to book, part, section, and paragraph.

Introduction

I

Kant opens the Transcendental Aesthetics with a definition or elucidation of the notion of intuition:

> In whatever way and through whatever means a cognition may relate to objects, that through which it relates immediately to them, and at which all thought as a means is directed as an end, is **intuition**. This, however, takes place only insofar as the object is given to us; but this in turn, at least for us humans, is possible only if it affects the mind in a certain way. The capacity (receptivity) to acquire representations through the way in which we are affected by objects is called **sensibility**. Objects are therefore **given** to us by means of sensibility, and it alone affords us **intuitions**. (A 19/B 33)

For someone who reads this passage for the first time, he is not likely to find it especially difficult to understand. For it seems that intuition means nothing other than the familiar idea of sense-data[1]: Both refer to something given to us immediately; both are resulted from the impingement of the things on our senses, a process which is appropriately called affection; and both may serve as the foundation of our empirical knowledge. One will become baffled, however, as soon as one learns more about the Kantian intuition. First, a close reading of our citation tells us that intuition is first defined *without* any reference to the sense or sensibility. We cannot, according to Kant, "assert of sensibility that it is the only possible kind of intuition" (A 254/B 310). Rather, as Kant emphasizes in the B-edition, it is only "for us humans" (this phrase is added in the B-edition) that an intuition can be given only by affection or through the sensibility. And our sensible, derived intuition (*intuitus derivativus*) is to be contrasted with the idea of an intellectual, original intuition (*intuitus originarius*) (B 72). Now it is not the time to discuss the significance of this contrast, but it should be clear enough that Kant admits no *conceptual* link between the notion of intuition and that of sensibility. In order to know what the Kantian intuition means, we cannot simply appeal to the idea of sense-data.

Second, just one page later, Kant introduces the concept of pure intuition, which "occurs a priori, even without an actual object of the senses or sensation, as a mere form of sensibility in the mind" (A 21/B 35). The pure intuition is also called formal intuition (cf., e.g., B 207), and Kant holds that space and time are just such intuition.

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[1] See Russell, *Problems of Philosophy*, ch. 5, for a clear statement of the idea of sense-data. It seems that this reading is endorsed by Dieter Henrich, as he claims that Kant's theory presupposes the "data-sensualism" of cognition, and construes the Kantian intuition as "an indeterminate multiplicity and sequence of simple particular sensations" ("Identity and Objectivity," p. 133).

But no one could reasonably take space and time, or our ideas of them, as sense-data, if for no other reason than the Kantian thesis that they are not resulted from the impingement of the objects on us, but are rather presupposed as its condition. Thus, to accommodate the idea of pure or formal intuition, we cannot simply identify intuition with sense-data.

Third, in the famous *Stufenleiter*-passage, where Kant gives a systematic definition of several kinds of representations, intuition is contrasted with concept: a cognition is "either an **intuition** or a **concept** (*intuitus vel conceptus*). The former is immediately related to the object and is singular; the latter is mediate, by means of a mark, which can be common to several things" (A 320/B 377). In comparison to the passage quoted above, what is new in this definition is the singularity of the intuition. Moreover, in the published text of his lectures on logic, intuition is simply said to be "a **singular** representation *(repraesentatio singularis)*" (Log, 9: 91), and neither its immediate relation to the object nor its link with sensibility is mentioned. The two characteristics of intuition specified in the *Stufenleiter*-passage are often called the immediacy criterion and the singularity criterion respectively. Even after a vehement controversy on the interpretation of the Kantian intuition,[2] it remains far from clear how these two criteria are related to each other; indeed, there is no agreement even on what they precisely mean. For example, it seems that the singularity criterion can be satisfied by a definite description, but a definite description is surely a mediated representation. And if some Kantian intuitions are expressed in the form of a determinate description, then even a loose connection between the former and sense-data could not be reasonably sustained.

Last but not least, Kant seems to be quite inconsistent on the relation between intuition and concept. In the *Stufenleiter*-passage, Kant claims that a cognition is "*either* an **intuition** *or* a **concept** (*intuitus vel conceptus*)" (A 320/B 377). Intuition is immediate and singular, concept is mediate and general, hence they are two wholly different kinds of representations, and there is absolutely no conceptual element in a mere intuition. Moreover, Kant holds that intuition and concept come from two

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[2] This controversy is evoked by Hintikka's seminal paper, "On Kant's Notion of Intuition (Anschauung)." Hintikka's view is criticized, on different grounds, by Parsons, "Kant's Philosophy of Arithmetic" (esp. the Postscript); Thompson, "Singular Terms and Intuition;" Howell, "Intuition, Synthesis, and Individuation;" and Wilson, "Kant on Intuition." I will discuss some of these papers in due course.

different sources: “Objects are therefore **given** to us by means of sensibility, and it alone affords us **intuitions**; but they are **thought** through the understanding, and from it arise **concepts**” (A 19/B 33). “The understanding is not capable of intuiting anything, and the senses are not capable of thinking anything” (A 51/B 75). The difference and mutual exclusiveness of intuition and concept, then, is founded on Kant’s primary division of the cognitive mind, which is often called the “doctrine of two stems (*Zwei-Stämme-Lehre*)” (cf. A 15/B 29).

On the other hand, Kant distinguishes intuition from mere sensation: “The effect of an object on the capacity for representation, insofar as we are affected by it, is **sensation**. That intuition which is related to the object through sensation is called **empirical**” (A 20/B 34). Thus, not only is the pure intuition independent from the sensation, but even the empirical intuition is different from the latter for its relation to the object. Sensation, as the first effect of the affection, must be somehow related to the object in order to become an empirical intuition. However, since the sensibility is nothing but the capacity to acquire representations by means of affection, it seems that the relation of an empirical intuition to the object cannot be established unless by means of the non-sensory faculty, viz. the understanding. Moreover, in the Metaphysical and Transcendental Deductions, Kant often speaks of the “unity” of intuition (cf. A 79/B 105, A 99, B 134, B143, B 160n.). This unity pertains to intuition as such; it is not the same as the unity of concept. Nevertheless, it is possible only through the act of synthesis, which in turn is a “function” of the understanding, and is grounded on the apperception. Insofar as an intuition has a unity, then, it cannot be the product of the sensibility alone, but depends somehow upon the understanding.

In short, Kant both affirms the dependency of intuition upon the conceptual capacity and denies any conceptual element in an intuition. His notion of intuition contains therefore a serious ambiguity, if not a straightforward contradiction. Since Kant provides excellent arguments both for and against the involvement of conceptual moment in intuition as the most primitive mode of representation, his text becomes a source of inspiration for both the conceptualist and the non-conceptualist views about mental content. As Robert Hanna points out, “Kant’s theory of intuition is the hidden historical origin of *both* sides of the contemporary debate between conceptualists and

nonconceptualists."[3] In connection with this debate, within Kant scholarship there is also an ongoing vehement debate between the conceptualist and non-conceptualist interpretations of Kant's notion of intuition.[4]

What we have mentioned are only a part of the puzzles about Kant's notion of intuition.[5] But they are already sufficient for showing that this notion is so complicated that it allows no simple definition or assimilation to the more familiar ones, and that even Kant himself might not be wholly consistent in using it. Wilfred Sellars famously characterizes the idea of sense-data as the "Myth of the Given." Now it seems that the Kantian intuition suffers not only from all the problems involved in the idea of sense-data, but also from many other problems or inconsistencies for the broader role it is intended to play in Kant's theory of cognition. It seems, then, that the Kantian intuition amounts to an even greater myth than the "Myth of the Given," or even to the center of a group of interrelated myths. A principal aim of the present work is to dissolve all these myths around Kant's notion of intuition.

II

Although there are already a lot of works on Kant's notion of intuition, my interpretation is distinctive with respect both to the method and to the conclusion. And I would like to say that my conclusion is the natural result of applying my methodological principles to the relevant text. My first methodological principle is that Kant should be treated as a systematic philosopher. Kant's ideal of philosophy is a system "in which, as in an organized body, every part exists for the sake of all the others as all the others exist for its sake, and no principle can be taken with certainty in **one** relation unless it has at the same time been investigated in its **thoroughgoing** relation to the entire use of pure reason" (B xxiii, cf. A 833/B 861). Accordingly, the meaning of the Kantian intuition cannot be determined on the basis of any single statement, even if it has the form of a definition. Rather, Kant's notion of intuition can

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[3] Hanna, "Kant and Nonconceptual Content," p. 251.

[4] Since this debate is still ongoing, no comprehensive survey of it is possible. But see McLear, "The Kantian (Non)-Conceptualism Debate," for a good summary of the state of the art and an extensive bibliography.

[5] We have not, for example, discussed the notorious problem of affection involved in Kant's elucidation of the notion of intuition. For a useful discussion of this problem, see Allison, *Kant's Transcendental Idealism*, pp. 64ff.

be appropriately understood only by considering its place in Kant's entire theoretical philosophy. Now it is obvious that Kant's main concern in his theoretical philosophy is not so much the possibility of mere perception as the possibility of nature, by which Kant means the "lawfulness (*Gesetzmäßigkeit*) of appearances in space and time" (B 165; cf. A 216/B 263; Prol, 4: 296).[6] Thus, if one wants to understand Kant's notion of intuition as he would himself do, but not merely to find some interesting material in Kant's text for pursuing one's own philosophical project (I have no intention at all to deny the value of such practice), then one needs to consider not only, say, the relation between the Kantian intuition and perception, but also the role it plays in the overall argument toward the lawfulness of nature.

My second methodological principle is that we must acknowledge that Kant's Critical philosophy is composed of different, not necessarily compatible strands of thought. In a letter to Marcus Herz Kant writes:

> You know very well that I am inclined not only to try to refute intelligent criticisms but that I always weave them together with my judgments and give them the right to overthrow all my previously cherished opinions. I hope that in that way I can achieve an unpartisan perspective, by seeing my judgments from the standpoint of others, so that a third opinion may emerge, superior to my previous ones. (June 7, 1771, Br, 10: 122; cf. his letter to Herder, May 9, 1768, Br, 10: 74)

This letter gives us a vivid picture of how Kant worked toward the *Critique of Pure Reason*. The Critical system is attained not through the development of any single principle, even if it is founded on Kant's own ingenious insight, but only through the critical engagement with a number of very different views. An examination of the development of Kant's thought in the 1770s will help us to discern these views and Kant's reaction to them, and to see more clearly Kant's original insights, which are interwoven in, but also concealed behind, the grandiose and intricate architectonics of the Critical system.

Admittedly, in emphasizing the presence of different lines of thought in the first *Critique*, I'm suggesting some version of the "patchwork theory." In its classical form, which is proposed most notably by Erich Adickes, Hans Vaihinger, and Norman Kemp Smith, this theory includes three points: (1) that Kant's text is full of various

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[6] Despite the great differences between the Transcendental Deductions in the two editions of the *Critique of Pure Reason*, both of them are concluded with the thesis that "the understanding is itself the source of the laws of nature" (A 127; cf. B 165). And the question "How is nature itself possible?" is said to be the "highest point that transcendental philosophy can ever reach, and upon to which, as its boundary and completion, it must be taken" (Prol, 4: 318).

inconsistencies or contradictions; (2) that such inconsistencies are due to the development of Kant's thought between 1769 to 1780; (3) that the text of the first *Critique*, especially the Transcendental Deduction in the first edition, is simply a juxtaposition of isolated notes written at different times into a "loose, external connection at the final redaction, without internal interpenetration and unity."[7] Taken our discussion of Kant's notion of intuition as an example, the first point seems to be undeniable.[8] It seems also true that Kant's thought underwent a lot of changes during the "silent decade," but this does not imply that the inconsistencies in the text of the first *Critique* are simply the reflection of these changes as such. This latter claim depends on the third point, which is concerned with the historical details of the composition of the first *Critique*. Since no one has any direct evidence about these details, the third point is not only repudiated by the critics of the "patchwork theory," but also discarded by the advocates of a weaker version of the latter.[9] Indeed, I think what we could tell with certainty is no more than that Kant's doctrine is not wholly consistent, and an examination of the development of Kant's thought in the "silent decade" and in the years between the publication of the first and the second editions of the *Critique* may facilitate our understanding of the origin of the inconsistencies. By contrast, the actual history of the composition of the first *Critique* is neither something of which we have sufficient knowledge, nor has it any profound philosophical significance.

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[7] Vaihinger, "Transcendental Deduction," p. 26; cf. Kemp Smith, *Commentary*, pp. xxix ff.

[8] Even H. J. Paton, the most vigorous opponent of the "patchwork theory," concedes that Kant's account of intuition in the Transcendental Aesthetics is inconsistent with that in the Transcendental Analytic, and suggests that the former is "in a sense provisional and is to be reinterpreted in the light of what comes later" (*Kant's Metaphysics of Experience*, pp. 52f.). But there are still a few opponent views. In a recent paper, Nathan Bauer argues that Kant's "seemingly conflicting claims [about the relation between intuition and concept] are actually the product of a well-crafted strategy for gradually convincing his readers of the conceptual character of intuition" ("A Peculiar Intuition," p. 216). Indeed, a similar view is already proposed by Edward Caird more than a century ago, as he writes: "This method of proceeding upon assumptions afterwards modified was characteristic of Kant and it has undoubtedly some advantages. It has especially the Socratic advantage of meeting the ordinary consciousness on its own ground and leading it by gradual steps to refute itself and so to discover for itself a deeper basis of thought, the necessity of which it might not otherwise have seen" (quoted from Vaihinger, *Kommentar*, vol. II, p. 19). Such views are very implausible, for the inconsistencies or contradictions in Kant's account of intuition is not only to be found in the published text of the first *Critique*, but also in Kant's own notes that are not prepared for publication, which cannot reasonably contain any "well-crafted strategy" for exposition.

[9] The "patchwork theory" is criticized most notably by Paton, "Is the Transcendental Deduction a Patchwork?" and more briefly, *Kant's Metaphysics of Experience*, vol. 1, pp. 37ff. Advocates of a weaker version of it, i.e., of the view that "the texts of the transcendental deduction, whatever the history of their composition, do indeed express a patchwork of arguments," include Robert Paul Wolff (*Kant's Theory of Mental Activity*, pp. 81ff.), Guyer (*Kant and the Claims of Knowledge*, p. 432 n.1, the sentence quoted is from this note), and Falkenstein (*Kant's Intuitionism*, p. 366n. 8). I think Falkenstein's explanation of Kant's inconsistencies is very convincing.

Now there might be a further worry about my adoption of the second interpretative principle, namely, that it seems to stand in conflict with the first. For how could Kant's philosophy be at the same time a system and a mere patchwork? But the conflict is merely apparent. For Kant, system is the ideal form of philosophy. Unlike the later, more ambitious system builders, however, Kant did not believe that his system can be deduced from a single highest principle, but always took great effort first to develop arguments that have some *prima facie* attractiveness, and then to bring them together into a whole system. The arguments he developed are often very interesting in their own rights, but there is no guarantee that they could be integrated into a coherent system. Indeed, given the problems about his notion of intuition indicated above, it is better to concede that they do not. But even though Kant failed to present a coherent system in the first *Critique*, it does not mean that his endeavor toward the system is pointless. It rather enables us to appreciate the strength and weakness of each of the lines of thought he has considered and their relation, and further to decide which of them are to be endorsed and which to be abandoned. Such decision would be entirely arbitrary or at most the reflection of one's own philosophical position if we do not take Kant's aspiration for system into account; it would be an important contribution to a better understanding of Kant if it is made from the summit of the Critical system.

In a famous remark on Plato Kant writes: "it is not at all unusual to find that we understand him [sc.: Plato] even better than he understood himself, since he may not have determined his concept sufficiently and hence sometimes spoke, or even thought, contrary to his own intention" (A 314/B 370). Ironically, while this claim has scarcely been taken seriously by later readers of Plato, it is not unusual to find even among the most sympathetic readers of Kant the claim that they understand Kant better than he himself did. Their views are perfectly expressed in a famous dictum of Wilhelm Windelband: "*Kant verstehen, heißt über ihn hinausgehen*."[10] Far from disparaging Kant's great achievements, such claim is made only upon the recognition of the revolutionary status of Kant's philosophy. As a revolutionary thinker, Kant's innovative ideas are unavoidably expressed, at least partly, through the traditional

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[10] Windelband, *Präludien*, p. iv.

vocabulary, and also mixed with the assumptions connected with the latter. Consequently, it is quite plausible that Kant himself "may not have determined his concept sufficiently and hence sometimes spoke, or even thought, contrary to his own intention." As we said above, Kant's intention cannot be appreciated unless he is taken as a systematic philosopher, and all his particular definitions and arguments should be examined against this general background.

Even if we concede that there are several, possibly incompatible strands of thought in Kant's Critical philosophy, it remains completely indeterminate what these strands of thought precisely are. And my third interpretative principle is that these strands of thought are best identified in terms of Kant's reaction to the traditional theories. In so doing, our primary aim is not to determine the actual historical influences Kant received and the actual responses he made to such influences, for these, like the historical details of the composition of the first *Critique*, are both extremely difficult to ascertain and of lesser philosophical significance. Our aim is rather to elucidate Kant's thought in a manner that is recommended by himself. In order to highlight the distinctiveness of his Critical doctrine, Kant makes extensive references to the classic authors in philosophy. He manages to divide them, in a simple, sometimes oversimplified, but almost always illuminating way, into several camps, and, by pointing out the inadequacies of each of those positions, to show that "[t]he **critical** path alone is still open" (A 856/B 884). The Critical position, then, is presented as the outcome of a long process of critical engagements with major previous theories, and we are naturally encouraged to understand and evaluate Kant's own teachings through a comparison with the theories he criticizes.

Among those authors, both the sheer number of the references and the importance of the topic suggest that the two most distinguished figures are Leibniz and Hume. Accordingly, it has been a common practice to read Kant in light of his relation to them.[11] Presumably because Kant's connection with them has already been explored in great depth by the earlier commentators, however, the more recent commentators

[11] Such readings are exemplified by Vaihinger, *Kommentar*, and Kemp Smith, *Commentary*. The connection between Kant and Leibniz is also emphasized, from quite different perspectives, in Martin, *Immanuel Kant*, and Gurwitsch, *Kants Theorie des Verstandes*. The literature on the connection between Kant and Hume is extensive, but the philosophically most interesting exploration remains, I think, L. W. Beck's papers collected in *Essays on Kant and Hume*.

tend to stress the significance of the minor figures for our understanding of Kant.[12] The value of such studies is conspicuous: they offer us a richer and more accurate picture of the intellectual background of the genesis of Kant's Critical philosophy, and give us the most reliable evidence for the actual influences Kant received. Nevertheless, I still find that a philosophical appreciation of Kant's main achievements would profit more from an examination of Kant's relation to the more prominent authors. After a close study of the relevant texts, I cannot but come to the same conclusion of Kemp Smith: "Hume and Leibniz are thus the two protagonists that dwarf all others. They realised as neither Malebranche, Locke, nor Berkeley, neither Reid, Lambert, Crusius, nor Mendelssohn ever did, the really crucial issues which must ultimately decide between the competing possibilities."[13] By "competing possibilities" Kemp Smith means the two views of the "function of thought," or as I would like to put it, two views concerning the nature and limits of the intellect as the faculty for thinking. Whether the intellect is, as Leibniz contends, the source of our knowledge of universal and necessary truths, or is it, as Hume urges, "nothing but a wonderful and unintelligible instinct in our souls" (THN, 1.3.16.9)? This is *the* question Kant sets out to answer in the *Critique of Pure Reason*. It seems that Kant recognized the importance of this question and the strength of the two opposed views more fully than anyone else in his time, and therefore makes far more references to Leibniz and Hume than to the minor figures whose works he was actually more familiar with. In other words, it seems to be Kant's own intention that his Critical philosophy should be read as if it were the result of his dialogue with Leibniz and Hume, and we shall respect his intention in the present study.

In addition to Leibniz and Hume, I think that we should also pay more attention to Kant's relation to the Aristotelian-scholastic tradition. Although he did not very often discuss Aristotle's theory, and never, as far as I know, mentioned the name of

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[12] See, e.g., Wunderlich, *Kant und die Bewußtseinstheorien*, and the works mentioned at p. 2n. 4. Even Wunderlich, however, concedes that the study of the minor figures does not automatically enable us to determine the actual influences they exert on Kant (p. 2).

[13] *Commentary*, p. xxxix.

any medieval thinker, his debts to this tradition are by no means negligible.[14] For the present I want to just give one example: Kant's doctrine of two stems or the dichotomy of sensibility and understanding seems to be perfectly anticipated by the anatomy of the soul in the Aristotelian tradition; and both Aristotle and Kant conceive the imagination as a mediating faculty between the sense and the intellect. It would certainly be wrong to suppose that Kant was simply repeating Aristotle's doctrine, and it would also be groundless to say that his doctrine of two stems was actually influenced by the works of Aristotle or any medieval philosopher. But given the profundity and significance of Aristotle's theory, and given the striking parallelism between it and Kant's theory of cognitive faculties, I can see no reason preventing us from elucidating the latter through a comparison with the former.

There is nothing new, I admit, in the three interpretative principles. Indeed, they seem to be quite old-fashioned, representing the method generally followed about a century ago. In following these principles, however, I find that fresh light can be shed upon Kant's notion of intuition and thereby upon some fundamental issues in his theoretical philosophy. More specifically, I want to suggest a connection between intuition, imagination, and judgments of perception (*Wahrnehmungsurteile*). Far from an unfortunate digression from the main argument of the Transcendental Deduction, it will be argued that the distinction between judgments of perception and judgments of experience (*Erfahungsurteile*) is of central importance for Kant's theory of cognition. In the meantime, we shall give a reconstruction of Kant's theory of experience that may seem quite unorthodox or even contrary to what Kant explicitly endorses. Given the interpretative principles explained above, I shall make no endeavor to show that they are compatible with all passages in Kant's text, or to attribute a single, coherent position to Kant. Instead, I shall attempt, on the one hand, to explain the origin of the contradictions in terms of the different strands of thought in Kant's Critical philosophy, while on the other hand, to argue that the position I adopt is both

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[14] The connection between Kant's Critical philosophy and the Aristotelian-scholastic tradition has hardly been adequately explored or even noticed. An important exception is Falkenstein, *Kant's Intuitionism*, Chapter 1, esp. p. 31. Falkenstein wants to show that Kant was actually influenced by this tradition, an in order to do this he appeals to the fact that the University of Königsberg was a stronghold of Thomism and to the significance of the Latin philosophical terms for Kant to support this view. But in the end he is incapable of citing any direct evidence in support of his historical thesis. A more plausible account, I think, is that this tradition is as it were the default position of all early modern philosophers, and despite the various strong reactions they made against this tradition, they are largely allegiant to it, even though sometimes only unconsciously.

philosophically appealing and implicit at least in some passages of Kant.

III

The thesis that intuition is the product of the imagination is not very well supported by Kant's text. It is clear form his elucidation of the notion of intuition that at least the empirical intuition is something we receive from outside; yet the imagination is hardly a receptive faculty. And in *Anthropology* Kant writes: "**Sensibility** in the cognitive faculty (the faculty of intuitive representations) contains two parts: **sense** and the **power of imagination**. – The first is the faculty of intuition in the presence of an object, the second is the faculty of intuition even **without** the presence of an object" (Anth, 7: 153, translation modified; cf. Anth, 7: 167; B 151). Hence, we may at most say that some intuitions are the products of the imagination, but there are of course other intuitions that are produced by the sense alone. As far as I can find, it is only in one place in the third *Critique* that Kant characterizes the imagination as "a faculty of intuition" *simpliciter*, and contrasts it with the understanding as "a faculty of concepts" (KU, 5: 292, cf. 190, 287). But since this characterization appears in a wholly different context, it is questionable whether it could be invoked to determine the relation between intuition and imagination in Kant's theoretical philosophy. At any rate, in arguing for my thesis, I shall rely not so much on such scarce textual evidence as on the inner logic of Kant's thought. My claim is not that at a particular time, the historical Kant did regard intuition as the product of the imagination (though this might be true, especially when he was writing the third *Critique*); rather, I want to argue that a fuller realization of the theoretical potentialities made possible by Kant's deepest philosophical commitments would give us sufficient reason to revise his official doctrine of intuition and imagination in the first *Critique*, and to establish a particularly intimate connection between them.

Fortunately, despite the lack of direct textual support, the connection between intuition and imagination is not wholly neglected by previous commentators. In arguing for the famous thesis that the imagination is the "common root" of sensibility and understanding, Heidegger suggests that "on the grounds of its essence, pure

intuiting is pure imagination."[15] But Heidegger says virtually nothing about the empirical intuition, and his emphasis on the pure intuition is actually intended to be a preparation for his own analysis of temporality.[16] The more decisive step for an interpretation of Kant, I think, was taken by Wilfred Sellars.[17] In the first chapter of his pioneering work, *Science and Metaphysics*, Sellars explicitly distinguishes two senses of "intuition" in Kant:

> Kant's use of the term 'intuition', in connection with human knowledge, blurs the distinction between a special sub-class of *conceptual* representations of individuals … and a radically different kind of representation of an individual which belongs to sheer receptivity and is in no sense conceptual.[18]

He then links intuition in the former sense with the imagination, and criticizes Kant for not paying enough attention to that distinction:

> In any event, it is clear that Kant applies the term 'intuition' to both the representations which are formed by the synthesizing activity of the productive imagination and the purely passive representations of receptivity which are the 'matter' (A 86; B 108) which the productive imagination takes into account. Yet if he is not unaware that he is using the term 'intuition' somewhat ambiguously, he does not seem to be aware of the radical nature of the ambiguity.[19]

Sellars' crucial insight here is that the Kantian intuitions can be taken as the foundation of our empirical knowledge only if we recognize the *conceptual* nature of them, for otherwise we shall fall into the Myth of the Given criticized in *Empiricism and the Philosophy of Mind*. As Sellars rightly observes, although Kant often conceives intuition along the same line of the sense-data theorists, his doctrine of the (productive) imagination at least allows us to give a more satisfactory interpretation of this notion, even if such an interpretation is perhaps never explicitly proposed by Kant himself. Given the enormous philosophical importance of Sellars' insight, I think that it must be taken into account in any interpretation of Kant's notion of intuition. Moreover, with the distinction between sensation and intuition mentioned above,[20] or

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[15] Heidegger, *Kant and the Problem of Metaphysics*, §28, p. 101.

[16] For a critical discussion of Heidegger's interpretation, see Henrich, "On the Unity of Subjectivity," esp. section V.

[17] The problem of the Kantian intuition is addressed mainly in three publications of Sellars: the text of his John Locke Lecture, *Science and Metaphysics*; "Some Remarks on Kant's Theory of Experience;" and "The Role of Imagination in Kant's Theory of Experience."

[18] Sellars, *Science and Metaphysics*, §17, p. 7.

[19] Ibid., §18, p. 7. The reference given in the text is incorrect; it should be A 86/B 118.

[20] Indeed, Kant explicitly connects imagination with the distinction between sensation and intuition at R 341: "Die Einbildungskraft ist nicht productiv in Ansehung der Empfindungen, sondern blos Anschauungen" (15: 134).

with that between the manifold of intuition and intuition itself,[21] Kant seems to be aware of the difference between the representations yielded by the synthesis of the imagination and the "purely passive representations of receptivity" more fully than Sellars supposed.

However, it is one thing to acknowledge the difference between these two kinds of intuitions; it is quite another thing to hold that the former kind of representations is *conceptual*. Not only does Kant always insist on the dichotomy between intuition and concept, but he also explicitly claims that the concepts, in addition to the manifold of intuition and "the **synthesis** of this manifold by means of the imagination," are "the *third* thing necessary for cognition of an object that comes before us, and they depend on the understanding" (A 79/B 104).[22] As a result, the great philosophical merit of Sellars' reading notwithstanding, it cannot be counted as an adequate interpretation of Kant for those exegetical problems. Using Sellars' insight and its further development by John McDowell as a major source of inspiration, the present study will give a close reading of a broader range of Kant's text, and come to the conclusion that in spite of some tensions or even inconsistencies, it not only can accommodate the insight of Sellars and McDowell and avoid the Myth of the Given, but also contains other important insights concerning the nature of our cognitive faculties that has not been noticed by them.

The connection between intuition and imagination is also emphasized in two recent monographs: Wayne Waxman's *Kant's Model of the Mind* and Gary Banham's *Kant's Transcendental Imagination*. Both works are focused primarily on the pure intuition of space (and time), and both take Kant's cryptic note on space as form of intuition and as formal intuition at B 160 as the most important textual basis of their interpretations. Without denying the importance of this much discussed note, I doubt whether it should be used as the starting point of an interpretation of Kant's notion of intuition. Indeed, this note is so cryptic that it simply does not allow anyone to get a precise meaning of the notions of forms of intuition, formal intuition, etc. Instead of

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[21] See A 99: "Every intuition contains a manifold in itself;" cf. also A 78f./B 104; B 144n. This distinction is repeatedly emphasized by Haag, *Erfahrung und Gegenstand*, e.g. pp. 150ff.

[22] This point is also made by Allison, *Kant's Transcendental Idealism*, p. 188.

beginning from this note, it seems more reasonable to start from the clearer and more uncontroversial passages and use this note as a touchstone of the successfulness of the interpretation derived from them.[23] Moreover, it is widely acknowledged that there are serious tensions, if not outright contradictions, between Kant's account of space (and time) in the Transcendental Aesthetic and that in the Transcendental Analytic. On which ground, then, should one prefer Kant's cryptic remark at B 160n. than his more explicit statements in the Transcendental Aesthetic? The only possible ground, I think, is that the former fits Kant's systematic intention better than the latter. As I suggested above, however, Kant's system of theoretical philosophy culminates in the thesis of the lawfulness of nature. Our interpretation of the B 160 note will therefore be founded not so much on any speculation on this single paragraph as on the broader question which role the formal intuition of space could play in Kant's experience.

Another problem with the accounts of Waxman and Banham is that despite the frequency of their talks about the imagination, neither of them seems to have fully recognized the aporetic nature of this faculty. The problem is not merely that, as Waxman rightly observes, this single faculty is assigned too many, apparently quite heterogeneous tasks so that it can hardly have a unity.[24] The more serious problem is that it seems that Kant's notion of the imagination, like that of intuition, is not a coherent one at all. In the most cases, Kant follows the traditional view, and classifies the imagination as a part of sensibility (cf. our quotation from Anth, 7: 153 above). But in an oft-cited footnote in the B-Deduction, the imagination is said to be a "name" of spontaneity, and the other "name" of it is the understanding (B 162n.). And we may find a passage in which Kant both affirms that the imagination belongs to the sensibility and claims that it is spontaneity (B 151f.). Since spontaneity is an essential characteristic of the understanding, it seems that this claim leads in effect to the collapse of the sensibility/understanding dichotomy. As we have seen above, this dichotomy is also challenged by the notion of intuition in roughly the same way, which is obviously not an accidental coincidence. Neither Waxman nor Banham, however, has given a detailed examination of the connection between intuition and

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[23] Similar criticism is also made by Falkenstein, *Kant's Intuitionism*, pp. 20f.

[24] See Waxman, *Kant's Model*, pp. 259ff,

imagination with respect to the challenge they make to the doctrine of two stems. This is a regrettable fact, as this challenge is crucial for Kant's entire theoretical philosophy. A main objective of the present study is to explore the connection between intuition and imagination in the broader context of the doctrine of two stems and thereby to lead to a new appraisal of the latter.

While the connection between intuition and imagination has some, though inadequate, textual basis, and has already been recognized by some, if not the most, commentators on Kant, their connection with the judgments of perception has simply no direct textual basis and has been explored, as far as I know, by no previous commentator.[25] Nevertheless, my interpretation is greatly inspired by Gerold Prauss' groundbreaking work *Erscheinung bei Kant*.[26] Prauss finds in Kant's famous metaphor that the pure concepts of understanding serve to "spell out [*buchstabieren*] appearances, so that they can be read as experience" (Prol, 4: 312; cf. A 314/B 370f.) the best model for an explanation of his theory of experience.[27] Cognizing an object is just like reading a word: appearances are like the letters (*Buchstaben*) such as "K," "a," "n," "t," and experience or empirical cognition is like the word "Kant." Appearances or letters are that *through* which we cognize an object or read a word, but in the most cases we have to go *beyond* them to attain the cognition of an object or the sense of a word, which is by no means contained in the appearances or the letters themselves. Prauss calls the act through which we proceed from the appearances or the letters to the cognition of an object or the sense of a word "construing" (*deuten*), and holds that experience is nothing but "construal of appearances." On the other hand, it is not completely impossible, though quite unnatural, to stay with the letters "K" "a" "n" "t" when we see the printed figures (Prauss calls them *Farbformen*) "Kant" (indeed, this would be more natural if the word these signs stand for is a

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[25] Matthias Wunsch proposes at the end of his well-argued and clearly-written book *Einbildungskraft und Erfahrung bei Kant* that a more adequate understanding of the Kantian imagination may be attained if it is considered in connection with Kant's theory of judgments of perception (pp. 269ff.). But he neither elaborates on this proposal nor links them to the notion of intuition.

[26] See also Dickerson, *Kant on Representation and Objectivity*, ch. 1, which gives a similar account of the relation between representations and objects of experience. The parallelism between Dickerson's model of explanation ("seeing things in pictures") and that of Prauss is enormous; but unlike Prauss, Dickerson does not use this model to elucidate Kant's theory of judgments of perception.

[27] Prauss, *Erscheinung*, pp. 48f.

unknown one). In such case, we still "spell out" these printed figures, yet without construing them as a meaningful word. Similarly, we may also stay with the appearances when we merely apprehend something but do not further construe the appearances as experience. With the distinction between these two ways of "spelling out," Prauss thinks that we may have a clear and determinate understanding of the nature of appearances and our knowledge of them: such knowledge is expressed by the judgments of perception.[28] According to Prauss' reconstruction, however, Kant does not fully recognize what judgments of perception should be like, and his examples for them are all inadequate. The only appropriate form they should take is "It seems …," which is not even implicit in any piece of Kant's text.

The word used both in Kant's metaphor and in Prauss' interpretation of it is "appearance." However, I think that Prauss model of explanation can also, and indeed more properly, be used to elucidate Kant's notion of intuition. As Prauss himself concedes, Kant often uses "appearance" and "intuition" synonymously, in so far as both refer to that through which the objects of experience are given.[29] But Prauss further claims that "appearance" has yet a more specific sense, namely the private, subjective states of the mind, as opposed to the common, inter-subjective objects of experience.[30] Now it seems that appearances in this sense mean nothing other than the "ideas" of early modern philosophy, which in turn are generally equated with "representations" in Kant. Although it is undeniable that Kant sometimes uses "appearance" in this sense, most notably in the fourth Paralogism of the A-edition (cf. A 369, 372), there seems to be nothing in the "*deuten*"-model that depends on this more specific sense of appearances but is incompatible with interpreting appearance as intuition. Moreover, it is unclear whether the identification of appearances with representations reflects Kant's considered view. Indeed, a comparison of the fourth Paralogism with the Refutation of Idealism of the B-edition suggests that Kant gradually realized the inadequacy of such identification and moved toward a more

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[28] Ibid., pp. 135ff.

[29] Ibid., pp. 34, 43.

[30] Ibid., pp. 16f. In fact, throughout the book, Prauss often takes "appearance" and "intuition" as synonyms even in this more specific sense.

realistic position. Thus, while I find the "*deuten*"-model highly suggestive and shall utilize it to elucidate Kant's notion of intuition, I think that that which is to be construed (the *Gedeutete*) is not representations, but intuitions.[31] And the judgments of perception will be shown to be concerned not with the modifications of the mind, but with the objects of intuition. Although both Prauss' and my interpretations are not in accordance with all Kant says about judgments of perception, a merit of mine is that it allows judgments of perception to take a more natural form, and also better accommodates Kant's own examples.

If the Kantian intuitions are expressible by judgments of perception, then they must be conceptual in a very strong sense. But does this view not crudely violate Kant's dichotomy between intuition and concept? While admitting this is so, I don't think it amounts to a defect of my interpretation. For such dichotomy has often been regarded as itself a defect of Kant's philosophy. In the words of a recent critic, sensibility and understanding "are distinguished in terms that make their characteristic relations to one another ultimately unintelligible."[32] In order to respond to such criticism, I first identify two lines of thought in Kant's Critical philosophy, the Aristotelian and the Leibnizian. And here the significance of my discussions of the historical connections becomes apparent: I argue that Kant's strict separation between intuition and concept is resulted from his acceptance of the Aristotelian theory of the soul and his rejection of the Leibnizian distinction between confused and distinct cognitions, both of which, however, are too premature or based on serious misunderstanding. And the actual argument of the mature Critical philosophy requires that the Leibnizian distinction should be restored. In this way, we shall gain an entirely new understanding of Kant's notion of intuition and his theory of experience.

IV

The body of this work is divided into eight chapters. The first three chapters are

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[31] This may seem puzzling, as intuitions are usually thought to be a kind of representations. But my point here is that the *Gedeutete* is not the *states* of the representing (whether intuiting or thinking) mind, but a particular kind of *content*, viz. the content of an intuition.

[32] Brandom, *Making It Explicit*, p. 615. Indeed, criticisms along this line can be traced as early as to Herder, Reinhold, Schelling, and Hegel. For useful quotations from some early critics of Kant's dualism, see Vaihinger, *Kommentar*, Vol. 1, pp. 485ff.

concerned with the historical sources of Kant's thought and Kant's appropriation of them. As I stressed above, they should by no means be taken as merely external to an interpretation of Kant's thought, but constitute an essential moment of an adequate understanding of Kant's insights. They serve primarily not to determine the actual influences Kant received while developing his doctrine, but to reveal the distinctiveness of Kant's position through an examination of Kant's conscious or unconscious reactions to the most prominent views available to him. In this way, they help to identify the crucial insights Kant strived, though not always successfully, to reconcile with each other through complex and elusive arguments in the first *Critique*. If one concentrates solely on this text, one would very probably miss the opportunity of having a much clearer view of those insights.

The first two chapters examine the relation between Kant's doctrine of two stems and the sense/intellect distinction in the Aristotelian-scholastic tradition. We shall see that although the notion of the forms of intuition marks a radical break-off with this tradition, Kant's initial distinction between intuition and concept in *Inaugural Dissertation* depends heavily on it. Despite the importance Kant attaches to this distinction in virtually all subsequent works, it is not made on any transcendental-philosophical ground, hence not automatically equal to the *transcendental* distinction between sensibility and understanding. On the other hand, in addition to sense and intellect, the Aristotelian-scholastic tradition invokes a third faculty, the imagination, to account for some phenomena that cannot be explained with reference to those two faculties alone. Kant seems to be unaware of either the Aristotelian doctrine or the systematic importance of this faculty in his initial presentation of the doctrine of two stems, but he later comes to an interesting view of the imagination that has much in common, but also some important differences, with the Aristotelian doctrine.

In the third chapter, we first consider Leibniz's theory of intellectual knowledge, and then turn to Hume's challenge to it with his famous skepticism concerning our knowledge of causal relations. Like Aristotle, Leibniz also regards the distinction between intellectual cognitions and non-intellectual cognitions to be fundamental, but he makes this distinction in a very different way. For Leibniz, intellectual cognition means not merely conceptual cognition, but above all universal and necessary

knowledge characteristic of mathematics and natural science, which I shall call "broadly a priori knowledge." However, the possibility of such knowledge is challenged by Hume's "sceptical doubts concerning the operations of the understanding" (this is the title of EHU, section 4). Through a careful analysis of Hume's argument, I argue that his skepticism concerning the principle of the uniformity of nature really makes the idea of broadly a priori knowledge problematic.

Chapter four is a transitional chapter that links our discussions of Leibniz and Hume with Kant's argument in the Transcendental Analytic and in the *Prolegomena*. Unlike the majority of other commentators, I emphasize the significance of Hume's account of causation in the *Enquiry* over that in the *Treatise* for our understanding of Kant's conception of the "Humean problem." We shall see that Kant understood it precisely as a challenge to the Leibnizian conception of the intellect, and Kant's metaphysics of experience is essentially a vindication of the latter against such challenge. We shall also come to see how Kant's famous question of the possibility of synthetic judgments a priori is connected with his response to Hume. At the end of this chapter, I'll give some preliminary notes on the consequences of my interpretation of the historical relations between Kant, Leibniz, and Hume for understanding Kant's notion of intuition.

The fifth chapter is devoted to a critical examination of Kant's doctrine of judgments of perception and judgments of experience in the *Prolegomena* and his further development of this doctrine, though under very different guise, in the B-Deduction. In chapter four, I explain why I think that instead of the Second Analogy, these texts constitute the core of Kant's response to Hume. And I shall not discuss the A-Deduction, either, on two grounds. First, I accept the patchwork thesis (though not the precise dating), and find that in the A-Deduction Kant still extensively uses the vocabulary of what Kemp Smith calls "subjectivism,"[33] which does not reflect his mature position. Second, as Allison points out, we can "discern the outlines of a single line of argument" only in the B-Deduction, but not in its predecessor.[34] But even the argument of the B-Deduction, I shall argue, is full of problems and cannot be accepted

[33] Kemp Smith, *Commentary*, p. 272.

[34] Allison, *Idealism and Freedom*, p. 32.

as it stands. Thus a reconstruction of Kant's argument seems to be necessary.

My reconstruction of Kant's argument is presented in the sixth and last chapter. But before I propose my own view, I first give some further reasons for why Kant's own argument does not work. My reconstruction is mainly based on one of Kant's most important, but not always respected insights, namely that the sensibility "realizes the understanding by means of [*indem*] at the same time restricting it" (A 147/B 187, translation altered). However, this insight is developed by me in a different way as by Kant himself. I argue that the categories should be understood as higher-order concepts that determine the structure of first-order empirical concepts. With this new account of the categories, I argue that "Hume's problem" and other related problems can be solved in a satisfactory way.

Chapter 1 Sense, Intellect, and Imagination in the Aristotelian Tradition

Both Kant himself and almost all historians of philosophy agree that his doctrine of two stems or the dichotomy between sensibility and understanding is a profound insight in itself and marks a great advantage of the Critical system over the one-sided systems of rationalism and empiricism.[1] However, this distinction could hardly be a new invention by Kant; it is rather suggested by the earliest philosophers from all cultures of the world and remains the commonly accepted view within the culture to which Kant belongs for many centuries since it was well elaborated in Aristotle's psychology. Does Kant simply appeal to the traditional theory to criticize the more recent ones, or is there something peculiar to the Kantian distinction which is not contained in the Aristotelian one? This question will be answered in this and the next chapters. In this chapter I first examine the standard distinction between sense and intellect in Aristotle and Aquinas (I); and then turn to their account of the imagination, which will be interpreted as largely an attempt at remedying the problems involved in the simplistic sense/intellect dichotomy (II). In the next chapter, I'll trace the origin of Kant distinction between sensibility and intellect, and then show the extent to which it follows the Aristotelian doctrine and to which it departs from it. Needless to say, my very limited discussion of the Aristotelian theory cannot do full justice to its complexity and profundity, but I hope that my exposition will at least turn out to be useful for a better understanding of the Kantian theory.

