

The Metaphysical Deduction of Categories in Kant's *Critique of Pure Reason*

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Abstract: In the *Critique of Pure Reason*, Immanuel Kant presents a transcendental and a metaphysical exposition of time and space as pure intuitions and as forms of sensibility. In a later chapter he presents a metaphysical and a transcendental deduction of *a priori* pure original concepts. According to Kant the metaphysical exposition “contains that which exhibits the concept as given *a priori*”. I will give a short account of Kant’s arguments regarding the metaphysical deduction, underlining some key points. Firstly, Kant needs a principle to establish the table of such concepts and uses, for this purpose, transcendental logic, mainly the functions of unity in judgment. From here he states the table of categories. Kant makes four observations about the correlation between the two tables, of judgments and of categories, and three observations about the table of categories. I will address some issues concerning the “metaphysical deduction”: the completeness of the table of the functions of unity as the guideline for the table of categories is debatable and the “deduction” may seem a circular argument. The correlation principle between the functions of unity and categories is not mentioned, but on the third observation on the table of categories Kant implies that it is, more or less, self-evident; further, I will argue that the correlations in the first class, that of quantity, could be different. One can consider that metaphysical deduction is a necessary proof, but it is not enough; at this point categories don’t have a proven objective validity. This, I think, is the task of the transcendental deduction; in the end I will address Ewing’s claim that the order of the two deductions should be reversed. I find that the metaphysical deduction *discovers* the categories, and the transcendental deduction *establishes* their objective validity, therefore the term “deduction” has two meanings for Kant.

Keywords: Kant, deduction, categories, metaphysical, transcendental, *Critique of Pure Reason*

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The reference to a “metaphysical deduction” appears in the *Critique of Pure Reason* only in edition B, §26, where Kant refers to the purpose¹ of the argumentation regarding the deduction of categories: “In der metaphysischen Deduktion wurde der Ursprung der Kategorien *a priori* überhaupt durch ihre völlige Zusammentreffung mit den allgemeinen logischen Funktionen des Denkens dargetan (...)” (Kant 1996, B159). Thus, if these categories will be deduced from reference to the universal logical functions of thinking, we must specify, firstly, what these functions are. In order to do that, a presentation of the Kantian conception of logic is needed.

Although Kant considers logic to be a closed science (there had been no significant progress since Aristotle), when he uses it to deduce the categories, he presents his own view regarding the domain. Logic, Kant says, is the science of the rules of the intellect in general. It can be approached from two perspectives: as a general use of the intellect, or as a particular use of the intellect. The first one contains the absolutely necessary rules of the intellect, while the second contains the rules of using the intellect to refer to a specific kind of objects. The first one is the elementary logic and does not consider any particular aspect of objects, while the latter is the *organon* of some sciences.

General or elementary logic - as it was mentioned above – can be, in its turn, divided into pure logic or applied logic. General pure logic does not regard all the empirical conditions that influence the activity of the intellect (the influence of the senses, the play of imagination, the rules of memory), it regards strictly *a priori* principles and is a *canon* of intellect and reason, but only regarding the formal part of their use (no matter what the content would be, empirical or transcendental). If general logic takes empirical conditions of the use of the intellect into account, then Kant calls this applied logic.

Only pure general logic is a science in the proper meaning of the term:

- “1) Als allgemeine Logik abstrahiert sie von allem Inhalt der Verstandeserkenntnis und der Verschiedenheit ihrer Gegenstände und hat mit nichts als der bloßen Form des Denkens zu tun.
- 2) Als reine Logik hat sie keine empirische Prinzipien, mithin

¹ E. Cassirer (1981) considers that this chapter will answer the problem of applying mathematical concepts to experience.

schöpft sie nichts (wie man sich bisweilen überredet hat) aus der Psychologie, die also auf den Kanon des Verstandes gar keinen Einfluß hat. Sie ist eine demonstrierte Doktrin, und alles muß in ihr völlig *a priori* gewiß sein." (Kant 1996, A54 / B78)

Transcendental logic does not ignore all kinds of content, general logic, on the other hand, does; it relates to a pure content, as it is possible due to the pure intuitions of space and time. This logic deals with the origin of knowledge of objects, as long as this origin lies within the subject and is not empirical.