I

The distinction between sense and intellect originates from Aristotle's analysis of the nature of the soul (*psuche*). In Aristotle, this term has no such religious or spiritual connotations that it usually has later, but simply means the principle of life. Thus even the plants and the lower animals, insofar as they are capable of living, have their souls. However, since "life is spoken of in many ways, and we say that a thing lives if

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[1] Kuno Fischer, for example, succinctly remarks: "[Den Dogmatisten] ist die Sinnlichkeit ein verworrener Verstand, [den Empiristen] der Verstand eine undeutliche, abgeschwächte Sinnlichkeit. Aber nach Kant unterscheiden sich beide Vermögen qualitativ. Dieser so begriffene Unterschied zwischen Sinnlichkeit und Verstand sei die erste Einsicht der kritischen Philosophie" (quoted from Vaihinger, *Kommentar*, vol. 1, p. 490).

but one of the following is present – intellect, perception, movement, and rest in respect of place, and furthermore the movement involved in nutrition, and both decay and growth" (DA, 413a21-24), a more adequate understanding of the nature of the soul requires a more concrete analysis of the different forms of life, which in turn are understood as the actualization of their corresponding potentialities or faculties. Aristotle explains his general method of investigating the faculties of the soul as follows:

> Anyone who is going to engage in inquiry about these [sc.: the potentialities of the soul] must grasp what each of them is and then proceed to investigate what follows and the rest. But if we must say what each of them is, e.g. what is the faculty of thought or of perception or of nutrition, we must again first say what thinking and perceiving are; for activities and actions are in respect of definition prior to their potentialities. And if this is so, and if again, prior to them, we should have considered their correlative objects, then we should for the same reason determine first about them, e.g. about nourishment and the objects of perception and thought. (DA, 415a14-21)

In short, different faculties of the soul correspond to different forms of life, which are characterized by their peculiar activities and objects. Aristotle distinguishes three forms of life: the life of plant, the sole activity of which is nutrition; the animal life, which is capable of both nutrition and sense-perception (*aisthesis*); and finally the human life, which, in addition to all that an animal is capable of, is capable of intellectual thinking. Thus we may expect that Aristotle's theory of sense-perception should apply both to non-human animals and human beings. According to Aristotle, sense-perception "consists in being moved and affected" (DA, 416b33). More specifically, the thing which perceives is moved and affected in such a way that, while it is not like the object before it is being affected, it "becomes like it and is such as it is" once it has been affected (DA, 418a5-6). Aristotle illustrates this idea with the following famous metaphor:

> In general, with regard to all sense-perception, we must take it that the sense is that which can receive perceptible forms without their matter, as wax receives the imprint of the ring without the iron or gold, and it takes the imprint which is of gold or bronze, but not qua gold or bronze. (DA, 424a17-19)

In this passage, Aristotle also makes clear what the objects of sense-perception are, namely the "perceptible forms." He distinguishes three kinds of them (DA, 418a7-25): First, there are special-objects which "cannot be perceived by another sense, and about which it is impossible to be deceived." They include color, sound, flavor, etc. Second, there are objects that "are not special to any [particular sense], but common to all." They include movement, rest, number, figure, size. Whereas these

two kinds of objects are "perceived in themselves," the third kind of objects are perceived only incidentally. For example, one may perceive a white thing not as a white thing, but rather as the son of Diares. In such cases, Aristotle holds that the perceiver is "not affected by the object of perception as such." Finally, Aristotle holds that "it is the special-objects which are objects of perception properly, and it is to these that the essence of each sense is naturally relative."

Aristotle does not provide any argument for the last claim, but it should be quite understandable if we notice its connection with the famous metaphor quoted above. In fact, that metaphor seems to apply perfectly just to the special-objects, less perfectly to the common-objects, and not at all to the incidental objects. For only a particular sense-organ can receive its corresponding special-objects in the same way as a piece of wax receives the imprint of the ring, whereas the perception of common-objects requires the coordination of the movements or affections taking place at several different sense-organs, and the perception of incidental objects goes obviously beyond the purely physiological process which constitutes the essence of perception. Aristotle is not unaware of such problems. He suggests that we have a common sense for the common-objects (DA, 425a27). However, he gives no further explanation at all of the nature and function of this faculty; hence any interpretation of his idea of the common sense would be highly speculative.[2] But no matter how we interpret the Aristotelian common sense, it cannot be held responsible for the perception of incidental objects, as we perceive the common objects in themselves but not incidentally. Aristotle does not explicit designate a faculty responsible for the perception of the incidental objects, but he returns to the distinction between three kinds of sensible objects in his discussion of the imagination (DA, 428b17-30). As we shall see in the next section, this is a main problem of Aristotle's original account of sense-perception and an

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[2] The phrase "common sense" occurs only one time in DA, and only in two further passages within his entire corpus: *De Memoria*, 450a10, and *De Partibus Animalium*, 686a31. Ross suggests that the common sense should be interpreted "not as being another sense over and above the five and apprehending a more varied group of objects, but as the common nature inherent in all the five. We must think of sense as a single faculty which discharges certain functions in virtue of its generic nature but for certain purposes specifies itself into the five senses and creates for itself organs adapted to their special functions" (*Aristotle*, p. 146). This functionalist account is admittedly highly interesting in itself, but I strongly doubt whether it could serve as a proper interpretation of Aristotle, whose deep interest in physiology leads him to regard the essence of sense-perception as consisting in the very physiological process. Moreover, Ross assigns to the common sense several further roles, such as the perception of the incidental sensible, the perception that we perceive, and the discrimination between the objects of two senses (ibid., pp. 147f.). Although all such cases are discussed by Aristotle, he nowhere explicitly attributes them to the common sense.

important motivation for his doctrine of the imagination.

We turn now to Aristotle's account of the intellect, which is defined as the faculty of thinking and supposing (DA, 429a22). The difference between sense-perception and thinking is clearly stated in the following passage:

> Actual sense-perception is so spoken of in the same way as contemplation; but there is a difference in that in sense-perception the things which are able to produce the activity are external, i.e. the objects of sight and hearing, and similarly for the rest of the objects of perception. The reason is that actual perception is of particulars, while knowledge is of universals; and these are somehow in the soul itself. For this reason it is open to us to think when we wish, but perceiving is not similarly open to us; for there must be the object of perception. (DA, 417b18-26; cf. *Analytica Posteriora*, 87b29-39)

Three criteria of distinguishing perception from thought are suggested in this passage. First and most importantly, the objects of perception are always particulars, whereas the objects of thought are always universals. We can perceive the man Socrates, but we cannot perceive the universal concept of man, which is the proper object of knowledge or thought. Secondly, the objects of perception are external things, whereas the objects of thought, the universals, lie somehow in the soul itself. The third criterion is a direct consequence of the second: Since perception requires external objects, it is not up to us whether to perceive something; since thinking is independent of the external things, it is up to us whether to think.

From these observations, Aristotle draws an important conclusion concerning the distinction between sense-perception and intellect: The ground that we can perceive only particulars lies in that perception can take place only at sense-organs. As the metaphor of the wax receiving the imprint of the ring suggests, when we perceive something, the corresponding organ becomes like the thing perceived. When we feel something hot or cold, our skin becomes hot or cold, and when we see a red thing, Aristotle believes that our eyes become red in a certain way. Thus we can only perceive things that are suitable to the organs. Conversely, "the sense is not capable of perceiving when the object of perception has been too intense, e.g. it cannot perceive sound after loud sounds, nor see or smell after strong colors or smells" (DA, 429a31-b1). Intellectual thinking, by contrast, is not subject to any limitation. The intellect "thinks all things" (DA, 429a18). As a result, it "should not be mixed with the body," and does not have a particular organ (DA, 429a23-26). For otherwise it would function in the same way as the sense, and would be subject to the limitation set by the constitution of the body. In short, "the faculty of sense-perception is not

independent of the body, whereas the intellect is distinct" (DA, 429b4-5). This thesis is commonly known as the immateriality of the intellect or the mind.

With these four criteria, the distinction between sense and intellect seems to have been firmly established. Still, it is not yet clear *how* the intellect could apprehend the universals, which are its proper objects. At the beginning of his discussion of the intellect Aristotle writes:

> Now, if thinking is akin to perceiving, it would be either being affected in some way by the object of thought or something else of this kind. It must then be unaffected, but capable of receiving the form, and potentially such as it, although not identical with it; and as that which is capable of perceiving is to the objects of perception, so must be the intellect similarly to its objects. (DA, 429a13-17)

This passage is striking, for instead of showing the difference between the activities of the sense and of the intellect, it seems to suggest that they are exactly alike. But while it is relatively intelligible that we receive, for example, the sensible form of redness from a red thing through the eyes, wherefrom, and through what thing, could we receive the universals? I think this is a really serious problem to which Aristotle has no solution, but let us postpone our further discussion of it for a moment, as the passage quoted above does not amount to Aristotle's whole story about the activity of the intellect. Later he distinguishes between the "thinking of undivided objects" and the "combination of thoughts as forming a unity." In the first case there is no falsity, whereas in the second case there is both falsity and truth (DA, 430a26-28). A few lines below he continues:

> Every assertion says something of something, as too does denial, and is true of false. But not every thought is such; that of what a thing is in respect of 'what it is for it to be what it was' is true, and does not say something of something. (DA, 430b26-29)

In light of this passage, we should attribute to Aristotle a theory of the intellect which says that the function or activity of it is twofold. In the first place, the intellect receives, or is affected by, its proper object. Such object is referred to here with the extremely long and awkward expression "what a thing is in respect of 'what it is for it to be what it was,'" which might be formulated more straightforwardly as the determination of a thing in respect of its essential property, or simply the nature or essence of a thing. In the second place, the intellect makes assertion or denial about it by composition or division. Only the first activity is akin to sense-perception, for both are always true and can never be false. The second activity may yield truth or falsity, and is not like the sense-perception at all.

There is little problem concerning the second activity of the intellect, though one may add that, in addition to assertion or denial, i.e., in addition to making positive or negative judgments, the intellect is also responsible for syllogistic reasoning. But the first activity of the intellect, which consists in the quasi-perceptual apprehension of its proper object, is still mysterious. It seems to be much more Platonic than Aristotle's general empiricism allows. A Platonist may appeal to the doctrine of *anamnesis* to explain the intellect's direct and infallible apprehension of the Forms, but this doctrine is resolutely rejected by Aristotle. Indeed, he even holds that "the primitive, immediate, principles" of demonstration come about, though *via* a very complex process, ultimately from perception, and we become familiar with them by induction (*Analytica Posteriora*, 99b15-100b5). If even such principles are not directly and infallibly apprehended by the intellect, we may wonder whether there is any qualified candidate for the intellect's proper object. In sum, given the great difficulties surrounding the thesis that the intellect quasi-perceptually and infallibly apprehends its proper object, it seems not entirely unreasonable to exclude it from the core of the Aristotelian distinction between sense and intellect.

If the intellect does not apprehend its proper objects in a quasi-perceptual way, how could they be cognized? I cannot find any explicit answer to this question in Aristotle's text, but a hint of a plausible answer might be found in his famous thesis that "the soul never thinks without an image" (DA, 431a16). We shall return to this thesis in the next section. At any rate, since our main concern is not so much Aristotle's own theory as the Aristotelian-scholastic tradition, let us turn to Thomas Aquinas to see whether he has a better answer.[3]

Like Aristotle, Aquinas also holds that the intellect belongs only to "men and anything else which is similar or superior to man" (DA, 414b18) – more specifically, for Aquinas, God and the angels – and is thus immaterial. Like the divine and the angelic intellect, the human intellect can know and understand, but the scope of its objects and the manner of its operation are much more limited than the former two. As to its proper objects, Aquinas restricts them to the "quiddity or nature existing in

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[3] Since I'm not writing a monograph on Aquinas, I shall refrain from making any explicit reference to the secondary works on him, but my understanding of Aquinas' theory of the mind is greatly helped by the writings of Anthony Kenny, Norman Kretzmann, John Marenbon, and Robert Pasnau.

corporeal matter" (ST, I.84.7). The word "quiddity" comes from the Latin word "*quid*" (what) and is intended to convey the meaning of Aristotle's extremely awkward phrase "what a thing is in respect of 'what it is for it to be what it was'" (DA, 430b29). Thus it means roughly the same thing as "nature" or "essence." Since the intellect has no direct contact with the corporeal things, the intellectual apprehension of the quiddity of them must be preceded by the reception of the sensible forms through the sense-organs. The sensible forms received by us are called "phantasms." The function or activity of the intellect consists in causing "the phantasms received from the senses to be actually intelligible, by a process of abstraction" (ST, I.84.6).[4] The process of abstraction is essential for our knowledge or understanding of material things, for it is by means of it alone that we proceed from particulars to universals, i.e., "know a form existing individually in corporeal matter, but not *as* existing in this individual matter" (ST, I.85.1; my italics).

Aquinas attributes this view of the activity of the intellect to Aristotle (ST, I.84.6), but we have seen that he actually holds the contrary view. Still, Aquinas' "abstractionist" account not only seems to be more plausible, but also accords much better with the spirit of Aristotle's empiricism than his own. Indeed, it can almost be said to be the standard view ever from its being proposed. To be sure, this does not mean that it goes without challenge in the past centuries. A number of most important thoughts in modern philosophy such as the rationalists' insistence on innate ideas, Berkeley's attack on abstract ideas, and Kant's theory of categories, can be seen as powerful responses to this account. But it is at least partly to the fact that the view they criticize is the standard one that the philosophical importance of their criticisms

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[4] More precisely, Aquinas attributes the act of abstraction only to the agent or active intellect, while we still possess another, passive intellect, which accounts for the fact that in acquisition of knowledge our intellect undergoes some change, i.e., the knowledge in the intellect becomes from potentiality to actuality (ST, I.79.2). On this account, we may have a solution to the problem we encountered with DA, 429a13-17 quoted above: the passive intellect receives, or is affected by, the universals as its proper objects in a quasi-perceptual way, not from the corporeal things themselves, but rather from the active intellect, which abstracts those universals from the phantasms of these things (cf. ST, I.85.1 ad 3). This interpretation seems more plausible than what we suggested above, but it misses the point that the activity of knowing or understanding seems to be essentially unitary, i.e., it does not seem to involve an act of abstraction and another act of reception. But even if we take it for granted, it should be clear that the more essential aspect of the activity of the intellect lies in the abstraction made by the active intellect, thus that passage is at the very least a tremendously misleading one as a characterization of the activity of the intellect as such.
Aquinas' doctrine of the two intellects comes from his interpretation of DA 3.5, which however is generally acknowledged as the most cryptic and controversial part of Aristotle's theory of mind. Since this doctrine is extremely obscure yet has no direct bearing on our understanding of Kant, I shall not discuss it any further in the present work.

is due.

As to the manner of operation of the human intellect, Aquinas holds that it knows and understands only discursively, i.e., through a discursion from the known to the unknown, from cause to effect or from effect to cause, or from principles to their conclusions (ST, I.14.7; I.58.3). Like God and the angels, we human beings can understand the universal concepts and principles; but our understanding of these concepts and principles are so limited that we, unlike God and the angels, cannot "see at once the truth of the conclusion in the principle," nor at once have knowledge of all that can be attributed to, or removed from a thing in apprehending its quiddity (ST, I.58.4). Because of the "feebleness" or "weakness of the intellectual light within us," we have to understand by composing, dividing, and reasoning (ibid.). Aquinas summarizes his theory of the operation of the human intellect in the following passage:

> [T]he human intellect does not acquire perfect knowledge by the first act of apprehension; but it first apprehends something about its object, such as its quiddity, and this is its first and proper object; and then it understands (*intelligit*) the properties, accidents, and the various relations of the essence. Thus it necessarily compares one thing with another by composition or division; and from one composition and division it proceeds to another, which is the process of reasoning. (ST, I.85.5)

The threefold division of the activity or function of the intellect is a natural extension of Aristotle's twofold division and turns out to be even more influential than the latter, as it lays the foundation for the division of all major early modern logic textbooks into the doctrines of conceiving, judging, and syllogistic reasoning. It also emphasizes that the second activity of the intellect in Aristotle is not something which the intellect can but does not need to do (which seems to be implied by Aristotle's own, more Platonic account of the first activity of the intellect), but a necessary operation of the intellect in order to have adequate knowledge of the corporeal things.

We conclude this section with a quotation from *Summa Theologiae*, where the Aristotelian-scholastic distinction between sense and intellect is stated, I think, as clearly as possible:

> Now our soul possesses two cognitive powers; one is the act of a corporeal organ, which naturally knows things existing in individual matter; hence sense knows only the singular. But there is another kind of cognitive power in the soul, called the intellect; and this is not the act of any corporeal organ. Wherefore the intellect naturally knows natures which exist only in individual matter; not as they are in such individual matter, but according as they are abstracted therefrom by the considering act of the intellect; hence it follows that through the intellect we can understand these objects as universal; and this is beyond the power of the sense. (ST, I.12.4)

II

It is common practice to give some linguistic notes before saying anything substantive about Aristotle's theory of imagination. The Greek words for imagination and image are *phantasia* and *phantasma*. In its original meaning, *phantasia* is "closely related to *phainesthai*, 'to appear,' and stands for either the appearance of an object or the mental act which is to appearing as hearing is to sounding."[5] Hence these words have an intrinsic passive tendency that is not reflected in the English words "image," "imagine," or "imagination." Moreover, it is argued that the *phantasia* is at work even in normal sensory experience like seeing; yet seeing and imagining are obviously quite different mental states. Given these problems, many scholars tend to use the original Greek words or to translate them as "to appear" and "appearance" in their discussions of Aristotle's theory. This, however, seems to me to be unnecessary, as the technical sense of a philosophical term is seldom determined by its ordinary use, but often by the philosophical tradition. Since the entire tradition of the philosophical theories of imagination is developed virtually within the Aristotelian framework, it is precisely the Aristotelian theory of *phantasia* to which we have often to recur when we want to understand the intellectual background of the theory of imagination of a modern philosopher like Hume or Kant. Indeed, Kant famously claims that "the imagination is a necessary ingredient of perception itself" (A 120n.). If this claim should not be regarded as simply contradictory or unintelligible, then I can see not reason that prevents us from rendering Aristotle's *phantasia* or *phantasma* as imagination or image, even if we acknowledge the role it plays in direct perception.[6] In sum, while it is important to keep cautious about the difference between Aristotle's conception of imagination or image and the conceptions of other philosophers or those implicit in ordinary use of these words, it would be of no point, especially for our purpose, to avoid the common English or German words in discussing Aristotle's theory.

At first sight, it seems that the imagination is only a faculty of minor importance

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[5] Ross, *Aristotle*, p. 148; for more details, see Schofield, "Aristotle on the Imagination," p. 251, n. 11.

[6] This point is also made in Schofield, "Aristotle," p. 250.

in Aristotle. Not only is it not mentioned in Aristotle's official lists of the faculties of the soul (cf. DA, 413a22-24; 414a29-31), but it does not have any proper object either, as all existing things are either particulars or universals, thus "either objects of perception or objects of thought" (DA, 431b21). Nevertheless, there are some mental phenomena that cannot be explained without reference to this faculty. In his main treatment of this faculty in DA 3.3, Aristotle attributes to the imagination the following activities: (1) visualizing or "produc[ing] something before our eyes" (DA, 427b17); (2) dreams (DA, 428a7; *De Insomniis*, 459a15-22); (3) perception of special, incidental, and common objects (DA, 428b17-30); in particular, (4) illusions involved in such perception, such as "the sun appears a foot across" (DA, 428b3; *De Insomniis*, 458b29). In addition, (5) memory is also held to be a function of the imagination (*De Memoria*, 450a21-24). Last but not least, Aristotle holds that some higher animals have (6) an imagination "concerned with reasoning" or "deliberation" (DA, 433b29, 434a5), which is responsible for the practical reasoning in such animals. Now it might be asked: Is there anything which all these activities have in common?

This question is not easy to answer. It seems that while these activities show some family resemblance, and all of them are similar to sense-perception in some respect, they hardly have anything in common. For example, visualizing and memory are in certain sense "up to us when we wish" (DA, 427b17), but perception, dreams, and illusions are not so. Dreams are for the most part false (DA, 428a7-11), but memory and perception of common and incidental objects are sometimes true, sometimes false; while visualizing and deliberative imagination is indifferent to truth and falsity. Even Aristotle's conclusion in DA 3.3 that the imagination is "a movement taking place as a result of actual sense-perception" (428b31) seems to apply only to visualizing, dreams, and memory, but not to various kinds of veridical or non-veridical perception, which takes place *at the same time* of the actual sense-perception, not as a result of it. It seems, then, that we should accept Malcolm Schofield's characterization of Aristotle's imagination as the "loose-knit, family concept" of "non-paradigmatic sensory experience."[7] But if even perception of special-objects involves the imagination and hence belongs to non-paradigmatic

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[7] Schofield, "Aristotle," pp. 256, 252.

sensory experience, we may wonder what paradigmatic sensory experience could be.

An interesting answer to this problem is proposed by W. D. Ross. According to Ross, Aristotle's new account of sense-perception in his discussion of the imagination "amounts to throwing on to *phantasia* the work of apprehending the incidentals and even the special sensibles as well as the common sensibles; and sensation would accordingly be reduced to the level of a mere passive affection which has to be interpreted by *phantasia* before it can give any information or misinformation about objects."[8] However, since such view involves a reversal of Aristotle's doctrine of sensation, Ross thinks that it probably does not represent his deliberate view. Although it is extremely difficult to speculate on what Aristotle's considered view exactly is, it seems reasonable to insist that as the paradigm of all sensory experience, perception of special-objects does not involve the imagination. Other kinds of sensory experience, including visualizing, memory, dreaming, illusions and hallucination, perhaps even perception of the common- and the incidental objects, are impossible without the imagination and therefore non-paradigmatic. Accordingly, although both the common-objects and the incidental objects are originally thought to be objects of sense, Aristotle's famous metaphor of the wax receiving the imprint from the ring, which seems to be characteristic of the paradigmatic sensory experience alone, does not perfectly apply to these cases. A major difficulty with this metaphor is that it cannot explain why the perception of special-objects is always true, whereas the perception of common and incidental objects is vulnerable to error. Thus it is not implausible that Aristotle returns to this problem in his discussion of the imagination in order to remedy this problem.

Indeed, from the opening paragraph of DA 3.3, it should be clear that the imagination is introduced just in order to explain the possibility of error, which can be explained neither under the assumption that "understanding and perceiving are the same," which Aristotle attributes to "the ancients" (DA, 427a20), nor by his own doctrine of the sense developed previously.[9] His theory of the imagination can thus be

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[8] Ross, *Aristotle*, p. 149.

[9] For a detailed interpretation of Aristotle's theory of the imagination in light of his explanation of the possibility of error, see Caston, "Why Aristotle Needs Imagination."

viewed as an attempt at self-criticism. The main idea of DA 3.3 seems to be that, since imagination is parasitic on but not identical with sense, its product, the perception of common and incidental objects, must also be parasitic on but different from perception of special-objects, hence is vulnerable to error. This is an interesting idea. Nevertheless, Aristotle provides too little detail about the relation between sense and imagination so that no definite account of the possibility of error in perception is to be found in his work. He does not even tell us whether and how the operations of the imagination in perception of common-objects and in that of incidental objects are different. Thus, while it is not impossible to give a satisfactory Aristotelian account of the mechanisms of various sensory experiences and the problem of error along this line, such an account would have to rely on the intelligence of the commentators at least as heavily as on Aristotle's text.

Aquinas also notices that incidental objects cannot be perceived through the five external senses alone. He contends that human beings possess a "cogitative power" which is responsible for the perception of incidental objects. More precisely, it is responsible for the perception of an individual as an individual, such as the perception of Socrates as Socrates or of a particular copy of *Critique of Pure Reason* as *that particular* copy. Accordingly, it still operates with particulars but not universals, and can be regarded as an interior sense which has its organ in the middle part of the head (ST, I.78.4). Nevertheless, it seems reasonable to suppose that every "this" must be a "this-such," for a bare "this" cannot be used to refer to anything. This point is realized by Aquinas, as he claims that through the cogitative power we perceive things "by means of collation of ideas" (ibid.). He even concedes that the cogitative power has "a certain affinity and proximity to the universal reason, which, so to speak, overflows into" it (ST, I.78.4 ad 5). The only difference between the cogitative power and reason is that while the latter compares "universal intentions," the former compares only "individual intentions," thus is also called the "particular reason" (ST, I.78.4).

By "individual intentions" Aquinas means the ideas of an individual such as Socrates or a particular copy, by "universal intentions" he means the general concepts like man or book. Accordingly, when I perceive the thing in front of me as *that* copy of the *Critique* which I used for many years, what is at work is the cogitative power;

whereas when I think that every book has some author(s), what is at work is the intellect or "universal reason." But how about the comparison of individual intentions with universal ones, such as perceiving Socrates as a man or perceiving a particular copy of the *Critique* as a book? While such perception is pervasive in ordinary life, it is difficult to be accounted for within the framework of the Aristotelian psychology, as it implies that the separation between the objects of sense and those of intellect is perhaps not as rigid as it may seem. As we shall see shortly, Aquinas offers an explanation of such comparison with the idea of "turning to the phantasms." However, while it is obvious that such comparison is intimately connected with the comparison of individual intentions, Aquinas does not mention the cogitative power in his later discussions

We turn now to Aristotle's account of image or *phantasma*. Aristotle famously claims that "the soul never thinks without an image" (DA, 431a16; cf. *De Memoria*, 449b31; DA, 431b2, 432a9). His argumentation for this claim in DA (432a3-14) is highly cryptic, but we may identify at least two arguments: First, he argues that the objects of thought are somehow derived from the objects of perception, therefore "unless one perceived things one would not learn or understand anything." Second, "when one contemplates one must simultaneously contemplate an image; for images are like sense-perceptions, except that they are without matter." The first argument is too weak for the conclusion Aristotle wants to prove. Even if we cannot learn anything about an object without at first perceiving it, it is quite possible that once we have some basic acquaintance with this object, we no longer need the image to think about it. Nevertheless, the weaker thesis that we cannot understand anything without at first perceiving it is interesting in itself, as it has important consequences for the formation of concepts. Aristotle calls the formation of concepts the "first thoughts," which are prior to their "combination" in judgments (DA, 432a13). Obviously, the first thoughts correspond precisely to the first activity of the intellect discussed in the last section. Instead of claiming that the intellect somehow immediately and infallibly receives from the first thoughts from its proper objects, however, Aristotle now holds that neither the first "nor any other thoughts will be images, but they will not exist without images" (DA, 432a13-14). Since concepts or the first thoughts are universals,

while all images are particulars, they must be different. But how should we understand the dependence of the first thoughts upon the images?

Although Aristotle does not develop this point any further, it seems that it can be understood along the line of Aquinas' abstractionist account of the intellect. According to Aquinas, the intellect abstracts the nature or quiddity of material things from the phantasms. "Phantasm" is simply the transliteration of the Greek word "*phantasma*," which is rendered here as "image." Thus it is quite plausible that Aristotle holds roughly the same position as that of Aquinas when he notices the intimate connection between images and "first thoughts." But what precisely is a *phantasma* or image? While it is argued by some scholars that in his main treatment of the imagination in DA 3.3, Aristotle does not use "*phantasma*" to mean mental imagery, but either appearance in general or the noun corresponding to cautious, skeptical, and non-committal *phainesthai* (accordingly, we may perhaps translate it into German as "*Erscheinung*" or "*Schein*"), even they concede that in the context of the connection between thinking and *phantasma*, "image" is indeed a good translation for the latter.[10] For it seems that what is required for the abstraction of a concept from the phantasms is just the possession of a number of images or pictures instantiating the corresponding concept. For example, in order to abstract the concept of tree, we must have in mind a number of images of trees. However, such images are neither the special-objects of any sense nor any common-object. The only possible alternative is that they are perceived incidentally. Thus the imagination, as the faculty "in virtue of which we say that an image occurs to us" (DA, 428a1), must also be involved in perception of incidental objects. This conclusion is not new, as we have already come to it in our discussion of Aristotle's account of the possibility of error in perception of incidental objects in DA 3.3. Unfortunately, in both contexts he does not further explain how images or other possible incidental objects are perceived through the imagination.

Aristotle's second argument for the indispensability of images for thinking is even more problematic: First, it is not clear what Aristotle means by saying "images are like sense-perceptions, except that they are without matter." As we noted in the

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[10] Cf. Schofield, "Aristotle on the Imagination," Part II.

last section, sense-perceptions themselves are said to be reception of perceptible forms without their matter, for the reception of matter is characteristic only for nutrition. But if both images and sense-perceptions are without matter, where lies the difference between them? Perhaps what Aristotle means is that unlike sense-perceptions, images are not dependent upon the presence of matter, i.e., the presence of their corresponding objects. But now we have a second problem: it seems that the reason Aristotle gives cannot be used to support his conclusion. No matter what the relation between images and sense-perceptions is, nothing follows from it concerning the relation between images and thought, for he does not show previously that sense-perception is necessary for thought. The same problem is also implicit in his earlier remark that "[t]o the thinking soul images serve as sense-perceptions" (DA, 431a14). Since he does not tell us how sense-perceptions themselves can contribute to thinking, this remark alone says nothing about how images can contribute to it.

In addition to these arguments in DA, Aristotle has yet another and apparently more plausible argument for the indispensability of images for thinking in *De Memoria*:

> Without an image thinking is impossible. For there is in such activity an affection identical with one in geometrical demonstrations. For in the latter case, though we do not make any use of the fact that the quantity in the triangle is determinate, we nevertheless draw it determinate in quantity. So likewise when one thinks, although the object may not be quantitative, one envisages it as quantitative, though he thinks of it in abstraction from quantity; while, on the other hand, if it is something by nature quantitative but indeterminate, one envisages it as if it had determinate quantity, though one thinks of it only as a quantity. (449b31-450a7)

Here Aristotle first draws upon the example of geometrical reasoning, which is commonly acknowledged as the paradigm of thinking from ancient Greece to our own time. Even in geometrical demonstration, Aristotle thinks, we have to appeal to the images, such as the image of a triangle. The reason why the appeal to a particular image does not undermine the universality of the conclusions is that in geometrical reasoning we can neglect or refrain from using the determinate properties pertaining to a particular image such as the quantity in a particular triangle, and thereby come to conclusions that are independent of these determinate properties. He then generalize this mode of thinking to other cases, claiming that as far as we abstract from the determinate properties, we can always legitimately appeal to particular images in thinking. This argument, however, is seriously flawed. First, although Aristotle and

many other philosophers, including Kant, believe that image (or more precisely, diagram) is necessary for geometrical reasoning, this belief has been called into question by the development of modern mathematics, especially by Hilbert's axiomatization of geometry. Second, even if we acknowledge that images are useful or even necessary for geometrical reasoning, it is far from clear whether this could be generalized to other cases. Could we, for example, derive the rationality or the mortality of men from any image, in the same way as we derive the Pythagorean theorem from the corresponding diagrams? Third, assuming that we *can* always think with images, it does not follow that we *must* always use them. In order to think that men are rational animals, one might raise in his mind the image of a man, but one need not do so. As a result, we must conclude that despite his acute observation of the significance of images in geometrical demonstration, Aristotle's general thesis that thinking is impossible without an image is too strong to be adequately supported either by his arguments or by the common sense.

Like Aristotle, Aquinas also holds that images or phantasms are indispensable of for thinking. "[I]t is clear," Aquinas writes, "that for the intellect to understand actually, not only when it acquires fresh knowledge, but also when it applies knowledge already acquired, there is need for the act of the imagination and of the other powers" (ST, I.84.7). He offers several different arguments for this claim: First, he observes that if one is not in good health, one would be unable to understand things which one previously knows. But the damages of the body, even of the brain, are not damages of the intellect or mind, as the latter is immaterial. Thus it follows that thinking or understanding always requires the proper functioning of the imagination and other powers, which have their organs in different parts of the brain. Secondly, he appeals to the common experience that phantasms are often used to facilitate understanding "by way of examples" (ibid.). Thirdly, Aquinas holds that the operation of the intellect itself is atemporal. But the activity of understanding, which consists in composing and dividing, necessarily involves time. This can be explained only under the assumption that the intellect "does not understand actually without turning to the phantasms" (ST, I.85.5 ad 2). Fourthly, he notices that we have intellectual knowledge of particular things. However, since the proper objects of the intellect are the

universals, such knowledge is possible only through the mediation of other faculties. Aquinas writes:

> Hence our intellect knows directly the universal only. But indirectly, and as it were by a kind of reflection, it can know the singular, because, as we have said above, even after abstracting the intelligible species, the intellect, in order to understand, needs to turn to the phantasms in which it understands the species, as is said in *De Anima* III. Therefore it understands the universal directly through the intelligible species, and indirectly the singular represented by the phantasm. And thus it forms the proposition "Socrates is a man." (ST, I.86.1)

All these arguments seem to have more clarity and plausibility than those of Aristotle, yet are not without their own problems. The first argument is grounded on the assumption that the intellect is an immaterial substance that is separate from the body. This assumption is hardly acceptable even for most of the contemporary opponents of "naturalizing the mind," but even if we accept it, it turn out to be deeply mysterious how the intellect as a separate substance *can* think with bodily images when the thinker is in good health. The second argument is similar to Aristotle's argument in *De Memoria*. While images are obviously useful in some kinds of thinking, most notably in geometrical reasoning, it does not follow that we have to always turn to them in all kinds of thinking. Which kind of images are involved, for example, in thinking that all bachelors are unmarried? Indeed, at this point Aquinas even falls short of Aristotle, as he does not specify in which kinds of thinking the images are particularly useful. The inference involved in the third argument is faultless, but the whole argument, like the first, is founded on an implausible assumption about the nature of the intellect. The fourth argument is concerned only with a particular kind of thinking, namely the intellectual knowledge of singular things. Hence it is insufficient to establish the general conclusion that thinking always needs images. However, since the intellectual knowledge of singular things is so pervasive and important, this argument reveals a crucial problem of the standard account of the operations of the intellect, hence deserves more extensive comments.

According to the standard account, the intellect operates with the universals alone, which are themselves immaterial but stand for material things. Thus once one acquires the concept of man, which may require the contact with particular men or their images, one will be able to form the judgment "all men are mortal" without appeal to any further images. Furthermore, one will also be able to make syllogistic reasoning without appeal to the images, for example to infer from "all men are

mortal" and "Socrates is a man" to the conclusion "Socrates is mortal." However, could one make the judgment "Socrates is a man" without appeal to any image? Aquinas' answer is negative. In order to make this judgment, one must compare Socrates who is particular and corporeal with the universal concept of man. But this is impossible, he thinks, unless the intellect has access to a phantasm or image of man, and then compares Socrates with this image. In other words, without "turning to the images," the intellect would be unable to subsume a particular thing under the universal concepts. But without such subsumption, the intellect would be located as it were in an ivory tower and lose all contact with the corporeal or material things, which however are held to be the proper objects of the human intellect.

Our sketchy and inconclusive discussions of the Aristotelian theory of the imagination come now to an end. To recapitulate: the theory of the imagination and images in Aristotle and Aquinas can be understood as an attempt at complementing and rectifying their original account of sense and intellect. The clear-cut separation of these two faculties is made, as we have seen, first on the difference between two different forms of life, the animal and the human. It is then confirmed by the physiology of the five senses, which culminates in the famous metaphor of the wax receiving the imprint of the ring without matter. In addition to sense-perception proper, we still have various quasi-perceptual experiences that can neither be explained by the physiological process alone nor be fitted by that metaphor. The imagination is then invoked, as a faculty that is parasitic on sense-perception in the narrow sense,[11] to hold responsible for these experiences. However, given the diversity of our quasi-perceptual experiences, the imagination seems more likely to be a placeholder for a number of more specific faculties than a genuinely unified faculty. Moreover, Aristotle seems to realize that his physiological theory of sense-perception and the metaphor resulting from it cannot even account for the perception of the common- and incidental objects, in particular for the possibility of error in such perception. Since such perception is so pervasive and important for both human and animal lives, his earlier account of sense-perception must be rectified by the new

[11] Cf. *De Insomniis*, 458b32: The imagination "does not occur without our seeing or perceiving something;" and 459a22: "[D]reaming is an activity of the faculty of sense-perception, but belongs to this faculty *qua* imaginative."

account of the imagination, which, regrettably, is not worked out. Aquinas notices the significance and the peculiarity of the perception of incidental objects and invokes a specific faculty for it, which is called the cogitative power. It turns out, however, that this faculty has more affinity with the intellect than with the sense.

On the other hand, the original Aristotelian conception of the intellect as operating with the universals alone is greatly modified with the introduction of the imagination. Aristotle famously holds that thinking is impossible without images, but none of his arguments suffices to establish this thesis. However, his arguments reveal that the simple separation of sense and intellect is untenable, as intellectual thinking is dependent on the images yielded by the imagination with respect both to concept formation in general and to geometrical demonstration. The necessity of images and imagination for thinking is also stressed by Thomas Aquinas, who offers several arguments for this thesis that are clearer and more powerful than Aristotle's. The philosophically most interesting one is the argument from the possibility of intellectual knowledge of particulars. Without constantly turning to the phantasms or images, the intellect would be unable to form judgments like "Socrates is a man."

Now there can be no doubt that the theories of the imagination and images in Aristotle and Aquinas greatly complement and revise the standard distinction between sense and intellect sketched in the last section. But the complements and revisions are so enormous that the new theories are potentially not merely the modification of the older one, but even the *substitution* of it. For example, if all or virtually all operations of the intellect require images, why not simply regard the imagination as the faculty for thinking? This is precisely the position of Hume. But for the present, let us turn our attention from the imagination back to the sense/intellect dichotomy, and try to answer the question raised at the beginning of this chapter, namely, whether the Aristotelian distinction between sense and intellect is simply followed by Kant.

Chapter 2 The Genesis of Kant's New Doctrine of Sensibility

In this chapter, I continue to answer the question whether Kant's distinction between sensibility and understanding is a mere repetition of the old one between sense and intellect in the Aristotelian-scholastic tradition. Although Kant often talks of that distinction in the *Critique of Pure Reason* and in other later works, it seems that in these works he simply presupposes but scarcely argues for this distinction, as if it were something self-evident and required no justification. For a better understanding of the Kantian distinction, then, we have to trace the origin of it in his earlier works. Kant offers his first systematic account of the nature of sensibility and intellect in the *Inaugural Dissertation*, and he seems to always be committed to this account in all later writings. Our discussion will thus be focused on it. I shall identify three ways of making the distinction between sensibility and intellect in this work and give a critical analysis of each of them in the following three sections (I-III). In the last section (IV), I summarize the result of these analyses and point out its limitation.

I

The full title of the *Inaugural Dissertation* is *On the Form and Principles of the Sensible and the Intelligible World*. The title already suggests that this work, unlike Aristotle's *De Anima*, is not an attempt at a full analysis of the faculties of the soul or the mind; it does not share the biological or physiological interest which is central to Aristotle's account of sense-perception. It is rather mainly concerned with the problem of metaphysics, i.e., the problem of "the **first principles** of the use of the **pure intellect**" (MSI, § 8, 2: 395).[1] In order to determine what these principles are, we must first know what the pure intellect is, and how it is distinguished from sensibility. The distinction between sensitive and intellectual cognition is therefore the subject-matter of the "**propaedeutic**" of metaphysics, and the *Inaugural Dissertation* is said to include a "specimen" of such propaedeutic (ibid.). Since the first *Critique* is

[1] Instead of "understanding," which is used by the translator of the Cambridge edition, I always use "intellect" to translate "*intellectus*" in my quotations from the *Inaugural Dissertation* in order to highlight the continuity of this concept in Kant and in the Aristotelian-scholastic tradition. There is nothing substantive in the choice of words, for in the broader sense, that is, in the sense of the "entire higher faculty of cognition" (A 835/B 863), understanding, reason, and intellect are precise synonyms in Kant.

also understood as the "**propaedeutic** to the system of pure reason" (A 11/B 25), the continuity between the projects of these two works and between their distinctions between sensibility and intellect is conspicuous.

The *Inaugural Dissertation* is divided into five sections, and the distinction between sensibility and intellect is introduced in the second, which bears the title "On the distinction between sensible things and intelligible things in general." At the opening of this section Kant writes:

> **Sensibility** is the **receptivity** of a subject in virtue of which it is possible for the subject's own representative state to be affected in a definite way by the presence of some object. **Intelligence** [*intelligentia*] (rationality) is the **faculty** of a subject in virtue of which it has the power to represent things which cannot by their own quality come before the senses of that subject (MSI, § 3, 2: 392).

It seems that there is nothing in this definition of sensibility which is not contained in what Aristotle says about sense-perception. And what Kant says about the intellectual faculty is even more disappointing, as he just tells us that it is not sense. From these uninteresting definitions, however, Kant draws a striking conclusion. He claims that "things which are thought sensitively are representations of things **as they appear**, while things which are intellectual are representations of things **as they are**" (MSI, § 4, 2: 392). The first half of this claim seems to be a natural consequence of Kant's Aristotelian definition of sensibility. Like Aristotle, Kant holds that what is given through the sense is conditioned by the "special character of the subject" (ibid.). Hence what does not conform to such conditions, i.e. what cannot "appear" to us, are not the objects of sensitive cognition. However, an examination of Kant's actual argument for this thesis shows that it contains some extra elements that do not have even the slightest trace in the Aristotelian doctrine. Kant writes:

> In a representation of sense there is, first of all, something which you might call the **matter**, namely, the **sensation**, and there is also something which may be called the **form**, the **aspect** namely of sensible thing which arises according as the various things which affect the senses are coordinated by a certain natural law of the mind. (ibid.)

According to this passage, it seems that only the matter of sensory representation, namely the sensation, is *received* from outside, while the form of sensory representation, as a natural law "*inherent in the mind*" and by means of which the sensations are coordinated (MSI, § 4, 2: 393), cannot be something received. The characterization of sensibility as receptivity, then, seems to be at most a partial one, applying only in so far as it receives the sensations. And Kant's Aristotelianism is also half-hearted: in conceding that "in respect of its quality it [sc.: the sensation] is

dependent upon the nature of the subject in so far as the latter is capable of modification by the object in question" (ibid.), he follows Aristotle's account of the perception of special-objects; but he provides an entirely non-Aristotelian account of the forms of sensibility, which correspond roughly to the "common-objects" in Aristotle. For Aristotle, these objects have the same status with the special-objects in so far as both are "perceived in themselves," and our perception of them is just like our perception of the special-objects in so far as in both cases we are "affected by the object of perception as such." Kant, by contrast, holds that we are affected by the objects only when we perceive the special-objects or sensations, whereas the cognition of the common-objects is resulted from the coordinating act according to the laws inherent in the mind. Now we may ask: which account of the perception of common-objects is more justified?

In comparison to the Aristotelian account, the Kantian one is, to say the least, very counter-intuitive. From everyone's own experience, it should be clear that we never see any color without at precisely the same time seeing some figure of some size, nor could we be aware of the alleged coordinating act. A proponent of Kant's position might respond that such coordinating act is some sub-conscious or unconscious process, which is so quick that the interval between the reception of mere sensations and the awareness of the sizes and figures is too small to be detected. While this is not absolutely impossible, it obviously requires specific argument which is never provided by Kant. The idea of the form of sensibility is repeated in a well-known passage in the Transcendental Aesthetic (A 20/B 34-5). In commenting on this passage, Kemp Smith writes that Kant's statements about the form of sensibility "rest upon the unexpressed assumption that sensations have no spatial attributes of any kind. In themselves they have only intensive, not extensive, magnitude. Kant assumes this without question, and without the least attempt at proof."[2] I find this criticism very pertinent.

Kant returns to the theme of the form of sensibility in the third section of the *Inaugural Dissertation*, where he argues that the forms of human sensibility are space

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[2] Kemp Smith, *Commentary*, p. 86; cf. similar criticisms made by Bergson, Riehl and others quoted by the author on this and the following pages. For a defense of Kant's position against such criticisms, see Kitcher, *Kant's Transcendental Psychology*, ch. 2.

and time. I shall discuss this doctrine in section III below. For the present, let us return to Kant's initial distinction between sensibility and intellect. We have just examined the first half of Kant's claim, that sensitive cognition is cognition of things as they appear. Now we turn to the last of this claim, that intellectual cognition is cognition of things as they are in themselves. It is not difficult to see that this claim does not follow from Kant's definition of the intellect. In order to proceed from the merely negative definition of the intellect to Kant's conclusion, Kant argues that "whatever cognition is exempt from such subjective conditions relates only to the object" (MSI, § 4, 2: 392). But this argument is invalid, as it is quite possible, and indeed a theorem of the scholastic empiricism, that the human intellect can know nothing which is not given through the senses: *Nihil est in intellectu quod non prius fuerit in sensu*. Instead of cognition of things as they are in themselves, then, the purely intellectual cognition might be entirely *empty*. Indeed, this is precisely Kant's mature position in the Critical period.

However, in the *Inaugural Dissertation*, Kant attempts to appeal to other sources to justify his claim about the intellectual cognition. He distinguishes between the "real" and the "logical" uses of the intellect. By the "**real use**" of the intellect Kant means a use by which "the concepts themselves, whether of things or relations, are **given**," whereas by the "**logical**" use of the intellect "the concepts, no matter whence they are given, are merely **subordinated** to each other … and compared with one another in accordance with the principle of contradiction" (MSI, § 5, 2: 393). The possibility of metaphysics is grounded on the real use of the intellect, by virtue of which alone we can have the pure concepts of the intellect, which are "neither abstracted from any use of the senses nor contain any form of sensitive cognition" (MSI, § 6, 2: 394). Such concepts include "possibility, existence, necessity, substance, etc., together with their opposites or correlates." They "never enter into any sensory representations as part, and thus they could not be abstracted from such a representation in any way at all" (MSI, § 8, 2: 395). In the fourth section of the *Inaugural Dissertation*, "On the principle of the form of the intelligible world," Kant offers a long and opaque argument which shows how speculations about the concepts of substance, cause, necessity, contingency, etc. are used in natural theology.

Without going into the details of Kant's argument, it should be clear why Kant claims that through the intellectual faculty we have representation of things as they are in themselves. This claim does not follow from the merely negative definition of the intellect, but rather from his conception of the real use of the latter, which in turn is supposed to account for the possibility of metaphysics. However, Kant becomes dissatisfied with his attempt at laying the ground for metaphysics in the *Inaugural Dissertation* soon after its publication,[3] and gradually realizes that the real use of the intellect is impossible.[4] As a result, we need not regard the idea of the real use of the intellect, which is a major non-Aristotelian moment in Kant's distinction between sensibility and intellect in the *Inaugural Dissertation*, as an essential element of it.

In contrast to the real use of the intellect, which belongs solely to metaphysics, the logical use of it is "common to all sciences" (MSI, § 5, 2: 393). In particular, it is held to be responsible for transforming mere appearance into *experience*:

> But in the case of sensible things and phenomena, that which precedes the logical use of the intellect is called **appearance**, while the reflective cognition, which arises when several appearances and compared by the intellect, is called **experience**. Thus, there is no way from appearance to experience except by reflection in accordance with the logical use of the intellect. (MSI, § 5, 2: 394)

This passage might be read as an anticipation of the main problem of transcendental philosophy, namely the problem of the possibility of experience. However, this problem occupies only a peripheral place in the *Inaugural Dissertation*, and is also very inadequately accounted for with the idea of the logical use of the intellect. The logical use of the intellect, as we have noted, consists in nothing more than the subordination of concepts according to the law of contradiction. But it is obviously impossible that by means of the law of contradiction alone we proceed from what is given to the senses to empirical cognition: First, in order to subordinate one concept under another, one must already possess these concepts, but that which is merely given through the senses cannot have a conceptual form. In fact, in his discussion of the real use of the intellect, Kant distinguishes the pure concepts of the intellect from

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[3] Cf. Kant's letter to Lambert on Sept. 2, 1770, where he suggests that the first and fourth sections of the *Inaugural Dissertation*, which contain his endeavor to display the real use of the intellect in metaphysics, "can be scanned without careful consideration" (Br, 10: 98).

[4] More precisely, perhaps we should say that the Critical Kant does not simply abandon the idea of the real use of the intellect, but rather substitutes the simple division of the uses of the intellect into the logical and the real ones with a subtler one, which cannot be articulated until he develops the idea of transcendental logic.

the "**abstract**" concepts, which are "only given empirically" (MSI, § 6, 2: 394). Since the abstract empirical concepts cannot be given through the senses alone, the intellect must also be involved in the formation of these concepts, yet this use of the intellect is neither real nor logical. We may call this use of the intellect "abstractive." Obviously, it corresponds exactly to the first operation or activity of the intellect in the scholastic tradition.

Besides the lack of a thematic discussion of the abstractive use of the intellect, Kant's account of the role of the intellect in empirical cognition is exposed to a further problem. While the logical use of the intellect corresponds obviously to the second operation of it in the Aristotelian tradition, namely the act of "combining and dividing," it is groundless to suppose that the principle of contradiction is the sole principle of such act, or that by means of this principle alone we proceed from the primitive concepts to empirical cognition. As he thinks more deeply on the problem of experience, Kant distinguishes between "general" and "transcendental" logic. From the Critical point of view, the "logical use" of the intellect in the *Inaugural Dissertation* belongs only to the general logic, which "abstracts from all contents of the cognition of the understanding and of the difference of its objects, and has to do with nothing but the mere form of thinking" (A 54/B 78). Only in this sense is logic "common to all sciences." Besides the laws of general logic, the constitution of experience still requires other a priori concepts and principles, which belong to the transcendental logic. But this idea is certainly not contained in Kant's theory of the intellect in *Inaugural Dissertation*.

Up to this point, we have examined what I take to be Kant's first way of making the distinction between sensibility and intellect in the *Inaugural Dissertation*. Although there are many important similarities between this and the Aristotelian ways of making the distinction between sense or sensibility and intellect, the Kantian one contains at least two elements that are not to be found in the Aristotelian one: the first one concerns the distinction between matter and form of sensibility, and the second one concerns the idea of the real use of the intellect. The first element remains a central one in Kant's Critical philosophy, whereas the second one is soon given up. As we have seen, however, both elements are not supported by adequate arguments. We

turn now to Kant's second way of making the distinction between sensibility and intellect, which is grounded on that between intuition and concept.

II

Kant's famous distinction between intuition and concept is made for the first time in the following passage:

> There is (for man) no **intuition** of what belongs to the intellect, but only a **symbolic cognition**; and the activity of the intellect [*intellectio*] is only possible for us by means of universal concepts *in abstracto*, not by means of a singular concept *in concreto*. For all our intuition is bound to a certain principle of form, and it is only under this form that anything can be **apprehended** by the mind immediately or as **singular**, and not merely conceived discursively by means of general concepts. (MSI, § 10, 2: 396)

In order to understand this key passage, we may first have a look at its background. The distinction between intuitive and symbolic cognition is invented by Leibniz in his seminal paper "Meditation on Knowledge, Truth, and Ideas," and then adopted in many textbooks or compendia of the Wolffian School. The version with which Kant is most familiar is presumably the one presented in A. G. Baumgaten's *Metaphysica* or G. Fr. Meier's *Auszug aus der Vernunftlehre*, both of which are used as the textbooks of Kant's lectures on metaphysics, anthropology, and logic throughout his entire career. The distinction between intuitive and symbolic cognition is presented in them in exactly the same way. In Meier's words:

> Wenn die vernünftige und gelehrte Erkenntniss vernünftig rühren soll, so muss sie … eine anschauende Erkenntniss sein. **Eine Erkenntniss ist anschauend** (*cognitio intuitiva*), wenn wir uns den Gegenstand stärker vorstellen, als die Zeichen desselben; stellen wir uns aber diese stärker vor als jenen, so ist **die Erkenntniss symbolisch** (*cognitio symbolica*). Alle gelehrte Erkenntniss ist entweder anschauend oder symbolisch. Wenn man die Aufmerksamkeit, das Nachdenken und die Überlegung vornehmlich mit dem Gegenstande der gelehrten Erkenntniss beschäftiget, so wird sie eine deutliche anschauende Erkenntniss.[5]

To determine whether a cognition is intuitive or symbolic, we have to ask whether the object itself is better cognized than its sign. But what does it exactly mean to cognize an object or to cognize its sign? Neither Baumgarten nor Meier gives any example of intuitive or symbolic cognition, but we may try to illustrate this distinction with an example Leibniz uses to illustrate his original distinction (cf. PPL, 292), though I'm not suggesting that the distinction has precisely the same meaning in Baumgarten and Meier as it has in Leibniz. Consider two figures, a triangle and a chiliogon, viz. a

[5] Meier, *Auszug*, § 236, reprinted at 16: 527; cf. Baumgarten, *Metaphysica*, § 620, reprinted at 15: 32. The same distinction is also made by Christian Wolff, though he uses slightly different terms: he contrasts intuitive not with symbolic, but with *figurative* cognition (*Vernüfftige Gedanken*, § 316, translated in Watkins, *Kant's* Critique, p. 27).

polygon of a thousand equal sides. In the former case, our representation of the figure is presumably stronger or more vivid than our representation of the mere word "triangle;" hence our cognition of triangle is intuitive. In the latter case, on the contrary, our representation of the word is presumably stronger or more vivid than our representation of the figure; hence our cognition of chiliogon is symbolic. In these examples, it seems that cognizing an object means having a clear and vivid picture of it, but it is not all clear what it means to cognize the sign. Perhaps this means simply cognizing the *figure* of the word, so that our symbolic cognitions of "triangle" and "TRIANGLE" are different. But Kant understands it in another way.[6] For Kant, cognition of the sign means cognition of the content of that sign. Thus, if the sign is a noun like "triangle," cognition of the sign is cognition of its corresponding concept, and, e.g., in the case of triangle, the cognition that it is a polygon of three sides, etc. As a result, while the intuitive cognition or cognition of an object itself is something like a vivid picture and therefore always *concrete*, the symbolic cognition or cognition of a concept is *abstract*.

Indeed, concreteness is always the core meaning of "intuition" in Kant's pre-Critical writings. Prior to the *Inaugural Dissertation*, the only work in which "intuition" is used technically or quasi-technically is the 1764 *Prize Essay*, *Inquiry Concerning the Distinctiveness of the Principles of Natural Theology and Morality*. In this work, Kant contrasts philosophical with mathematical cognition: "in mathematics, the object is considered under sensible signs *in concreto*, whereas in philosophy the object is only ever considered in universal abstracted concepts; and the clarity of the impression made by such abstracted concepts can never be as great as that made by signs which are sensible in character" (UD, 2: 292). Because they operate with signs which have no meaning in themselves, the proofs and inferences in arithmetic and (what we would call) algebra are said to proceed concretely. But the concreteness of mathematical cognition is most conspicuous in geometrical demonstration. By drawing a particular circle, we can discover the properties of all circles. These properties are, as it were, *seen* concretely from the circle we draw (UD,

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[6] At a later phase of the development of his thought, however, Kant understands symbolic cognition exactly in the way suggested in the last sentence, though he does not take words as the paradigm of symbols at this time. See KU, 5: 351; Anth, 7: 191.

2: 278). On this ground, Kant holds that the "intuition" involved in mathematical cognition is greater than it is in philosophy (UD, 2: 292; cf. 291).

Despite these significant observations, I think Kant's use of "intuition" in the *Prize Essay* is only semi-technical, for it seems to depend too much on the ordinary sense of the German word "*Anschauung*." Thus he allows the idea that one cognition contains more intuition than the other, which means that one cognition is *anschaulicher*, i.e. clearer or more vivid than the other. Such idea disappears in the *Inaugural Dissertation*, where Kant realizes that conceptual thinking is not merely less clear or less vivid than "intuiting" or "seeing," but has no share at all of the *concreteness* characteristic of the latter because of its abstract nature. However, from the incompetence of conceptual thinking, it does not follow that the concrete things cannot be cognized by the intellect as such. Like the medieval philosophers, Kant concedes that the divine intellect is intuitive, and the intellectual intuition is the "principle of objects," "independent," and "archetype" (MSI, § 10, 2: 397).[7] But he follows the Aristotelian-scholastic tradition in that the proper objects of the *human* intellect are the universals, whereas the proper objects of the sense are the particulars.[8] Since what can be "seen" concretely is always a particular, while what can be thought abstractly is always a universal, Kant takes the distinction between sensibility and intellect and the one between intuition and concept as equivalent.

This, I believe, is the essential story about the genesis of Kant's notion of intuition. My conclusion is similar to the one proposed by Charles Parsons, who emphasizes the idea of phenomenological presence involved in this notion.[9] In addition to the plausibility of the historical reconstruction, a major merit of this interpretation is that it is neutral enough to accommodate different kinds of intuitions: divine or human, pure or empirical, intuitions in actual perception or intuitions in

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[7] For a useful survey of the medieval conceptions of intuition or intuitive cognition, see Kobusch, "Intuition."

[8] As I stressed in the Introduction, it is very difficult to determine how Kant was actually influenced by the Aristotelian tradition, but his familiarity with the latter can be seen from his explicit reference to the well-known "division of cognition into *aistheta kai noeta*" among "the ancients" (A 21-2/B 35-6 n.).

[9] Parson, "Kant's Philosophy of Arithmetic," pp. 112; 145; id., "The Transcendental Aesthetic," p. 66.

mere imagination.[10] However, while Parsons thinks that immediacy is the fundamental criterion for the Kantian intuition, I think that *concreteness* is even more fundamental than either immediacy or singularity. For while one cannot have a concrete representation of something save by "seeing" it immediately, one might have some immediate representations that are not concrete, depending on how "immediacy" is understood. For example, it seems that the mere sensations like pain or itch are immediate in a legitimate sense, but they do not amount to any concrete representation. Moreover, as Parsons notices,[11] Kant holds that the mathematical axioms are immediately certain (A 732/B 760), but the axioms are not concrete things, either. If neither mere sensations nor the axioms are intuition in the Kantian sense, it seems that immediacy alone is not an adequate criterion for the Kantian intuition.

Singularity, too, seems to be a less fundamental criterion for the Kantian intuition than concreteness. For whatever one could "see" concretely must be a singular thing, but not every singular thing is apprehended through concrete "seeing." The most obvious counter-example is definite description. A definite description can be used to refer to at most one thing and therefore is singular, but cognition through a definite description is neither immediate nor concrete. However, it seems that Kant has never considered this problem, which is at least partly due to the fact that the definite description has hardly attracted any attention from the logicians in his time. Instead, the logicians of the Wolffian school develop a theory of "singular concepts," which forms the crucial background for understanding Kant's idea of the singularity of intuition. Again, I quote Meier's text:

> Alle Begriffe, welche durch die logische Absonderung gemacht werden, sind **abgesonderte** oder **abstracte Begriffe** (*conceptus abstractus, notio*). Begriffe, die nicht abgesondert sind, heissen **einzelne Begriffe** (*conceptus singularis, idea*). Z.E. Leibniz. Alle *unmittelbare* Erfahrungsbegriffe sind *einzelne* Begriffe.[12]

Meier contrasts here between abstract concepts and singular concepts or proper names, such as "Leibniz," and explicitly attributes immediacy to the latter. We may remember that in the key passage quoted above Kant talks of an activity "by means of

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[10] Cf. B 278, where Kant says that not "every *intuitive* representation of outer things includes at the same time their existence, for that may well be the effect of the imagination (in dreams as well as in delusions)."

[11] "Kant's Philosophy of Arithmetic," p. 145.

[12] Meier, *Auszug*, § 260, reprinted at 16: 551.

a singular concept *in concreto*" (MSI, § 10, 2: 396). Thus it is not implausible that Kant equates singular concept with concrete representation or intuition. In his exposition of the concept of space he writes: "**The concept of space is thus a pure intuition**, for it is a *singular concept*" (MSI, § 15.C, 2: 402). And in a *Reflexion* dated the same year as the *Inaugural Dissertation* he writes that the pure cognitions "are either *conceptus singulares* and are called *intuitus puri* or general and are pure rational concepts" (R 3955, 17: 364). In its initial technical sense, then, intuition means exactly singular concept in Meier's sense. Thus it is quite probable that Kant's characterization of intuition as immediate and singular is simply taken from Meier. As a result, it becomes readily intelligible why Kant never explains the immediacy and singularity of intuition, which are so fundamental to his entire theoretical philosophy that they obviously require an explanation.

Indeed, it is no surprising that Kant equates intuition with singular concept, as he construes symbolic cognition as cognition of abstract concepts, thus naturally establishes a link between their respective opposites, i.e., between intuitive cognition and singular concepts. However, Kant later rejects the idea of singular concepts, and realizes that "[i]t is a mere tautology to speak of universal or common concepts – a mistake that is grounded in an incorrect division of concepts into **universal, particular,** and **singular**. Concepts themselves cannot be so divided, but only **their use**."[13] (Why Kant rejects the idea of singular concepts? To be discussed later) In addition, he also changes his conception of symbolic cognition, and uses "discursive" alone to characterize the abstract cognition through universal concepts in his later

[13] Log, 9: 91. The importance of this remark is stressed by Thompson, "Singular Terms and Intuitions," pp. 317f. However, Thompson and many other commentators (with the exception of Wilson, "Kant on Intuition," p. 250) ignore the fact that Kant did accept the doctrine of singular concept at the initial stage of developing his notion of intuition. In addition to the passages quoted in the main text, we may find his detailed discussion of the doctrine of singular concept in his early lectures on logic (cf. V-Lo/Blomberg, 24: 239f.; 257ff.). And the position of the published text of *Logic* is to be found in later lectures, e.g. in V-Lo/Wiener, 24: 904f.; 908.

writings.[14] As a result, the genesis of Kant's notion of intuition from his innovative reading or misreading of Meier's text becomes largely invisible even for many cautious and diligent scholars.

Our historical investigation into the origin of Kant's notion of intuition has some important philosophical consequences. First, it should be clear that neither immediacy nor singularity, but concreteness alone should be taken as the primary characteristic of the Kantian intuition. Thus it is illegitimate to move from the singularity of a representation to the conclusion that this representation is an intuition, at least if one wants to preserve its original, technical meaning. Regrettably, it seems that this illegitimate move is taken by Kant himself in arguing for the intuitive nature of space and time.

Second, it becomes unclear what kind of distinction the one between intuition and concept is. The origin of the Kantian distinction is Meier's division of abstract and singular concepts, which is a "logical" one in the sense that it is a distinction between different terms. However, while every term is either singular or general, it is questionable whether each term is attached with a representation that is either concrete or abstract. For example, "triangle" is a general term, but our representations of it can be both concrete and abstract. According to Kant, when we try to prove a geometrical theorem with a diagram, our representation of the triangle is concrete; whereas when we simply represent it as a polygon with three sides, our representation is abstract. By contrast, "Kant" is a singular term, but it seems that our representations of him, too, can be both concrete and abstract. For those who have attended Kant's lectures, the representations of him are concrete, whereas for those who just know him to be the greatest modern philosopher, the representations of him are abstract. As

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[14] See note 6 above. Because of his insensitiveness to the *development* of Kant's view on symbolic cognition, Falkenstein (*Kant's Intuitionism*, p. 375 n. 51) fails to appreciate the importance of the Wolffian intuitive/symbolic distinction for Kant's notion of intuition, and wrongly, I think, connects the latter directly to the medieval doctrine of intuition. Although there happens to be some similarities between the Kantian and the Scotist conception of intuition, there is no evidence showing that Kant was even basically acquainted with the medieval doctrine. Most importantly, while all medieval philosophers, indeed all philosophers prior to Kant, hold that intuition must be *intellectual* cognition (But Falkenstein claims that the "Medievals supposed that information is immediately, and hence intuitively, given to us in sense" (ibid., p. 43)!), Kant holds it to be sensory. Hence it is impossible that Kant simply inherits the notion of intuition from any traditional account. For the same reason, we must also reject Heidegger's claim that "knowing is primarily intuiting" (*Kant and the Problem*, § 4, p. 15; see the whole paragraph for Heidegger's elucidation of this claim). While this claim is probably true for all philosophers prior to Kant, it does not apply to Kant, who denies the possibility of intellectual intuition in human beings and therefore does not take (human) intuition to be knowledge proper.

a result, it does not always make sense to say that the representation of something is an intuition or a concept.

Third, we can see how tenuously the distinction between sensibility and intellect is connected with the one between intuition and concept. After establishing the concreteness, hence the singularity of intuition, it seems that Kant might have simply appealed to the Aristotelian doctrine that singulars or particulars are the objects of sense to conclude that intuitions are possible only through sensibility.[15] In the Aristotelian tradition, however, to perceive a concrete object as a concrete object is to perceive it incidentally, and the perception of incidental objects, as we have seen, turns out to be not so much an achievement of the sense as of the imagination or the cogitative power. Indeed, it seems that the image or *phantasma* in the Aristotelian tradition is exactly the counterpart of the Kantian intuition. Accordingly, if Kant really wants to appeal to the Aristotelian theory, he should hold that intuition is the product of the imagination. However, since he does not have anything like a theory of the imagination in the *Inaugural Dissertation*, this conclusion is not yet open to him. Moreover, as we have seen, although Aristotle never formally gives up the rigid dichotomy of sense and intellect, it is in fact seriously challenged by his account of the imagination. Thus, as Kant later realizes the significance of the imagination, it is not implausible that he, too, implicitly changes his view on the distinction between sensibility and understanding without explicitly acknowledging it. This is no more than a hypothesis for now, but I shall attempt to verify it in later chapters.

While the appeal to the Aristotelian doctrine is perhaps the simplest way to establish the connection between intuition and sensibility, it is not necessarily the only possible one. In fact, Kant seems to adopt a different, more roundabout way to establish this connection in the *Inaugural Dissertation*, arguing that space and time are both the forms of intuition and the forms of representations of the senses. To evaluate this argument is the task of the next section.

III

[15] The significance of the Aristotelian doctrine for the relation between the singularity of intuition and its connection with sensibility is also suggested by Hintikka, "On Kant's Notion," p. 44, but he understands the singularity of intuition in a quite different way as proposed here.

The notion of the form of intuition is introduced immediately after the distinction between intuition and concept. Kant writes:

> But this formal principle of our intuition (space and time) is the condition under which something can be the object of our senses. Accordingly, this formal principle, as the condition of sensitive cognition, is not a means to intellectual intuition. … The **intuition**, namely, of our mind is always **passive**. It is, accordingly, only possible in so far as it is possible for something to affect our sense. (MSI, § 10, 2: 396f.)

Kant's conclusion here is exactly what he says about intuition in the opening paragraph of the Transcendental Aesthetic, which is quoted at the beginning of the Introduction. While the connection between intuition and sensibility is simply asserted in the *Critique*, it seems that Kant tries to argue for it in the *Inaugural Dissertation*. The structure of his argument should be like the following:

(1) All human intuitions are bound to the formal principle of space and time.

(2) Space and time can be represented only through the sensibility.

(3) Therefore, all human intuitions are the products of the sensibility.

The inference is valid, but how about the premises? The premise (1) is relatively easy to appreciate. As explained above, intuition is the concretely "seeing" of things, where "seeing" is used metaphorically so that even the divine intuition can be so characterized (it is not uncommon to say God sees things). Accordingly, the mere notion of intuition does not imply that a particular immaterial soul, which is not bound to the formal principle of space and time, cannot be "seen" or intuited at all. If *human* intuition is bound to such principle, this must be resulted from human nature. The appeal to human nature here might be entirely legitimate, but could it be used to establish Kant's premise? It might be part of human nature that we cannot "see" anything concretely which is not spatial, but it seems perfectly possible to "see" a triangle concretely irrespective of its change in time. Indeed, this is just the way we see things in geometrical demonstration. Moreover, as Kant concedes in the *Critique*, we have no way to represent time or the temporal sequence concretely other than "through a line progressing to infinity," i.e., by means of a spatial representation (A 33/B 50; cf. B 154, 156). As a result, it seems that all that we may conclude is that space, but not time, is the form of intuition.

The situation with the premise (2) is more complicated. The first thing we should note is that Kant's extensive discussions about space and time are in the third section of the *Inaugural Dissertation*, whereas the connection between sensibility and

intuition is established in the second. Before going into the details of Kant's theory of space and time, therefore, we may reasonably doubt whether this connection is presupposed rather than argued for in his theory of space and time. We shall see that this is really the case in our discussion of Kant's argument from the phenomenon of incongruent counterpart.

In the third section of the *Inaugural Dissertation*, which bears the title "On the principles of the form of the sensible world," Kant claims that space and time are just such principles. More specifically, they are "so to speak, the schemata and conditions of everything sensitive in human cognition" (MSI, § 13, 2: 398). This thesis is somewhat ambiguous. If by it Kant means that we can cognize through the senses only *things* existing in space and time, then I think it could be taken as a true statement about the constitution of our senses. But this does not imply that the spatial and temporal properties of these things are cognized through the sensibility alone. Whereas all physical objects exist in space and time, to determine their spatial and temporal properties often requires a lot of intellectual labor of the physicists. If, however, Kant's thesis means rather that our sensory *representations* are spatiotemporal, then I think it is dubious, as it is not clear in which sense our auditory and olfactory experiences, for example, are spatial. Either way, Kant fails to give a sound argument for premise (2).

Another possible argument is that space and time should be understood as the subjective "law of the mind, in virtue of which it is necessary that all the things which can be objects of the senses (through the qualities of those objects) are seen as **necessarily** belongs to the same whole" (ibid.; cf. MSI, § 14.5, 2: 400; § 15.D, 2: 403). This claim brings us back to the distinction between matter and form of sensitive representations discussed above. According to that distinction, as the forms of sensitive representations, space and time are not, properly speaking, "an outline or any kind of schema of the object, but only a certain law which is inherent in the mind" or "an internal principle in the mind" in virtue of which the various factors in an object may be "clothed with a certain **aspect**" or "coalesce into some representational whole" (MSI, § 4, 2: 393). This conception of the form of sensitive representations differs from the one suggested in the last passage in that it implies that such form is

not some aspect presented in an sensible object, but rather the organizing principle that makes such presentation possible. We have noted that this conception of the form of sensitive representations rests on an implausible conception of sense-perception. But even we assume that space and time are forms of sensitive representations in this sense, it does not follow that they are cognized through sensibility alone. Quite on the contrary, since they are not something received from outside but laws inherent in the mind, it seems that they cannot belong to sensibility as receptivity.

In the first *Critique*, Kant further explains the idea that space is the form of sensibility with a well-known *Gedankenexperiment*:

> So if I separate from the representation of a body that which the understanding thinks about it, such as substance, force, divisibility, etc., as well as that which belongs to sensation, such as impenetrability, hardness, color, etc., something from this empirical intuition is still left for me, namely extension and shape (*Gestalt*). These belong to the pure intuition, which occurs a priori, even without an actual object of the senses or sensation, as a mere form of sensibility in the mind. (A 20-1/B 35)

Several points in this passage deserve some comments. First, even if Kant's argument is wholly successful, it only implies that space is the form of sensibility. A little reflection will tell us that it is hardly possible to represent time in the same way as described here. Second, Kant's separation of various elements in the representation of a body seems to be problematic. On the one hand, divisibility is said to be something thought by the understanding, but our representation of it seems to depend on our pure spatial intuition. On the other hand, impenetrability is said to be something which belongs to sensation, but traditionally it is regarded as a primary quality which does not depend upon the specific constitution of our senses. Indeed, in most cases Kant takes impenetrability as something having the same status as extension and shape, for all of them are analytically implicit in the concept of body and dependent on space (cf. e.g., A 8/B 12; Prol, 4: 289). Last and most importantly, it is not a self-evident truth that the form of sensory representations must itself be cognized through the sensibility alone. As I noted above, our representation of space does not seem to depend on our receptivity or our capacity of being affected, hence is probably the product of some other faculty. It might be objected that since Kant already shows that space is not an intellectual representation, it follows, by means of elimination, that it is a sensory one. But if Kant's *Gedankenexperiment* shows that space is not an intellectual representation, then for exactly the same reason it is not a sensory one,

either. For Kant's argument to work, it seems that we must presuppose a third faculty, presumably the imagination, which is responsible for the representation of space as the form of sensibility.

In addition to the thesis that space and time are the forms of sensibility, it is suggested that Kant's decisive argument for the connection between sensibility and spatial representation is the one based on his observations on the phenomenon of incongruent counterpart. Indeed, this phenomenon is widely held to be the main motivation for his distinction between sensibility and intellect.[16] He discusses this phenomenon for the first time in an essay published in 1768 with the title "On the Primary Ground of the Differentiation of Directions in Space." In defining what an incongruent counterpart is he writes: "a body which is exactly equal and similar to another, but which cannot be enclosed in the same limits as that other, [is] its incongruent counterpart" (GUGR, 2: 382). A most usual instance of it is a pair of human hands, or more precisely, a hand and the reflection of it in a mirror. In the 1768 essay, Kant takes the phenomenon of incongruent counterpart as evidence against the Leibnizian relational view of space, according to which "space simply consists in the external relation of the parts of matter which exist alongside each other" (GUGR, 2: 383). Kant's argument is a *reductio*: Assuming that the relational view is true. For any part (P) of a hand, there must be a corresponding part of it (P*) in the other hand such that the relations of P to other parts of that hand are exactly the same as the relations of P* to other parts of its hand. Hence it follows that the spaces occupied by both hands must be identical. But they are actually incongruent. Therefore the relational view is false. In order to determine the relation of physical things to each other, Kant thinks that we have to appeal to the Newtonian "**absolute** and **original space**" (ibid.).

As Kant revisits the problem of incongruent counterpart in the *Inaugural Dissertation*, he no longer thinks that the appeal to the Newtonian absolute space is necessary for explaining that phenomenon, but comes to the thesis of the ideality of space (and time). Nevertheless, he continues to criticize the Leibnizian view, albeit with a different emphasis. He argues that since there is no difference between one

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[16] See, e.g., Gloy, "Die Kantische Differenz;" Haag, *Erfahrung und Gegenstand*, pp. 28ff. For a different view, see Zerbudis, "Incongurent Counterparts."

thing and its incongruent counterpart "in respect of everything which may be expressed by means of *characteristic marks* (*Merkmale*) intelligible to the mind through speech," the incongruity "can only be apprehended by a certain intuition" (MSI, § 15.C, 2: 403). Here it is impossible, but also unnecessary, to determine the cogency of Kant's argument.[17] Even if we accept his conclusion, it does not help to establish the connection between intuition and sensibility. For the distinction Kant makes here is still the one between concretely "seeing" or intuiting and discursive thinking or thinking through characteristic marks, not the one between sensibility and intellect. In fact, Kant never uses the phenomenon of incongruent counterpart to establish the connection between intuition and sensibility in the *Inaugural Dissertation*. And when he later argues that incongruent counterparts are *sensory* intuitions and that this implies transcendental idealism (cf. Prol, 4: 286), he simply *presupposes* but does not argues for that connection.

Thus far we have examined Kant's various attempts at showing that space and time are sensory representations. The conclusion is that none of Kant's arguments is sufficient for this thesis. As a result, the connection between intuition and sensibility cannot be established through their relations to space and time. Nevertheless, Kant manages to establish an important though negative conclusion, namely that human intuition cannot be a purely intellectual representation. The argument runs as follows:

(1*) All human intuitions are bound to the formal principle of space.

(2*) Spatial relations cannot be represented through the intellect alone.

(3*) Therefore, no human intuitions can be represented through the intellect alone.

Unlike the original premise (2), (2*) is well supported both by the *Gedankenexperiment* Kant uses in the *Critique* and by his observation on the phenomenon of incongruent counterpart. In addition, it is further supported by Kant's distinction between coordination and subordination. We are not unfamiliar with these two notions. As we noted above, the main operation of the intellect in its logical use is to subordinate one concept under another, while the form of sensibility is responsible

[17] For a historically informed discussion of Kant's thesis, see Rusnock and George, "A Last Shot," esp. pp. 272ff. I agree with the authors that the "paradox" of incongruent counterpart can be solved if we introduce the concept of direction or orientation, but I don't agree with them in that they deny, while I believe, that this concept, like other geometrical concepts, is based on certain pure intuition.

for the coordinating act which makes the scattered sensations into a whole. Subordination is possible only through characteristic marks and therefore peculiar to the intellect, whereas coordination is prior to the cognition of the characteristic marks and possible through the form of sensibility. As a result, space, as the form of sensitive representations or of the act of coordinating, does not have its origin in the intellect. Now if (2*) is true, since (1*) is taken as a fact about human nature, it follows (3*) is also true.

The difference between (3) and (3*) is subtle but important. If the human mind could be exhaustively divided into sensibility and intellect, then (3) and (3*) would be equivalent. As we have shown, however, while (3) is ill-founded, (3*) is very likely to be true. Thus it becomes questionable whether that division of the human mind is appropriate. Is it not natural to suppose a faculty which is not receptive and hence does not belong to sensibility, but whose operations consist not so much in subordination as in coordination and hence does not belong to the intellect either? If we acknowledge the existence of such faculty and call it imagination, it is perspicuous that the imagination is responsible for our representations of spatial relations and therefore makes intuition possible. Regrettably, this possibility seems to be wholly overlooked by Kant not only in the *Inaugural Dissertation*, but even in the Transcendental Aesthetic.

What I have discussed in this section is just a small portion of Kant's doctrine of space and time in the *Inaugural Dissertation* and the corresponding part of the first *Critique*. I almost completely ignored that part of Kant's doctrine that becomes the Metaphysical and Transcendental Expositions, where the notion of sensibility is not mentioned at all. Nor have I discussed the implications of Kant's doctrine of space and time for his transcendental idealism. I shall return to Kant's doctrine of spatial intuition and geometry in chapter 7 below, but shall not touch the problem of transcendental idealism throughout this work.

IV

Having examined all relevant passages of the *Inaugural Dissertation*, we are now in a position to determine the relationship of Kant's initial distinction between sensibility

and intellect to the Aristotelian one between sense and intellect. Following the Aristotelian tradition, Kant defines sensibility as receptivity and attributes a logical use to the intellect. But he departs from that tradition with his distinction between matter and form of sensitive representations and the idea of the real use of the intellect in metaphysics. Whereas the latter idea soon vanishes from his thought, the former is a constant element of the Critical philosophy.

Moreover, quite independent of the Aristotelian tradition, Kant bases the distinction between sensibility and intellect upon the one between intuition and concept. The primary meaning of intuition is concrete presence, and immediacy and singularity are both derivative criteria. Kant holds that human intuitions are always sensitive, but he does not argue for this. He might have simply appealed to the Aristotelian doctrine that particulars or singulars are the objects of sense, but this doctrine is challenged by Aristotle's own account of the imagination. Accordingly, even if we admit that human beings do not have a purely intellectual intuition, it does not follow that human intuitions are always passive and products of the sensibility as receptivity.

Kant connects his distinction between matter and form of sensitive representations with the notion of intuition through his doctrine of space and time. Despite the appearance of symmetry, a close analysis of his arguments shows that many of them make sense with respect only to space, not to time. A most important difference is that while space can be represented or intuited in itself, such as in geometry, there is no way to represent time as such. Kant argues that for human beings, intuition or concrete representation is always bound to the formal principle of space, and that spatial relations cannot be represented through the intellect alone. But this does not imply that spatial intuition is the product of sensibility as receptivity, as our pure spatial intuition, which is essential for the cognition of the axioms, postulates, and even problems of geometry, as well as of the phenomenon of incongruent counterpart (MSI, § 15.C, 2: 402f.), does not seem to be itself receptive. However, despite the originality of Kant's notion of intuition, it seems that the role it plays is very similar to the one played by the image or *phantasma* in Aristotle. Thus it might not be implausible to interpret the Kantian intuition as the Aristotelian image.

But if this is so, intuition should be connected not so much with the senses as with the imagination.

It might be objected that although the imagination is different from the senses, both of them belong to sensibility in the broader sense. Accordingly, even if we concede that space is the product of the imagination, it remains true that it is represented through sensibility. My response to this objection is that though Kant may have good reasons to include the imagination as a part of sensibility, such inclusion is incompatible with defining sensibility as receptivity. In fact, the notion of sensibility stems from Baumgarten's notion of the lower cognitive faculty. According to Baumgarten, the human cognitive faculty can be divided exhaustively into the lower and the higher ones. The lower cognitive faculty is "the faculty to cognize something obscurely and confusedly or indistinctly." "Non-distinct representation is called sensitive. Therefore the power of my soul represents through the lower faculty sensitive perceptions." By contrast, the higher cognitive faculty, namely the "mind" or the "intellect," is "the faculty to cognize something distinctly."[18] The lower cognitive faculty or sensibility comprises a number of more specific faculties, including sense, imagination, and many other faculties, virtually all of which are discussed in Kant's *Anthropology*, which is largely based on his reading and criticism of the "Empirical Psychology" of Baumgarten's *Metaphysica*.

It is an indubitable fact that Kant, in particular in his works, private notes, and lectures on anthropology, almost always includes the imagination as a part of sensibility. But since the basis of all these notes and lectures is Baumgarten's text, it is not improbable that Kant's inclusion is simply inherited from Baumgarten. If Kant continued to follow Baumgarten and defined sensibility as the faculty of obscure and confused cognition, then there would no obvious problem in including the imagination into sensibility. However, he criticizes Baumgarten's definition of sensibility for the reason that the distinction between confused and distinct cognitions is merely "logical" but does "**not touch** at all the things **given**, which underlie every logical comparison;" while the distinction between sensibility and intellect is one concerning the "ancestry" or "origin" of our representations. Thus sensitive cognition

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[18] Baumgarten, *Metaphysica*, §§ 520, 521, 624. My own translation.

can be distinct, such as in geometry, whereas intellectual cognition can be confused, such as in metaphysics (MSI, § 7, 2: 394-5).

Kant's criticism is well motivated, but it is neither very original nor does full justice to the Leibnizian-Wolffian position he criticizes. As we have seen, the idea that sense and intellect are different origins of our cognition is a fundamental tenet of the Aristotelian tradition, and Kant does not add any new element to it in the *Inaugural Dissertation*. On the other hand, if we base our judgments not on Kant's narrative but on the independent study of the original texts, it should be clear that, despite significant divergences, Locke, Leibniz, and Hume all insist on this idea. In particular, athough Baumgarten's definition of the intellect as the faculty of distinct cognition stems from Leibniz, what Leibniz actually contends is that distinct cognition must always involve the intellect, but not that such cognition is completely independent from the contribution of the senses and the imagination.[19] Accordingly, it seems reasonable to accept Kant's criticism yet without regarding it as a novel doctrine in the history of philosophy.

Moreover, accepting the claim that sensibility is a self-contained, non-reducible cognitive faculty does not means that it is the *sole* cognitive faculty apart from the intellect; nor does it imply that it should be characterized as receptivity. Indeed, since the pure intuition in geometry obviously does not depend on sensations received from outside, it must be originated from a faculty that is both non-receptive and non-intellectual. As a result, Kant has either to give up his definition of sensibility as receptivity or to acknowledge the status of the imagination as a third faculty that belongs neither to sensibility nor to the intellect.

Finally, then, the parallelism between Kant's and the Aristotelian theories of cognitive faculties turns out to be even greater than what is suggested by the sense/intellect dichotomy. Not only is Kant's distinction between sensibility and intellect largely modeled after the Aristotelian distinction between sense and intellect, but the most novel notion of his theory, that of intuition, also seems to have been anticipated by the Aristotelian image or *phantasma*. Furthermore, although both Aristotle and

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[19] Cf. Leibniz, "Meditations on Knowledge," PPL, 291-294. For a more detailed discussion and assessment of Kant's criticism of Leibniz, see section 1 of the next chapter.

Kant initially develop their doctrines of image or intuition within the framework of the dichotomy between sense or sensibility and intellect, both notions turn out to go beyond this framework and point to a third faculty, the imagination, whose status is precarious. The only important difference between the Kantian intuition and the Aristotelian image, I think, consists in Kant's emphasis on the spatiality of intuition. However, at the stage of the *Inaugural Dissertation*, it is yet unclear what consequences Kant's emphasis may have.

The reason why Kant does not fully realize the theoretical potency of the notion of intuition in the *Inaugural Dissertation* is that he is not, at that time, very much concerned with the main problem of the transcendental philosophy, namely the problem of experience. Indeed, the only kind of intuition Kant discusses in this work is the pure intuition of space and time, and the only epistemic role intuition can have is restricted to geometry (including the cognition of the phenomenon of incongruent counterpart), pure mechanics, and perhaps also arithmetic (MSI, § 12, 2: 397). He does not tell us what *empirical* intuitions are like and what role they can play in our cognition. Moreover, as the title and the overall structure of the *Inaugural Dissertation* indicate, Kant's main effort there is to separate the intelligible from the sensible and thereby to establish the possibility of metaphysics. With the oversimplified conception of the logical use of the intellect, he seems to be too optimistic about the possibility of cognition of the sensible things. It is only in the years after the publication of the *Inaugural Dissertation* that he gradually appreciates the problem of the possibility of experience and realizes that the elements he separates before must be united to make experience possible. An adequate interpretation of Kant's notion of intuition, then, is possible only in the context of Kant's theory of experience.

Chapter 3 Leibniz, Hume, and the Problem of Experience

Our study of the *Inaugural Dissertation* is important for understanding Kant's concepts of intuition and sensibility because it reveals Kant's initial motivations and arguments as he begins to use them as technical terms. The significance of such study, however, is limited, for in that work these concepts are not yet considered in the context of the primary problem of the transcendental philosophy, namely the problem of experience. A fuller appreciation of Kant's notion of intuition requires therefore an elucidation of the precise meaning and the significance of the problem of experience in Kant. The task of this and the next chapters is to provide such an elucidation. As in previous chapters, I find it especially instructive to consider the position of Kant in comparison with those of his pre-eminent predecessors. With respect to the problem of experience, they are generally held to be Leibniz and Hume. Although they are more likely to have exerted direct influence on the development of Kant's thought than Aristotle and Aquinas, my main interest remains to consist in the connection of thoughts as such rather than in the historical details.

In spite of the enormous differences between theirs positions, both Leibniz and Hume attribute to the imagination a prominent role in our experience. The imagination is no longer, as in Aristotle, a faculty that is merely parasitic on or derivative from the senses, but becomes a central faculty that is responsible for various cognitions and desires. Accordingly, the traditional dichotomy between sense and intellect has, at least partly, to give place to the new one between imagination and intellect or understanding. Our following discussions will highlight the significance of the imagination in Leibniz's and Hume's account of empirical knowledge. Through an appreciation of their views, we shall also be in a better position to understand how Kant's doctrine of the imagination is connected with his theory of experience.

This chapter is divided into three sections: it begins with an examination of Leibniz's distinction between distinct and confused cognition, which, I shall argue, is seriously misunderstood by Kant (I); then I give a sketch of Leibniz's theory of intellectual cognition, emphasizing the importance of what I shall call "broadly a priori cognition" (II). In the last section, I consider how this theory is challenged by

Hume (III).

I

Leibniz's distinction between confused and distinct cognition is an ingenious and important one in philosophy of mind and cognition. Unfortunately, it does not attract sufficient attention it deserves, not the least because of Kant's persistent but, I shall argue, unfair criticism of it based on crudest misunderstanding. The *locus classicus* of this distinction is Leibniz's short but seminal paper "Meditations on Knowledge, Truth, and Ideas." He first distinguishes between obscure and clear concepts or knowledge: A concept is *obscure* if it "does not suffice for recognizing the thing represented;" it is *clear* when "it makes it possible for me to recognize the thing represented" (PPL, 291). He further divides clear knowledge into confused and distinct knowledge: Knowledge is *confused* when "I cannot enumerate one by one the marks which are sufficient to distinguish the thing from others, even though the thing may in truth have such marks and constituents into which its concept can be resolved" (ibid.). If we can enumerate such marks, our knowledge is *distinct*. The difference between clarity and distinctness of cognition is put more straightforwardly in the *Nouveaux Essais*: while all *clear* ideas, including the confused ones, are *distinguishing*, i.e., distinguish objects, only *distinct* ideas are *distinguished*, i.e., are "in themselves distinct" and "distinguish in the object the *marks* which make it known, thus yielding an analysis or definition" (NE, II.xxix.4, 255; my italics). Distinct cognition, then, is cognition through marks, which is exactly what Kant calls "discursive" cognition and which makes, as we have seen, the logical use of the intellect possible.

Leibniz offers many interesting examples to illustrate his distinctions. (1) Our knowledge of the metaphysical concepts, such as the Aristotelian entelechy or the four causes, is not only confused, as Kant points out, but actually even obscure, for by virtue of them nothing can be distinguished (PPL, 291). (2) The range of clear but confused ideas is very broad: they include, first, the "particular objects of the senses" such as colors, odors, and flavors, which can be discerned "from each other but only by the simple evidence of the senses and not by marks that can be expressed" (ibid.).