Not all knowledge is transcendental "daß nicht eine jede Erkenntnis *a priori*, sondern nur die, dadurch wir erkennen, daß und wie gewisse Vorstellungen (Anschauungen oder Begriffe) lediglich *a priori* angewandt werden oder möglich sind, transzendental (d.i. die Möglichkeit der Erkenntnis oder der Gebrauch derselben *a priori*) heißen müsse." (Ibid., A56 / B80)

The difference between the transcendental and the empirical does not lie in the relation of knowledge to the object, but in the critique of knowledge. Kant gives the use of space as an example, which, if related to objects in general, is transcendental, and, if related to objects of the senses, it is empirical. In the first case, space is the origin of some *a priori* knowledge, and in the second case it is the origin of some *a posteriori* knowledge.

Transcendental logic is, in its turn, divided into analytics and dialectics. *Transcendental analytics* exposes the elements of the pure consciousness of intellect and the principles without which no object could be thought. It is logic of truth. Using logic as an *organon* leads to errors and appearances, their critique being the object of dialectics. *Transcendental analytics* must consider the following facts: its concepts must be pure, not empirical; they must not belong to intuition and sensibility, but to thought and intellect; they must be elementary, not derived concepts; their table must be complete.

Transcendental analytics has two parts: the analytics of concepts and the analytics of principles. The analytics of concepts is not an analysis of concepts, but a decomposition of the intellect itself as a faculty, in order to examine the possibility of *a priori* concepts. This decomposition supposes that there will be a search for pure concepts in the intellect and an analysis of the pure use of the intellect. The discovery of these concepts must be done by following a criterion that will, in this way, assure the completeness of the table. If their discovery is attempted through the observation of the intellect in

various ways of knowledge, then we will never be able to say that the analysis is complete, because there will always be unanalyzed knowledge.

Unlike intuitions, which are based on affections, concepts rely on functions: “Das Urteil ist also die mittelbare Erkenntnis eines Gegenstandes, mithin die Vorstellung einer Vorstellung desselben. In jedem Urteil ist ein Begriff, der für viele gilt und unter diesem Vielen auch eine gegebene Vorstellung begreift, welche letztere denn auf den Gegenstand unmittelbar bezogen wird.” (Ibid., A68 / B93)

All judgments are functions of unity in our representations, and all acts of the intellect can be reduced to judgments, which lead to the conclusion that the intellect is a faculty of judgment. Moreover, all functions of the intellect can be found, if a complete exposure of the functions of unity in judgments is accomplished.

From these premises, Kant will begin the metaphysical deduction of categories. From this moment on, in edition B of the *Critique*, Kant lists some sections in order to better distinguish the discussed elementary concepts, as he mentions at the end of the transcendental deduction of categories from 1787.

The table of functions² (Paton 1931) of unity in judgments is presented without many arguments, which led to a lot of criticism. The table is listed as follows:

1. The quantity of judgments: universal, particular, singular
2. Quality: affirmative, negative, infinite
3. Relation: categorical, hypothetical, disjunctive
4. Modality: problematic, assertoric, apodictic

How did Kant get to this table? If he had the functions of unity in judgment as a criterion, which, in fact, is the categories, then it means that he deduced the table of judgments from the table of categories, and not vice-versa. The idea that he defends, is, nevertheless, that the table of categories will be deduced from here and, this way, it will be complete. As the author himself states, this table does not entirely follow the usual technique of logicians, this being the reason for which a few explanatory observations are given. The first observation refers to singular judgments that logicians think we can treat as we treat the universal ones. For example, the judgment “Socrates is mortal” is singular, while the

² H.J. Paton (1931) identifies “the form of judgment” with the “function of judgment”, although they have different connotations.

judgment “all humans are mortal” is a universal one. However, the predicate “mortal” refers to an entire sphere of the subject, whether it is made of a single object or of infinity of objects. Kant agrees with this observation, but he says, if we regard judgment not only in the sense of the relation subject-predicate, but like a piece of knowledge, then the singular judgment is quantitatively different from the universal one, and it relates to it like unity to infinity. Therefore, the unity that singular judgment represents is a quantitative one, not a synthetic one. But the difference between these judgments finds its place in a “Tafel der Momente des Denkens überhaupt (obzwar freilich nicht in der bloß auf den Gebrauch der Urteile untereinander eingeschränkten Logik)” (Ibid., A71 / B 96-97).