Second, our aesthetic judgments are also clear but confused, as the artists can distinguish correctly between good and bad works of art but are "often unable to give a reason for their judgment" (ibid.). Third, the "empiric's kind of knowledge," such as that of the porters and peddlers who can say what their loads weigh to within a pound, belongs also to this kind, for the "accurate sense" of them "does not serve to reveal the nature and properties of the weight" (NE, II.xxix.13, 262). (3) Clear and distinct knowledge is exemplified by the assayers' knowledge of gold, which consists in the analysis of the concept of gold into its marks, such as heaviness, color, and aqua fortis. And our concepts of "objects common to many senses, such as number, magnitude, and figure," are usually clear and distinct (PPL, 292). Such knowledge is not necessarily superior to the confused one with respect to pragmatic purposes. For instance, the world's ablest expert in statics couldn't do as well as the porter and peddlers in determining the weight of their loads (NE, II.xxix.13, 262). Nevertheless, only distinct knowledge can relate to each other through marks and thereby become science.

Now it seems not unreasonable to equate the distinction between distinct and confused cognition with the one between intellectual and non-intellectual cognition. Distinct cognition always involves conceptual analysis, and conceptual thinking is possible only through the intellect. Even though the objects of some distinct cognition can be *given* only through the senses, such as the common-objects of shape and size, these objects can be distinctly *cognized* only through the intellect. By contrast, no matter how clear (in the technical sense) or how useful a confused cognition might be, it still does not involve any conceptual thinking and is therefore non-intellectual. If this is true, however, Kant's criticism of the Leibnizian distinction between sensibility and intellect must be wholly groundless.

Kant uses slightly different arguments in the *Inaugural Dissertation* and in the *Critique* to make such criticism, and it is not difficult to find that both are highly problematic. As we have seen, in the *Inaugural Dissertation* Kant argues that the distinction between confused and distinct cognitions is merely "logical" and does "**not touch** at all the things **given**." His point is easy to understand if we note the main purpose of that work: in order to distinguish the intelligible from the sensible world,

he has at first to distinguish the intelligible from the sensible objects, which in turn requires him to distinguish the different ways in which objects are given. Accordingly, since geometrical and physical cognitions are concerned with objects that are given through the senses, such cognitions are sensitive; whereas metaphysics alone is concerned with objects that are given through the intellect and is therefore intellectual cognition. However, it seems that Kant conflates here the origin of the *objects* with the origin of our *cognition* of these objects. Whereas the objects of geometry are sensible or at least non-intellectual, the distinct cognition of them is certainly impossible without the intellect. Since the intellect is defined in the Leibnizian tradition not as the faculty by means of which the objects of distinct cognition are *given*, but rather as the faculty for distinct cognition, Kant's criticism simply misses the point.

In the *Critique*, Kant reformulates his criticism in connection with the doctrine of things in themselves:

> The difference between an indistinct and a distinct representation is merely logical, and does not concern the content. … The Leibnizian-Wolffian philosophy has therefore directed all investigations of the nature and origin of our cognitions to an entirely unjust point of view in considering the distinction between sensibility and the intellectual as merely logical, since it is obviously transcendental, and does not concern merely the form of distinctness or indistinctness, but its origin and content, so that through sensibility we do not cognize the constitution of things in themselves merely indistinctly, but rather not at all. (A 43-4/B 60-2)

I don't pretend to discuss here Kant's doctrine of things in themselves. Nevertheless, I think it should be clear that his criticism in this passage is completely irrelevant, for no one claims that we can cognize things in themselves through sensibility, even merely indistinctly. Although it is extremely difficult to say what things in themselves are, it seems safe to say that if there is anything that can be counted as a Kantian thing in itself, it must be something which does not appear. Whatever one understands by "appear," it seems always true that things which do not appear cannot be cognized through sensibility. Thus Kant's conclusion that through sensibility we cannot cognize things in themselves at all is just a trivial truism that no one could reasonably deny. Unsurprisingly, there is simply no conflict between this truism and the definition of sensibility as the faculty of confused or indistinct cognition, as this definition does not imply that we have confused cognition of all kinds of entities. From the Leibnizian point of view, it seems reasonable to suppose that there are entities of which we can only have obscure ideas, such as the concepts of scholastic metaphysics, and perhaps

also entities of which even obscure ideas are impossible, such as those implying an outright logical contradiction. All these entities, like the Kantian things in themselves, surely cannot be cognized through the sensibility; presumably, they are not the proper objects of human cognition at all.

In fact, besides the distinction between intellectual and non-intellectual *cognition*, Leibniz also proposes a division of *objects* that is similar to what Kant proposes in the *Inaugural Dissertation*. Such division is already used in his examples of confused and distinct cognition, and more systematically formulated in a letter to Sophia Charlotte, the queen of Prussia. Leibniz writes:

> There are thus three levels of concepts: those which are *sensible* only, which are the objects produced by each sense in particular; those which are at once *sensible and intelligible*, which appertain to the common sense; and those which are *intelligible* only, which belong to the understanding. The first and second together are imaginable, but the third lie beyond the imagination. The second and third are intelligible and distinct, but the first are confused, although they may be clear and recognizable. (PPL, 549)

Among many other important points, I just want to note one advantage of Leibniz's treatment of the common-objects to Kant's. According to Kant, the spatial relations are form of the sensible world and of sensitive representations, and at the same time the objects of distinct cognition of geometry, but not themselves perceived through the senses. As I have argued, however, this position is not very plausible, as it is based on a problematic view of the nature of sensation. By contrast, the broadly Aristotelian view adopted by Leibniz seems to be more reasonable. Leibniz concedes that the spatial or geometrical concepts, but also numbers, are concepts of the common sense. Unlike Aristotle, however, he holds that these concepts are essential for our empirical cognition: "For whenever one tries to explain sensible qualities distinctly, one always turns back to mathematical ideas, and these ideas always include *magnitude*, or multitude of parts" (PPL, 548).[1] In this way, he anticipates the Kantian thesis of the necessary applicability of mathematics (especially geometry) to our experience, but without committing Kant's implausible view on our spatial perception.

Despite his general misunderstanding and persistent criticism of the Leibnizian distinction between distinct and confused representations, it seems that Kant once does quite correctly grasp and even develop this distinction. This curious fact is to be

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[1] As Alfredo Ferrarin rightly observes, "With respect to primacy in the order of truth, to universality and objectivity and to usefulness for science, seventeenth century philosophy inverts the relation between the Aristotelian proper and common sensibles" ("Kant's Productive Imagination," p. 72).

found in an early piece of Kant, *The False Subtlety of the Four Syllogistic Figures*, which contains his first discussion of the distinction between intellectual and non-intellectual cognition. In this essay, which is published nearly two decades before the first *Critique*, Kant declares a thesis that becomes well-known in the latter, namely, that "the higher cognitive power rests absolutely and simply on the faculty for judging."[2] If the nature of the intellect is understood in this way, Kant believes, a crucial difference between intellectual cognition and non-intellectual cognition will become apparent. For although some non-human animals act as if they were capable of something very similar to human cognition, their lacking of the capacity to judge prevents them from having any genuine knowledge. The dog, for example, can distinguish the roast from the loaf, but it does not really cognize this difference, for "it is one thing to **differentiate** things from each other, and quite another thing to **cognize** the difference between them. The latter is only possible by means of judgments and cannot occur in the case of animals, who are not endowed with reason" (DfS, 2: 59; cf. UD, 2: 285). In other words, the dog differentiates things only "physically," that is, it is "driven to different actions by different representations;" whereas the man is able to differentiate things "logically," that is, it is able to make the negative judgment that a thing A is not B (DfS, 2: 60).

The distinction Kant draws here is obviously the one between (clear but) confused or distinguishing cognition and distinct or distinguished cognition. Although Leibniz does not take this to be a distinction between animal and human cognition in the examples listed above, his discussion of animal cognition in other passages is quite similar to what Kant says here, and he stresses the importance of memory and habit for animal cognition, which Kant seems not to have paid enough attention (see the next chapter). On the other hand, I think it should be clear that there is no reason to overestimate, or even to mystify, Kant's characterization of the understanding as the faculty for judging. In the context both of *False Subtlety* and the *Critique*, his point is simply that the adequate form of conceptual or discursive thinking is judgment. But this seems to be precisely what Leibniz means in saying that distinct

[2] DfS, 2: 59. On the same page he writes: "**understanding** and **reason**, that is to say, the faculty of cognizing distinctly and the faculty of syllogistic reasoning, are not different fundamental capacities. Both consist in the faculty for judging; but when one judges mediately, one draws an inference;" cf. also A 69/B 94.

cognition involves an analysis or definition, for how is conceptual analysis or definition possible save in the form of judgment?

There is, however, at least one thesis in the *False Subtlety* that is not anticipated by Leibniz's distinction between confused and distinct cognition, namely the connection between understanding as the faculty for judging and self-consciousness:

> My present opinion tends to the view that this power or capacity is nothing other than the faculty of inner sense, that is to say, the faculty of making one's own representations the objects of one's thought. This faculty cannot be derived from some other faculty. It is, in the strict sense of the term, a fundamental faculty, which, in my opinion, can only belong to rational beings. But it is upon this faculty that the entire higher cognitive power is based. (ibid.)

Anyone who is familiar with the basic ideas of the Transcendental Deduction will find that the latter is anticipated by this passage to a considerable extent. But there is still an essential difference: whereas the *inner sense* is initially taken to be the fundamental faculty upon which the intellect or the entire higher cognitive power is based, it is the "synthetic unity of apperception" alone that is acknowledged with the same status in the *Critique* (B 134n.). However, a more sympathetic reader of this passage will note that here the faculty of inner sense is simply identified with the faculty of self-consciousness, thus what Kant actually wants to suggest is no more than a connection between the capacity for judging and the faculty of self-consciousness. And when he later became to be aware of the distinction between inner sense and apperception, he would not hesitate to say that the capacity of judging is founded rather on the apperception, which alone might be regarded as the "fundamental faculty." We may further note that the conclusion is made here in a very tentative tone, which is presumably because in the *False Subtlety*, Kant was yet unable to really establish the connection between self-consciousness and the capacity of judging, that is, he was yet unable to explain the capacity of judging with reference to the self-consciousness alone. Indeed, it takes Kant more than ten years, first in the so-called *Duisburg-Nachlass* and then in the first *Critique*, to elaborate such an explanation.

II

In the Preface to his *Nouveaux Essais* Leibniz asks

> whether all truths depend on experience, that is on induction and instances, or if some of them have some other foundation. For if some events can be foreseen before any test has

> been made of them, it is obvious that we contribute something from our side. Although the senses are necessary for all our actual knowledge, they are not sufficient to provide it all, since they never give us anything but instances, that is particular or singular truths. But however many instances confirm a general truth, they do not suffice to establish its universal necessity; for it does not follow that what has happened will always happen in the same way. (NE, 49)

The distinction Leibniz draws here is the one between particular or singular truths and general or necessary truths. The former, Leibniz contends, are grounded on the senses, whereas the latter are impossible without our "contributing something from our side," which means for him the contribution of the intellect. Leibniz's argument for this thesis is that the senses can give us only particular instances, but from mere instances no universal and necessary truth could be derived. At first sight, this seems just a rehearsal of the familiar Aristotelian doctrine that the objects of senses are singular or particular things, whereas those of the intellect are universals. Unlike the Aristotelian tradition, however, Leibniz is concerned not so much with universal concepts as with universal truths. Despite the apparent similarity, these two kinds of universality are quite different. In the Aristotelian tradition, it is because of the physiological fact that our sense-organs can only be affected by particular things that we are capable of knowing what is common to many things only though the intellect. But it does not follow that the intellect enables us to know universal truths in Leibniz's sense. For the latter require not merely that the statements are true of *many* things, but that they hold for *every* thing under proper description. For a better appreciation of Leibniz's point, let us consider his criticism of the classical theory of abstraction with an example.

According to the classical theory of abstraction, which is the standard one in the Aristotelian-scholastic tradition and which Leibniz rightly attributes to Locke, universal concepts, in particular essences or quiddities, are abstracted from particular phantasms or images, and the act of abstraction, i.e. of making what is particular and sensible universal and intelligible, is the first operation of the intellect. This model is now seriously challenged by Leibniz. Suppose one has seen many instances of swans and finds all of them white. One would naturally abstract from them the universal concept of swan as a white bird. This concept, being universal, is a kind of intellectual cognition, but does the mere possession of it enable us to claim the universal truth that all swans are white? Obviously not. Thus it is impossible to know universal truths by means of abstraction alone (the problem of necessity is more complicated and to be

discussed later). Nor could they be cognized by means of the second operation of the intellect, i.e. by composing and dividing. For these operations can only be used to clarify the relations between concepts, such as to analyze the concept of bird into those of animal and winged, but are not responsible for the original formation of any concept. There is, then, no source in the Aristotelian and indeed in the empiricist theory of the intellect in general that can be used to account for the possibility of universal knowledge.

Leibniz sees it necessary to give an alternative account of the nature of the intellect and intellectual knowledge. The gist of his account is summarized in one sentence by himself, by adding a few words to a famous dictum of scholastic empiricism: "*Nihil est in intellectu quod non fuerit in sensu, excipe: nisi ipse intellectus*" (NE, II.i.2, 111). According to Leibniz, the intellect itself is not restricted to the operations of abstraction and composition or division; it must rather make some more substantial contribution to human knowledge, which not only is the source of our knowledge of universal and necessary truths, but also provides us with the metaphysical concepts. Our first metaphysical idea is that of ourselves, from which we proceed to know other metaphysical ideas such as substance, soul, cause, effect, and finally God.[3] In addition, the metaphysical concepts or truths are held to be that which "makes us capable of the sciences or of demonstrative knowledge," and from which the concepts of "logic and ethics" are originated (PPL, 638; 549). Unfortunately, Leibniz gives no argument for these bold claims.

The affinity between this account and Kant's doctrine of the real use of the intellect in the *Inaugural Dissertation* is obvious, but I don't pretend to say that Kant was actually influenced by Leibniz. Moreover, a major difference between them is that Leibniz does, while Kant does not, regard the real use of the intellect as necessary for our cognition of the sensible world. As Kant thinks more thoroughly on the nature both of the metaphysical concepts and of empirical cognition, however, he comes to a position which is closer to that of Leibniz than what he says in the *Inaugural Dissertation*. We shall say more about this in the next chapter.

Let us return to Leibniz. Instead of showing how our knowledge of universal and

[3] "On What is Independent," PPL, 547-553, here 549; cf. NE, Preface, 51; II.i.2, 111; IV.iv.5, 392; "Principles of Nature and of Grace," PPL, 636-641, here § 5, 638; "Monadology," PPL, 643-652, here § 30, 646.

necessary truths is made possible by the metaphysical concepts, Leibniz actually adopts another route to explain the possibility of such knowledge. Following the Cartesian tradition, Leibniz claims that we find in the intellect above all "the *force of the conclusions* in reasoning, which are a part of what is called the *natural light*" (PPL, 549). The first kind of things which are illuminated by the natural light are not the metaphysical concepts or truths, but what might be justifiably called "analytic truths," though this name is invented by Kant later. Such truths can be further divided into two kinds: those which are true by virtue of the laws of formal logic alone, e.g. if all As are B then some Bs are A; and those which require conceptual analysis. The example Leibniz gives for the latter is that all just beings are charitable, but not all charitable beings are just, for the concept of charity is included in that of justice but not vice versa (PPL, 550).

The second kind of things the natural light illuminates are the "axioms of mathematics." Instead of the axioms of (Euclidean) geometry, the examples Leibniz gives are that "if the same quantity is taken away from two equals the remainders are equal," and that "if both sides of a balance are equal neither will sink" (PPL, 550). Like the analytic truths, such truths are known strictly a priori, i.e. independently from *any* experience; but unlike the former, they are not concerned with merely intelligible objects such as the forms of thought or notions of pure morality, but with the common-objects or quantities. Although Leibniz does not invent the distinction between analytic and synthetic judgments, the separate discussion of the two groups of propositions may suggest that he is already quite sensitive to the difference between analytic and synthetic a priori judgments. But even if synthetic judgment a priori is already recognized as a particular type of cognition in Leibniz, he does not ask the specific question of how such cognition is possible.

Finally, Leibniz claims that all *necessary* truths are known "only by this natural light and not at all by sense experiences. For the senses can indeed help us after a fashion to know what is, but they cannot help us to know what *must* be or what cannot be otherwise" (ibid.). Leibniz gives two examples of such truths: first, "every heavy body falls toward the center of the earth, and is not sustained freely in the air;" second, "the odd numbers when added together continuously in their order produce

the square numbers in order" (ibid.). Here his point is the same as the passage quoted at the beginning of this section, and now we can become clearer about what necessity means in this context. It is not used in the strictly logical sense which Leibniz sometimes does endorse, according to which a proposition is necessarily true if and only if its opposite is or implies a contradiction, for there is no contradiction in the opposites of his two examples, at least of the first one. The opposition of necessity here is not impossibility, but rather contingency. The difference between necessary truths and contingent truths is that while the latter are grounded on brute facts and can be known only through the acquaintance with the facts, the former are grounded on the nature or essence of a sort of things,[4] hence can be known *broadly* a priori by means of demonstration. By "broadly a priori" I mean the mode of knowledge which is independent from experience of a particular fact, but not necessarily from experience in general. It should be distinguished from *strictly or absolutely* a priori knowledge, which, in Kant's words, occurs not only "independently of this or that experience, but rather […] **absolutely** independently of all experience" (B 2f.). That if I do not hold my book it will fall off, for example, can be known a priori in the broad but not the strict sense, as it can be asserted without my actually seeing its falling, but not if I never saw the fall of anything. Thus defined, strictly a priori knowledge is obviously a proper subset of broadly a priori knowledge. What Leibniz means by universal and necessary truths, then, seems to be nothing but the truths known broadly a priori, as they are grounded on, and indeed express, the nature or essence of a sort of things, thus are necessary and universal, i.e., hold for every thing of that sort.

In early modern philosophy, the notion of necessity is most commonly connected with the idea of causation, which says that the cause *necessitates* the effect, so that if the cause obtains, the effect *must* follow. The cause is usually supposed to be a substance that possesses certain power which is not observable in itself but brings about a change in another substance as its effect. The causal power is usually regarded as belonging to the nature or essence of a sort of substances, and the necessity of causal relation is often conflated with the necessity of broadly a priori truths.

[4] Here "sort" should be understood very loosely, including, but not restricted to, the natural kinds. Besides them, we have also, so to speak, mathematical sorts such as triangle or integer. Even body can be regarded as a sort, and the nature of this sort is exactly the object of physics.

However, since mathematical truths are not about causal powers yet also broadly a priori and necessary, we may conclude that there are at least two different kinds of necessary truths. Accordingly, intellectual knowledge is characterized by Leibniz sometimes as knowledge of causes, sometimes as that of the demonstrative reason, both of which are contrasted to knowledge of mere facts.

This characterization of intellectual cognition has many great merits: first, it perfectly explains why we are prone to some common mistakes. It is probably part of our nature to generalize. However, if we are unable to find the common cause or demonstrative reason which justifies our generalization, we shall be very probably mistaken. Leibniz gives two examples for false generalization: first, "iron sinks to the bottom when placed in water;" second, "two lines which approach each other continuously finally meet" (PPL, 551). Both theses are well supported by many instances, but both of them are false, for an iron pot can be made so hollow that it floats and can even carry a considerable load besides, and geometry furnishes lines called asymptotes which, when extended to infinity, approach each other continuously yet never meet.

Another merit of Leibniz's characterization is that it leaves sufficient place for non-intellectual cognition, thus avoids the seemingly absurd supposition, sometimes attributed to Descartes, that the non-human animals are merely machines or automata and therefore incapable of any cognition. "There is," he writes, "a connection between the perceptions of animals which has some resemblance to reason, but it is grounded only on the memory of *facts* or effects and not on the knowledge of *causes*. Thus a dog runs away from the stick with which he has been beaten, because his memory represents to him the pain which the stick had caused him" (PPL, 638; cf. 645). Such non-intellectual cognition not only belongs to non-human animals, infants, and children, but the major part of our cognition is also non-intellectual: "Men act like beasts insofar as the sequences of their perceptions are based only on the principle of memory, like empirical physicians who have a simple practice without theory. We are all mere empirics in three-fourths of our actions. For example, when we expect daylight tomorrow, we act as empiricists, because this has always happened up to the present" (PPL, 645; cf. 638). In the terminology discussed in the last section, such

non-intellectual cognition is classified as clear but confused. Confused cognition, as we stressed above, is not necessarily inferior to distinct, scientific cognition in every respect; indeed, it is even superior to the latter for many pragmatic purposes. However, it should now be clear that it is really inferior in one important respect, namely, that only distinct, intellectual cognition enables us to have broadly a priori cognition and to predict, i.e. to make inference from past to future, infallibly and with certainty.

The contrast between intellectual or distinct and non-intellectual or confused cognition is also explained by means of the distinction between *ideas* and *images*. In Leibniz's technical sense, ideas are nothing but distinct concepts, and do not include confused mental entities. Clear but confused representations are classified now as images. Accordingly, while the British empiricists take ideas and images to be more or less the same thing, or even give priority to images or impressions over ideas, Leibniz persistently stresses that they must be separated. "The thought sequences of beasts," he says, "are only a *shadow* of reasoning, that is, they are nothing but a connection in the imagination — a passage from one image to another; for when a new situation appears similar to its predecessor, it is expected to have the same concomitant features as before, as though things were linked in reality just because their images are linked in the memory" (NE, Preface, 51). Since the reasoning or quasi-reasoning of the imagination depends solely on the resemblance of images, it can never attain the essences or causal powers behind them, hence can never provide us with the foundation of demonstration, i.e. the distinct concepts, by means of which alone our knowledge of universal and necessary truths is possible.

In the previous chapter, I have tried to argue that Kantian intuitions can be interpreted as (Aristotelian) images. If this is so, since ideas in Leibniz's technical sense are precisely Kantian concepts, it seems that the Kantian distinction between *intuitions* and *concepts* is well anticipated by the Leibnizian distinction between images and ideas. However, there is a remarkable difference between Leibniz's and Kant's views of the role of images in geometry. Kant, like Aristotle, holds intuitions or images to be indispensable for geometrical demonstration; but Leibniz holds that "knowledge of figures does not depend upon the imagination, any more than

knowledge of numbers does, though imagination may be a help" (NE, II.xxix.13, 261). We can find in the *Nouveaux Essais* several interesting arguments for this thesis: First, Leibniz notices that whereas we can hardly have an adequate image of a chiliagon, or distinguish it from a polygon with 999 sides, we can have some precise knowledge of the nature of this shape with certainty. Such knowledge, therefore, does not depend on images or the imagination. Second, he takes the notorious problem of universal triangle as evidence for the thesis of the independence of geometry from images: if geometry is dependent on images, since any particular image of triangle must be either rectangular or acute-angled or obtuse-angled, we would be able to have geometrical knowledge only of each particular type of triangle, but not of triangle in general, which is absurd (NE, IV.ii.15). Finally, he reuses the example of asymptotes to show that images easily mislead us to some false conclusions (NE, IV.xii.6).[5]

All these arguments are, I think, quite plausible. However, what they can prove is merely that geometry cannot be derived *solely* from images or the imagination, but not that the latter are not essential to geometry. And it is precisely the latter thesis that is denied by Kant when he claims that geometry is sensitive. Thus there is *perhaps* no real conflict between the views of Leibniz and Kant (and Aristotle) with regard to the role images and imagination play in geometrical knowledge. Despite his reluctance in embracing images as an indispensable component of our geometrical knowledge, Leibniz ultimately concedes that the axioms of (Euclidean) geometry are evident only by means of images (ibid.). And he seems to hold that *both* images and imagination *and* the intellect are necessary for geometry in the following passage:

> It is true that the mathematical sciences would not be demonstrative but would consist of a simple induction or observation which could never assure us of the perfect generality of the truths found in it, if something higher, which only the intellect can provide, did not come to the aid of *imagination* and *sense*. (PPL, 548)

Now it seems that the situation of geometrical knowledge is more or less the same as that of broadly a priori empirical knowledge, for in both cases we must first have something like images, which are then rendered intelligible, that is, transformed into distinct concepts, which are the foundation of demonstrative reasoning. Unlike analytic truths, which can be cognized without appeal to any image and presumably

[5] In addition, Leibniz gives an interesting answer to the famous Molyneux problem by invoking the distinction between images and ideas, arguing that a man born blind, once he is made to see, can distinguish a sphere from a cube, as he has some "rudiments of a natural geometry" (NE, II.ix.8). But this is an application of that distinction rather than an argument for it.

by means of certain intellectual intuition (not in Kant's technical sense), our knowledge of those truths necessarily involves the cooperation of the imagination and the intellect. This is an important insight of Leibniz. However, his account is too general to be informative. It does not tell us *what* can be rendered intelligible (colors, for example, are held to be something which is impossible to be transformed into distinct concepts); nor is it clear *how* the intellect operates in generating concepts (the traditional answer to this question, the abstractionist account, is shown to be inadequate). We shall see that the constructive part of Kant's first *Critique* is primarily an answer to these questions, especially the second one.

III

The *locus classicus* of Hume's challenge to the rationalistic account of intellectual knowledge is the section 4 of *Enquiry concerning Human Understanding*, which bears the title "Sceptical Doubts concerning the Operations of the Understanding." This section begins with the famous "Hume's fork," namely the distinction between "Relations of Ideas" and "Matters of Fact." Relations of ideas are the objects of "the sciences of Geometry, Algebra, and Arithmetic; and in short, every affirmation, which is either intuitively or demonstratively certain;" they are "discoverable by the mere operation of thought, without dependence on what is any where existent in the universe" (EHU, 4.1).[6] As far as the relations of ideas are concerned, therefore, there is no difference between Hume's position and that of Leibniz. His "sceptical doubts" are not directed at the operations of the understanding in intuition and demonstrative reasoning. Matters of fact, by contrast, cannot be known to be true or false by intuition or demonstrative reasoning alone, for "[t]he contrary of every matter of fact is still possible; because it can never imply a contradiction, and is conceived by the mind with the same facility and distinctness, as if ever so conformable to reality" (EHU, 4.2). By what means, then, can we decide the truth or falsehood of a proposition about matters of fact?

Like virtually all other philosophers, Hume holds that "the present testimony of

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[6] To be precise, this is only Hume's position in the *Enquiry*. In the *Treatise*, he holds that the first principles of geometry "are still drawn from the general appearance of the objects" (1.3.1.4), hence probably should be classified not as relations of ideas, but rather as matters of fact.

our senses” and “the records of our memory” are among the sources of our knowledge of matters of fact (EHU, 4.3). However, they do not exhaust all the sources of this kind of knowledge, for what they can tell us is no more than the mere facts or instances isolated from one another, yet our knowledge of matters of fact is not restricted to them, but also includes the connections between them. It is because of our knowledge of such connections that we are capable of inferring some unknown facts from what is present to us, and of predicting what will happen in the future based on such inference—in short, of having broadly a priori knowledge of matters of fact. Now Hume claims: “All reasonings concerning matter of fact seem to be founded on the relation of *Cause and Effect*. By means of that relation alone we can go beyond the evidence of our memory and senses” (EHU, 4.4). This claim seems too strong, as we may also invoke other principles in our reasonings concerning matter of fact, such as the various principles of conservation and Ockham’s Razor. But causal inference is certainly one of the most fundamental sources of our knowledge of matters of fact, and Leibniz, as we have seen, often characterizes the foundation of our broadly a priori knowledge as the knowledge of causes. Thus, Hume’s “sceptical doubts” concerning our knowledge of causal relations, which amount to the thesis that they are not the object of our intellectual cognition at all, should be taken as nothing less than a challenge to the possibility of our broadly a priori knowledge of matters of fact in general. But how could he argue for that thesis?

Hume’s argument is developed in two steps. In the first step, he argues that causal relations cannot be cognized a priori. This is because “the effect is totally different from the cause, and consequently can never be discovered in it” (EHU, 4.9). For example, when I see a billiard-ball moving in a straight line towards another, I cannot infer, by means of intuition or demonstration, whether and how the second ball will move, for I can conceive of several different possibilities concerning the motion of the two balls, none of which is “more consistent or conceivable than the rest” (EHU, 4.10). Note that the conception of consistency or conceivability Hume may appeal to here is no more than merely *logical* consistency or conceivability, according to which anything which does not imply a logical contradiction is consistent or conceivable. Now it is unclear whether the only source of our a priori knowledge is the principle of

(non-)contradiction—don't forget the difficulties with the status of geometrical knowledge and especially Hume's own ambivalent attitude to it. But even if we add a few intuitions (such as those concerning the fundamental concepts of geometry) to the sources of our a priori knowledge, and concede the soundness of Hume's argument, this will not amount to a challenge to the Leibnizian account of a priori or necessary knowledge, for what Hume establishes is merely that we have no strictly a priori knowledge of causal relations, but from this it does not follow that we do not have broadly a priori knowledge of them. It is exactly the latter thesis, however, that lies at the heart of the Leibnizian account.

The real challenge Hume makes to the Leibnizian conception of causal necessity is in the second step of his argument. The thesis he endeavors to defend in this step is that "even after we have experience of the operations of cause and effect, our conclusions from that experience are *not* founded on reasoning, or any process of the understanding" (EHU, 4.15). His argument runs as follows: first, he assumes that "there is no known connexion between the sensible qualities and the secret powers; and consequently, that the mind is not led to form such a conclusion concerning their constant and regular conjunction, by any thing which it knows of their nature" (EHU, 4.16). For example, from the color, weight, and consistence of bread, we cannot know that it is fit for the nourishment and support of a human body. This assumption seems quite plausible, for otherwise all scientific inquiries would be superfluous. Then he points out that what we can know is only the constant conjunction of certain kinds of phenomena in the past, but this does not imply that they will be still so connected in the future. As he famously puts it:

> These two propositions are far from being the same, *I have found that such an object has always been attended with such an effect*, and *I foresee, that other objects, which are, in appearance, similar, will be attended with similar effects*. … The connexion between these propositions is not intuitive. There is required a medium, which may enable the mind to draw such an inference, if indeed it be drawn by reasoning and argument. What that medium is, I must confess, passes my comprehension; and it is incumbent on those to produce it, who assert, that it really exists, and is the origin of all our conclusions concerning matter of fact. (EHU, 4.16; cf. 4.21)

In short, the principle Hume calls here into question is that the future will resemble the past, or that the nature is uniform. He argues that this principle cannot be known intuitively or demonstratively, as the contrary of it, that the course of nature may change, implies no contradiction (EHU, 4.18). Nor could it be known by experimental

reasoning or reasoning concerning matters of fact, for all such reasoning is founded on causal relation, but our knowledge of this relation is possible only by presupposing that principle. Thus we "must be evidently going in a circle, and taking that for granted, which is the very point in question," if we endeavor to derive that principle from reasoning concerning matters of fact (EHU, 4.19). As a result, we can have absolutely no knowledge of the principle of the uniformity of nature, and there is absolutely no rational ground for our knowledge of causal relations.

Let us remind ourselves of Leibniz's account of broadly a priori knowledge. Such knowledge is grounded on universal causal laws which we derive from causal relations discovered in past instances. Although the discovery of these relations in past instances must rely on senses and memory, the very reasonings by means of which we proceed to universal causal laws and to what will happen in the future are demonstrative. However, now it should be evident that such demonstration is possible only if the nature is uniform. Thus, if Hume had succeeded in showing that the principle of the uniformity of nature is unfounded, we would be incapable of having any broadly a priori knowledge of matters of fact. On the other hand, it is an undeniable fact that we do have ideas of necessary causal relations. How could Hume explain this fact?

It is not difficult to find an explanation within the framework of Hume's naturalism. To say that our knowledge of causal relations has no *rational* ground, does not mean that it has no ground at all. The real and only ground for such knowledge, Hume contends, is the connexion which "we *feel* in the mind," or the "customary transition of the imagination from one object to its usual attendant" (EHU, 7.28). In other words, Hume proposes a "projection" theory of causation, which says that the necessity of causal relation is nothing other than the projection of the *felt* necessity, which is resulted from our habit or custom, into the objects. In this way, he breaks resolutely with the traditional view of causation, according to which our knowledge of the cause is one of the highest achievements of the human intellect. For Hume, such knowledge stems not from intellect or reason at all, but rather from custom and imagination, the operations of which "are a species of natural instincts, which no reasoning or process of the thought and understanding is able, either to produce, or to

prevent."[7]

Leibniz, as we have seen, does not deny the importance of the instincts, and even concedes that in ordinary life reasonings based on memory and imagination are much commoner ("in three-fourths of our actions"). But he would surely insist on the difference between reason and instinct, and reject any attempt at conflating or reducing the causal necessity, which is the ground of true, scientific reasoning, with or to the necessity we merely feel, which is the ground of the "shadow of reasoning," which we share with other higher animals. However, although the distinction Leibniz insists on has no little intuitive plausibility, it turns out, under scrutiny, to depend on the principle of the uniformity of nature. Thus, for anyone who wants to maintain the Leibnizian distinction and the possibility of broadly a priori knowledge, he must be able to defend this principle against Hume's "sceptical doubts." Since he cannot anticipate Hume's argument, and does not appreciate the problematic nature of that principle, Leibniz does not provide a defense of it. This task, I shall argue, is undertaken by Kant as the central project of the constructive part of his theoretical philosophy.

My discussion of Hume's theory of causation is based solely on the *Enquiry*, and does not take into account what he says in the *Treatise*. I have three reasons for doing so: first, I think his discussions in the *Enquiry* alone suffice to give us a clear picture of his criticism of the traditional view of causation; second, though not having been taken seriously by the majority of scholars, Hume himself expresses his wish in the "Advertisement" for the *Enquiry* that instead of the *Treatise*, the two *Enquiries* and other essays "may alone be regarded as containing his philosophical sentiments and principles;" last but not least, it is the *Enquiry* that was first translated into German and exerted great influences on the German philosophical discourses in 1760s-70s in

[7] EHU, 5.8; cf. 9.6: "[T]he experimental reasoning itself, which we possess in common with beasts, and on which the whole conduct of life depends, is nothing but a species of instinct or mechanical power, that acts in us unknown to ourselves; and in its chief operations, is not directed by any such relations or comparisons of ideas, as are the proper objects of our intellectual faculties."

general and Kant's philosophical development in particular.[8] Nevertheless, many commentators maintain that Kant must have been acquainted with Hume's discussions of causation in the *Treatise*, even if only indirectly, for they believe that Kant's famous discussion of the same theme in the Second Analogy can be understood only against the background of the latter.[9] I don't find this claim quite convincing, but in order to show why it is not, we have first to have some acquaintance with what Hume says in the *Treatise*.

The main difference between Hume's accounts of causation in the *Treatise* and in the *Enquiry* is that in the latter work he just questions what the ground of our knowledge of particular causal relations is, while in the former he not only asks this question, but also casts doubt on a "general maxim in philosophy, that *whatever begins to exist, must have a cause of existence*" (THN, 1.3.3.1). By contrast, in the *Enquiry* he writes: "It is universally allowed, that nothing exists without a cause of its existence" (EHU, 8.25). To use Lewis White Beck's apt labels, the question Hume raises in the *Treatise* alone concerns the principle "every-event-some-cause," whereas the one he raises in both works concerns the principle "same-cause-same-effect."[10] These questions are obviously different, but the relation between them is not so clear. In the *Treatise*, Hume first argues that the every-event-some-cause principle cannot be derived "from knowledge of any scientific reasoning," but "must necessarily arises from observation and experience" (THN, 1.3.3.9). Instead of explaining its derivation from observation and experience, however, he suggests that "it will be more

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[8] The *Enquiry* first appeared in German in 1755 as the second part of Hume's *Vermischte Schriften*, edited by Johann Georg Sulzer, 4 vols. (Hamburg and Leipzig, 1754-56), while the *Treatise* has not been translated into German until 1790-92. The *Enquiry*, in particular the section IV of it, turns out to be very popular among German philosophers even before the maturity of Kant's thought. It has been discussed by Moses Mendelssohn in his essay "Ueber die Wahrscheinlichkeit," and by Marcus Herz in his *Betrachtungen aus der spekulativen Weltweisheit*. In his essay Mendelssohn writes: "The German translation of this work [sc. the *Enquiry*] is in everyone's hand and we shall quote the chief objections from the fourth section which he calls *Sceptical Doubts concerning the Understanding*, which generally appear to suspend physical certainty." (quoted from Klemme, "Causality," p. 381). Moreover, Johann Nicolaus Tetens also provides a detailed discussion of Hume's view on causality, which does not seem to be based on other text than the *Enquiry*, in his *Philosophische Versuche über die menschliche Natur und ihre Entwicklung*. Kant was surely familiar with both the translation of the *Enquiry* and the discussions of Hume by the German philosophers.

[9] See Vaihinger, *Kommentar*, vol.1, pp. 347f., who probably for the first time suggests that Kant is acquainted with Hume's theory of causation in the *Treatise* through James Beattie's *Essay on the Nature and Immutability of Truth*, which is translated into German in 1772. This suggestion is followed by a number of prominent Kant-scholars, including Kemp Smith, *Commentary*, pp. xxxiii ff., 61ff., 593ff.; R. P. Wolff, "Kant's Debt to Hume via Beattie;" Beck, *Essays on Kant and Hume*, pp. 117ff. For a different opinion, see Guyer, *Knowledge, Reason, and Taste*, p. 75 n. 2.

[10] Beck, *Essays*, p. 120.

convenient to sink this question" in that concerning the same-cause-same-effect principle, in the hope that "the same answer will serve for both question" (ibid.). The answer he provides for the latter question is roughly the same as the one he gives in the *Enquiry*. But this answer, which is sketched above, apparently has nothing to say about the principle every-event-some-cause, and Hume never returns to discuss this principle again in the *Treatise*.[11]

We shall discuss Kant's relation to Hume in terms of these two questions in the next chapter. But before turning to Kant, I find it important to clarify what Hume's "Sceptical Doubts concerning the Operations of the Understanding" precisely means. To be sure, Hume is recommending here certain kind of skepticism, but what kind exactly? It is not the Cartesian one about the existence of external things or of other minds, nor is it concerned with what might be called the pure use of the intellect, i.e. the operations of the intellect in the acquisition of knowledge about relations of ideas, which is due to intuition and/or demonstrative reasoning alone. The only target of this skepticism is the *empirical use of the intellect*, i.e. the operations of the intellect in the acquisition of knowledge about matters of fact. Through his penetrating analysis, Hume shows that all such knowledge is based on our knowledge of causal relations, the rationality of which depends on the veracity of the principle of the uniformity of nature. But this principle, Hume argues, cannot be justified either through intuition, or by demonstrative reasoning, or by experimental reasoning. Accordingly, his skepticism is the one concerning the rationality of our empirical knowledge, the core of which is the skepticism concerning the principle of the uniformity of nature.

If this is true, then the "standard" conception of Hume's skepticism, according to which it is above all concerned with the problem of the rationality of *induction*, would be ill-founded, as we do not make any explicit reference to the concept of induction in explaining his skepticism. But do we perhaps make some implicit reference to it? This depends on what we understand by "induction." If *all* empirical knowledge, including propositions known broadly a priori, is said to be inductive, then we do make implicit reference to it; but this usage simply masks, rather than discloses, why our empirical

[11] According to Guyer (*Knowledge, Reason, and Taste*, pp. 83f.), Hume returns to the question concerning the principle every-event-some-cause with the definitions of cause proposed in THN, 1.3.14.35, which he uses to show that we have no basis whatever for our belief in this principle. But I don't see how the passage Guyer refers to can support his interpretation, nor does it seem to be Hume's intention that this principle is *entirely* groundless.

knowledge is *problematic*. On the contrary, we do not make even implicit reference to it if induction denotes only the kind of knowledge which is based on *nothing but* the observation of instances. On this view, induction is non-rational *per definitionum*, and the problem of the rationality of induction would therefore never arise. If the latter sense is adopted, then we can see clearly where the problem of our empirical knowledge consists, and what Hume's distinctive approach to his skepticism is. Instead of something which is called into doubt, induction now becomes the very means Hume uses to respond to those doubts, or to provide a "Sceptical Solution" to them. It is by means of induction or observation of repetitive instances, Hume argues, that we assume, tacitly in the imagination but not in the understanding, that the nature is uniform. Obviously, adopting the second sense of induction is the philosophically more interesting choice, and this sense is also adopted by Leibniz and Kant when they claim that induction is insufficient for our knowledge of strictly universal truths (cf., e.g., B 3, A 91/B 124). As a result, it seems reasonable to conclude that Hume's skepticism is one concerning the rationality of empirical knowledge in general and of the principle of the uniformity of nature in particular, but not of induction.

Chapter 4 What is Kant's Metaphysics of Experience?

In the previous chapter, we have explained Leibniz's distinction between sensible and intellectual cognition, emphasizing the importance of what I dubbed "broadly a priori" cognition. We have also shown that this distinction is seriously challenged by Hume's "sceptical doubts" concerning the principle of the uniformity of nature. In this chapter, I shall argue that Kant's theory of experience can be understood exactly as a defense of the Leibnizian distinction against Hume's challenge. This thesis is more unorthodox as it may seem: On the one hand, throughout the main works of the Critical philosophy, Leibniz is more frequently criticized (though largely unfairly, as I hopefully have shown) than defended. And Kant explicitly claims that he is concerned not so much with broadly a priori cognition as with strictly a priori cognition (B 2). On the other hand, although it is quite common to interpret Kant's Critical philosophy as a response to Hume, there is no universal agreement on how such response should be understood. And most commentators believe that Kant neither successfully responds to Hume's skepticism concerning the principle of the uniformity of nature, nor even attempts to do so.[1] Thus solid arguments are required for my thesis.

To interpret Kant's theory of experience as his defense of the Leibnizian distinction between sensible and intellectual cognition against Hume, however, is not primarily intended to reveal any historical connection between these philosophers. Instead, my primary aim is to propose a way of understanding Kant's own project. There are a lot of controversies about the goal and the structure of the various parts of the Transcendental Analytic and their relations, which controversies have significant bearings on the assessment and reconstruction of Kant's arguments. Since Kant's comments on these issues are scattered and often puzzling, and given the unusual way the first *Critique* is composed, such controversies do not seem to allow a satisfactory settlement on purely *internal* evidence. Thus I adopt a different route in order to shed some fresh light on these problems. I try to demonstrate what Kant has to do if he intends to give an answer to Hume's skepticism, and that he really has such intention. If I am largely right on these two points, then we will have a firm foundation for

[1] The only major exception is Michael Friedman. See Friedman, "Causal Laws and the Foundations of Natural Science;" and De Pierris and Friedman, "Kant and Hume on Causality."

further inquiries into his various arguments.

This chapter is divided into four parts: I begin with a discussion of a widely accepted but ultimately unsatisfactory interpretation of Kant's philosophical project and his response to Hume (I), and argue that the problem of this interpretation has its origin in a confusion of Kant himself by examining the development of his conception of metaphysics after the *Inaugural Dissertation* (II). In the next step, I propose an alternative interpretation, which emphasizes the significance of the problem of broadly a priori judgments (II). On this basis, I explore the implications of this interpretation for understanding his theoretical philosophy in general and his notion of intuition in particular (IV).

I

Kant famously claims that the "real problem of pure reason is now contained in the question: **How are synthetic judgments a priori possible?**"[2] This problem is of highest importance for Kant, because he holds it to be the question concerning the possibility of cognition from pure reason, in particular of metaphysics: "On the solution of this problem, or on a satisfactory proof that the possibility it demands to have explained does not in fact exist at all, metaphysics now stands or falls" (B 19). Immediately after this sentence, Kant relates the problem of the possibility of synthetic judgments a priori to Hume:

> David Hume, who among all philosophers came closest to this problem …, stopped with the synthetic proposition of the connection of the effect with its cause (*Principium causalitatis*), believing himself to have brought out that such an a priori proposition is entirely impossible, and according to his inferences everything that we call metaphysics would come down to a mere delusion of an alleged insight of reason into that which has in fact merely been borrowed from experience and from habit has taken on the appearance of necessity. (B 19-20)

From these quotations, a clear picture about Kant's conception of metaphysics and of the "Humean problem" emerges: The body of metaphysics is composed by various synthetic judgments a priori, among which a most important one is the principle of causality. As Kant understands it, this principle, and indeed the possibility of metaphysical cognition in general, is seriously challenged by Hume's naturalistic account of our ideas of cause and effect. As a result, his own philosophical project can

[2] B 19. Kant's statements here about metaphysics, Hume, and the problem of the possibility of synthetic judgments a priori are an adaptation of what he previously says in § 5 of the *Prolegomena* (4: 275ff.), to which the quotations in the main text should be compared.

appropriately be understood as a response to Hume: With the main arguments of the Transcendental Analytic, Kant "restores to the pure concepts of the understanding their a priori origin, and to the universal laws of nature their validity as laws of the understanding," which he regards as the "complete solution of the Humean problem" (Prol, 4: 313).

We may call this interpretation the "metaphysical" reading of Kant's response to Hume. According to this reading, Hume's skepticism is concerned not with any empirical cognition, including the broadly but not strictly a priori cognition, but rather with a particular metaphysical principle alone, namely the principle of causality.[3] What, then, is the content of this principle? There can be little doubt that the very principle in question is that "every alteration must have some cause", which is first used as an example of strictly a priori cognition in Kant's initial discussion of Hume in the *Critique* (B 5), and then becomes the very thesis he attempts to prove in the Second Analogy (cf. B 232). Formulated with Beck's labels introduced in the last chapter, the challenge made by Hume's skepticism or naturalism is understood by Kant only as the one concerning the principle every-event-some-cause, but not the principle same-cause-same-effect.

In a celebrated quasi-autobiographical remark Kant writes: "I freely admit that the remembrance of **David Hume** was the very thing that many years ago first interrupted my dogmatic slumber and gave a completely different direction to my researches in the field of speculative philosophy" (Prol, 4: 260). There are enormous controversies about the nature of Kant's "dogmatic slumber" and how it was actually "interrupted" by Hume, which cannot be adequately discussed within the scope of this study.[4] But a plausible account may be offered in accordance with the metaphysical reading: The principle of causality is simply a variation of the principle of sufficient reason, which is a fundamental principle of the rationalistic metaphysics. Kant's

[3] This interpretation is advocated by a lot of renowned commentators, including Kemp Smith, *Commentary*, pp. 63f.; Beck, *Essays on Kant and Hume*, pp. 126f.; 134; Carl, *Der schweigende Kant*, p. 146; Thöle, *Kant und das Problem der Gesetzmäßigkeit der Natur*, pp. 24ff.; Hatfield, "The *Prolegomena* and the *Critique*," p. 192; for further references, see Friedman, "Causal Laws," p. 193 n. 7.

[4] Main recent works on these issues include Kuehn, "Kant's Conception of 'Hume's Problem;'" Gawlick and Kreimendahl, *Hume in der deutschen Aufklärung*; and Kreimendahl, *Kant – Der Durchbruch von 1769*. Theirs and other major interpretations are briefly reviewed in Carl, *Der schweigende Kant*, pp. 154ff. Indicating that none of them are fully satisfactory, Carl concludes that Kant's autobiographical report is perhaps "gar keine Darstellung eines historischen Ereignisses, sondern die Analyse einer philosophischen Theoriekonstellation im Gewande eines solchen Berichts" (p. 158).

"dogmatic slumber" consists in a belief he once held, namely that this principle can be "seen" (*eingesehen*) by the pure intellect or derived from more fundamental purely rational principles, such as the law of (non-)contradiction, or, with the terminology of the *Critique*, that this principle is analytic. Later he somehow became acquainted with Hume's attack on this belief (perhaps indirectly through Beattie) and realized that the status of the principle of sufficient reason is problematic. The "dogmatic slumber" is thereby interrupted.[5]

But this is not the last word. As Kant writes immediately after the "dogmatic slumber" sentence, he "was very far from listening to him [sic.: Hume] with respect to his conclusions," but rather takes Hume's challenge only as "the first spark of this light" (ibid.). In other words, Hume correctly argues that this principle is not an analytical truth, but a synthetic proposition; yet from this he incorrectly concludes that it is not an a priori truth, as he has no conception of synthetic judgments a priori. And it is one of Kant's fundamental insights that that principle can be justified only by appealing to a third thing, namely "**possible** experience" (A 766/B 794). Based on this insight, Kant reestablishes the "principle of sufficient reason" as the "ground of possible experience" (A 200f./B 246) in the Second Analogy, by showing that this principle is a necessary condition of transcendental time-determination. Moreover, he holds that Hume's problem is not merely restricted to the concept of cause, but may be generalized as one concerning all concepts "through which the understanding thinks connections of things a priori," in particular the concepts of substance and community (Prol, 4: 260; 310). Kant's three Analogies therefore constitute at the same time his response to Hume in the generalized form and his justification of the metaphysical principles.

Now it seems that the metaphysical reading of Kant's response to Hume is well supported by all relevant passages and therefore can be accepted with certainty. But I still find it unsatisfactory for both historical and philosophical reasons: Historically, as I noted in the last chapter, Kant was familiar with Hume's arguments in the *Enquiry*, but did not have any first-hand knowledge of the *Treatise*. Thus, it would be more

[5] The account offered here is plausible but not entirely unproblematic, for the analyticity of the principle of sufficient reason is criticized more thoroughly by Crusius than by Hume, and Kant's knowledge of Crusius' work is very solid. See Beck, *Essays*, pp. 92ff., and the works referred to on p. 95 n. 58.

reasonable to suppose that Kant's response to Hume is based mainly on what Hume says in the *Enquiry*, rather than on what he says in the *Treatise*. However, Hume's attack on the metaphysical principle of causality is to be found in the latter alone, not in the former. As a solution to this problem, many commentators suggest that Kant's response is based on some *indirect* knowledge of Hume's attack on the metaphysical principle of causality.[6] Obviously, this suggestion is unnatural and *ad hoc*; and even if we accept that Kant has some indirect knowledge of Hume's view in the *Treatise*, it remains hardly conceivable why Kant, who both appreciates Hume so much and is familiar with the *Enquiry*, totally ignores what he says in that work and bases instead his frequent discussions solely on unreliable, second-hand sources.

Philosophically, without the same-cause-same-effect principle, the every-event-some-cause principle would be entirely empty and useless. As Friedman points out, "[t]o say that B has a cause A is … to say that B is related to A by a uniformity or causal law."[7] In other words, the same-cause-same-effect principle is already implied by the very concept of cause. Thus, without a proof of this principle, one would be unable to use the concept of cause in a philosophically demanding way – that is, although one would still be able to use this concept insofar as one finds it "right, useful, and, with respect to all cognition of nature, indispensable," one could not claim that "it is thought through reason a priori," in which case one simply assures what "Hume had never put in doubt," but does not give an answer to the question regarding which Hume "awaited enlightenment" (Prol, 4: 258f.). As a result, even if one can know a priori that the event B must have some cause A, one cannot know where A consists on any *rational* ground, but has to rely solely on habit or custom. Obviously, Kant cannot, and, as we shall see, does not accept this result. His answer to Hume must therefore contain a proof of the same-cause-same-effect principle.

If these considerations show that the metaphysical reading of Kant's reaction to Hume and of his own philosophical project is inadequate, it does not follow that Kant's text is misunderstood by the proponents of this reading. Rather, I dare to say that such inadequacy is due not so much to the failure of the interpreters as to Kant's

[6] See note 9 of the last chapter.

[7] "Causal Laws," p. 171.

own confusion of Hume's problem and even of his own philosophical project. This is indeed a bold thesis, but I shall try to defend it by considering Kant's idea of metaphysics of experience, which can be best understood through an examination of the development of Kant's conception of metaphysics after the *Inaugural Dissertation*.

II

As we have seen in the second chapter, the main concern of the *Inaugural Dissertation* is the possibility of metaphysics as cognition from pure intellect. Such cognition, Kant then supposes, depends on the "real" use of the intellect, through which the peculiar concepts of metaphysics, such as substance or cause, are given. These concepts are primarily used for the cognition of the intelligible world, not for the cognition of the sensible world, which involves merely the "logical" use of the intellect. Kant abandons or at least becomes skeptical of this view in his famous letter to Marcus Herz written in 1772. In this letter, Kant asks a question which he takes to be "the key to the whole secret of metaphysics," namely: "What is the ground of the relation of that in us which we call 'representation' to the object?" (Br, 10: 130; all quotations in this and the following paragraphs are from this letter) This question is not difficult to answer as far as there is a *causal* relation between representation and object: either the representation is "passive" or "sensitive," i.e., caused by the object as the latter affects the subject, or "the object itself were created by the representation," as when the representations in question are divine cognitions or our moral concepts. The real difficulty concerns only the "pure concepts of the understanding," which "must not be abstracted from sense perceptions, nor must they express the reception of representations through the senses; but though they must have their origin in the nature of the soul, they are neither caused by the object nor do they bring the object itself into being."

Kant concedes that he was content to explain these concepts "in a merely negative way" in the *Inaugural Dissertation* and did not consider their relation to the objects. Indeed, I think that in that work, he simply cannot consider this question or give a positive determination of the intellectual representations, for he fails then to

recognize a distinction which he later explicitly draws (Prol, 4: 316n.), namely the one between the *intellectual* and the *intelligible*. This failure not only is the ground for his unfair criticism of the Leibnizian distinction between intellect and sensibility, but also leads him to confine intellectual representations to intelligible objects. However, it seems that he acquires in some time between the *Inaugural Dissertation* and the Herz-letter the crucial insight that, although the intellect cannot be used for knowledge of *intelligible objects*, it plays an indispensable role for our *intellectual knowledge* of sensible objects, and the role it plays is not restricted to the "logical" use of the intellect, i.e. to the subsumption of concepts according to the law of (non-)contradiction. As he recognizes the importance of intellectual representations for our knowledge of *both* intelligible *and* sensible objects in the Herz-letter, he asks a question which he could *not* ask in the *Inaugural Dissertation*, namely "how my understanding may formulate real principles concerning the possibility of such concepts, with which principles *experience* must be in exact agreement and which nevertheless are independent of experience." This, obviously, is one of the major questions Kant attempts to answer in the Transcendental Deduction.[8]

We shall say more about the project of the Transcendental Deduction in the next section. For the present, we may first consider a more explicit statement concerning the relation between metaphysics and theory of experience in the Preface to the *Metaphysical Foundations of Natural Science*. Kant writes:

> All true metaphysics is drawn from the essence of the faculty of thinking itself, and is in no way fictitiously invented on account of not being borrowed from experience. Rather, it contains the pure actions of thought, and thus a priori concepts and principles, which first bring the manifold of **empirical representations** into the law-governed [*gesetzmäßig*] connection through which it can become **empirical cognition**, that is, experience. (MAN, 4: 472)

This passage is particularly important for our purpose, because it suggests something like the Leibnizian account of the structure of empirical knowledge, which is outlined

[8] There is some controversy concerning the status of Kant's account of intellectual cognition in the Herz-letter. Some commentators (e.g., de Vleeschauwer, *The Development of Kantian Thought*, pp. 58ff.; Beck, "Two Ways of Reading Kant's Letter") insist that here Kant still adheres to the position of the *Inaugural Dissertation*, and understands intellectual cognition as primarily cognition of the intelligible world, while others (e.g. Carl, "Kant's First Drafts," p. 5f.; Guyer and Wood, "Introduction," p. 48) contend that here Kant already anticipates the central problem of Transcendental Deduction, and is no longer interested in the problem of the possibility of our knowledge of the intelligible world. As Beck points out, Kant's own text does not resist either interpretation. But since he explicitly notices the relation between the pure concepts of understanding and the principles of experience, yet does not make any claim to the effect that our knowledge of the intelligible world is impossible, I think Kant's position regarding intellectual cognition in the Herz-letter should best be regarded as an intermediate one which is different both from that of the *Inaugural Dissertation* and from that of the *Critique*.

in the last chapter. According to Leibniz, the operations of the intellect render our knowledge of particular facts, which is acquired through mere induction and instances, into what I called broadly a priori knowledge by seeking out the common cause or reason of different facts. Admittedly, what Kant refers to here by "the manifold of empirical representations" is not immediately to be identified with knowledge of particular facts – perhaps it should be understood as the mere sensory impressions that do not yet reach the level of such knowledge; but there can be no doubt, I think, that the "lawfully connected experience" in Kant means exactly broadly a priori knowledge in Leibniz. As a result, Kant's theory of experience must contain a similar account of the role of the intellect in empirical knowledge to that of Leibniz. Since the latter is challenged by Hume's skeptical attack on the same-cause-same-effect principle, Kant's theory of experience should provide a defense of the Leibnizian account against such attack.

Furthermore, in his posthumously published essay on the progress of metaphysics in Germany, Kant no longer regards the famous question about the possibility of synthetic judgment a priori as the main task of transcendental philosophy, but instead claims that "[t]he supreme problem of transcendental philosophy is therefore: How is experience possible?" (FM, 20: 275) The change brought about by this new formulation to the old question is subtle: In the *Critique* and the *Prolegomena*, the possibility of metaphysics in the sense of synthetic knowledge a priori of the intelligible objects is still posited a problem to solve. And the solution to this problem is the "essential end" to which the inquiries into the conditions of possibility of (alleged) synthetic knowledge a priori in mathematics and natural science are only the "means" (cf. Prol, 4: 327). However, since Kant ultimately believes that metaphysics in this sense is impossible, the original "essential end" disappears, and the "means" now become the end. Accordingly, he claims that "if there is a synthetic knowledge a priori, then the only way out is that it must contain conditions a priori of the possibility of experience as such" (FM, 20: 274); and he need not, as far as theoretical cognition is concerned, to ask the general question concerning the possibility of synthetic knowledge a priori, but can simply put it as that concerning the possibility of experience.

In sum, there are two major conceptions of metaphysics throughout Kant's works: Metaphysics is sometimes conceived as the system of purely intellectual cognition, sometimes as the system of cognition of the intelligible or supersensible world. And we may identify three phases of the development of Kant's attitude to metaphysics: In the first phase, which lasts until the *Inaugural Dissertation*, these two conceptions perfectly coincide with one another; in the second phase, which is represented by the Herz-letter and lasts until the *Critique* and the *Prolegomena*, the two conceptions partly overlap with each other; in the third phase, which begins from the *Critique*,[9] they become entirely divorced. The system of intellectual cognition becomes nothing but the metaphysics of experience, while the system of cognition of the intelligible world becomes the metaphysics of morals, which is actually no longer the kind of theoretical cognition Kant pursues in the *Inaugural Dissertation*.

For the Critical Kant, then, the only legitimate theoretical metaphysics is the metaphysics of experience, which specifies the a priori conditions that render merely empirical representations into lawfully connected experience. Thus it seems that there is no antagonism, as some commentators contend,[10] between metaphysical and epistemological readings of the *Critique*. But now the question is: What are these a priori conditions? Can all of them be expressed as synthetic propositions a priori? Are they nothing but the "principles (*Grundsätze*) of pure understanding" of the first *Critique*, in particular the three analogies? Kant's answer to these questions is ambivalent; and such ambivalence, I think, is the origin of Kant's confusion about the nature of Hume's problem and of his own philosophical project. For it seems to be a deep conviction of Kant that the fundamental principles of metaphysics, including the metaphysics of experience, must be synthetic propositions a priori; and it seems that he also believes, presumably on the ground of the putative completeness of his Table of Categories and of the connection between the categories and the principles (cf. A 161/B 200), that his "system of principles of pure understanding" is a complete

[9] In including the *Critique* and the *Prolegomena* into both the second and the third phases, I mean that different views on the nature of metaphysics coexist in these works.

[10] Most notably Heidegger, who writes: "The intention of the *Critique of Pure Reason,* therefore, remains fundamentally misunderstood, if it is interpreted as a 'theory of experience' or even as a theory of the positive sciences. The *Critique of Pure Reason* has nothing to do with a 'theory of knowledge'" (*Kant and the Problem*, § 3, p. 11).

presentation of the synthetic propositions a priori that are the conditions of the possibility of experience. But these convictions, I shall argue, are not faithfully reflected in what Kant actually says in the *Critique*.

First, it is unclear whether the merely empirical representations are rendered into lawfully connected experience simply by virtue of certain *principles* that are synthetic propositions a priori. In both the first and the second editions of the *Critique*, the thesis of the lawfulness of nature is established in the Transcendental Deduction (cf. A 127; B 165), not in the Analogies. And although the arguments of the Transcendental Deduction are extremely complicated, the basic point of it should be quite clear: The function of the understanding is not to prescribe any principle, but rather to combine or to synthesize the intuitions into various kinds of judgments in accordance with the categories, and thereby make them into full-fledged cognition of objects. Indeed, this account is also more favored by the common sense: While it is universally admitted that certain "synthesis" (the precise meaning of which might be controversial) is required in order to bring the more primitive type of cognitions ("intuitions") into the more advanced ones, it is questionable whether any general principle is explicitly or even implicitly invoked in such process. Accordingly, the metaphysics of experience would consist not so much in the demonstration of certain principles as in the explanation of the "synthesis" that renders the more primitive cognitions into the more advanced ones.

Second, even if certain principles must be invoked in the constitution of experience, it does not follow that these principles are exactly those which Kant enlists in the System of Principles of Pure Understanding. As we just noted, the putative completeness of this system presupposes an intrinsic connection between these principles and the categories. However, such connection is so loose that makes any claim of their structural parallelism dubious. While the three "analogies of experience" correspond quite well to the three categories of relation, the principles Kant expounds and defends in the Axioms of Intuition and the Anticipations of Perception have apparently nothing at all to do with the categories of quantity and quality. More importantly, in the last chapter we have seen that the same-cause-same-effect principle is necessary for the possibility of broadly a priori cognition, but this

principle is not included in Kant's "system." As a result, if Kant's metaphysics of experience is intended to give an account of *all* a priori conditions of the possibility of experience as broadly a priori cognition, then it should not be restricted to the principles Kant actually discusses in the System of Principles.

From these considerations, it seems that Kant's metaphysics of experience must be separated from the answer to his original question concerning the possibility of synthetic judgments a priori. Thus, while the metaphysical reading sketched in the last section may do full justice to the latter question, it does not thereby amount to an adequate interpretation of the former. But since this reading also provides us with the most plausible account of Kant's reaction to Hume, it seems that we have to conclude that it would be wrong to interpret Kant's metaphysics of experience in terms of his response to Hume. This conclusion, however, is too premature, for we shall see that Kant does offer powerful arguments against Hume's skepticism concerning broadly a priori knowledge in his own theory of experience, and also explicitly relates these arguments to Hume's problem.

III

In this section I argue for two theses: First, that the problem of broadly a priori knowledge is a central concern of his theory of experience; second, that his solution to this problem is a major part of his response to Hume. Taken together, they imply that Kant's metaphysics of experience can indeed be legitimately and fruitfully interpreted as a defense of Leibniz's account of rational knowledge against Hume skepticism thereof. To begin with, let us compare the following two passages:

> For since the senses and induction can never teach us truths that are fully universal or absolutely necessary, but only what is and what is found in particular examples, and since we nonetheless know the universal and necessary truths of the sciences – in this we are privileged above the beasts – it follows that we have drawn these truths in part from what is within us. (PPL, 551)

> Experience teaches us, to be sure, that something is constituted thus and so, but not that it could not be otherwise. **First**, then, if a proposition is thought along with its **necessity**, it is an a priori judgment. … Experience never gives its judgments true or strict but only assumed and comparative **universality** (through induction). … Thus if a judgment is thought in strict universality, i.e., in such a way that no exception at all is allowed to be possible, then it is not derived from experience, but is rather valid absolutely a priori. … Necessity and strict universality are therefore secure indications of an a priori cognition, and also belong together inseparably. (B 3f.)

It seems that the arguments of these passages are exactly the same. From the universality and necessity of certain cognition, it is argued that such cognition must

have some non-empirical sources. As a result, it is very natural to suppose that Kant's conception of a priori cognition is identical with the broadly a priori knowledge in Leibniz. However, according to Kant's explicit statement, a priori cognition is restricted to what we call strictly or absolutely a priori cognition alone — indeed, our definition of this notion is simply adopted from Kant's text –, but does not include cognition that is a priori in the broad but not in the strict sense (B 2). Does Kant think that only strictly a priori cognition is necessary and universally true, but not broadly a priori cognition? If the answer is positive, does he have any good reason in holding this view?

I think that the first question does not allow an unequivocal answer, and that the answer to the second question must be negative. Although it seems true that in his explanation of the meaning of "a priori," Kant does hold the strictly a priori cognition to be the only kind of necessary and universal one, his argument for this view is flawed due to an important confusion. On the other hand, even though he never explicitly recognizes such confusion, he actually suggests another view elsewhere. The confusion consists in the ambiguity of the concept of experience. In the opening passage of the Introduction of the *Critique* Kant writes:

> There is no doubt whatever that all our cognition begins with *experience*; for how else should the cognitive faculty be awakened into exercise if not through objects that stimulate our senses and in part themselves produce representations, in part bring the activity of our understanding into motion to compare these, to connect or separate them, and thus to work up the *raw material of sensible impressions* into a *cognition of objects* that is called *experience*? (B 1)

In commenting on this passage, Lewis White Beck famously dubs the two meanings of experience "Lockean experience" or "L-experience" and "Kantian experience" or "K-experience."[11] The former refers to "the raw material of sensible impressions" or "Lockean ideas without the conceptual and interpretative activities of the mind," whereas the latter refers to "a cognition of objects" and perhaps "coincide[s] with the phenomenally real." With this distinction, Kant's problem of experience might be briefly stated as the question of how we move from L-experience to K-experience. The distinction Beck draws is very illuminating yet not entirely unproblematic, to

[11] Beck, *Essays on Kant and Hume*, pp. 40f. See also Cohen's comment on this passage: "In diesem Satz wird die Erfahrung als ein Räthsel aufgegeben. Die Auflösung dieses Räthsels ist der Inhalt der Kantischen Philosophie. Kant hat einen neuen Begriff der Erfahrung entdeckt" (*Kants Theorie der Erfahrung*, 1st ed., p. 3). Perhaps it is true that Kant is the first one who uses the word experience in this sense, but the idea behind is obviously already emphasized by Leibniz.

which we shall return in the next section. For the moment, let us just use Beck's distinction to explain Kant's ambiguity. Although Kant should be clear about the difference between these two conceptions of experience, he seems to somehow forget it when he claims that no necessary or strictly universal truth can be taught by experience. For this claim is true only for L-experience, but not for K-experience, which obviously includes many necessary and strictly universal truths, such as the law of gravity. He seems, in other words, to divide all cognitions into purely empirical and purely intellectual, and simply ignore the possibility of the kind of cognition that is partly empirical but also partly intellectual. From the fact that purely empirical cognition or L-experience cannot give us necessary and strictly universal knowledge, he overhastily concludes that such knowledge must be purely intellectual and hence strictly a priori. But if we take the broadly a priori cognition in Leibniz or K-experience into account, it should be obvious that Kant has no good reason at all to restrict necessity and universality to strictly a priori cognition alone.

Still, the significance of broadly a priori knowledge is well recognized in other passages by Kant. Perhaps the clearest passage is his reformulation of the main problem of transcendental philosophy in his essay on the progress of metaphysics, which is quoted above. But we can also find some passages in the *Critique*. First, using the concept of *cause* to illustrate the general task of the transcendental deduction, Kant writes:

> For this concept always requires that something A be of such a kind that something else B follows from it **necessarily** and **in accordance with an absolutely universal rule**. Appearances may well offer cases from which a rule is possible in accordance with which something usually happens, but never a rule in accordance with which the succession is **necessary**; thus to the synthesis of cause and effect there attaches a dignity that can never be expressed empirically, namely, that the effect does not merely come along with the cause, but is posited **through** it and follows **from** it. The strict universality of the rule is therefore not any property of empirical rules, which cannot acquire anything more through induction than comparative universality, i.e., widespread usefulness. But now the use of the pure concepts of the understanding would be entirely altered if one were to treat them only as empirical products. (A 91f./ B 124)

In this passage, Kant speaks again of necessity and absolute universality, but now ascribes these properties to *particular causal laws*. Such laws are contrasted with merely empirical rules, which can at most claim to be factually true and to have "comparative universality," but have no necessity or absolutely universal. It is by means of the category of causality, Kant believes, that we proceed from such rules to the particular causal laws. And to justify this belief is the central task of the

transcendental deduction: "The transcendental deduction of all a priori concepts therefore has a principle toward which the entire investigation must be directed, namely this: that they must be recognized as a priori conditions of the possibility of experiences (whether of the intuition that is encountered in them, or of the thinking). Concepts that supply the objective ground of the possibility of experience are necessary just for that reason" (A 94/B 126). "Experience" means here obviously the K-experience or broadly a priori cognition.

Second, in the Analytic of Principles Kant writes: "Even laws of nature, if they are considered as principles of the *empirical use of the understanding*, at the same time carry with them an expression of necessity, thus at least the presumption of determination by grounds that are a priori and valid prior to all experience" (A 159/B 198). Here again, necessity is regarded as belonging to particular laws, not merely to strictly a priori principles. And the source of such necessity is the "empirical use of the understanding" – an idea that is simply absent in the *Inaugural Dissertation*! In that work, as we have noted, Kant discerns only two kinds of use of the intellect: the "logical" use, which is grounded on the law of (non-)contradiction alone, and the "real" use, which belongs solely to metaphysics as purely intellectual cognition. Both kinds of use are obviously different from the empirical use of the understanding, which cannot be discovered until the problem of experience, which is largely ignored in that work, becomes Kant's main theoretical concern. However, this use belongs, together with the two other kinds use of the intellect, to the "natural light" in Leibniz, and is also precisely that which is called into question by Hume in the *Enquiry*. By focusing on the empirical use of the understanding, therefore, Kant seems just to defend the Leibnizian account against Hume's skepticism.

However, in the following sentence Kant writes: "But without exception all laws of nature stand under higher principles of the understanding, as they only apply the latter to particular cases of appearance" (ibid.). Accordingly, Kant holds that the necessity of particular laws is derived from the necessity of the strictly a priori principles, which he expounds and defends in the "System of the Principles of Pure Understanding." As I attempted to argue above, however, this view does not seem to be quite plausible. The necessity of particular empirical laws is directly derived from

the principle same-cause-same-effect, rather than from the principle every-event-some-cause. Indeed, the development of modern physics seems to have made a strong case against the latter principle, while the former principle remains to be an indispensable guide for all ordinary and scientific inquiries. Thus, in my opinion, it would be a useful practice that one tries to separate Kant's general task of explaining the empirical use of the understanding from his actual explanation of it by appealing to the every-event-some-cause principle. And this is the strategy I shall adopt in the present work.[12]

So far I have attempted to show the continuity between Kant's metaphysics of experience and Leibniz's account of the broadly a priori knowledge. Now I turn to the connection between Kant's project and his response to Hume. As we noted in section I, the majority of Kant's remarks on Hume's problem are concerned with the metaphysical principle every-event-some-cause. Nevertheless, I think that these remarks may also be perfectly applied to the empirical laws of nature and their common ground, the principle same-cause-same-effect. For the point of Kant's criticism of Hume is that the latter's "universal empiricism" (i.e., naturalism) cannot accommodate anything beyond the "merely subjective necessity," which results solely from "induction" or "custom" (*Gewohnheit*) and obeys the law of "association" (cf. B 5, B 127; Prol, 4: 258, 277; KpV, 5: 13, 50f.). But since there are propositions that are "objectively" necessary truth, such as those in mathematics, the "universal empiricism" or naturalism must be false.

As we have noted in the previous chapter, however, in the *Enquiry* Hume does not extends his naturalism to "relations of ideas," to which all mathematical propositions belong. Instead, his "sceptical doubts" concern only the "empirical use" of the understanding and its *conditio sine qua non*, namely the principle of the

[12] On this point I disagree with Friedman's interpretation (see note 1 above for references), from which I learned a lot and which my own interpretation resembles in many respects. Friedman holds that the particular causal laws should be understood as "grounded" in, or as the "specific realization" of, the transcendental principles Kant establishes in the Analytic of Principles, and he uses Kant's discussion of the transformation of Kepler's laws into Newtonian law of universal gravitation to illustrate the role of transcendental principles for the constitution of experience. While I find Friedman's discussion really instructive, I cannot see why the transformation in question necessarily involves the alleged transcendental principle every-event-some-cause, instead of the concept of cause and the principle same-cause-same-effect alone. Moreover, Friedman's reconstruction is connected mainly with the Analogies and only occasionally touches the themes of the Transcendental Deduction, hence entirely freed from talks about the activities of the mind, but I believe that a more satisfactory reconstruction should take the latter into account. My reconstruction is presented in the next chapter.

uniformity of nature. Kant was perfectly aware of this fact, but he still criticizes Hume for two reasons: First, he thinks that the mathematical truths are not about "relations of ideas," or in his own terminology, that they are not analytic. Second, and following the first point, he thinks that there are other kinds of purely a priori cognition than mathematics, which Hume totally ignores due to his lack of the conception of synthetic cognition a priori. Kant then regards the identification and justification of such cognitions as his response to Hume and at the same time as his own philosophical project. Now the problem is: What precisely are such cognitions?

The most natural answer to this question is that they are certain metaphysical principles, such as those Kant expounds and defends in the Analogies, for only these principles are purely a priori. Indeed, this is the answer given by the metaphysical reading sketched in section I. However, we should note that in his discussions of Hume's "universal empiricism," Kant always understands a priori cognition as cognition that possesses strict necessity and universality, which can never be gained from *mere* experience, induction, or association. And we have shown that broadly a priori cognition, too, possesses the same kind of necessity and universality as the strictly a priori one, and that it, too, cannot be gained from mere experience or induction, as Leibniz already emphasizes. Thus, a refutation of Hume's "universal empiricism" should contain not only the identification and justification of the metaphysical principles, but also an account of the status of K-experience as broadly a priori cognition.

Unfortunately, in the first *Critique* Kant hardly explores the connection between Hume's naturalism and the possibility of our intellectual knowledge of empirical laws. However, in the *Critique of Practical Reason*, he offers a brief, retrospective remark on the "deduction" program of the first *Critique*, which sheds much new light on this connection. Kant writes:

> [1] For, on such [sic.: Hume's] principles we can never **infer** a consequence from the given determinations of things as existing (since for this the concept of a cause, which contains the necessity of such a connection, would be required) but can only expect, by the rule of imagination, cases similar to preceding ones, though this expectation is never secure however often it is fulfilled. [2] Of no event could one say: something **must** have preceded it, upon which it **necessarily** followed, that is, it must have a **cause**; [3] and thus, however frequent the cases one knew of in which there was such an antecedent, so that a rule could be derived from them, one could still not, on account of this, assume it as always and necessarily happening in this way, and one would also have to give blind chance its right, with which all use of reason ceases. (KpV, 5: 51; the emphasis in the *Cambridge Edition* is misplaced)

It seems that in the first and the third sentence or clause, Kant is commenting on Hume's attack on the same-cause-same-effect principle, but in the second clause he suddenly shifts to the principle every-event-some-cause without any awareness of the change of subject-matter. Presumably, then, Kant's acquaintance of Hume's attack on the latter principle is not by means of any secondary sources, but simply comes from his own "creative misunderstanding" of Hume's argument in the *Enquiry*! This presumption becomes more plausible if we note the fact that Kant has a lasting interest in finding a foundation for the principle of sufficient reason. In the last paragraph of the *Inaugural Dissertation*, Kant introduces three so-called "**principles of convenience**," the first one of which being that "**all things in the universe take place in accordance with the order of nature**" (MSI, 2: 418), which is naturally taken as an antecedent of the principle Kant attempts to prove in the Second Analogy. Thus it seems quite plausible that Kant, keeping the problem of the grounding of the principle every-event-some-cause in mind while he encounters Hume's "sceptical doubts" in the *Enquiry*, overhastily takes the latter to be concerned with the former problem, and thereby ignores the problem of broadly a priori knowledge, which is Hume's actual concern in the *Enquiry*.

Despite his "creative misunderstanding," however, Kant does not fail to grasp what Hume actually says in the *Enquiry*; and when he distances himself from the task of providing a foundation for the principle of sufficient reason, which occupies him too much in the first *Critique*, he can realize the real point of Hume's naturalism. In addition to the passage quoted above, Kant continues to write in the second *Critique*: "Hume's empiricism in principles also leads unavoidably to skepticism even with respect to mathematics and consequently in every **scientific** theoretical use of reason"; and he holds that with his own "deduction," he "was able to overthrow the unavoidable consequence of empiricism, namely skepticism first with respect to natural science and then … with respect to mathematics as well" (KpV, 5: 52, 53). These remarks can be taken as textual evidence for an epistemological reading of Kant's response to Hume and of his own project in the constructive part of his theoretical philosophy, according to which the possibility of broadly a priori cognition or K-experience, rather than the strictly a priori metaphysical principles, is what

Hume calls into doubt and what Kant wants to rescue from such doubt. Although the textual evidence does not suffice to show that the epistemological reading should be preferred to the metaphysical reading (I must confess that the contrary seems to be the case), it at least reflects an important respect of Kant's transcendental philosophy. And if the epistemological reading can avoid the historical and philosophical problems of the metaphysical reading, then I think it would be qualified as a more interesting reconstruction of Kant's thought.

The strongest textual evidence for the epistemological reading, however, is the distinction between judgments of perception (*Wahrnehmungsurteile*) and judgments of experience (*Erfahrungsurteile*) in the *Prolegomena*. With this distinction, Kant suggests that we proceed from certain "subjective" kind of empirical cognition to certain more "objective" but still empirical cognition, though his explanation of what these two kinds of cognition exactly amount to is highly problematic and even inconsistent. Since he explicitly uses this distinction as a solution to Hume's skepticism concerning the concept of cause, which Kant calls the "*crux metaphysicorum*" of Hume (Prol, 4: 312), I think it is reasonable to interpret Kant's distinction as a *direct* response to Hume's "sceptical doubts," i.e., as a vindication of the Leibnizian account of the "empirical use of the understanding" against Hume's naturalism. In the next chapter, I shall give a systematic reconstruction of Kant's distinction along this line. But before I can do this, I find it necessary to pay more attention to the implications of the epistemological reading for our interpretation of Kant's theory of experience in general and of his notion of intuition in particular.

IV

Despite the central place it occupies in the *Prolegomena*, the distinction between judgments of perception and judgments of experience is usually regarded only as a minor moment of Kant's theory of experience.[13] This is quite understandable for several reasons: First, this distinction does not appear in either of the first two editions of the *Critique of Pure Reason*, which is written before the *Prolegomena* and then substantially revised after it. Thus, it seems reasonable to suppose that, were Kant to

[13] The most important exception is Prauss, *Erscheinung bei Kant*.

regard it as a core doctrine of his mature philosophy, he would integrate it into the revised text of the *Critique*. Since this is not true, the antecedent must be false. Second, Kant's exposition of this distinction is often unclear and even inconsistent. Third, it is often held that the "analytic method" (Prol, 4: 263, 276n.) of the *Prolegomena* presupposes the possibility of synthetic cognition a priori, which is precisely what Hume calls into doubt. Thus, to respond to Hume's skepticism with this distinction would be a *petitio pricipii*.

To the first objection, my response consists of two points: First, although Kant does not explicitly refers to the distinction between judgments of perception and judgments of experience in the *Critique*, his contrast between the subjective unity of consciousness and the objective unity of consciousness (B 139) and his doctrine of judgment in the B-Deduction are often regarded as a revision or development of that distinction. Thus it just apparently disappears from the *Critique*, but not really. Second, even if Kant himself does not include that distinction into his mature theory of experience, this does not prevent us from giving it a prominent role in our interpretation of Kant. For a revolutionary and highly original thinker like Kant, it is not unusual that he opens a number of different ways to solve certain problem but finally adopts one that is not the most promising. For example, although Kant constantly holds the analogies to be the core piece of his response to Hume, I hope I have shown that they are actually inadequate for this task. And if this task can be more adequately solved with the distinction between judgments of perception and judgments of experience, I think it can certainly be taken as playing a central role in Kant's theory of experience.

As to the second objection, I concede that the doctrine of the two kinds of judgments in the *Prolegomena* is full of various problems and cannot be defended as it stands. But it is precisely for this reason that it demands not only an interpretation, but a thorough reconstruction. Moreover, I think that such reconstruction has to appeal to a concept that is central to the *Critique* but seldom talked about in the *Prolegomena*, namely that of apperception. As a result, the reconstructed theory of the two kinds of judgments will be closer to what Kant says in the *Critique* than to what he says in the *Prolegomena* in many respects.

Now it might be further asked why not simply focus on the Transcendental Deduction and put the doctrine of the *Prolegomena* aside. My answer is that the transcendental deduction is so complicated that it is extremely difficult to ascertain what Kant's main theses in it are and how the arguments are used to establish them. In addition to an answer to Hume's skepticism concerning the "empirical use of the understanding," the transcendental deduction might also be fruitfully read as containing a refutation of Berkeleyan (and Humean) idealism,[14] or a theory of self-consciousness, or even the foundation of Kant's criticism of traditional metaphysics,[15] or certain mixture thereof. Starting from the Transcendental Deduction, then, would demand us first of all to deal with the endless interpretative details of Kant's text, which very probably makes our own interpretative thread invisible. By contrast, when we invoke the Transcendental Deduction to interpret the distinction between judgments of perception and judgments of experience, we shall always have a clear sense of what Kant contributes to the solution of a particular problem. Admittedly, adopting this interpretative strategy necessarily means that one cannot do justice to the profound philosophical potential of Kant's text, but this, I think, is the price one has to pay for a clear understanding of a particular aspect of it.

The third objection seems to be the philosophically most powerful one, but actually it is based on serious misunderstanding. In explaining his "analytic method" Kant writes: "The analytic method … signifies only that one proceeds from that which is sought *as if* it were given, and ascends to the conditions under which alone it is possible. In this method one often uses nothing but synthetic propositions, as mathematical analysis exemplifies, and it might better be called the **regressive** method to distinguish it from the synthetic or **progressive** method" (Prol, 4: 276n.). As the subjunctive mood clearly indicates, Kant does not simply presuppose the

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[14] This is how Jonathan Bennett interprets Kant's Transcendental Deduction, cf. *Kant' Analytic*, pp. 105ff. Strawson, *Bounds of Sense*, provides a similar interpretation, though he does not mention the name of either Berkley or Hume in his discussion of the Transcendental Deduction.

[15] Indeed, this is how Kant himself understands his project after 1781. Cf. his famous long footnote in the Preface to *Metaphysical Foundations of Natural Science* (4: 474ff.), especially the following passage from it: "For if we can prove **that** the categories which reason must use in all its cognition can have no other use at all, except solely in relation to objects of possible experience (insofar as they simply make possible the form of thought in such experience), then, although the answer to the question **how** the categories make such experience possible is important enough for **completing** the deduction where possible, with respect to the principal end of the system, namely, the determination of the limits of pure reason, it is in no way **compulsory**, but merely **meritorious**."

possibility of any particular cognition, but rather uses it as a mere hypothesis. When one finds a hypothesis plausible, one naturally proceeds in a similar manner to that in which a mathematician tries to prove certain theorem, namely to attempt to find out the conditions under which it can be proved. By itself, such method does not guarantee that the hypothesis one wants to prove is true; the hypothesis might turn out to be false, the supposed theorem might not be a theorem at all. But for just the same reason it does not involve any *petitio pricipii*.

In fact, the analytic or regressive method not only is immune to this common objection, but has a great advantage over the progressive method. The latter method, which is most commonly used in mathematics, presupposes a strong foundationalism. However, while in mathematics there are indeed some indisputable fundamental definitions and axioms, in philosophy this is unlikely to be the case. In particular, despite many heroic attempts in the last half of the last century at a reconstruction of Kant's argument as a deductive, i.e. quasi-mathematical derivation of certain non-trivial conclusions from certain extremely meager, but supposedly indisputable premises, such as the possibility of self-consciousness, none of them has received general acceptance, and none of them can claim itself as a fulfillment of Kant's own intention.[16] By contrast, using the regressive method, one need not to ascend to any putative highest principle, but can be content to just settle the conflict between different "claims of right" — in our case, between the claim that the understanding has an "empirical use" which makes our broadly a priori knowledge possible and the claim that it does not have such use. As Henrich convincingly shows, Kant's original meaning of "deduction" should be understood after this "judicial" model rather than the traditional "mathematical" model.[17] Thus the regressive method, which obviously fits the judicial model better than the progressive method, seems to be a more appropriate method even of carrying out the original project of the transcendental

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[16] For a useful critical survey of such attempts, see Ameriks, "Recent Work," part 2.

[17] See Henrich, "Kant's Notion of a Deduction."

deduction.[18]

The regressive method also serves well for our interpretation of Kant's doctrine of the two kinds of empirical judgments and of (at least part of) the transcendental deduction as his response to Hume's skepticism concerning the empirical use of the understanding in the *Enquiry*. In order to rebut Hume's skepticism, Kant need to start neither from any alleged highest principle of human cognition, such as the pure or absolute "I," nor from any supposed most basic or simplest elements of it, such as the mere sensations or sense-data, but may simply from what Hume himself presupposes in the *Enquiry*, namely from the possibility and actuality of knowledge of particular instances based on the deliveries of senses and memory. If he could show that the possibility of experience as broadly a priori cognition is somehow entailed by this Humean presupposition, then his answer to Hume would be perfectly completed. Accordingly, the two kinds of empirical judgments can be regarded, respectively, as the premise and the conclusion of Kant's argument.

So far we have laid down some basic guidelines for our reconstruction of Kant's theory of experience. Now I turn to the more specific issue concerning the role of intuition in the reconstructed theory. In the last section we have introduced Beck's famous distinction between L-experience and K-experience. This distinction is surely very important, but it would be an oversimplification if one takes them to be the only kinds of empirical representations with which Kant is concerned in his theoretical philosophy, for there is yet another kind of empirical representations which is more sophisticated than the "raw material of sensible impressions" but more primitive than the broadly a priori cognition. This third kind of empirical representation is our cognition of objects based merely on instances and induction. Such cognitions differs from mere sensations or impressions in at least two important aspects: first, they always have intentionality, that is, they are always *about* some object, whereas the "raw material" is usually about nothing at all. Second, they always involve the use of some concepts, whereas the latter is non-conceptual in the strictest sense. As I noted in the Introduction, Kant distinguishes within sensitive representations between

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[18] This may seem to be in conflict with the analogy between the usages of regressive method in philosophy and in mathematics indicated in the last paragraph. But this analogy holds only as far as the "method of discovery" is concerned—even mathematicians have usually to use the regressive method to discover mathematical truths. As far as mathematical proof is concerned, however, the progressive method must be used.

sensations or impressions as the most primitive kind of representations and intuitions as the more sophisticated ones. Thus it would be very natural to identify intuitions with that intermediate kind of empirical representations, i.e. the cognition of particular instances.

This interpretation of Kant's notion of intuition[19] has some textual support. In explaining the general idea of the analogies of experience Kant writes: "An analogy of experience will therefore be only a rule in accordance of which unity of experience (not as a perception itself, as empirical *intuition* in general) is to arise from perceptions."[20] Here empirical intuition is taken to be equivalent to perception, and both are contrasted with experience as broadly a priori cognition. Thus, if perception is knowledge of particular instances, which seems quite unproblematic, then intuition, too, should be understood as referring to such knowledge. Similarly, in *Prolegomena* Kant writes:

> The given intuition must be subsumed under a concept that determines the form of judging in general with respect to the intuition, connects the empirical consciousness of the latter in a consciousness in general, and *thereby* furnishes empirical judgments with universal validity; a concept of this kind is a pure a priori concept of the understanding, which does nothing but simply determine for an intuition the mode in general in which it can serve for judging. (4: 300)

According to this passage, the pure concepts of the understanding or the categories play a double role in the formation of experience: first, they connect intuitions or the "empirical consciousness" of them in a "consciousness in general;" second and as a result of the first, they furnish empirical judgments with universal validity, i.e., transform our knowledge of particular instances into broadly a priori knowledge. But how could this double role of the categories be possible, if intuitions were not identical to particular empirical judgments?