In conclusion, the table of the functions of unity in judgment is not a table of general logic, but a table of pure logic, which cannot, by any means, contradict general logic, because, in the end, it makes it possible, but which, due to the expansion of its domain, by considering a pure content, affords some distinctions that cannot occur in general logic. So, the difference between singular and universal judgments does not lie in their shape, but in the pure content associated with them. From a formal point of view, transcendental logic does not say more, but when judgments are regarded as pieces of knowledge, meaning that they have a pure content, what is singular is related to that which is universal, as unity related to multiplicity, as an undividable unity related to a whole made of such units. However, is this difference a quantitative one, or a qualitative one?

Furthermore, in the same direction of transcendental logic, Kant distinguishes infinite judgments from the affirmative ones, and this is a distinction that cannot be made in general logic. For example, the judgment “The soul is immortal” is a judgment that has a negative predicate, but, in fact, it is an affirmative judgment. This judgment is an infinite judgment, because, if the subject is the negation of a predicate, it can be, according to that judgment, many other things. The example Kant chose is not very clarifying, because, if a soul is not immortal, then it is mortal, meaning that the sphere of possibilities has only two variants, which hardly justifies the attribute of “infinite” given to the judgment.

In his argument, Kant expands the universe of the discourse, from “soul” to “beings” in such a way that, if a soul is immortal, then there can be infinity of other beings that are not mortal. “Diese unendliche

Urteile also in Ansehung des logischen Umfanges sind wirklich bloß beschränkend in Ansehung des Inhalts der Erkenntnis überhaupt, und in so fern müssen sie in der transzendentalen Tafel aller Momente des Denkens in den Urteilen nicht übergangen werden, weil die hierbei ausgeübte Funktion des Verstandes vielleicht in dem Felde seiner reinen Erkenntnis *a priori* wichtig sei kann.” (Ibid., A72 / B98) Therefore, the difference does not lie in the quantitative relation between the infinite and the finite, as in the case of the previous paragraph, but in the way in which the content of the judgment is given. An unusual, yet relevant example would be the infinite judgment “a cat is a non-spoon”, which avoids the ambiguity of the grammatical articulation of the concept “immortal”, a logically positive concept expressed through a negative construction. “Non-spoon” designates an infinite class of objects, among which we can find a cat.

The third observation regarding the table of judgments concerns the relations of thinking in judgments, which can be: a) of the predicate related to the subject; b) of the principle related to the consequence; c) of divided knowledge and of all the members of the division between themselves. The first one is the categorical judgment, the second one is the hypothetical one, and the last one is the disjunctive judgment. The discussion about the disjunctive judgment and its relation to consciousness by taking content into account has a clarifying purpose for the argumentation of the third analogy of experience, in the chapter dedicated to the principles of pure intellect.

“Es ist also in einem disjunktiven Urteile eine gewisse Gemeinschaft der Erkenntnisse, die darin besteht, daß sie sich wechselseitig einander ausschließen, aber dadurch doch im Ganzen die wahre Erkenntnis bestimmen, indem sie zusammengenommen den ganzen Inhalt einer einzigen gegebenen Erkenntnis ausmachen.” (Ibid., A74 / B99) These judgments can be interpreted as relations of the elements of a judgment, relations of a judgment to another judgment, and, in the end, relations of a judgment to the universe of discourse.

The fourth observation regards the last group of judgments, those of modality. Again, Kant distances himself from the interpretation of the modalities of general logic, where the *modus* can be: possible, impossible, contingent or necessary. For Kant, this type of categories does not contribute in any way to the content of judgment. However, the difference between transcendental logic and general logic was

previously stated as the pure content that the first one takes into account. Therefore, if in this case the judgments of modality do not relate to the content, it means that they should correspond to the classification from general logic. The thing that Kant focuses on here is the relation of the *copula* to consciousness, from which it could be deduced judgment as: possible (arbitrary), assertoric (real) or apodictic (necessary). The problematic judgment expresses only logical possibility, a free choice. The assertoric judgment expresses logical truth, reality; in a hypothetical reasoning, the antecedent is problematic, but the consequent is assertoric. The apodictic judgment considers the consequent in an *a priori* relation with the antecedent, that is, in a necessary manner.