Admittedly, the word "intuition" is also used in another way, taken as equivalent to sensation or impression. We need not to go back to the Transcendental Aesthetics to find such examples, as they can also be found in the same paragraph of the passage just quoted. Kant writes:

> At bottom lies the intuition of which I am conscious, i.e., perception (*perceptio*), which belongs solely to the senses. But, secondly, judging (which pertains solely to the understanding) also belongs here. … Hence it is not, as is commonly imagined, sufficient for

[19] In this chapter, by "intuition" I always mean empirical intuition alone.

[20] A 180/B 222. The Guyer/Wood translation places the words in the brackets, which are placed in the original German text after "*Erfahrung*," after "perception," which makes this sentence sounds unintelligible.

> experience to compare perceptions and to connect them in one consciousness by means of judging; from that there arises no universal validity and necessity of the judgment, on account of which alone it can be objectively valid and so can be experience. (ibid.)

In this passage, intuition is also taken to be equivalent to perception, but both are regarded as belonging solely to the senses, thus do not have even the minimal conceptual content. By themselves, intuitions are not yet the intermediate cognition proposed above, but must be compared and connected in one consciousness by means of judging in order to become the latter. Thus we have two different accounts of the relation between intuition and the intermediate cognition. The question is: Should intuitions be understood as sensations or impressions, or rather as some intermediate cognition?

Kant's text does not allow us an incontrovertible answer. However, it should be clear that an account of the intermediate cognition remains always an essential part of Kant's theory of experience, no matter how the "proof-structure" changes from the first to the second edition of the *Critique* and in the meantime. Accordingly, Kant needs a technical term to refer to the intermediate cognition, but he does not have one. The proximate candidate for such a technical term is empirical intuition, for in most cases, it is said to be the product of the synthesis of apprehension (cf. A 98f., B 160ff.), hence obviously something more sophisticated than mere sensations or impressions. From these considerations, it seems reasonable to take the second alternative as the standard meaning of the Kantian intuition. Thus, from now forth, I shall treat intuition always as certain intermediate cognition that is based on, but not identical with, the mere sensations or impressions, as if it were so unambiguously used by Kant.

The identification of Kantian intuition with certain intermediate cognition, however, does not tell us what it precisely is. In our discussions of Leibniz and Hume, we assume that the intermediate cognition is (1) knowledge of particular instances, but this is not the single possible conception of such cognition. In the *Critique*, Kant seems to take (2) images as the intermediate cognition; while in *Prolegomena*, he explicitly calls it "judgment of perception," which is *sometimes* said to be (3) judgment about the state of the subject. Which interpretation should be adopted? The answer, I think, is that we should adopt the one which serves best for the reconstructed Kantian argument against Hume's skepticism concerning the possibility

of broadly a priori cognition. Now it is time to proceed to the reconstruction of Kant's argument.

Chapter 5 Judgments of Perception and Judgments of Experience

In the last chapter I offered some reasons for taking Kant's doctrine of judgments of perception and judgments of experience as the core both of his metaphysics of experience and of his response to Hume. I also indicated that this doctrine is full of problems and confusions so that a reconstruction is necessary. Such a reconstruction will be given in this chapter. I begin with a critical examination of Kant's discussions of the two kinds of judgments in the *Prolegomena* and elsewhere, arguing that there is a gap in Kant's argument that cannot be filled without the notion of apperception (I). Then I turn to his theory of apperception in the Transcendental Deduction, with the focus on the relationship between apperception and judgment (II). Although I shall argue that Kant's theory of judgment in the B-Deduction is highly problematic, it leaves us with many important insights that could be used in a reconstruction of a Kantian response to Hume's skepticism concerning the empirical use of the understanding.

I

The distinction between judgments of perception and judgments of experience is introduced in § 18 of the *Prolegomena* as one between two kinds of empirical judgments:

> **Empirical judgments, insofar as they have objective validity**, are **judgments of experience**; those, however, that are **only subjectively valid** I call mere **judgments of perception**. The latter do not require a pure concept of the understanding, but only the logical connection of perceptions in a thinking subject. But the former always demand, in addition to the representations of sensory intuition, special **concepts originally generated in the understanding**, which are precisely what make the judgment of experience **objectively valid**. (Prol, 4: 298)

I think it is fair to say that the distinction is made here with greatest clarity: Both judgments of perception and judgments of experience are empirical judgments, i.e., judgments that "have their basis in the immediate perception of the senses" (Prol, 4: 297). They differ from each other by two criteria: First, judgments of perception involve only "the logical connection of perceptions in a thinking subject," whereas judgments of experience require pure concepts of the understanding or categories. Second, judgments of perception are "only subjectively valid," whereas judgments of

experience are "objectively valid." The first criterion may naturally be seen as a revised version of Kant's account of the twofold uses of the intellect in the *Inaugural Dissertation*: Kant continues to hold that the "logical" use of the intellect is involved in all judgments, but now regards the "real" use of the intellect and hence the categories not as something belonging solely to metaphysics as theoretical knowledge of the noumenal world, but rather as that by virtue of which our objective but still empirical knowledge, i.e. objective knowledge of the phenomenal world, becomes possible. This fact confirms the thesis advanced in the last chapter, namely that Kant's doctrine of the two kinds of judgments constitutes the very core of his metaphysics of experience. Now the question is: How could the first criterion be connected with the second? That is, how could the merely subjectively valid judgments of perception be transformed into the objectively valid judgments of experience by virtue of the real use of the understanding and the categories?

Before we can answer this question, we must get clearer about what the two kinds of judgments precisely are. A further explanation of their differences is provided in the passage immediately following the one quoted above:

> All of our judgments are at first mere judgments of perception; they hold only for us, i.e., for our subject, and only afterwards do we give them a new relation, namely to an object, and intend that the judgment should also be valid at all times for us and for everyone else; for if a judgment agrees with an object, then all judgments of the same object must also agree with one another, and hence the objective validity of a judgment of experience signifies nothing other than its necessary universal validity. But also conversely, if we find cause to deem a judgment necessarily, universally valid (which is never based on the perception, but on the pure concept of the understanding under which the perception is subsumed), we must then also deem it objective, i.e., as expressing not merely a relation of a perception to a subject, but a property of an object; for there would be no reason why other judgments necessarily would have to agree with mine, if there were not the unity of the object—an object to which they all refer, with which they all agree, and, for that reason, also must all harmonize among themselves. (Prol, 4: 298)

Here Kant seems to identify judgments of perception with judgments about the *private* mental state of an individual, which, as such, has no relation to any object external to that individual. Judgments of experience, by contrast, seem to include all judgments that are objectively valid, i.e., all judgments about external, hence *public*, objects. Kant holds that all such judgments are "necessarily, universally valid," which means here that they are "valid at all times for us and for everyone else." He further holds that the converse is also true, that is, that all judgments that are necessarily and universally valid must be about public objects. In short, "[o]bjective validity and necessary universal validity (for everyone) are therefore interchangeable

concepts" (ibid.). In addition, Kant claims that all our empirical judgments are at first mere judgments of perception, which means that all our empirical judgments are at first about our private mental states, and then become judgments about external object.

I think that this account of the two kinds of judgments is deeply problematic for at least three reasons: First, Kant gives several examples for judgments of perception, none of which, however, is about the private mental state of an individual. His examples include the judgments that "the room is warm, the sugar sweet, the wormwood repugnant;" that "the air is elastic" (Prol, 4: 299), and that "[i]f the sun shines on the stone, it becomes warm" (Prol, 4: 301n.). Among these examples, the first three are obviously the most "subjective" ones—indeed, Kant holds that they could never "become judgments of experience even if a concept of the understanding were also added" (Prol, 4: 299n.). But even these judgments are about a particular object (the room) or perhaps a sort of thing (sugar, wormwood), not about the mental state of any individual. Kant argues that these judgments are "merely subjectively valid," because "I do not at all require that I should find it so at every time, or that everyone else should find it just as I do" (Prol, 4: 299). But this argument does not seem to be quite convincing, as the sweetness of sugar, for example, seems to be something which can be reasonably expected to be recognized by other people and on other occasions.

Admittedly, those judgments are "subjective" insofar as the predicates of them all express "secondary qualities," which are traditionally deemed as depending on the particular constitution of the subject. However, the dependence of such qualities on the subjective does not make them merely subjective, just like the dependence of our life on water does not make it merely water-like. Moreover, just a few pages before his introduction of the two kinds of judgments, Kant, referring explicitly to Locke's distinction between primary and secondary qualities, claims that they have exactly the same ontological status insofar as they are all appearances (cf. Prol, 4: 289). Thus it is questionable whether the Lockean distinction can really be used to explain the merely subjective validity of Kant's examples.

The inadequacy of the examples he provides in the *Prolegomena* is presumably

recognized by Kant in his later discussions of the two kinds of empirical judgments. Kant revisits this distinction in a later *Reflexion* (R 3145, 16: 678), which is then used in § 40 of the *Jäsche Logic*, the title of which is "Judgments of Perception and of Experience." Here Kant changes his examples for judgments of perception:

> A judgment from mere perceptions is really not possible, except through the fact that I express my representation **as perception**: I, who perceive a tower, perceive in it the red color. But I cannot say: **It is red**. For this would not be merely an empirical judgment, but a **judgment of experience**, i.e., an empirical judgment through which I get a concept of the object. E.g., **In touching the stone I sense warmth**, is a judgment of perception: but on the other hand, **The stone is warm**, is a judgment of experience. (Log, 9: 113)

According to this passage, even those judgments whose predicates are certain secondary qualities, which are taken as the paradigmatic cases of judgments of perception, are actually judgments of experience. By contrast, only those judgments which express *nothing but* the *feeling* of a particular individual at a particular time can count as judgments of perception. Now it seems that Kant's new examples satisfy this condition, and the first problem of his account of judgments of perception is thereby solved.[1] However, as we proceed to the other two problems of Kant's account of judgments of perception in the *Prolegomena*, we shall see that the new examples make those problems even more serious.

The second problem is that if the distinction between judgments of perception and judgments of experience is to be understood as one between judgments about private mental states and judgments about public external objects, then it cannot be used as an answer to Hume. From our discussions in the last two chapters, it should be clear that Hume's "sceptical doubts" in the *Enquiry* do not amount to the skepticism about the external world, but are directed only at the possibility of what we call broadly a priori cognition. The real divergence between Leibniz and Hume consists in whether there is any rational ground that enables us to draw from particular, observed instances conclusions that are universal or unobserved, not in whether and how we can acquire knowledge of external objects from knowledge of our own mental states. Thus, although both Leibniz and Kant regard necessity and universal validity as the reliable criteria for the more "objective" kind of cognition, which is impossible without the use of the intellect or its peculiar concepts, the categories, what they mean by these

[1] Prauss holds the contrary view. He argues that the statement "I, who perceive a tower, perceive in it the red color" is composed of two parts. In the first part, it asserts that I perceive a tower, and in the second part, that I have the feeling of red. Thus only the second part of this statement satisfies the criteria of judgments of perception, but the first part, and therefore the entire statement, does not (*Erscheinung bei Kant*, pp. 193ff.).

criteria is actually quite different. Whereas all true statements about the external objects would be regarded as necessary and universal truths according to the criteria Kant proposes in the *Prolegomena*, only broadly a priori truths, i.e., propositions expressing universal laws or what can be derivable from such laws, would be regarded as universal or necessary by Leibniz. But if the parallelism between Leibniz's distinction between merely empirical and rational cognition on the one hand, Kant's distinction between judgments of perception and judgments of experience on the other, is merely apparent, the latter cannot be regarded as a restoration of the former against Hume's attack.

To this objection, it might be responded that it is totally irrelevant, as Kant's distinction between two kinds of empirical judgments is perhaps not *intended* to be a defense of Leibniz's position at all. However, although Leibniz's name is hardly ever mentioned in this context, I think we have shown that his theory is precisely the position Hume wants to criticize. Thus, since Kant explicitly regards his doctrine of the two kinds of judgments as his answer to Hume (cf. Prol, § 29), it is perfectly reasonable to expect that he should provide a defense of the Leibnizian account. Moreover, the example Kant uses to illustrate how Hume's problem could be solved with his distinction between the two kinds of empirical judgments is the transformation from the judgment of perception that "[i]f a body is illuminated by the sun for long enough, then it becomes warm," to the judgment of experience that the sun "through its light is the cause of the warmth" (Prol, 4: 312). Even if it not so clear whether and how the latter proposition can count as a broadly a priori truth,[2] there can be little doubt that the former is not about the private mental states of any individual. We shall be concerned with the cogency of Kant's argument later. For the present, we need just note the incompatibility of Kant's example with his explanation of the nature of judgments of perception. As a result, either Kant does not have a successful response to Hume with the distinction between the two kinds of empirical judgments, or his response is not grounded on the distinction as he officially expounds.

Last but not least, I think Kant's insistence on the priority of judgments of

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[2] A plausible account of the broadly a priori status of this proposition is provided by Michael Friedman, who refers to Wilhelm Scheele's theory of radiant heat in his *Chemische Abhandlung von der Luft und dem Feuer* of 1777 as the scientific theory in which this proposition is embedded and which thereby confers broad apriority to it. Friedman's indication is quoted in Longuenesse, *Kant and the Capacity to Judge*, p. 179 n. 27.

perception is inconsistent with his main thesis in the Refutation of Idealism in the B-edition of the *Critique*, namely that "even our **inner experience**, undoubted by Descartes, is possible only under the presupposition of outer experience" (B 275). In Note 1 to the proof of his "theorem" of the Refutation, Kant characterizes (material) idealism as the view that "the only immediate experience is inner experience, and that from that outer things could only be **inferred**," and he claims that through his argument "it is proved that outer experience is really immediate" (B 276). But if Kant holds that all our judgments of experience must be preceded by judgments of perception, and that they refer, respectively, to judgments about external objects and judgments about mental states, then it seems that he simply commits the material or empirical idealism which he criticizes.

It might be responded that unlike the material idealists such as Berkeley, Kant does not, with his doctrine of the two kinds of empirical judgments, claim that our knowledge of external objects is *inferred from* our knowledge of our internal states, but rather has in mind some other relations between the two kinds of empirical judgments. He may hold, e.g., that judgments of experience are the results of the "*Deuten*" of judgments of perception,[3] or that we cognize external objects *in* our subjective representations in a way analogous to our seeing something *in* a picture.[4] However, despite the subtlety of such suggestions, I don't think they really can save Kant from that inconsistency. For the problem is not *how* we acquire knowledge of external things through our knowledge of internal states, but *whether* this is so. And Kant's answer to the latter question is positive in the *Prolegomena*, but negative in the Refutation of Idealism. Thus we have to choose between these alternatives if we want to have a coherent picture of Kant's theory of experience. Now the question is: How should we choose between them?

Here it is useful to appeal to the conclusions arrived at in the last chapter. I have argued that Kant's metaphysics of experience in general and his doctrine of the two kinds of empirical judgments in particular should be understood as a defense of the Leibnizian account of our broadly a priori knowledge against Hume's skepticism or

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[3] See Prauss, *Erscheinung*, pp. 294ff.

[4] See Dickerson, *Kant on Representation and Objectivity*, Ch. 1.

naturalism. But in our discussion of the second problem of Kant's account of judgments of perception, it is argued that this account cannot achieve the task which it is intended to achieve. As a result, I think we should reject this account, and see whether that task could be achieved by adoption the position of the Refutation of Idealism. This does not mean, however, that the Refutation is itself to be read as a response to Hume—as I have shown, Hume's "sceptical doubts" neither presupposes nor entails idealism in the ordinary sense, and are not so understood by Kant; nor does it imply that the doctrine of the two kinds of empirical judgments should be completely excluded from Kant's truly Critical position. Indeed, the first passage quoted in this chapter contains two main ideas that not only seem to be quite reasonable in themselves, but also set a good framework for understanding where Hume's problem precisely consists and how it can be solved: namely that there is a more subjective kind and a more objective kind of empirical cognitions or judgments, and that the role of the categories is to transform the more subjective kind of judgments into the more objective kind. Accordingly, what is inadequate is perhaps not Kant's distinction as such, but merely the way this distinction is drawn.

Let me explain my proposal in more detail. In our discussion of Leibniz, we noted that he also distinguishes between two kinds of empirical knowledge, namely between knowledge based solely on instances or induction and broadly a priori knowledge. The two kinds of knowledge do not differ with regard to the content: that the sun will rise tomorrow, for example, can be known in both ways. Their difference consists rather in the ground of cognition: both require deliveries from senses, but only broadly a priori knowledge involves the operations of the intellect, and thereby involves knowledge of the causes. On the other hand, Kant also suggests, at least in his explanation of the example "air is elastic," that a judgment of perception may have precisely the same content as a judgment of experience, and the former is transformed into the latter by "subsum[ing] the intuition of the air under the concept of cause and effect" (Prol, 4: 301). It is perhaps not so clear what such subsumption exactly mean, but there can be no doubt that it is resulted from the operations of the intellect. Thus there are sufficient structural similarities between Kant's and Leibniz's distinctions between two kinds of empirical judgments, which may justify the attempt at a revision

of the former after the latter. And since, as I repeatedly emphasized, the Leibnizian distinction is the very target of Hume's "sceptical doubts," such revision will lead to a direct confrontation between Kant and Hume. What we seek in Kant's text, then, is an argument that justifies the distinction between a more subjective kind of empirical judgment and a more objective kind of it. But can such an argument be found?

As far as the text of the *Prolegomena* is concerned, I'm afraid that the answer is negative. This is not because of the problems of Kant's official way of drawing that distinction I criticized above. Although his characterization of judgments of perception as judgments about the private mental states of the judging subject seems to me to be highly problematic, his examples do not agree so well with this characterization. And here what is commonly a deficiency becomes a merit, for Kant's innocent examples is thereby freed from his problematic generalization. But while I find Kant's examples to be instructive, I don't think his *explanation* of those examples is convincing. Let us begin with the most "subjective" examples of judgments of perception: "the room is warm, the sugar sweet, the wormwood repugnant" (Prol, 4: 299). Kant claims that they could never become judgments of experience. As we argued above, however, this claim is unfounded. In fact, I think that statements concerning secondary qualities are simply statements concerning certain *powers or dispositions* of a particular object or a kind of objects, which powers or dispositions exercise or realize themselves under certain *circumstances* and on certain *sensory organs* and result thereby in the sensory qualities we perceive. Since they involve, in addition to certain (relational) properties of the objects, the circumstances and the constitution of the subject of perception, they are not as "objective" as statements concerning primary qualities alone, i.e. statements concerning nothing but the properties of objects themselves, though not objects "in themselves" in the peculiar Kantian sense. But since they also depend on the properties of the objects, statements concerning secondary qualities can also be reasonably expected to other people, as far as the relevant bodily constitution and the circumstances are similar enough. Unfortunately, this feature of the secondary qualities is entirely overlooked in the

Prolegomena.[5]

Kant's next example is "the air is elastic." Both the meaning of this sentence and its status as judgment of perception and as judgment of experience are not easy to understand. Longuenesse helpfully refers to Kant's explanation of elasticity in the *Metaphysical Foundations of Natural Science* as the background of this sentence.[6] Elasticity is equated there with expansive power, and is said to be "the basis on which the filling of space rests," and "an essential property of all matter" (MAN, 4: 500). Accordingly, we can *perceive* that the air is elastic when we, e.g., feel the resistance of the air when it is compressed, or see its return to the initial volume as long as it is no longer compressed. Based on such observation or perception alone, we make the judgment of perception that the air is elastic. But how does it become a judgment of experience? Kant gives the following explanation:

> Now before a judgment of experience can arise from a judgment of perception, it is first required: that the perception be subsumed under a concept of the understanding of this kind; e.g., the air belongs under the concept of cause, which determines the judgment about the air as hypothetical with respect to expansion. This expansion is thereby represented not as belonging merely to my perception of the air in my state of perception or in several of my states or in the state of others, but as **necessarily** belonging to it, and the judgment: the air is elastic, becomes universally valid and thereby for the first time a judgment of experience, because certain judgments occur beforehand, which subsume the intuition of the air under the concept of cause and effect, and thereby determine the perceptions not merely with respect to each other in my subject, but with respect to the form of judging in general (here, the hypothetical), and in this way make the empirical judgment universally valid. (Prol, 4: 300f.)

I must confess that I cannot understand the point of this passage. Kant seems to suggest that we come first to the hypothetical judgments that if air is compressed, then it resists this compression, or that if air is no more compressed, then it returns to its initial volume. Such hypothetical judgments are merely judgments of perception. In the next step, presumably due to the putative connection between the hypothetical form of judgment and the category of cause and effect established in the Metaphysical Deduction, we somehow "subsume the intuition of the air under the concept of cause and effect, and thereby determine the perceptions," i.e., the perceptions of compression and resistance, or of the cease of compression and expansion, "not merely with respect to each other in my subject, but with respect to the [hypothetical]

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[5] Kant's inadequate account of secondary qualities in the *Prolegomena* is actually rectified by his later distinction within the relatively subjective representations: "The green color of the meadows belongs to **objective** sensation, as perception of an object of sense; but its agreeableness belongs to **subjective** sensation, through which no object is represented, i.e., to feeling, through which the object is considered as an object of satisfaction (which is not a cognition of it)" (KU, 5: 206; cf. MdS, 6: 211f.).

[6] Longuenesse, *Kant and the Capacity*, pp. 174ff.

form of judging in general." Could anyone understand how those perceptions or intuitions are "subsumed" under either the category of cause and effect or the hypothetical form of judgment, and how the judgment thus formed acquires universal validity?

Longuenesse proposes that those hypothetical judgments

> can in turn be generalized into 'If the x of my intuition is air, it tends to expand in volume'. Now, informed by the multiplicity of concurrent observations, we may conclude that the perceptions under consideration are "determined in themselves with respect to the logical form of the (hypothetical) judgment." The perceptions thought under the concept of 'air' are consequently to be subsumed under the concept of cause, those thought under the concept of 'expansion' under that of effect, and we transform our judgments of perception into judgments of experience.[7]

Longuenesse's interpretation makes Kant's passage intelligible but at the same time problematic. For the ground of the "subsumption" of the perceptions under the category of cause and effect and of the transformation of a judgment of perception into a judgment of experience is said to be the "multiplicity of concurrent observations," which seems to be nothing but the mere repetition or induction that is taken as the source of our ideas of cause and effect by Hume. And the adding of the form of hypothetical judgment does not seem to amount to any substantially new element that goes beyond Hume's naturalistic account. As a result, I think that Kant's elucidation of his example, as Longuenesse interprets it, does not tell us how he could respond to Hume with the doctrine of the two kinds of empirical judgments.

Kant's last example is "more easily understood" than the one just analyzed. It says that the judgment of perception "If the sun shines on the stone, it becomes warm" is transformed into the judgment of experience "the sun **warms** the stone" by adding "the understanding's concept of cause, which connects **necessarily** the concept of sunshine with that of heat" (Prol, 4: 301n.). This example is also used in explaining how his doctrine of the two kinds of empirical judgments could be used as a response to Hume. His explanation is worth a full quotation:

> [1] For having a try at **Hume's** problematic concept (this, his *crux metaphysicorum*), namely the concept of cause, there is first given to me *a priori*, by means of logic: the form of a conditioned judgment in general, that is, the use of a given cognition as ground and another as consequent. [2] It is, however, possible that in perception a rule of relation will be found, which says this: that a certain appearance is constantly followed by another (though not the reverse); and this is a case for me to use hypothetical judgment and, e.g., to say: If a body is illuminated by the sun for long enough, then it becomes warm. Here there is of course not yet a *necessity* of connection, hence not yet the concept of cause. [3] But I continue on, and say: if the above proposition, which is merely a subjective connection of perceptions, is to be a

[7] Longuenesse, *Kant and the Capacity*, p. 176.

> proposition of experience, then it must be regarded as necessarily and universally valid. But a proposition of this sort would be: The sun through its light is the cause of the warmth. The foregoing *empirical rule* is now regarded as a *law*, and indeed as valid not merely of appearances, but of them on behalf of a possible experience, which requires universally and therefore necessarily valid rules. [4] I therefore have quite good insight into the concept of cause, as a concept that necessarily belongs to the mere form of experience, and into its possibility as a synthetic unification of perceptions in a *consciousness in general*. (Prol, 4: 312)

I divide this passage into four parts in order to clarify the structure of Kant's argument. Basically, I think that in the first three parts, Kant hardly says anything that is not already contained in his explanation of the example "the air is elastic." In the first part, Kant specifies the first element that will be used in his response to Hume, namely "the form of a conditioned judgment in general." As he himself concedes, such form of judgment (at most)[8] entails the relation of ground and consequent, not that of cause and effect. And in the *Critique* Kant gives an example of a hypothetical judgment that does not express the relation of cause and effect: "If there is perfect justice, then obstinate evil will be punished" (A 73/B 98). Since this judgment merely expresses an analytic truth or a relation of ideas, it is not the target of Hume's "sceptical doubts." As a result, it seems that the use of the form of hypothetical judgment as such does not make any contribution to Kant's response to Hume.

In the second part, Kant indicates that we find some empirical rules on the ground of constant conjunction. Such rules take the form of hypothetical judgment, but do not have the necessity characteristic of the laws of nature, and are therefore merely judgments of perception. Kant's account in this part seems to be completely Humean, and his divergence with Hume will consist only in the later parts. However, what Kant says in the third part is rather disappointing, as he seems to suggest that the transformation of a judgment of perception into a judgment of experience, or of a empirical rule into a law of nature, is simply by virtue of our *regarding* it as necessarily and universally valid. But what could be more absurd than the claim that the necessity of a causal law consists merely in that it is "regarded," or, as Kant says in his elucidation of the last example, "represented," as necessary? And if this is all that Kant could say in responding to Hume's "sceptical doubts," it would be hardly credible that his answer should be taken seriously.

A new element, however, appears in the fourth part. This new element is the

[8] At most, because in modern, truth-functional logic, the form of conditional or the idea of material implication does not imply any relation between the content or meaning of the antecedent and consequent.

notion of “consciousness in general.” It is a well-observed fact that, in contrast to the *Critique*, a salient feature of the *Prolegomena* is that talks of cognitive faculties, apperception, synthesis, etc., which occupy a central place in both editions of the Transcendental Deduction, are almost absent in the latter. But finally it turns out that such talks are not really avoidable in a satisfactory account of the distinction between judgments of perception and judgments of experience. And the notion of “consciousness in general,” which appears four times in the central part of the *Prolegomena* (Prol, 4: 300, 304, 309n., 312), is usually (with the only exception of the third occurrence) assigned the crucial *objectifying* role that is assigned to the apperception in the *Critique*, and can therefore be reasonably seen as the counterpart of apperception in the *Prolegomena*. Unfortunately, this notion remains largely unexplained by Kant. Thus we have to appeal to Kant’s theory of apperception in the *Critique* in order to understand Kant’s notion of “consciousness in general,” and thereby the transformation of judgments of perception into judgments of experience and his response to Hume.

Before turning to the *Critique*, I think it is worthwhile to draw attention to Kant’s famous remark that “the problem **how** experience is now possible by means of these categories, and only through these categories alone … can almost be accomplished through a single inference from the precisely determined definition of a **judgment** in general (an action through which given representations first become cognitions of an object)” (MAN, 4: 475n.). This remark is part of Kant’s famous long footnote in the Preface to the *Metaphysical Foundations of Natural Science*, which is published between the *Prolegomena* and the second edition of the *Critique.* The problem Kant talks about here is obviously the familiar one that lies at the center of the Transcendental Deduction and also of the doctrine of judgments of experience, but the proposed solution is striking: while both the A-Deduction and the doctrine of the *Prolegomena* discussed above are extremely complicated and also deeply problematic, Kant now seems to regard their complexity as unnecessary, suggesting that the problem can be solved “almost … through a single inference.” Is this really possible? And does this mean that he simply gives up the much more complicated arguments provided before, in particular the doctrine of the two kinds of empirical

judgments in the *Prolegomena*? In order to answer these questions, we may first have a look at the background of Kant's bold new claim.

The entire footnote is intended to be a response to Johann Schultz's review of J. A. H. Ulrich's *Institutiones Logicae et Metaphysicae*.[9] Schultz is a close friend and disciple of Kant and the author of the first commentary on the *Critique of Pure Reason*. But in his review he complains that the deduction of the categories, as the main element of Kant's system, is too obscure to receive a fair examination. He also criticizes Kant's doctrine of judgments of perception and judgments of experience. Basically, his point is that Kant encounters with this distinction a dilemma: Either judgments of perception are some kind of experience or they are not. In the former case, given the conclusion of the Transcendental Deduction that categories are the condition of the possibility of experience as such, it follows that categories are the condition of the possibility of judgments of perception, which contradicts what Kant says in the *Prolegomena*. But in the latter case, experience would comprise judgments of experience, and Kant would thereby simply *presuppose* what Hume calls into doubt, namely the possibility of universally and necessarily valid knowledge. Presumably, then, Kant gives up the doctrine of the two kinds of empirical judgments in order to avoid such dilemma. And the fact that this doctrine is virtually absent in all Kant's main works except the *Prolegomena* is a strong evidence for this thesis.

However, I can only partially agree with this thesis. I think Schultz's criticism is perhaps not so compelling, as it seems to rest on a confusion between two meanings of "experience" indicated in the last chapter. Nevertheless, Kant's doctrine of the two kinds of empirical judgments is still full of various problems, some of which I endeavored to identify above. And it is quite probable that Kant himself realizes those or some other problems and becomes then dissatisfied with the distinction of the two kinds of empirical judgments as presented in the *Prolegomena*. But this does not mean that he simply gives up that distinction. Or more precisely, it does not mean that he should, or has good reason to, give up that distinction, as the difference between the two kinds of judgments is shown by Kant and perhaps even more clearly by Leibniz to be something real. It is reasonable to expect, therefore, that instead of

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[9] In this paragraph I largely follow Pollok, "'An Almost Single Inference,'" esp. p. 327.

simply giving up that distinction, Kant should provide a more satisfactory account of the two kinds of empirical cognitions with the new definition of judgment. In the next section, we shall see that such an account is offered in § 19 of the B-Deduction.

II

In this section, I shall be concerned with the question what new light Kant's new definition of judgment developed in the B-Deduction can bring on the doctrine of the two kinds of empirical judgments. Kant's new definition of judgment is given in § 19 of the B-Deduction: "a judgment is nothing other than the way to bring given cognitions to the **objective** unity of apperception" (B 141). This definition is closely related yet slightly different from the one given in the long footnote in the *Metaphysical Foundations*, as it involves the notion of the objective unity of apperception, which is absent in the latter. This difference is slight but not unimportant, but we shall see that ultimately the two definitions amount to the same thing. The most important fact that we may note now, I think, is that no reference is made to the categories in either definition. Since the task announced in that footnote is to explain the role of the categories of making experience possible, and, as its full title indicates, the entire Transcendental Deduction is a deduction of the pure concepts of understanding, we may wonder how it is possible to accomplish this task "almost through a single inference" from a premise that apparently has nothing to do with the categories.

The most natural answer to this question is of course to follow Kant's own suggestion in § 20 that "the **categories** are nothing other than these very functions for judging, insofar as the manifold of a given intuition is determined with regard to them (§ 10)" (B 143).[10] The detail of Kant's argument for an intrinsic connection between forms of judgment and categories is to be found in the Metaphysical Deduction, where he first constructs a "table of judgments," which comprises four "titles," each of which contains then three "moments." The twelve forms of judgment are then regarded as an exhaustive and systematic presentation of the "function of

[10] In the original B-edition of the *Critique*, the reference made in this sentence is to § 13, which does not seem to make good sense. Thus the editor of the *Akademieausgabe* (Benno Erdmann) makes the suggestion that it should be to § 10, which is followed here. Nevertheless, the Guyer/Wood translation retains the original "§ 13" for reasons given at p. 727 n. 41 of their edition.

thinking" (A 70/B 95). In accordance to this table, Kant suggests that we may also construct an exhaustive "table of categories" for the following reason:

> In such a way there arise exactly as many pure concepts of the understanding, which apply to objects of intuition in general a priori, as there were logical functions of all possible judgments in the previous table: for the understanding is completely exhausted and its capacity entirely measured by these functions. (A 79/B 105)

This passage is not easy to understand. In particular, it is not clear what "functions of thinking" or "logical functions of judgments" mean. However, instead of trying to understand it, many commentators are more willing to criticize Kant's overall strategy for the obvious reason that Kant's table of the forms of judgment is based on an obsolete formal logic, which should be substituted either by a "speculative" logic or by a modern, post-Fregean conception of (formal) logic.[11] Despite many respectable attempts at rescuing Kant's project from such criticisms,[12] I think at least the Strawsonian criticism has not been adequately responded to by anyone, but I shall not argue for this thesis here. Instead, I want to indicate another problem of Kant's project, which does not vanish even if we acknowledge the validity of Kant's logic, the completeness of his table of judgments, and the correspondence between forms of judgments and categories (all of these, it should be stressed, are in fact quite problematic!). The problem is in connection with Kant's distinction between schematized and unschematized categories:

> In fact, even after abstraction from every sensible condition, significance, but only a logical significance of the mere unity of representations, is left to the pure concepts of the understanding, but no object and thus no significance is given to them that could yield a concept of the object. Thus, e.g., if one leaves out the sensible determination of persistence, substance would signify nothing more than a something that can be thought as a subject (without being a predicate of something else). Now out of this representation I can make nothing, as it shows me nothing at all about what determinations the thing that is to count as such a first subject is to have. Without schemata, therefore, the categories are only *functions of the understanding* for concepts, but do not represent any *object*. (A 147/B 186f.)

From Kant's example and especially from his conclusion drawn in the last sentence, it should be clear that the objectifying role can be played only by schematized categories, whereas only unschematized categories are directly connected with the

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[11] See Hegel, *Enzyklopädie*, § 42; Strawson, *Bounds of Sense*, pp. 78ff.

[12] Most notably Longuenesse, who declares on the first pages of her *Kant and the Capacity* that she aims to defend Kant against such charges. However, as my discussion of her interpretation of Kant's example "the air is elastic" shows, she does not succeed in establishing the objectifying role of the logical forms of judgment. To be sure, from this single instance it would be too premature to conclude that her defense is not very successful, but see Allison, "Where Have all the Categories Gone?" for an incisive criticism of Longuenesse's general approach. In my view, the main problem of Longuenesse's approach is that she mistakenly regards Kant's main line of argument in the Metaphysical and Transcendental Deduction as a continuation of his account of the "logical" use of the intellect in the *Inaugural Dissertation* (cf. *Kant and the Capacity*, pp. 26ff.), while I think the categories are rather the products of the "real" use of the intellect.

forms of judgment. Thus, if objective cognition consists primarily in judgments as defined in § 19, then what the latter involve cannot be merely unschematized categories, but must be schematized ones, which cannot be derived directly from the forms of judgment. The significance of the distinction between schematized and unschematized categories can be seen most clearly from Kant's criticism of traditional rational psychology. In the first Paralogism, Kant grants that we may legitimately asserts that the soul is a substance as far as the latter is used in a purely logical, unschematized way, but we are not thereby entitled to claim that the soul is a substance if the latter is understood as a schematized category, i.e., as "that which persists" (A 182, B 225). And the mistake of rational psychology consists simply in the illegitimate move from the unschematized category of substance to the schematized category (cf. A 349f.). Obviously, then, as the mere forms of judgment, unschematized categories cannot serve to distinguish objective from non-objective cognitions.

If the intrinsic connection between forms of judgment and categories cannot be taken for granted, how could the problem explicitly raised in the footnote from the *Metaphysical Foundations*, namely that concerning the objectifying role of the categories as the pure concepts of the understanding, be solved in virtue of a new definition of judgment? Must we follow those commentators who tend to disregard Kant's doctrine of judgments and categories and concentrate on the direct connection between self-consciousness and objectivity?[13] I don't think so. In addition to the problem that such interpretation does not respect the fact that the transcendental deduction is a deduction of the categories, I think a too close connection between self-consciousness and objective cognition would leave too narrow place for subjective experience—it would entail, to use the title of Beck's famous essay (which in turn is adopted from C. I. Lewis's work), that the sage of Königsberg has no dream. Admittedly, a direct connection between self-consciousness and objectivity is indicated at least in the A-Deduction. But Kant, presumably recognizing its inadequacy in dealing with the problem of subjective cognition, reworks it with the

[13] See, e.g., Strawson, *Bounds of Sense*, pp. 97ff.; Henrich, "Identity and Objectivity." However, Henrich modestly concedes that his reconstruction is "only an element, not the whole, of an interpretation of [Kant's] transcendental deduction" (p. 128), thus does not rule out other possible interpretations of Kant's argument.

distinction between two kinds of empirical judgments in the *Prolegomena*, which in turn is transformed into his doctrine of judgment in the B-Deduction. In consequence, I think no interpretation of Kant's Transcendental Deduction should be accepted unless it can offer a satisfactory account of the problem of subjective cognition.

Now we encounter a dilemma: On the one hand, it is a core insight of Kant that there is an intrinsic connection between self-consciousness and objective knowledge, the proper expression of which is judgments of experience; on the other hand, the connection should not be too close to rule out the possibility of more subjective mode of cognition, which might be expressed by judgments of perception. Could we get out of this dilemma? Could we thereby also given an account of the objectifying role of judgment and categories? I think the answers to both questions are positive. As I stressed above, the objectifying function belongs not to the categories as such, but to schematized categories alone. Thus, if it is by means of judgment that merely subjective, perceptual cognitions are distinguished from objective, universally valid ones, then what we should seek is not the connection between judgment and categories as such, but the one between judgment and schematized categories. However, such connection is not explicitly discussed in any part of the *Critique* or in other works of Kant: The only part in which he develops his theory of judgment in some detail is the Transcendental Deduction, but the official argument in it is based on the (putative) connection between judgment and categories as such. As a result, the connection between judgment and schematized categories can be established only through a reconstruction of Kant's argument. But what are the premises and the result of an adequate reconstruction, and how should it proceed?

As I understand it, the result of our reconstruction should be an answer to Hume's skepticism concerning the empirical use of the intellect. And the most distinctive, at the same time most important premise of Kant's argument in the Transcendental Analytic is no doubt his doctrine of apperception. As we noted in chapter 3, even the pre-Critical Kant regards our capacity of self-consciousness as the ground of our understanding, which is equated with the capacity for judging long before the *Critique*. While this idea is a mere "opinion" as Kant first envisages it, it becomes a full-fledged theory of experience in the *Critique*. Accordingly, our reconstruction will

also begin from the notion of apperception. It will be argued that judgment and schematized categories are connected through the transcendental apperception as their common ground.[14]

Given its central place in the Transcendental Deduction, it is hardly any news to take the notion of apperception as the fundamental principle of Kant's argument, but my own interpretation has, I hope, some peculiar features.[15] Most importantly, I suggest that we need to distinguish between three conceptions of the I or the self, which correspond to three kinds of representations proposed by Leibniz. Such distinction is not made by Kant either in the *Critique* or in the *Prolegomena*, but is at least indicated in a letter to Herz on May 26, 1789. In this letter Kant claims that without the conditions under which our knowledge of things is possible,

> I would not even be able to know that I have sense data; consequently for me, as a knowing being [*erkennendes Wesen*], they would be absolutely nothing. They could still (if I imagine myself to be an animal) carry on their play in an orderly fashion, as representations connected according to empirical laws of association, and thus even have an influence on my feeling and desire, without my being aware of them (assuming that I am even conscious of each individual representation, but not of their relation to the unity of representation of their object, by means of the synthetic unity of their apperception). (11: 52)

There are apparently only two conceptions of the self in this passage: In the weighty sense, the self is the subject of cognition, whereas in the weaker sense, the self is the owner of certain sense data. But I think Kant's characterization of the self in the weaker sense here is not so accurate, as sense data are not the only kind of representations that lack the unity of theoretical cognition, indeed even not the primary kind. Since for Kant all theoretical cognition must consist in judgment, any kind of representation that does not reach the level of judgment might be taken as something belongs merely to the self in the weaker sense, and intuition is obviously a kind of such representation. Moreover, if there are certain "empirical laws of association," it seems that they should apply not so much to mere sensations or sense

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[14] Until this point, my analysis is very close to the interpretation of Guyer, who vigorously argues, throughout Parts I-III of his highly influential *Kant and the Claims of Knowledge* and in numerous subsequent publications, for the "extralogical" nature of the categories and the real grounding of the (relational) categories in the transcendental time-determination. While having learnt much from Guyer's critical analysis of Kant's argument, I hold his positive result to be dubious. In particular, I think he lays too much weight on the problematic notion of transcendental time-determination, but too little on Kant's theory of judgment and apperception.

[15] Needless to say, even if there is some originality in my interpretation, it owes much to the inspiration provided by previous commentators, in particular Korsgaard, *Self-constitution*; Allison, *Idealism and Freedom*, esp. chs. 4, 7, 9; Pippin, "Kant on the Spontaneity of Mind." I find Korsgaard's "constitutional" model of the self very illuminating, but she does not use it to interpret Kant's theoretical philosophy. A recent attempt at using this model to develop a Kantian account of cognitive agency is Valaris, "Spontaneity and Cognitive Agency." None of these authors, however, emphasizes the significance of the distinction between different conceptions of the self as I do.

data as to some more complicated representations such as intuitions. Finally, as we have seen in chapter 3, both Leibniz and Hume reasonably concede that even animals can have clear but confused representations of things, which enable them to distinguish one thing from another and hence obviously go beyond mere sensations. From these considerations, we may wonder whether "sense data" in this passage should be substituted with "intuitions," which are provisionally understood as certain intermediate cognitions that are shared by human beings and other animals.

This ambiguity becomes more acute if we pay sufficient attention to what Kant says in the last parenthesis. Before this sentence, he suggests that the I in the weaker sense might have some representations without being conscious of this fact, and the proper candidate for such representations can only be sense data, not intuitions. But here Kant claims that even if I am conscious of some representations, they do not thereby automatically belong to the synthetic unity of apperception, that is, to the I in the weighty sense. Thus it is reasonable to conceive of three levels of the self in order to understand this passage. In the weighty sense, the self is the owner of distinct cognitions; in the weaker sense, it is the owner of clear but confused cognitions or intuitions; whereas in the weakest sense, the self is correlated to the obscure cognitions or mere sense data. Both human beings and other animals have a self in the two weaker sense, while human beings alone have a self in the weight sense.

In the last parenthesis, Kant also provides a valuable explanation of the relation between the two stronger conceptions of the self in terms of the distinction between consciousness and self-consciousness or apperception: The I in the weaker sense can be conscious of *individual* representations or intuitions (note the singularity of intuition!), while the I in the weighty sense can have self-consciousness, which should not be understood as any kind of reflexive knowledge that is acquired above all through introspection, but rather as that by means of which the intuitions are *unified* in the "representation of their object." As we shall see immediately, this new conception of self-consciousness is the key to Kant's Transcendental Deduction.

With the distinction between three conceptions of the self, new light will be shed on some familiar passages of the B-Deduction. Perhaps the most celebrated passage of the B-Deduction is the opening sentence of § 16: "The **I think** must **be able** to

accompany all my representations; for otherwise something would be represented *in* me that could not be thought at all, which is as much as to say that the representation would either be impossible or else at least would be nothing *for* me" (B 131f.). The first question we should ask now is: how many and which conceptions of the self are involved in this sentence? The answer, I think, is all three conceptions. First, it is fairly clear that all representations that can be accompanied by the "I think" must be conscious representations, and are therefore "mine" in the weaker sense; and that whatever is represented *in* me belongs to me in the weakest sense. By contrast, it seems that the I for whom the mere unconscious representations are "nothing" can only be the self in the weighty sense. On the one hand, the unconscious representations are not "nothing" for the self in the weaker sense. Like the *petites perceptions* in Leibniz, they are as it were the materials with which the conscious representations or intuitions are built. On the other hand, as we have seen, the self in the weighty sense consists in the consciousness of the unity of different intuitions as related to their object, hence has no direct contact with unconscious representations. Taken together, Kant's point in this sentence should be that even though there are unconscious representations, they are totally irrelevant to our theoretical cognition insofar as they remain below the threshold of consciousness and do not become intuitions. Thus, far from dogmatically denying the possibility of unconscious or obscure representations,[16] Kant intends here just to explain what is at issue in the Transcendental Deduction. While the relation between the self in the weakest sense and the self in the weaker might be an interesting problem in psychology or anthropology, transcendental philosophy is concerned only with the relation between the self in the weaker sense and the self in the weighty sense. In consequence, from now on we may ignore the self in the weakest sense, and concentrate on the other two conceptions of the self.

There is, however, yet another reference to the I in the opening sentence of § 16 which is not discussed in the last paragraph, namely the "I think" which must be able to accompany all my conscious representations or intuitions. Doe it belong to the self in the weaker sense or to the self in the weighty sense? The answer is: neither. For the

[16] Unconscious or obscure representations are discussed at length in Anth, § 5, 7: 135ff.

representation "I think" is later declared to be a "simple and in content for itself wholly empty representation" (A 345/ B 404), whereas both the self in the weighty sense and the self in the weaker sense have their own representations. However, from the emptiness of the "I think" does not follow its insignificance. In fact, it amounts exactly to what Kant famously calls the "**transcendental** unity of self-consciousness" (B 132), which is the *formal, constitutional* principle by means of which alone the self in the weighty sense is constituted. But what is the matter for such constitution that corresponds to this formal principle?

Kant does not give an explicit answer to this question. But immediately after the opening sentence of § 16 he writes: "That representation that can be given prior to all thinking is called **intuition**. Thus all manifold of intuition has a necessary relation to the **I think** in the same subject in which this manifold is to be encountered" (B 132). Intuitions, then, are the correlata of the "I think" and therefore presumably the matter for the constitution of the self in the weighty sense. Intuitions relate to the transcendental unity of apperception just as matter relates to form, which in turn is explained as the relation between "the determinable in general" and its "determination" (A 266/B 322). We have suggested earlier that intuitions should be understood as the representations pertaining to the self in the weaker sense. If this is true, we can have a clear view of the relation between the self in the weaker sense and the self in the weighty sense: The latter is constituted by the former plus the formal principle of the transcendental unity of apperception; more specifically, by the determination of the former through this principle. Our next question is therefore: how could our intuitions be determined by this purely formal, empty principle?

Such determination is possible through a particular act which Kant gives many different names, such as "an act of **spontaneity**" (B 132), "combination" (throughout § 15, B 129f.), "original combination" (B 133), or less specifically, "synthesis" (B 130, B 133, B 135, etc.). Indeed, this act is the genuine starting point of Kant's argument in the Transcendental Deduction, for it is from the "original combination" that "much may be inferred" (B 133). However, in explaining this act Kant claims that "the manifold representations that are given in a certain intuition would not all together be **my** representations if they did not all together belong to a self-

consciousness; i.e., as my representations (even if I am not conscious of them as such) they must yet necessarily be in accord with the condition under which alone they **can** stand together in a universal self-consciousness, because otherwise they would not throughout belong to me" (B 132f.). Here Kant seems to conflate between different conceptions of the self: in the first half of this sentence, "my representations" refer to representations belonging to me in the weighty sense; whereas in the last half, as Kant also counts the unconscious representations as mine, the conception of the self involved here must be the weakest one. But it would certainly be unjustified to claim that all representations pertaining to me in the weakest sense, or even in the weaker sense, must be able to stand under the condition under which representations pertaining to me in the weighty sense actually stand or can stand.

In fact, the same confusion also affects what Kant calls "the supreme principle of all intuition in relation to the understanding," namely "that all the manifold of intuition stand under conditions of the original synthetic unity of apperception" (B 136). Kant holds that this principle is "itself identical, thus an analytical proposition" (B 135, cf. B 138), on the ground that "it says nothing more than that all my representations in any given intuition must stand under the condition under which alone I can ascribe them to the identical self as my representations" (B 138). However, there is an ambiguity in this proposition: If "all my representation" mean all representations that belongs to me in the weighty sense, then this proposition is indeed an analytic truth, but it says nothing about the representation which belongs to me only in the weaker sense but not in the weighty sense. And we have no ground to suppose that there is no such representation, for intuition is understood so far just as the kind of representation which belongs to me in the weaker sense but not yet in the weighty sense. If, however, "all my representations" means all representations that belong to me in the weaker sense, then this proposition cannot be an analytic truth; indeed, it is quite questionable whether it is a truth at all.[17]

The consequence of such confusion for the Transcendental Deduction as a whole

[17] The classical criticism of the analyticity of Kant's principle is Guyer, "Kant on Apperception and A Priori Synthesis," p. 209; id., *Kant and the Claims*, pp. 132f., 140ff. Guyer does not, however, express his criticism in terms of the two conceptions of the self as I do. Moreover, I don't think that this confusion is so fatal to Kant's argument in the Transcendental Deduction as Guyer thinks. For a notable defense of Kant's view, see Allison, *Idealism and Freedom*, ch. 3. Despite the illuminating analysis he gives to Kant's argument, I think Allison's defense is unsuccessful because he does not distinguishes between different senses of the "I" or the "self" in Kant.

can be appreciated only later. For now let us turn our attention to Kant's discussion of the "original combination," which makes mere conscious representations or intuitions into self-conscious representations. Kant writes:

> Namely, this thoroughgoing identity of the apperception of a manifold given in intuition contains a synthesis of the representations, and is possible only through the consciousness of this synthesis. For the empirical consciousness that accompanies different representations is by itself dispersed and without relation to the identity of the subject. The latter relation therefore does not yet come about by my accompanying each representation with consciousness, but rather by my **adding** one representation to the other and being conscious of their synthesis. (B 133)

In this passage, Kant introduces the new idea of the "thoroughgoing identity of the apperception" or of the subject. As I understand it, this idea alone is the *essential* determination of the I or the self in the weighty sense. Earlier we suggested that the self in the weighty should be understood as the owner of distinct or objective cognitions, and that the self-consciousness pertaining to it alone should be understood not as certain reflexive consciousness, but as the consciousness of the unity of individual representations in relation to their object. These are of course important Kantian views, but strictly speaking they remain so far only provisional suggestions. Now they must be *derived* from this essential determination of the self in the weighty sense. In other words, it must be shown that *as* a consciousness being aware of its own thoroughgoing identity, the self in the weighty sense *must* possess objective, distinct representations, and is conscious of itself *only* by means of the consciousness of the unity of the intuitions in relation to their object. How could this be proved?

Kant's strategy is to find out the condition of the possibility of my consciousness of my own identity. As he rightly observes, the mere consciousness of individual representations is not enough for such consciousness, and from this he concludes that the latter is possible only "by my adding one representation to the other and being conscious of their synthesis." This conclusion is quite understandable, for if we consider the process of the constitution of the self in the weighty sense from the self in the weaker sense, we shall see that all "materials" that are at one's disposal for such constitution are the individual representations pertaining to the self in the weaker sense. And since no single such representation suffices for the constitution, the only option seems to be that the latter is achieved through the "combination" or "synthesis" of several individual representations. Nevertheless, Kant's proposal becomes less plausible if we view the problem from a more neutral perspective: How is it possible

to combine or synthesize, for example, the representation of the rain outside my room with the representation of the copy of the *Critique* on my desk? And how could I be conscious of such synthesis, and thereby constitute myself in the weighty sense?

Now there is an easy answer to such objections: The individual representations or intuitions are combined or synthesized with one another not arbitrarily, but in accordance with certain rules. Such rules tell me that my representation of the rain outside my room should rather be combined with, say, the representation of the wetness of the ground or of an umbrella, and my representation of the copy of my *Critique* should be combined with, say, the representation of the philosopher Kant. However, while it is quite easy to describe these and other particular cases, it is very difficult to spell out what the rules regulating our synthesizing act are. And here, I think, we may appreciate an important insight of Kant: as I understand him, Kant holds that all such rules are nothing but the specification of the concept of an *object*. According to Kant, cognitions "consist in the determinate relation of given representations to an object. An **object**, however, is that in the concept of which the manifold of a given intuition is **united**" (B 137). Presumably, then, with the concept of an object, we can know the rules in accordance with which intuitions should be combined or synthesized, and these rules are at the same time the rules for the constitution of the self in the weighty sense. This idea is further confirmed by Kant's new definition of the transcendental unity of apperception: as he first introduces this notion in § 16 (the exact words he uses there are "transcendental unity of self-consciousness"), he just says that it is the principle by means of which all my representations belong to me in the weighty sense. But in § 18 he writes: "The **transcendental unity** of apperception is that unity through which all of the manifold given in an intuition is united in a concept of the object" (B 139). The concept of the object is thereby declared to be the key to the constitution of the self in the weighty sense.

Kant's appeal to the concept of the object seems to be a plausible strategy, but I think at least two remarks are necessary. First, while it seems reasonable to grant the concept of object a prominent role in the combinations of representations, it does not follow that it is the only vehicle, as it were, for such combinations. As Kant himself

concedes, the formal or general logic "abstracts from all contents of the cognition of the understanding and of the difference of its objects" (A 54/B 78), thus the combination (and division) within its scope is guided by the logical forms alone, not by the concept of the object. In addition to the purely logical rules, there might be other rules that govern the combination of our representations in context which is different from that of empirical cognition. To use Kant's own example again, the proposition "If there is perfect justice, then obstinate evil will be punished" certainly involves some combination; but since it is not about any empirical object, the concept of the object seems to be entirely useless in this case. Since "the synthetic unity of apperception is the highest point to which one must affix all use of the understanding, even the whole of logic and, after it, transcendental philosophy" (B 134n.), it seems that it must contain other principles of combination or synthesis than what is provided by the concept of the object.

Second, like the I or the self, "object" also has more than one senses. This is already indicated in the *Critique*: "Now one can, to be sure, call everything, and even every representation, insofar as one is conscious of it, an object; only what this word is to mean in the case of appearances, not insofar as they are (as representations) objects, but rather only insofar as they designate an object, requires a deeper investigation" (A 189f./B 234f.). Here Kant contrasts object in the weighty sense with its representations, which in turn are also objects, but only in the weaker sense. However, I think Kant neglects at least an important kind of things that are neither objects in the weighty sense nor mere representations, namely *images*—not mental images, but images that can be literally "seen" in a picture or a film.[18] In the usual case, when we see some photos or videos about the *Frauenkirche*, our representations are united in the object *Frauenkirche*, not in any particular image of it. We shall say more about the interesting question concerning the nature of image in the next chapter. For now, I think while there is some complexity concerning the nature of object in the weaker sense, it should be fairly clear that the ordinary, material things like books or the Earth are all objects in the weighty sense.

[18] In fact, Kant himself notices an example that is an object only in the weaker sense but not a representation, namely the rainbow (A 45/B 63). Shadows, too, belong to this kind of objects. But I think they can also be regarded as images in a loose sense. Or at least images are a more paradigmatic kind of such objects.

Despite the problems indicated in these remarks, the connection between the self in the weighty sense and objects in the weighty sense remains a tempting idea. But in order to carry out this idea, we must ask *how* the concept of an object in the weighty sense can serve to unite the manifold of an intuition. Instead of answering this question in a straightforward way, however, Kant introduces yet another idea, namely that of judgment. Here, finally, after a long detour of various preparatory discussions, we come back to the point from which our examination of the Transcendental Deduction in this section departs. Let me quote the two definitions of judgment again: A judgment is "an action through which given representations first become cognitions of an object" (MAN, 4: 475n.); or "nothing other than the way to bring given cognitions to the **objective** unity of apperception" (B 141). The long detour enables us now to understand why they are equivalent. However, we do not yet have a satisfactory answer to the question raised as these definitions are first introduced, namely the question about the role of the categories. But let us postpone this problem for a while again, and first consider the relation between judgment and object and the possible new light this relation may bring on the problem of the constitution of the self in the weighty sense.

In § 19, Kant holds that the essential character of judgment consists in the copula "is": the aim of this word is "to distinguish the objective unity of given representations from the subjective. For this word designates the relation of the representations to the original apperception and its **necessary unity**, even if the judgment itself is empirical, hence contingent, e.g., 'bodies are heavy'" (B 142). The empirical and contingent judgments that nevertheless express the objective unity of given representations are obviously nothing other than the judgments of experience in the *Prolegomena*. Judgments of perception, by contrast, are no longer regarded as judgments proper according to the new definition, as they express merely "the relation of these same representations in which there would be only subjective validity, e.g., in accordance with laws of association" (ibid.). The example Kant gives for a proposition of merely subjective validity is "If I carry a body, I feel a pressure of weight," whereas the corresponding proposition of objective validity is "It, the body, is heavy" (ibid.). Presumably, the difference between the two propositions is that only

in the second my two different representations, the vision of a body and the feeling of heaviness, are combined objectively and brought to the "objective unity of apperception" by means of the concept of an object.

However, I find both Kant's examples and his elucidation of them to be highly problematic, especially when they are compared with Kant's doctrine of the two kinds of empirical judgments discussed in the last section. To begin with, the significance Kant gives to the copula "is" is entirely unfounded. If, as Kant says in the *Prolegomena*, the proposition "the air is elastic" can be taken both as a judgment of perception and a judgment of experience, then obviously the word "is" plays no role in distinguishing objective from merely subjective validity. Now one might say that according to the position of the second edition of the *Critique*, this proposition can no longer be regarded as one expressing merely subjective validity. Admittedly, this proposition seems to be too "objective," but we may easily give other examples that employ the copular yet are merely subjectively valid, such as "this dish is delicious (for me)." On the other hand, there are plenty of objectively valid propositions that do not employ the copular, e.g., "the Earth moves around the Sun." In fact, there is at least one highly sophisticated language that hardly uses any copula at all, namely the classical Chinese. In consequence, I think there is no connection between the copula "is" and objective validity at all.

The second problem is that Kant does not find an adequate way of expressing merely subjectively valid proposition. His example "If I carry a body, I feel a pressure of weight" consists of two part, and only the latter part expresses a feeling. The first part says that a particular body is carried by a particular individual at a particular time, hence at least intends to be an objectively valid proposition.[19] And I think it is no mere accident that the reference to an object in the weighty sense is required even if one wants to express one's most subjective experience. But I would like to further pursue this interesting issue later.

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[19] The inadequacy of Kant's expressions is already noted by Prauss, see note 1 above. It might be objected that unlike the examples discussed by Prauss, here Kant's example is a hypothetical proposition. But as Kant himself indicates (A 73/B 98), in a hypothetical proposition the antecedent is not always asserted. However, in this context, just as in the example "If the sun shines on the stone, it becomes warm," Kant does not mean a conditional that might be counter-factual, as in his example "If there is perfect justice, then obstinate evil will be punished;" what he has in mind is rather the combination of *actual* perceptions (note the German word "*wenn*," which is translated as "if," can also be translated as "when"). As a result, the antecedents in these cases are at least intended to be true.

The third problem is perhaps the philosophically most important one: Kant provides no account of why the representation of heaviness should be combined with the representation of body. This problem needs some clarification: Suppose that the body in question is a piece of gold. To the same extent to which we may justifiably say "It, the body, is heavy;" we may also justifiably say "It, the body, is yellow." However, while we may also justifiably say "(all) bodies are heavy," it is certainly wrong to say "(all) bodies are yellow." But why should the representation of yellowness only be combined with the representation of gold, whereas the representation of heaviness can be combined with the representation of body? I think Kant has no answer to this question in the Transcendental Deduction. In particular, his appeal to the concept of the object in the weighty sense must be useless, as it is too general to be used to distinguish between these two cases.

The fourth problem concerns the relation between objectively valid combination in a judgment and merely subjectively valid combination. As we noted above, in the *Prolegomena* Kant claims that "All of our judgments are at first mere judgments of perception" (Prol, 4: 298). By contrast, in the B-Deduction he claims that "the pure synthesis of the understanding … grounds a priori the empirical synthesis," and that "the empirical unity of apperception, … which is also derived only from the [original unity of consciousness], under given conditions *in concreto*, has merely subjective validity" (B 140). Accordingly, the merely subjectively valid cognitions are no longer deemed as the first step towards the objectively valid ones, but rather somehow "derived" from the latter. But if we reflect a bit on the actual process of human cognition, there can be little doubt that we always proceed from the more subjective cognitions to the more objective ones, which suggests that the position of the *Prolegomena* should be favored. Moreover, this problem may be considered in conjunction with the third one: according to the position of the *Prolegomena*, we at first make the judgment of perception that if a carry a body, I feel a pressure of weight, or that if I see a gold, I have the feeling of seeing something yellow. On the ground of such judgments of perception, we make the judgments of experience that bodies are heavy and that gold is yellow. The ground for the difference between the two ways of combination might then be found elsewhere than in the transformation of

judgment of perception into judgment of experience, which presumably involves the concept of an object in the weighty sense. Even if the last problem is thereby not yet resolved, it becomes at least less acute. On the contrary, if one denies the importance of judgments of perception for judgments of experience, as Kant seems to do in the B-Deduction, then the last problem would be a direct threat.

Given all these problems, it seems that Kant's account of judgment in § 19 does not help us to understand the unification of the manifold of an intuition in the concept of an object in the weighty sense, which is the explication of the idea of original combination introduced in § 16. Since on such unification or combination depends the constitution of the self in the weighty sense, we do not have a satisfactory account of latter either. In addition, the role of the categories remains always unclear. Thus, rather than "almost through a single inference," it seems that the task of the transcendental deduction of the categories cannot be accomplished at all with the new, "precisely determined" definition of judgment.[20] Indeed, as I just argued, with the new definition of judgment, Kant lamentably abandons the natural and plausible distinction between judgments of perception and judgments of experience, and thereby makes new trouble for himself that could actually be avoided.

However, even if Kant's official argument in the Transcendental Deduction fails for the lack of a satisfactory theory of judgment, his text leaves us with plenty of insights that can serve as the guiding principle for a Kantian account of experience. These insights include the objectifying function of the categories, the correlation between the self in the weighty sense and our knowledge of the object in the weighty sense, and the significance of the judgment. In the next chapter, I'll attempt show how these insights may be used to respond to Hume's "sceptical doubts." Although I cannot pretend that my following account is precisely what Kant actually wants or ought to say, I believe that an interesting philosophical job would be done if a Kantian response to Hume's skepticism concerning the empirical use of the understanding can

[20] In his classical study of the Transcendental Deduction, Henrich draws attention to R 6350 (written presumably in 1797), which contains some hints of Kant's more specific views on the nature of object and its relation to judgment (*Unity of Reason*, p. 153). However, in this *Reflexion* Kant just stresses the complexity, i.e., non-simplicity of the object, thus at most proves that an object must be resulted from the combination of several representations; it does not tell us which representations should be combined, and what the rules for such combination is, thus is still vulnerable to the third problem indicated above. Moreover, it gives no hint of the role of the categories in such combination.

be reconstructed. And that is all I aspire to do.

Chapter 6 Objectivity and the Categories

The task of this chapter is, as declared above, to present a reconstruction of Kant's argument that will be freed from all the problems indicated in the last one. My reconstruction is quite simple, yet violates some of Kant's official doctrines. In order to vindicate the violation, therefore, it is necessary to make some criticisms of Kant's own argument. The chapter is divided accordingly into three parts: It begins with a recapitulation of the results gained so far and some preparatory notes on how my reconstruction will proceed (I), which are followed by a critical examination of Kant's argument in the second half of the B-Deduction (II). In the last section I present my reconstructed version of the Kantian argument, with which, I shall argue, the problem of Hume as well as many other problems can ultimately be solved (III).

I

In the last two chapters, I argued that while Kant's theory of experience should be understood as his defense of a broadly Leibnizian view against Hume's skepticism concerning the empirical use of the understanding, this task is not successfully accomplished by his actual argument in the *Prolegomena* and in the Transcendental Deduction. The specific problems of his arguments are indicated in the last chapter, but now I venture to add that there is a simple but deep ground for his failure, namely the confusion between different levels of objectivity. In the most passages from both the *Prolegomena* and the Transcendental Deduction, Kant tends to take whatever belongs to the object itself as objective, and contrasts it with the mere representations, which are understood as the private mental states. Accordingly, the problem he aspires to solve must be the familiar Cartesian problem of how we can go beyond the mere representations and arrive at knowledge of the external world. Like Descartes, his also attempts to solve this problem with the notion of self-consciousness, though what this notion means for him is very different from what it means for Descartes. However, the Leibnizian distinction between the subjective and the objective, which is challenged by Hume's "sceptical doubts," is completely different from the Cartesian. For Leibniz, even cognitions of external objects, insofar as they are grounded merely on

observation and induction, are subjective, whereas objective cognitions must be broadly a priori, i.e., they must have their ground in the knowledge of their common "cause" or "reason." And Hume, at least in the *Enquiry*, does not cast doubt on the possibility of knowledge of external things, but claims only that broadly a priori knowledge is impossible. As a result, it seems that despite his frequent allusion to the Humean problem, Kant does not actually deal with it at all.

However, as I emphasized in the Introduction, both the Transcendental Deduction and the part of the *Prolegomena* corresponding to the Transcendental Analytic conclude with the thesis of the lawfulness of nature, which obviously entails the possibility of broadly a priori knowledge. Accordingly, to provide a solution to the Humean problem is at least something Kant should have done with his theory of experience. On the other hand, in his attempt at solving the Cartesian problem, Kant already hints at some key ideas for a solution to the Humean problem, even though he does not develops these ideas into a full-fledged account. In what follows, I shall attempt to develop a Kantian response to Hume based on these ideas.

In my view, the most important idea for our purpose is that of (original) combination. Both Kant and Hume hold that intuitions or perceptions as such are not combined with each other. It is perfectly possible that I see a body without having the feeling of heaviness, or vice versa. Moreover, they both hold that the representations can be combined either subjectively or objectively, but they draw this distinction in quite different ways: according to Hume, if certain combination occurs just for one time, it is merely contingent or subjective; whereas if the same combination occurs frequently, it is necessary and objective. For Kant, by contrast, if intuitions are combined through an "empirical synthesis" and "in accordance with laws of association," then the combination is merely subjectively valid; whereas if they are combined "**in virtue of the necessary unity of apperception**" (B 141), then the combination is objectively valid. From the Kantian perspective, then, the Humean objective combination is actually still subjective, which makes it impossible for Hume to attain knowledge of the objects in the weighty sense. But from the Humean perspective, the Kantian objective combination would be something too mysterious to be really intelligible. So it seems that both parties simply hold their opponent's view

to be unacceptable.

With the clarification of the nature of their dispute, however, we can have a clearer conception of how it may be mediated. On behalf of Kant, the first thing to do is to demystify the notion of the necessary unity of apperception and thereby to make his account of the objective combination intelligible. But this task is already done in the last chapter with the idea of the self in the weighty sense: To bring certain cognitions to the objective or necessary unity of apperception is simply to take them as part of the self in the weighty sense, that is, to accept them as members of a privileged group of cognitions, which group is characterized by the demand that every member of it must be able to be "added" to another member and so constitute a unity in which the identity of the self in the weighty sense can be recognized. Presumably, this unity is the unity implied by the concept of an object in the weighty sense. However, as we have seen, Kant does not give any satisfactory account of what an object in the weighty sense is, still less of the unity characteristic of it. Our task will therefore mainly consist in providing such an account. But before we can do this, I think there is an important ambiguity in what I just said about the membership of the privileged group of cognitions, which can be best indicated with a bit of symbolic logic. Consider the two formulae:

(1) $(\forall x)\ (x \in S \leftrightarrow (\exists y)(y \in S \wedge O(xy)))$

(2) $(\forall x)\ (x \in S \leftrightarrow (\forall y)(y \in S \rightarrow O(xy)))$

Here x, y, etc. mean cognitions, S means the privileged group of cognitions, and O means the relation of two cognitions as they are united in the concept of an object in the weighty sense. Which formula is the accurate expression of the Kantian view explained above? (1) seems to be too weak, for it is quite possible that a cognition stands in the O-relation to some member of S but not to others, and thereby cannot be accepted as a member of S. For example, take x to be the cognition that all bodies are yellow, y to be the cognition that the piece of gold in front of me is yellow. Presumably, they are well united in the concept of the body. But since x is incompatible with other members of S, such as the cognition that snow is white, it cannot be taken as a member of S. However, (2) seems to be too strong, for it would lead to the apparently absurd conclusion indicated in the last chapter, namely that my

cognition of the copy of the *Critique* in front of me must somehow combined with my cognition that it is raining now. Neither formulae, then, is qualified as an adequate expression of the relation between the self in the weighty sense and the object in the weighty sense.

A more appropriate expression, I think, should say that in order to become a member of S, a cognition x must stand in relation O to many other cognitions that already belong to S, but does not need to stand in such relation to all cognitions belonging to S. More precisely, it must stand in relation O to all cognitions that are themselves united in the object in which x is also supposed to be united. This point might be expressed with the following formula:

(3) $(\forall x)\ (x \in S \leftrightarrow (\exists y)(y \in S \wedge O(xy) \wedge (\forall z)(O(yz) \rightarrow O(xz))))$

This formula seems to be quite plausible. But there might still be a final worry: it might be possible that the object in which x and y are united is different from the object in which y and z are united, so that x and z may not be united in any object. For example, take x to be the cognition that Kant is wise, y to be the cognition that Kant is a teacher of Herder, z to be the cognition that Herder dies in 1803. Presumably, x and y are united in the object Kant, and y and z are united in the object Herder, but it seems that x and z are not united in any object. However, I think this problem is not very serious, for we may stipulate that one cognition must be about only one object, so that the cognition that Kant is a teacher of Herder is about Kant, whereas the cognition that Herder is a pupil of Kant is about Herder. On this view, y and z are not united in any object, and our worry simply dissolves. Admittedly, this stipulation is somewhat artificial and not entirely unproblematic. But since our purpose here is merely to clarify the sense in which a cognition belongs to the self in the weighty sense, a small technical imprecision might be pardonable.

Now it is time to turn to the concept of the object in the weighty sense. In the last chapter we have quoted Kant definition of the object as “that in the concept of which the manifold of a given intuition is **united**” (B 137). We have also noted that for Kant, the unification or combination of the representations in an object in the weighty sense is not the only relation that may lie between them. They may also be connected to one another in a more subjective way, to which Kant gives no special name. Kant

proposes two ways of distinguishing between the objective combination and the merely subjective connection: First, in § 18, he claims that they are grounded in the "**transcendental unity** of apperception" and the "**subjective unity** of consciousness" respectively (B 139). However, if what I said about Kant's conceptions of the self is on the right track, it is clear that this distinction depends on the one between object in the weighty sense and object in the weaker sense, hence cannot serve as the foundation of the latter. But Kant's second attempt at drawing that distinction, which is based on his account of judgment in § 19, has also been shown to be highly problematic. In consequence, we need an entirely new account of the nature of the object in the weighty sense for a satisfactory reconstruction of Kant's argument.

I propose that the most essential determination of an object in the weighty sense is that it is *categorially determinable*. More precisely, such an object must be able to be determined with respect to the categories of relations, namely substance, causality, and community. Furthermore, all these three categories are understood as schematized, i.e., they have determinate empirical significance. The category of substance requires that an object in the weighty sense must persist to some extent.[1] The categories of causality and community, taken together, require that an object in the weighty sense must be able both to exert certain causal powers upon other objects and to be influenced by such powers exerted by other objects. A major merit of this account, I think, is that it enables us to find an answer to the question which bothers us so much throughout the last chapter, namely the question concerning the precise status of the categories. According to the official doctrine of the *Critique*, the categories acquire their objectifying function through their relation to the forms of judgment. However, as I tried to argue in the last chapter, this doctrine is full of problems and cannot be taken for granted. But then we could have no idea about the role of the categories in empirical cognition. Now if they are the principles that serve to organize intuitions into the concept of an object in the weighty sense, then we may have a different, and more plausible, account of their objectifying role. Without

[1] My conception of the category of substance is thus quite different from the one Kant uses in the First Analogy, according to which substance is that which persists absolutely. However, even if a absolutely persisting and lasting substance is required for our empirical cognition, which I can neither defend nor refute here, I shall argue that the concept of a relatively persisting object is also necessary, and this concept is obviously what the category of substance connotes. The same view of the meaning of substance is also argued for in Strawson, *Bounds of Sense*, pp. 125ff.

reference to the dubious derivation of them from the forms of judgment, the categories may now be *directly* connected to the object in the weighty sense, and can be deemed as "an objective condition of all cognition, not merely something I myself need in order to cognize an object but rather something under which every intuition must stand **in order to become an object for me**" (B 138).[2]

The plausibility of this conception of the object in the weighty sense might be illustrated with some examples. First, let us take Kant's own example in § 19. Contrary to his own explanation, what distinguishes the objectively valid proposition "It, the body, is heavy" from the mere conjunction of the perception of a body and the feeling of heaviness is not the copula "is," but rather the concept of the body as an object in the weighty sense. According to this concept, the body must possess certain intrinsic causal powers that can be exerted upon other objects. My feeling of heaviness, then, should be taken as the result of the exertion of this power upon my body. And I can reasonably expect, in a broadly a priori way, that when I carry this body at another time or in another place I shall have a similar feeling; that when another person carries it, he will have the feeling of heaviness; that when this body is put in water it will sink to the bottom, etc. This is not to say, however, that such expectations are always right. One might get wrong in these cases for various different reasons, which will be discussed later for their complexity. At any rate, such expectations cannot be made at all, at least not on any rational ground, if the body is not taken as an object in the weighty sense suggested here.

The second example I want to give involves the category of substance. When a straight stick is put in a glass filled with some water, one will have the visual experience that the stick is broken. But when the stick is picked out of the glass, one will find it straight and unbroken. What happens in the meantime? In order to answer this question, we regard the stick as an object in the weighty sense, to which the category of substance applies. We further note that the broken stick we "see" is not an object in the weighty sense, hence does not persist at all. Thus we conclude that nothing happens to the stick itself, and can again reasonably, but also fallibly, expect

[2] In Kant's text, the subject term of this sentence is actually the "synthetic unity of consciousness." However, on the one hand, this sentence seems to me to make better better sense with the substitution made here; while on the other hand, it could be argued that the categories are correlated with the synthetic unity of consciousness, so that Kant's idea is not distorted by my substitution.

that other people will have similar experience in similar cases etc. And again, unless we apply the category of substance to the stick, such expectations would be impossible.

If these examples help to make some sense of my proposal, they also leave many problems. First, while Kant holds that all twelve categories are necessary for our empirical cognitions, only the three categories of relation are talked about both in my explanation and in my examples. However, the twelve categories are derived simply from the twelve alleged forms of judgment, and both these forms of judgment and the derivation are highly problematic. Moreover, as I emphasized in the last chapter, according to Kant's own view, the objectifying function belongs to the schematized categories alone. Although Kant's doctrine of schematism is baffling, at least one thing is clear, namely that the schema of the categories is the "transcendental time-determination" (A 139/B 178). The schematized categories, then, are the principles that serve to organize intuitions with respect to the temporal relations. Now from Kant's Analytic of the Principles, it is clear that only the categories of relation are really relevant to the temporal relations. Indeed, Kant writes that "the three analogies of experience … are nothing other than principles of the determination of the existence of appearances in time, in accordance with all three of its *modi*: that of the relation to time itself, as magnitude (the magnitude of existence, i.e., duration); that of the relation in time, as a series (one after another); and finally that in time as a sum of all existence (simultaneous)" (A 215/B 262). Since there seems to be no other possible temporal relation, it is not so surprising that only the categories of relation can be "schematized" and play the objectifying role.[3]

This is not to say, however, that the categories of relation are the only things by means of which different intuitions are united in an object in the weighty sense. In addition to the temporal relations, it seems that the spatial relations are also a fundamental structure with respect to which intuitions can be united. Without

[3] The peculiarity of the categories of relation is already noted by many prominent interpreters of Kant, see, e.g., Prauss, *Erscheinung bei Kant*, pp. 103ff. The most detailed argument for this thesis is Guyer, *Kant and the Claims of Knowledge*, who on the one hand notices that in Kant's earlier "transcendental theory of experience," which is contained in the *Duisburg Nachlass*, only the categories of relation are connected with apperception and deemed as constitutive for experience; while on the other hand shows, through a penetrating criticism of Kant's official arguments in the Metaphysical and Transcendental Deductions, that these new elements of the *Critique* are actually not defensible.

appealing to such relations, we can perhaps have the intuition of a door, a roof, a tower, etc., but not the representation of the *Frauenkirche* as a whole. Now one may ask whether the combination of representations with respect to spatial relations involves the operation of the understanding and the categories. But this question is difficult to answer within a Kantian framework: On the one hand, according to the doctrine of transcendental time-determination, such combination does not involve the operation of the understanding. On the other hand, however, Kant claims that "all combination … is an action of the understanding" (B 130). A fortiori, this particular kind of combination is the result of the action of the understanding. A possible way out of this dilemma is to regard such combination as the result of the "figurative synthesis" of the imagination, which will be discussed in some detail in the next section.

Another problem of the conception of the object in the weighty sense suggested above is that it is simply dogmatic. On what ground, it might be asked, could we claim that it must be categorially determinable? Indeed, the task of the Transcendental Deduction is often held to consist in explaining "how **subjective conditions of thinking** should have **objective validity**, i.e., yield conditions of the possibility of all cognition of objects" (A 89f./B 122), and thereby in "exorcizing the specter"[4] that

> appearances could … be so constituted that the understanding would not find them in accord with the conditions of its unity, and everything would then lie in such confusion that, e.g., in the succession of appearances nothing would offer itself that would furnish a rule of synthesis and thus correspond to the concept of cause and effect, so that this concept would therefore be entirely empty, nugatory, and without significance. Appearances would nonetheless offer objects to our intuition, for intuition by no means requires the functions of thinking. (A 90f./B 123)

But if object in the weighty sense is *stipulated* as an entity that can be determined by our "subjective conditions of thinking," viz. the categories, then it seems that the task of the Transcendental Deduction is solved with too much ease, or actually merely *avoided*. Instead of exorcizing the specter, it seems that we simply *asserts* that it does not exist.

This objection, however, arises from a serious misunderstanding of my strategy. By stipulating an object in the weighty sense as a categorially determinable object, I'm not claiming that there are in fact such objects. Instead, I'm just try to connect the project of the Transcendental Deduction declared earlier with the argument he

[4] See Allison, *Kant's Transcendental Idealism*, pp. 160ff.

actually uses in the B-Deduction through the concept of the object in the weighty sense. The specter remains so far daunt us, but could now be expressed with more convenience: it becomes the problem whether there is any object in the weighty sense at all. As we have seen in chapter 3, Hume would deny the existence of any such object, as he holds a "projection" theory of causation. According to his position in the *Enquiry*, we might be sure of the existence of the material things like bread or billiard balls, but our conception of such things do not imply that they can be categorially determined. In consequence, with the conception of the object in the weighty sense suggested above, we not only faithfully recapitulate Kant's intention in the Transcendental Deduction, but also make clear its connection with the Humean problem, which remains obscure if the concept of the object in the weighty sense is understood merely as the Cartesian body as opposed to mind.

Although the concept of the object in the weighty sense is essential to Kant's response to Hume, it alone does not enable us to dispel Hume's "sceptical doubts." For even if it is established that there are objects that are categorially determined, nothing has been said about the relation between such objects. Thus, even if we can know that one particular billiard ball causes another particular ball to move, we don't know whether the same will happen to two other billiard balls. But this is exactly what is called into doubt by Hume's skepticism concerning the principle same-cause-same-effect. In short, the concept of the object in the weighty sense does not tell us how we could make *generalizations*. Indeed, it is also unclear whether and how this concept can explain the *errors* in our generalizations. To use Leibniz's example cited in chapter 3, based on a large number of our past experiences, we may suppose that a piece of iron will sink to the bottom when it is placed in water. Although this supposition seems to be well supported by regarding the piece of iron as an object possessing certain causal powers, it is wrong. But we do not know, within the Kantian framework explicated so far, how this error could be explained. And this may be seen as the third problem of my interpretation of the concept of an object in the weighty sense. Unlike the first two problems, this third problem is a real challenge to the account proposed here.

Now I think it is time to take an overview of what we have gained through our

analysis and reconstruction of Kant's arguments and what problems are left by it. Perhaps the most important result of our analysis is the correlation between the self in the weighty sense and the object in the weighty sense—both of them are constituted by the act of combining or synthesizing the representations, which are in themselves unconnected, into a structured whole. Typically, such combination is carried out through the categories of relations, though we have noted that it might also be purely logical and does not involve relations to any object, or be carried out with respect to the spatial relations. We have not, however, either show that there is any self in the weighty sense or that there is any object in the weighty sense. Indeed, although Hume himself does not connect his famous "bundle theory" of the self with his skepticism concerning the rational basis of our belief in causal relations (and actually does not mention the former at all in the *Enquiry*), we may now appreciate that they are intrinsically connected with each other. A Humean may consistently concedes the existence of selves in the weaker sense, who can be conscious of any of their representations but never of the connection between them, and of objects in the weaker sense, i.e., objects that are not categorially determinable, while denying the existence of either the self in the weighty sense or the object in the weighty sense. As I repeatedly emphasized, this is not equivalent to, and does not presuppose, the idealism *a la* Berkley, for there is no contradiction in conceiving of material things that exist in the three-dimensional space yet are not categorially determinable.

In sum, Kant might still reproach Hume for providing a too subjectivistic account of our empirical knowledge, but would have to concede that it is at least self-consistent. And Hume might now concede that Kant's account is not such mysterious, but insist at the same time that it is not very compelling. Moreover, it seems that Kant has to appeal to the Humean "constant conjunction" to explain how generalization is possible. As a result, what Kant provides seems to be nothing more than an *alternative* to Hume's account of our empirical cognition, but not a disproof of it. However, what we are so far concerned with is merely the first half of the B-Deduction, while the lawfulness of nature and other important theses are established only in the second half. Accordingly, we may now turn to this part of Kant's text to find out whether he

has any new argument that can be used in his response to Hume.[5]

II

The major new element that is introduced in the second half of the B-Deduction is probably the distinction between *synthesis speciosa* and *synthesis intellectualis* made in § 24 and the notion of imagination connected with the latter. Kant writes:

> This **synthesis** of the manifold of sensible intuition, which is possible and necessary a priori, call be called **figurative** (*synthesis speciosa*), as distinct from that which would be thought in the mere category in regard to the manifold of an intuition in general, and which is called the combination of the understanding (*synthesis intellectualis*); both are **transcendental**, not merely because they themselves proceed a priori but also because they ground the possibility of other cognition a priori. (B 151)

Immediately after this passage, Kant continues to say that "the figurative synthesis, if it pertains merely to the original synthetic unity of apperception, i.e., this transcendental unity, which is thought in the categories, must be called, as distinct from the merely intellectual combination, the **transcendental synthesis of the imagination**" (ibid.). The significance of these concepts becomes apparent only in § 26, where Kant introduces the notion of the "**synthesis of apprehension**," by which he means "the composition of the manifold in an empirical intuition" (B 160). Although he does not explicitly connect the synthesis of apprehension with the figurative synthesis of the imagination, he regards the imagination as "that which connects the manifold of sensible manifold" (B 164), hence these two kinds of the synthesis are actually the same thing. Now we may note that the synthesis of apprehension is necessary even for our cognition of certain kind of objects in the weaker sense, such as images. The image of the *Frauenkirche* on the screen of my TV, for example, is an object only in the weaker sense, as it is not subject to the causal laws to which the actual *Frauenkirche* (and the screen itself, taken as a material thing) is subject. But the apprehension of it surely involves certain synthesis. Thus, if Kant could prove that even objects in the weaker sense, insofar as they can be apprehended, are somehow related to the transcendental unity of apperception, hence presumably

[5] The relation between the two parts of the B-Deduction has become a much debated theme in Kant scholarship since the publication of Henrich's classical paper "The Proof-Structure of Kant's Transcendental Deduction." Since I don't aim to offer a comprehensive commentary to the Transcendental Deduction here, I think I am not obliged to discuss this difficult issue. But if I am allowed to express my opinion with providing argument, I would say that the second half of the B-Deduction is indeed a "botch" (to use Bennett's characterization, *Kant's Analytic*, p. 105) that is composed by several lines of thought that Kant finds useful either in completing his main line of argument of the Transcendental Deduction or in addressing some issues that should have been addressed but actually not yet. Although some of these thoughts are invaluable, they do not constitute the "second step" of Kant's argument.

belong to the self in the weighty sense, then the existence of the self in the weighty sense is established on basis that would also be accepted by Hume. And given the correlation between the self in the weighty sense and objects in the weighty sense, it follows that all objects, insofar as they can be apprehended, must be objects in the weighty sense, i.e., objects to which the categories of relation apply.

This line of argument is tempting for both exegetical and philosophical reasons. On the one hand, it is well supported by some of Kant's most important, programmatic remarks. For example, in the Metaphysical Deduction he writes: "The same function that gives unity to the different representations **in a judgment** also gives unity to the mere synthesis of different representations **in an intuition**, which, expressed generally, is called the pure concept of understanding" (A 79/B 105). Similarly, in a footnote in the B-Deduction he writes: "It is one and the same spontaneity that, there under the name of imagination and here under the name of understanding, brings combination into the manifold of intuition" (B 162n.). In both passages, the figurative synthesis of the imagination is taken as virtually the same thing as the intellectual synthesis of the understanding, or indeed merely the "first application" of the latter to objects of intuition (B 152). On the other hand, it provides us with some invaluable hints of an answer to a fundamental problem of philosophy, namely the problem of the possibility of intellectual knowledge of sensible objects. As we have seen in chapter 1, this problem is already addressed by Aristotle and Aquinas. They, too, find that the imagination as a mediating faculty between sense and intellect is crucial for answering this question, but since they insist that the imagination is a part of the sense, broadly construed, their answers are ultimately not quite successful. Now if Kant were right in insisting that the imagination functions actually as a proxy, as it were, of the intellect, then it would become readily intelligible why we can have intellectual knowledge of sensible, i.e., imaginable, objects, or, to use the idiom famously invented by Sellars, why mere perceptual experience can enter into the space of reasons. Not surprisingly, then, this interpretation is adopted by many

commentators with different philosophical concerns.[6]

In spite of all these merits, I think this interpretation still has many problems. The first problem is that this line of argument would lead to many inconsistencies with what Kant says elsewhere. To begin with, along this line of argument, Kant has to concede that the imagination both "belongs to **sensibility**" (B 151) and "is spontaneity" (B 152), but this claim is at odd with his fundamental distinction between sensibility and understanding. In the *Critique* and in all subsequent works, Kant always insists on the definition of sensibility as receptivity (cf., e.g., A 19/B 33, A 51/B 75) that is first proposed in the *Inaugural Dissertation* (see chapter 2 above). Accordingly, the imagination must be both spontaneous and receptive, which seems to be absurd. To avoid such absurdity, Kant explains that the transcendental synthesis of the imagination is "an effect [*Wirkung*] of the understanding on sensibility" (B 152).[7] But the sense in which "effect" here should be understood is far from clear. It cannot be understood as the schematized category of cause and effect defended in the Second Analogy, as it does not involve any determination of time, but nor can it be the mere unschematized category, which is supposed to be nothing but what is expressed by the hypothetical form of judgment. Moreover, Kant famously characterizes the imagination as "a blind though indispensable function of the soul, without which we would have no cognition at all" (A 78/B 103). But it seems that the blindness of the imagination is hardly compatible with its being the "same spontaneity" as the understanding.[8] Last but not least, the conclusion at which Kant wants to arrive

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[6] Among many others, this reading is adopted by McDowell, *Mind and World*; id., *Having the World in View*; Longuenesse, *Kant and the Capacity*; id., *Kant on the Human Standpoint*; Waxman, *Kant's Model of the Mind*; Haag, *Erfahrung und Gegenstand*. While all these authors agree on that the figurative synthesis of the imagination is just an exercise of the same spontaneity or apperception that is responsible for the intellectual synthesis, they differ on whether the figurative synthesis is conceptual (McDowell, Haag) or pre-conceptual (Longuenesse, Waxman).

[7] This idea is given a prominent role in Longuenesse's interpretation of Kant. In explicating this idea she writes: "The act of thinking whose result is judgment, because its goal is judgment, affects receptivity and thereby combines the sensible given with a view to judgment" (*Kant and the Capacity*, p. 203). Later on the same page she further explains that "it is not judgment, in its discursive forms, that affects sensibility. But the act of spontaneity which affects sensibility has judgment for its goal—that is, discursive combination of concepts according to logical forms" (ibid. Cf. id., *Kant on the Human Standpoint*, Part 1, passim). Although her explanations of the relation between imagination and judgment are often illuminating, I don't think Longuenesse really succeeds in telling us what it means that a faculty is "affected" by another. She might perhaps explain this notion by appealing to Kant's doctrine of self-affection. But the latter is surely among the most obscure part of the Critical philosophy that can hardly be used as a basis to explain other things.

[8] Perhaps because of his recognition of this inconsistency, in his own copy of the A-edition of the *Critique* Kant emends "a blind though indispensable function of the soul" to "a function of the understanding" (23: 45). Nevertheless, this emendation has not been incorporated into the B-edition.

through the "same function" or "same spontaneity" thesis is that "all synthesis, through which even perception itself becomes possible, stands under the categories" (B 161). However, in all the texts we have examined so far, especially in the Analogies and the *Prolegomena*, the categories are said to be that by virtue of which mere perceptions are transformed into experience in the sense of broadly a priori cognition. This contradiction seems to be even more outright than the other two.

The second problem is directly connected with the third contradiction just indicated. It is the old problem of subjective representations. It is an undeniable fact that there are various kinds of subjective representations in human cognitive life: in addition to dreams, illusions, and hallucinations, which are subjective in the Cartesian sense, there are many other representations that are subjective not in the Cartesian sense, but in the Leibnizian-Humean sense. As I said above, seeing an image in a film or in a photo is just one such instance, but hearing some music, or indeed aesthetic experience in general, as well as recognizing the weight of certain load without the help of any instrument, all these are subjective in the latter sense and belong to the realm of what Leibniz calls "confused" ideas, with which we are occupied, Leibniz says, in the three-fourth of our life (see chapter 3 above). While it is natural to suppose that the confused ideas need some synthesis, which might be understood as some "processing" in the brain, it seems that they do not involve the determination of the categories and do not lead to any universal law. Moreover, as Leibniz observes, the confused ideas are something we share with some higher animals. And there seems to be little doubt that these animals, however "clever" or "intelligent" they might be, cannot possess any categories. As a result, if mere perceptions, which are usually confused in the Leibnizian sense, already involve the categories, animals would not be able have perception, which is obviously absurd.[9]

More problems can be found if we examine the detail of Kant's actual argument, which is condensed in a single passage of § 26:

> [1] We have **forms** of outer as well as inner sensible intuition a priori in the representation of space and time, and the synthesis of the apprehension of the manifold of appearance must always be in agreement with the latter, since it can only occur in accordance with this form. [2] But space and time are represented a priori not merely as **forms** of sensible intuition, but also as **intuitions** themselves (which contain a manifold), and thus with the determination of

[9] For an instructive criticism of Kant's view in terms of animal cognition, see Okrent, "Acquaintance and Cognition." See also McClear, "Kant on Animal Consciousness," for a useful discussion on this issue.

> the **unity** of this manifold in them (see the Transcendental Aesthetic).* [3] Thus even the **unity of the synthesis** of the manifold, outside or within us, hence also a **combination** with which everything that is to be represented as determined in space or time must agree, is already given a priori, along with (not in) these intuitions, as condition of the synthesis of all **apprehension**. [4] But this synthetic unity can be none other than that of the combination of the manifold of a given **intuition in general** in an original consciousness, in agreement with the categories, only applied to our **sensible intuition**. [5] Consequently all synthesis, through which even perception itself becomes possible, stands under the categories, [6] and since experience is cognition through connected perceptions, the categories are conditions of the possibility of experience, and are thus also valid a priori of all objects of experience. (B 160f.)

Despite the denseness and complexity of this passage, it seems that Kant's argument is intended to run as follows: (a) the apprehension of something necessarily requires the apprehension of its spatiotemporal properties ([1]); (b) but the apprehension of any spatiotemporal property, or indeed of space and time themselves as formal intuitions, depends on the unity of synthesis ([2]-[3]), (c) which is the same as the one involved in *synthesis intellectualis*, namely the transcendental unity of apperception, which in turn is realized only by virtue of the categories ([4]).[10] (d) "Consequently all synthesis, through which even perception itself becomes possible, stands under the categories" ([5]). The inference from (a), (b), and (c) to (d) is obviously valid, and (a) seems also to be quite unproblematic. The problem, then, is whether (b) and (c) can be established.

Let us begin with (b). The asterisk after sentence [2] points to a notoriously difficult footnote appended by Kant himself, which provokes a lot of debates in recent Kant scholarship. Kant writes:

> Space, represented as **object** (as is really required in geometry), contains more than the mere form of intuition, namely the **comprehension** of the manifold given in accordance with the form of sensibility in an **intuitive** representation, so that the **form of intuition** merely gives the manifold, but the **formal intuition** gives unity of the representation. In the Aesthetic I ascribed this unity merely to sensibility, only in order to note that it precedes all concepts, though to be sure it presupposes a synthesis, which does not belong to the senses but through which all concepts of space and time first become possible. For since through it (as the understanding determines the sensibility) space or time are first **given** as intuitions, the unity of this a priori intuition belongs to space and time, and not to the concept of the understanding (§ 24). (B 160n.)

In order to understand this footnote, we should read it in connection with the general task of (b). The general point of this passage, I think, is that our cognitions of space as a formal intuition, i.e., geometrical cognitions, require the synthesis of the

[10] Admittedly, the idea of *synthesis intellectualis* does not appear in the original text, but I think it is implicit in the reference to "intuition in general," which may perhaps be understood as the intuition of a general kind of things instead of a particular object (but cf. B 148). If this is so, then it seems that by means of *synthesis intellectualis* and the unschematized categories, we may know, e.g., that all bodies have extension, but not the exact magnitude of a particular body. I'm not sure whether this interpretation is adequate, but otherwise I don't know how to make sense of [4].

imagination.[11] But what does space as a formal intuition mean? Earlier in the B-Deduction Kant writes: “in order to cognize something in space, e.g., a line, I must **draw** it, and thus synthetically bring about a determinate combination of the given manifold, so that the unity of this action is at the same time the unity of consciousness (in the concept of a line), and thereby is an object (a determinate space) first cognized” (B 137f.). Accordingly, space as an object or as a formal intuition means simply determinate space, whereas space as a form of intuition is indeterminate.[12] Now I think that space can become determinate in two ways: either by means of geometrical concepts, such as a sphere, a cube, or without any such concepts but merely demonstratively, such as the figure I draw on a piece of paper, or the space occupied by a particular body. Only in the latter way is the determinate space “precedes all concepts,” and it seems that space determined in this way is already sufficient for the apprehension of an object, as there are too many things which we can apprehend and recognize without being able to describe their shapes with geometrical concepts. In particular, the “incongruent counterparts” we discussed in chapter 2 seem to be a perfect Kantian example of pre- or non-conceptual apprehension of determinate space (assuming Kant is right in holding that the difference between a thing and its incongruent counterpart is non-conceptual). Now the question is: Does such pre- or non-conceptual determination of space involve certain unity of synthesis? And is this unity of synthesis the same as the synthetic unity of apperception, so that it comes about “as the understanding determines the sensibility?”

For his argument to work, Kant needs to prove that the answers to both questions are positive. But I think this cannot be done. While it is natural to suppose that the apprehension of a particular figure involves certain synthesis and unity, hence to give a positive answer to the first question, there is no ground to suppose that such synthetic unity is the transcendental unity of apperception. Rather, it seems that what is involved here is nothing more than the “subjective unity of consciousness” Kant

[11] This footnote is discussed in detail in my “Geometrical Concepts and Formal Intuition.” What I shall say below is at odd with some common interpretation, for a fuller justification of my view, see that paper.

[12] This is also Allison’s view, see *Kant’s Transcendental Idealism*, pp. 115f. But my interpretation of “determinate space” differs significantly from his.

talks about in §§ 18-19. There Kant appeals to such unity to account for the subjective connection of representations or association, but it should be noted that *the synthesis of apprehension is presupposed even by association*! Perhaps the best example to illustrate this point is the duck-rabbit famously put into philosophical use by Wittgenstein.[13] The same figure may be seen as a duck by some people, and as a rabbit by others, thus it seems that the "seeing as" is a matter of association.[14] However, it seems also true that the synthesis of apprehension is presupposed by both ways of "seeing as," thus the unity of the synthesis of apprehension cannot be the same as the objective, transcendental unity of apperception. Or it might be said that the "seeing as" does not presuppose, but is itself *identical* with the synthesis of apprehension. But on this account, the difference between the unity of the synthesis of apprehension and the transcendental unity of apperception would be even more conspicuous. Furthermore, the independence of the synthesis of apprehension from the transcendental unity of apperception can be seen more clearly by considering the animal cognition. It is not uncommon to find dogs that are capable of recognizing a particular figure under different circumstances and of picking it out from a number of different figures. And it seems that this is impossible unless the figure is apprehended by the dogs in a certain way. Thus the unity of synthesis of apprehension is something that can be attained even by dogs. However, only human beings can possess the transcendental unity of apperception. As a result, the former kind of unity must be different, and independent, from the latter kind.

Admittedly, these criticisms are all based on the assumption that space can become determinate without any geometrical concepts. I have tried to justify this assumption in a few words, but now one may object that I have simply ignored the idea of "demonstrative concept," according to which even "this figure" or "that shape" can count as concepts, insofar as they can serve to *recognize* a particular object or property over a (possibly very short) period of time.[15] As we have seen in chapter 3,

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[13] Wittgenstein, *Philosophical Investigations*, p. 204.

[14] Cf. Kant's characterization of the merely subjectively valid association: "One person combines the representation of a certain word with one thing, another with something else; and the unity of consciousness in that which is empirical is not, with regard to that which is given, necessarily and universally valid" (B 140).

[15] This idea is famously suggested by McDowell, *Mind and World,* p. 57f., though he does not use the phrase "demonstrative concept" there.

however, confused ideas are already sufficient for recognition, and they are shared by us with other animals. For example, it is quite natural to suppose that a dog has a confused idea of the master, thus is capable of recognizing his master under various circumstances, but it cannot have any distinct idea of the master, which involves an analysis of this concept into several marks. But in the case of merely demonstrative concepts, it seems that we, too, are not always capable of giving such an analysis of them. In consequence, demonstrative concepts are presumably nothing more than confused ideas, which are entirely independent from the understanding or the transcendental unity of apperception.

Another response to my criticism might be that by formal or determinate space, Kant means space determined by geometrical concepts alone. After all, instead of space determined in a demonstrative way, such space is "really required in geometry." Now it is not implausible that such space can be comprehended only by means of the transcendental unity of apperception. However, as I indicated above, such space does not "precede all concepts," though it might precede all concepts of the understanding, i.e., all categories. Moreover, we have also noted that determinate space in this sense is not required for the mere apprehension of spatial object, as I can apprehend many things, such as my own body, without being able to determine it with geometrical concepts. As a result, Kant's doctrine of formal or determinate space, so understood, would have nothing to do with the theses (b) and (c), which therefore remain unjustified.

From all these considerations, we may now conclude that while (b) is quite plausible, (c) is completely groundless. As a result, Kant's strategy for arguing for the "same function" or "same spontaneity" thesis via the connection between synthesis of apprehension and the formal intuitions of space and time seems ultimately untenable. However, it should be noted that even if the conclusion (d), namely the proposition [5], cannot be established, [6] does not thereby lose its plausibility, as the categories may probably be the condition to which all *connection* of perceptions must be subject, as far as they can become experience in the sense of broadly a priori cognition. But at any rate, it must be conceded that even the second half of the B-Deduction is insufficient to establish the reality of either the subject in the weighty sense or the

object in the weighty sense, hence insufficient to undermine Hume's naturalism. We have therefore to envisage some entirely new ideas in order to complete Kant's argument. Before we leave the text of the B-Deduction, however, I think it is worthwhile to deepen our appreciation of the problems of Kant's official argument by examining the examples he uses to illustrate his view. The first example is about the perception of a house. When I perceive a house, Kant writes,

> my ground is the **necessary unity** of space and of outer intuition in general, and I as it were draw its shape in agreement with this synthetic unity of the manifold in space. This very same synthetic unity, however, if I abstract from the form of space, has its seat in the understanding, and is the category of the synthesis of the homogeneous in an intuition in general, i.e., the category of **quantity**, with which that synthesis of apprehension, i.e., the perception, must therefore be in thoroughgoing agreement. (B 162)

There are several problems in this passage. First, presumably following the early modern "mental image" tradition, Kant understands the perception of a house as drawing a picture of it in the mind, but this is a serious mistake. The idea of mental image has been criticized by many philosophers in the 20th century, but I shall not discuss these criticisms here. The difference between perception and drawing a picture either in the mind or on a piece of paper can be clearly appreciated with the Leibnizian distinction between confused and distinct ideas. One can perceive a house *as* a house even if one possesses only a confused idea of house, whereas one can draw a picture of house, if it should represent the spatial structure of the house reasonably accurately, only if one possesses a distinct idea of house. The former is possessed by virtually all people as well as by some higher animals, whereas the latter belongs only to a few people trained in architectonics. Second, as Kant himself concedes, the category of quantity is resulted from the *abstraction* from the form of space. Thus it is quite possible that the synthetic unity pertaining to the category of quantity, which surely has its seat in the understanding, is brought about in the process of abstraction, hence is *not* the same as the "synthetic unity of the manifold in space," whatever the latter may mean. This would seem more plausible if we recall that abstraction is traditionally regarded as the proper act of the understanding, by means of which the mere sensible is transformed into something intelligible. Accordingly, the necessary agreement between the synthesis of apprehension and the category of quantity would have its ground not in the synthesis of apprehension, but in the act of abstraction. Third, even if Kant successfully proves that "**[a]ll intuitions are extensive**

magnitudes"[16] and therefore subject to the category of quantity, it makes little contribution to the solution of the Humean problem, which is concerned merely with the category of causality, or at most with the categories of relation, but not with the category of quantity. And even if the applicability of Euclidean geometry to the physical world becomes questionable with the invention of Non-euclidean geometry and especially with its employment in Einstein's theory of relativity, I know of no one who doubts the applicability of the category of quantity *in general* to empirical cognitions. Thus it seems that Kant's thesis is so trivial that it hardly deserves specific justification.

Kant's second example is about the perception of the freezing of water, which consists in the perception of one state of water (fluidity) succeeded by another (solidity). Like the former example, Kant claims that the mere perception already involves the "necessary synthetic **unity** of the manifold, without which that relation," viz. the successive relation of the two states of water, "could not be **determinately** given in an intuition (with regard to the temporal sequence)" (B 163). Again, he claims that this synthetic unity is the same as the one pertaining to a category, in this case the category of cause: "But now this synthetic unity, as the a priori condition under which I combine the manifold of an **intuition in general**, if I abstract from the constant form of my inner intuition, time, is the category of **cause**, through which, if I apply it to my sensibility, I **determine everything that happens in time in general as far as its relation is concerned**" (ibid.).

This argument is even more problematic than the previous one. First, as Kant himself concedes, abstracted or isolated from the condition of time, the category of cause and effect means simply ground and consequence (A 73/B 98, B 112), but it seems that this relation has absolutely nothing to do with the perception of the freezing of water. Accordingly, whatever kind of synthetic unity is involved in my perception of the freezing of water, it cannot be that pertains to the category of cause. Second, it is a basic principle of the "analogies of experience" that the objective

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[16] B 202. This is the very thesis of the Axioms of Intuition, and the new paragraph Kant adds in the second edition to this part of the *Critique* (B 202f.) is virtually a repetition of the passage under examination now.

determination of time is itself not perceptible.[17] To use an example already used in the last section, when a straight stick is put into a glass filled with water, we *see* that it is broken but *know* that it is not, because our knowledge comes about by *determining* what is seen with the categories, in this case the category of substance. If the category of cause is already involved in the perception of the freezing of water, it seems that it must also be involved in this example, but then it becomes unclear how we can know that there is actually no change happens to the stick but some change happens to the water. In sum, none of his examples succeeds in making any progress towards a more satisfactory account of the categories.

III

In this section I try to provide an account of the categories and other related issues that is Kantian in spirit but does not accord with all Kant says in the B-Deduction. My account is intended to satisfy the following desiderata: first, it should include a defense of the possibility of broadly a priori cognition against Hume's skepticism concerning the empirical use of the understanding; second, it should leave sufficient room for the more subjective kind of cognition, which is shared by us with some other animals; third, it should be very simple, corresponding to the idea of "almost a single inference;" fourth, as a Kantian account, it should make use of Kant's fundamental insight, namely the correlation between the self in the weighty sense and object in the weighty sense. As I attempted to show in this and the last chapters, these desiderata are not fulfilled by Kant's own argument. Thus here is exactly the place to "go beyond Kant."

To begin with, let us consider the idea of object in the weighty sense again. We have suggested that it should be understood as the object that is categorially determinable, and also stressed that categories here signify only the schematized categories of relation. In addition, we have explained how these categories enable us to go beyond the merely subjective feelings or perceptions to cognitions of objects. Such cognitions are objectively or necessarily and universally valid as understood in the *Prolegomena*, i.e., they "should also be valid at all times for us and for everyone

[17] The contradiction between this example and the Second Analogy is also noted by Allison, *Kant's Transcendental Idealism*, p. 199.

else" (Prol, 4: 298). But they are not necessary and universal truths as understood in the *Critique*, which are equivalent to what I called broadly a priori truths. That Kant was born in 1724, for example, is necessarily and universally valid in the former sense, as it would be acknowledged by everyone at any time. But it is a contingent truth that cannot be known even broadly a priori. Now the question is whether the schematized categories may enable us to have cognitions that are necessarily and universally valid in the latter sense, i.e., whether they may enable us to have broadly a priori cognitions.

In order to answer this question, we have to know what schematized categories exactly amount to. In the official argument of the Transcendental Deduction, the categories are said to be "concepts of an object in general, by means of which its intuitions is regarded as **determined** with regard to one of the **logical functions** for judgments" (B 128, cf. B 143). This definition does not contain even the minimal hint of the connection between categories and broadly a priori cognition, and, as we have argued in the last chapter, the connection between categories and the logical forms of judgment is highly problematic. Thus it cannot be relied on for our purpose. A more interesting definition is given in § 26: "Categories are concepts that prescribe laws a priori to appearances, thus to nature as the sum total of all appearances" (B 163). This definition might be favored for two reasons: it does not involve the problematic connection of the categories to the logical forms of judgment, and it points to the connection between categories and laws of nature, which are the foundation of our broadly a priori cognitions. However, it is too general to provide us any detail about the lawfulness of nature can be established with the help of the categories. And like the previous one, it does not specify what the "schematization" of the categories means. The answer to the last question can be found only in the chapter of Schematism, where Kant writes:

> Thus the schemata of the concepts of pure understanding are the true and sole conditions for providing them with a relation to objects, thus with **significance**, and hence the categories are in the end of none but a possible empirical use, since they merely serve to *subject appearances to general rules of synthesis* through grounds of an a priori necessary unity (on account of the necessary unification of all consciousness in an original apperception), and thereby to make them fit for a *thoroughgoing connection in one experience*. (A 145f./B 185)

This passage contains, I think, Kant's most satisfactory account of the categories and their schemata. If appearances could really be made "fit for a thoroughgoing

connection in one experience," by which I understand the *lawful* connection of the appearances with each other, then the foundation of broadly a priori cognitions would be secured, and Kant would be able to answer Hume's skepticism concerning the same-cause-same-effect principle. Moreover, the role of the schematized categories becomes thereby clearer than ever: although they are always deemed as the objectifying elements in human cognition, so far we do not have any satisfactory account of their precise role. Now they may be interpreted as the "general rules of synthesis" by means of which the appearances or, as I would like to say, intuitions, are transformed into experience. Since the schematized categories or the schemata of the categories are "nothing but a priori time-determinations in accordance with rules" (A 145/B 184), the general rules of synthesis in question may reasonably be taken as nothing other than the rules for a priori time-determination, and are not necessarily connected with certain forms of judgment. Finally, though not explicitly stated in this passage, it at least implies the possibility that the appearances or intuitions may not be subjected to the schematized categories and thereby connected in one experience, and thus the possibility of the more subjective kind of representations is admitted.

Despite the alluring prospect of this account, an independent reflection on our actual experience will cast some doubt on it. To use an example I have used for several times, from the objective cognition of the heaviness of a particular body we may infer that all bodies are heavy, whereas from the cognition of the yellowness of a particular body (gold) we cannot infer that all bodies are yellow, but only that gold is yellow. Apparently, no time-determination is involved in either case, and the rules of synthesis are provided, in the two true general propositions, by the concepts of body and of gold respectively. Indeed, thus far we have focused almost solely on intuitions and categories, but paid too little attention to empirical concepts. However, it is only by means of these concepts that we are able to formulate universal laws of nature and thereby know particular facts in a broadly a priori way, as well as distinguish empirical reality from illusion (as in the example of seeing stick in water). Thus it seems that the objectifying function belongs, instead of the categories, rather to the empirical concepts themselves, in particular to the concepts of natural sciences.

The plausibility of this thesis would very probably be increased if we note the two

following facts: First, according to Kant's original conception, the objectifying role of the categories is connected with the forms of judgment. Since every empirical judgment must fall under some of these forms, it would be natural to think of, as it were, the pervasive presence of the categories in all empirical judgments. But now this very connection is discarded, hence in the most empirical statements the categories are simply absent, at least apparently. Nevertheless, such statements are often objectively valid even in the strong sense of the *Critique*. As a result, one naturally becomes suspicious of whether the objectifying function should be located elsewhere than in the categories. Second, Kant takes Newtonian mechanics as the only "proper" (*eigentliche*) natural science for its extensive use of mathematics (cf. MAN, 4: 469ff.), and the fundamental concepts of Newtonian mechanics are directly connected with the categories of relation. In fact, it is all too natural to take the three Analogies of Experience as the "translation" of Newton's laws of motion into the language of philosophy. But now we realize that there are many other branches of science that are qualified as proper natural science, as they also make extensive use of mathematics and can inform us with objective, even law-like knowledge of the external world and of ourselves. As a result, it is questionable whether the categories of relation should be acknowledged with the same privileged status now as they may reasonably be acknowledged in Kant's time.

I think these problems are real. However, as a partial defense of Kant's view, we may make the following points: First, in order to respond to Hume, Kant need only to prove that the categories of relation, especially cause and effect, do have an objectifying function. He does not need to show that the objectifying function belongs to them alone. Second, even if the notions of substance, causation, and interaction are not the *only* basic concepts in the best knowledge of the world available to us, they still occupy a central place in it. One cannot dispense with them either in ordinary or in scientific reasoning, though one might also require other fundamental concepts in doing so. Third, if the three categories of relations are understood *exactly* as the rules for a priori time-determination, then they may find application in cases which are normally regarded as *not* involving such relations. For example, the second law of thermodynamics states that the entropy of a closed system always increases with time.

According to the ordinary usage, this law does not involve any causal relation. But if all necessary relations of temporal order are regarded as causal relations, then this law may also be regarded as a causal law. Finally, I think the most fundamental insight of Kant, the correlation between the self in the weighty sense and the object in the weighty sense, is not affected by these problems. Even if there are basic concepts that may serve as the "general rules of synthesis" other than Kant's categories of relations, we may include those concepts into a new list of the categories, and consider whether and how Kant could prove the lawfulness of nature with the "updated" version of the categories.

Even with an "updated" list of the categories, however, the tension indicated above is still unresolved. As my examples show, it seems that the "rules of synthesis" belong neither to any old nor to the newly added categories, but simply to empirical concepts as such. But this tension can be resolved, I think, if we make use of Kant's distinction between *synthesis speciosa* and *synthesis intellectualis*, though perhaps not exactly in the sense as Kant understands it. In my view, empirical concepts (or more precisely, their schemata) provide the rules of *synthesis speciosa*, whereas the categories provide the rules of *synthesis intellectualis*. The former kind of synthesis is exercised by the imagination (but not the mysterious "transcendental imagination"), whereas the latter kind of synthesis by the understanding or apperception. Without the former kind of synthesis, the world would be a complete chaos, whereas without the latter kind of synthesis, the world would not be comprehensible as the *nature* in the Kantian sense, i.e., as "the combination of appearances as regards their existence, in accordance with necessary rule, i.e., in accordance with laws" (A 216/B 263; cf. Prol, 4: 296).

On this account, sufficient room is left for the more subjective kind of cognitions, especially for the judgments of perception. In the last chapter, we have seen Kant's own doctrine of judgments of perception is both artificial and deeply problematic, but now we can have a simple and natural definition of it that is freed from all those problems. The main idea is straightforward enough: Judgments of perception are simply statements about what one perceives. But in order to accommodate other quasi-perceptual experiences, such as illusions, hallucinations, or dreams, but also

seeing something in the TV-screen or simply fantasy, we may say that judgments of perception are about what is present to us in perceptual or quasi-perceptual experiences. The quasi-perceptual experiences are quasi-perceptual because they obey the same rules of synthesis as those of perceptual experiences. Even in dreams, illusions, or pure fantasy, no plane figure with only two sides, for example, can be present to us. The quasi-perceptual experiences differ from perceptions proper in that they express merely possible state of the world, whereas perception are defined as about the actual state of the world. But a possible and non-actual state of the world is not equivalent to a private state of the mind. Accordingly, what can be expressed by judgments of perception is not restricted to the subjective, private feelings of an individual, such as the sweetness one feels when one eat some sugar, but also includes, and indeed consists *primarily* in, possible states of the external world one perceives, such as the perception that the stick in the water is broken. Such statements are, of course, particularly vulnerable to errors, as they do not contain in themselves any ground that may justify our belief in them.[18] But they can be transformed into the more objective, though not absolutely infallible, kind of cognitions through the *synthesis intellectualis*, through which they are also transformed from the constituents of the self in the weaker sense to the self in the weighty sense. However, since we are not *forced* to determine them with the categories, they may remain as mere parts of ourselves in the weaker sense.[19]

Now I believe that the problem of the more subjective kind of cognition is resolved. But this solution is not fully in accord with what we said above. For we have suggested that the objectifying role should be attributed to the empirical concepts themselves, but if they are operative only in *synthesis speciosa*, it seems that this role must be restored to the categories. In order to resolve this tension, I think we may appeal to Leibniz's distinction between confused and distinct ideas again: What is involved in mere *synthesis speciosa* is the mere confused empirical concepts, whereas the objectifying role pertains only to distinct empirical concepts. But how could

[18] For this reason, but just for this reason, we may add "it seems" to each judgment of perception. Thus I agree with Prauss's suggestion of the appropriate form of such judgment (*Erscheinung bei Kant*, pp. 224ff.), but on totally different grounds.

[19] Cf. Prol, 4: 290: "If an appearance is given to us, we are still completely free as to how we want to judge things from it."

confused concepts be made distinct? Leibniz gives no answer to this question. And I want to propose a simple answer: such transformation is achieved through *reflection according to the categories*. As the rules of intellectual synthesis, the categories are *higher-order concepts* that are applied not to empirical objects, but only to first-order empirical concepts. For example, in order to have a distinct concept of house, one should be capable of taking it as a substance, i.e., of knowing that it may persist in a considerable long period of time, though not, as Kant's official definition of substance requires, forever. Thus one will be able to unite his various perceptions of the house—some in the morning, some in the afternoon, some about the facade, some about the individual rooms—in the concept of house, but *not* in the concept of substance. On the other hand, without the category of substance, such unification would be without any rational ground. In this way, I develop Kant's fundamental insight of the Schematism, namely that the significance of the categories, i.e., their relation to the object, "comes to them from sensibility, which realizes the understanding by means of at the same time restricting it" (A 147/B 187, translation altered; cf. A 146/B 185f.). Since the categories cannot be used to predicate concrete things directly, they can be realized only through the empirical concepts, which are resulted from the figurative synthesis of imagination and hence belong to sensibility; at the same time, since they are nothing but the rules of reflection, they are also restricted by the materials on which the reflection can be performed. Admittedly, this is not in full accord with Kant's own view, according to which the contribution of sensibility is this context is nothing but the temporal form. But I hope that my proposal could be supported by the overall argument of this chapter.

This new account of judgments of perception and of the objectifying function enables us to propose a more satisfactory account of the relation between judgments of perception and judgments of experience. The former, as I just said, are judgments about merely possible states of the world, whereas the latter are judgments about actual states of the world. And the actuality of a possible state of the world can reasonably be endorsed by nothing other than the reflection according to the categories. In this way, I think that Kant's wish that the task of the transcendental deduction "can almost be accomplished through a single inference from the precisely

determined definition of a **judgment** in general" (MAN, 4: 475n.) is not so unrealistic as the most commentators suggest.[20] Let us quote again the definition of judgment in § 19 of the B-Deduction: "a judgment is nothing other than the way to bring given cognitions to the **objective** unity of apperception" (B 141). If we note that the "given cognitions" are not infallible cognitions about my private state of mind but problematic cognitions about the external world, and that they are brought to the unity of apperception by means not of the categories themselves, but of the distinct empirical concepts, if we further note, as a result of the last point, that neither the particular form of judgment nor the copula "is" plays any role in distinguishing between the merely possible and the actual, then all the problems I indicated in the last chapter about this definition disappear. In particular, the simple but so far unanswered question why we can conclude from the heaviness of a particular body to the proposition that all bodies are heavy, but not from the yellowness of a particular body to the proposition that all bodies are yellow, even if all bodies he have seen happen to gold (which, I admit, is quite implausible, but still possible) can now be easily answered: If different representations are united in the categories themselves, then it is hardly clear what the difference between these cases is. But if they are united in the empirical concepts of body and of gold, which, distinctly represented, imply quite different categorial determinations,[21] then it becomes readily understandable why the heaviness can reasonably be attributed to all bodies, but yellowness can reasonably be attributed only to gold.

By the same token, we can also have an answer to Hume's skepticism concerning the same-cause-same-effect principle. A key assumption of Hume's argument is that there is no connection between the sensible qualities of a thing, such as the color and consistence of bread, with its "secret powers," in this case the powers of nourishment and support (EHU, 4.21). From the Kantian standpoint advocated here, we may respond that if bread is conceived in a merely confused way, then such connection can

[20] Cf., e.g., Henrich, "Identity and Objectivity," p. 136. Pollok, "'An Almost Single Inference'," argues that this idea is crucial for Kant's rewrite of the Transcendental Deduction, but from this he mistakenly (I think) concludes that the possibility of judgments of perception is no longer acknowledged after the B-Deduction.

[21] What exactly is the categorial determination of gold? Given its relative stability, perhaps it should be regarded as certain substance; but I think it is more natural to regard "natural kind" as an independent category, as it provides sufficient rules according to which the particular natural kinds are determined.

indeed never be found; but if of bread is conceived in a distinct way, which requires its being reflected according to the category of cause and effect, one would recognize that both the sensible qualities and the causal powers of nourishment and support necessarily belong to bread *qua* bread. As a result, one may *reasonably* expect that if something looks like bread, then it *probably* has the powers bread should have. But one also knows that the sensible qualities characteristic of bread might be the effect of other causes, which do not necessarily have nourishment as their other effect. It is precisely because of the latter kind of knowledge that we are distinguished from other higher animals, which may possess a lot of confused ideas but can never make them distinct, because they do not possess the categories that are indispensable for reflection. And it is because Hume denies the possibility of empirical use of the understanding from the beginning, I think, that he simply neglects this important difference.

In my explanation of the objectifying function of the distinct empirical concepts, which in turn are possible only through reflections according to the categories, I suggested two forms of its exercise: First, the mere judgments of perception, which are about the *possible* states of the world, are transformed by this function into the judgments of experience, which are about the *actual* states of the world. Second, the connection between different representations in a single or a limited number of instances is transformed by this function into a *universal* truth that holds for the past, the present, and the future. This may seem puzzling, as the senses of objectification in the two cases seem to be quite different. Does it mean that I do not have a unified account of the objectifying function? I don't think so. In my view, it is another important insight of Kant that the two kinds of objectivity are intrinsically connected with each other. Kant writes: "The difference between truth and dream, however, is not decided through the quality of the representations that are referred to objects, for they are the same in both, but through their connection according to the rules that determine the combination of representations in the concept of an object, and how far they can or cannot stand together in *one experience*" (Prol, 4: 290). With this remark, Kant resolutely breaks with the traditional attempt, common to Descartes, Hume, and many others, at seeking the criteria for reality in the qualities of the representations

themselves, and locates the criteria in the possibility of one, coherent experience. But the possibility of experience, which is established by the reflection according to the categories, is at the same time the condition of rational generalization. As a result, the two kinds of objectivity stand or fall together as the condition of the possibility of experience is satisfied or not.

So far I have attempted to give a new, but still Kantian account of the object in the weighty sense. On this account, an object in the weighty sense is simply something stands under a distinct empirical concept, such as a piece of bread (assuming that our concept of bread is distinct). Given the correlation between the self in the weighty sense and the object in the weighty sense, the *existence* of the self in the weighty sense seems to be unproblematic. But now we may further ask how great the *realm* of the self in the weighty sense is. In particular, can all representations belonging to the self in the weaker sense also be taken as part of the self in the weighty sense? Kant's answer seems to be positive, as he writes: "everything that may ever come before our senses must stand under the laws that arise a priori from the understanding alone" (B 160; cf. B 161, B 164f., and B 143 (the title of § 20)). However, his own argument for this thesis, which is critically examined in the last section, is shown to be unsuccessful. And my reconstructed version of argument is also too weak to establish this thesis. Should we then conclude that this thesis is false? And since in my reconstruction the self in the weighty sense is hardly mentioned, should we conclude that this notion actually plays no great role in Kant's argument?

The answers to both questions are, of course, negative. Let us first consider the second question. It is quite true that in both ordinary and scientific reasoning, we do not normally appeal to any conception of the self in order to determine the truth of any proposition. But this does not mean that the self is of no importance in such reasoning. For if the self in the weighty sense is constituted by the combination of various cognitions into an object in the weighty sense, then from the fact that there are many different kinds objects in the weighty sense, it follows that there might be different *selves* in the weighty sense that are thereby constituted. In this case, I would still "have as multicolored, diverse a self as I have representations of which I am conscious" (B 134), or more precisely, as multicolored, diverse a self as the objects in

the weighty sense that I cognize. Though seemingly incredible, this is in fact an accurate description of the cognitive state of modern people: while we have objective knowledge in this or that area, we do not always know how such knowledge is connected, and if such connection can absolutely not be established, then it would be no exaggeration to say that one is cognitively split. The idea or ideal of *the* self in the weighty sense, then, guides us to seek the most universal principles by means of which cognitions of different objects in the weighty sense are connected, and different "selves" in the weighty sense ultimately converge into the one self. Thus, even if Kant's thesis that all representations belonging to the self in the weaker sense can also be taken as part of the self in the weighty sense cannot be proved, it should still be taken as an ideal that guides our inquiry.

According to the state of natural science of Kant's age, the universal principles by means of which all our objective cognitions are connected are of course the laws of Newtonian mechanics. This explains why the Newtonian mechanics is given such a prominent role in Kant's system. And even though the Newtonian mechanics does not seem to be qualified as the proper source of the universal principles now as in Kant's age, the ideal of a unified scientific theory, of which many scientists never cease to dream, may also be regarded as the result of the pursuit for the one self in the weighty sense. And I believe that the following remark of Kant will find as much approval by us as by his contemporaries:

> [The scientists] comprehend that reason has insight only into what it itself produces according to its own design; that it must take the lead with principles for its judgments according to constant laws and compel nature to answer its questions, rather than letting nature guide its movements by keeping reason, as it were, in leading-strings; for otherwise accidental observations, made according to no previously designed plan, can never connect up into a necessary law, which is yet what reason seeks and desires. (B xiii)

Conclusion What is Intuition?

Now it is time to answer the question raised at the beginning of the Introduction, namely what intuition is, by bringing the results of the individual chapters together. In the second chapter, I argued that as Kant first invents his peculiar notion of intuition, the primary meaning of it is concreteness. This meaning applies not only to our empirical intuition, but also to our pure intuition, and even to divine intuition. How does this notion evolve with the development of the Critical philosophy? In the fourth chapter, I indicated that the meaning of empirical intuition in the first *Critique* is by no means unequivocal, but it should be best understood as certain intermediate cognition. In the last chapter, I showed that a plausible account of the possibility of experience requires such intermediate cognition, which corresponds roughly to what Kant calls "judgment of perception" in the *Prolegomena*, to be understood as judgement of possible state of the world. Of course, possible state of the world can be described in termed of general facts or laws, e.g., we may conceive of a twin earth that is the same as ours except that the water there is composed not of H_2O, but of XYZ, or that the gravitational constant there is two times larger than here. But the mere possibility of an intuition should not be understood in this way. It concerns, at least directly, only the actual state of a single thing. As a result, concreteness remains to be an essential characteristic of intuition in the Critical theory of experience.

However, there are also important differences between the conceptions of intuition in the *Inaugural Dissertation* and in the *Critique*. While Kant already recognizes the impossibility of intellectual intuition for human beings in the former work, he does not then fully appreciate the essential inadequacy of human intuition for *empirical* knowledge, as he still holds an Aristotelian, abstractionist theory of concept, and has no idea of the significance of the categories for *empirical* knowledge. The Critical Kant, by contrast, distinguishes between object in the weaker sense and object in the weighty sense, and realizes that the relation to the latter cannot be established except by means of reflection according to the categories. As a result, the relation between intuition and concreteness becomes more intricate: Intuition alone no longer suffices for our knowledge of concrete, actual object; it must always work together with the

distinct empirical concepts, which are impossible without the categories, for our acquisition of empirical knowledge. In Kant's famous dictum, "intuitions without concepts are blind" (A 51/B 75).

As I noted in the Introduction, there is an ongoing debate on whether the Kantian intuition is conceptual or non-conceptual. If the interpretation and reconstruction advocated in this study are on the right track, I think this debate is to a great extent a verbal dispute. For if by concept one understands *distinct* concept, i.e., concept that is analyzed into its marks, by means of which one concept can be connected with another, and which connection makes our inference possible, then intuition is surely non-conceptual. But if by concept one also understands *confused* concept, i.e., concept that merely serves to distinguish one thing from others, then intuition must be conceptual, for otherwise it would not be qualified as the intermediate cognition.[1]

In addition to the intuition without concept, another thing which is called "blind" by Kant is the imagination without apperception. Thus we find a perfect parallelism between intuition and imagination. From this parallelism, we can not only naturally regard the imagination as the faculty of intuition, but also attain some new insights into the nature of both. First, we are now in a better position to understand the relation between imagination and apperception. The former can indeed be conditioned by the latter and thereby no longer "blind," but become a "transcendental" faculty that makes empirical cognition possible. But this is achieved not by means of the apperception "affecting" the sensibility, in particular the inner sense (cf. B 155), which is hardly intelligible, but simply by our reflecting on the *products* of the imagination, namely the intuitions, according to the categories, the *products* of the understanding. Of course, it is up to us whether we perform such reflection or not, but it is not wholly up to us whether we could perform it successfully. For this reason, cognition is always an achievement, which necessarily demands agency, and at the same time involves certain risk, which is called "*Wahrheitsrisiko*" by Prauss.[2] Thus we can find some

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[1] My conclusion, then, is very similar to that of Grüne, *Blinde Anschauung*. However, while she links intuitions to obscure concepts, I link them to clear but confused ones. Moreover, Grüne does not discuss the problem of judgments of perception, which, I think, is very important for understanding Kant's notion of intuition.

[2] Prauss, *Erscheinung bei Kant*, p. 295f.

similar structure between cognition and action in Kant's Critical philosophy.[3]

Second, with the idea of cognitive agency, we may also better appreciate the difference between human and animal intuitions, and also between human and animal imaginations. It has been a common view that animals cannot have any idea of external things, but are driven by the sensations and their instinctive reactions to such sensations alone. However, if the distinction between object in the weaker sense and object in the weighty sense is appropriately drawn, I believe that we can admit some higher animals the idea of object in the weaker sense, but not in the weighty sense. As I argued in the last chapter, even cognitions of object in the weaker sense require some synthesis, which is achieved through the imagination by means of the combination of the intuitions into certain unity. Accordingly, I think there is no difference in kind between the human intuition and imagination and their counterparts in some higher animal, and the former are no less "blind" than the latter. The only, but pivotal, difference between human and animal cognitions, I think, consists in the way the intuitions are connected. While even the most intelligent non-human animals can combine the intuitions in some very limited way, largely according to their instinct, the human understanding and its system of categories provides much more possibilities for combination. Furthermore, sometimes we find that the intuitions available to us are insufficient to be united into experience. In this case, we may try, as it were, to *produce* new intuitions for our purpose, and the most efficient way for such production is by experiment, as the passage quoted at the end of the last chapter strongly indicates. In sum, while there is no qualitative difference between human and animal intuitions, the capacity of methodically connecting and producing new intuitions makes our experience infinitely richer than that could ever be possessed by any other animal.

Third, new light is shed on the relation between intuition and image. In the second chapter, I already indicated some similarity between Kantian intuition and Aristotelian image (*phantasma*). Now the connection between them becomes even closer. Just like the Aristotelian image, an intuition is nothing but the way an object (in the weaker sense) *appears* to us, and the faculty for making such appearing possible is the

[3] For more on this issue, see Prauss (ed.), *Handlungstheorie und Transzendentalphilosophie*, and the literature indicated there.

imagination (*phantasia*). Moreover, the Kantian intuition also shares with the Aristotelian image the property of immediacy, though not in the causal or physiological sense (in which sense, as both agree, only sensations or special-sensibles are immediate), but in the sense of the absolute starting point of all operations of our mind. Such starting point is not the Archimedean point dreamed by Descartes. It is essentially fallible, and cannot amount to any knowledge by itself. But it is also the *conditio sine qua non* of all ordinary or scientific knowledge. On the other hand, in modern, representationalist tradition, "image" is often understood as something *standing for* external things by virtue of its similarity with them. Although Kant also partially commits himself to this view, in particular in the A-Deduction, I think this is not his mature position, and we should not interpret intuition or imagination in this way.

Finally, and in connection with the last point, I always regard intuition as a spatial representation, and never talk of inner intuition, whose only form is time. It seems that in doing so, I do not respect a fundamental tenet Kant repeats again and again. I admit this is true. However, as I already indicated in chapter 2, the difference between space and time is much greater as Kant realizes, or at least as he is willing to concede. His parallel treatment of space and time is motivated, I think, above all by his commitment to the Newtonian mechanics, in which they play a fundamental role, and his insistence on an inadequate theory of inner intuition is largely because he still stands in the representationalist tradition. I hope that my critical discussion and reconstruction of his arguments may suffice to show that the inner intuition should not have the role Kant assigns to it in his theory of experience. But even this is true, one may still ask whether there is any private, purely subjective experience that has no spatial property, and, if there is, what their role in our mental life is. But these questions can be answered only in another study.

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