“Dieselbe Funktion, welche den verschiedenen Vorstellungen in einem Urteile Einheit gibt, die gibt auch | der bloßen Synthesis verschiedener Vorstellungen in einer Anschauung Einheit, welche, allgemein ausgedrückt, der reine Verstandesbegriff heißt.” (Ibid., A79 / B104-105) We can infer from here that the functions of unity in judgment must correspond to the functions of unity in intuition, meaning that what makes judgment possible can also make experience possible. The relation between categories and the table of judgments is dual. On the one side, categories are deduced from the table of judgments, and on the other side, categories are conditions of possibility for judgments. Two directions of argumentation become distinctive. Firstly, when categories are discovered, one starts from something familiar, from the faculty of judgment. Kant, through the metaphysical deduction of the categories, does not prove their validity, their objective validity. He had not yet established that there are pure concepts of the intellect that have an objective validity. The categories discovered here are only pure concepts, but their role in knowledge had not been stated yet. In the transcendental deduction, it will be shown that the unification functions of the intellect are conditions of possibility for knowledge, so categories have an objective validity³. Starting from the table of judgments, Kant can deduce only a part of the attributes that categories should have. This means that they are pure original concepts, but, as I have already said, their role in knowledge hadn't

³ It can be argued that metaphysical deduction is the necessary proof for the objective validity of categories and transcendental deduction is the sufficient proof for the objective validity of categories.

been established yet, so, the possibility of *a priori* synthetic judgments is not yet clear. The table of judgments is the starting point of discovery, but not of validation. The categories are the ones that generally make judgment possible, so they condition the table of judgments itself. This way, the *a priori* origin of some concepts is derived from the table of judgments, - which constitutes the metaphysical deduction. The validation of categories is proven in the transcendental deduction, where it is also shown that these categories are conditions of possibility of judgments in general, so they are conditions of possibility for judgments of the presented table.

This way, an argumentative series of discoveries and foundations is distinguished. From here, we can draw the conclusion that we can properly speak of categories only after it is proved that these pure concepts deduced here are objectively valid.

This is the table of the categories:

1. of quantity: unity, multiplicity, totality
2. of quality: reality, negation, limitation⁴
3. of relation: inherence and subsistence (*substantia et accidens*), cause and dependence (cause and effect), community (reciprocal action between active and passive)
4. of modality: possibility – impossibility, existence – nonexistence, necessity – contingency

These are the pure concepts of the intellect⁵. They are original (elementary) concepts, unlike the derived ones, which are pure, too. The discovery of derived concepts is announced by Kant as the task of another work. Even if these original concepts are derived from the table of the functions of the intellect in judgment, it does not mean that they were deduced from other concepts, and, this way, they are not original. What was found with the help of the table of judgments was only the title of some individual concepts that belong to the intellect, not their properties. It is known, at this point, that they are *a priori*, because they were not extracted from experience, but it has not been proven yet that they are conditions of the possibility of experience. Therefore, these concepts will get the attribute of “category” only after the transcendental deduction will

⁴ C. Noica (1998) names this category “limitation that does not limit”.

⁵ D. Johnson (1995) considers that the derivation manner of the categories implies, doubtlessly, the fact that they are concepts about objects.

have found the existence of some concepts that, they alone, make experience possible⁶. For now, naming these concepts “categories” must be taken with the announced reserve. However, Kant was convinced that such concepts existed; moreover, he brings into discussion other philosophers’ attempts to discover and give a complete account of them.

Kant names pure concepts “categories”, following Aristotle’s terminology. He objects that the ancient philosopher had no method in obtaining the list of these concepts.

On the other hand, Kant claims that he had found a principle that makes the list of categories complete. This principle is the faculty to judge. Kant does not mention the exact manner in which the table of judgments was produced. Taking the faculty to judge (or to think) as a principle, Kant does not deduce individual types of judgment analytically, so that their completeness is not assured. Yet, Kant apparently seeks the functions of unity in judgment, and with their help he will state the table of judgments. This manner is one that cannot assure completeness, even if judgments were followed in the framework of general logic. General logic, in its turn, doesn’t have a unique criterion for their classification and, moreover, Kant only starts from general logic, he really aims at is transcendental logic – that’s where the changes in the list of judgments emerged. The general logic of his time does not include the list that Kant provides. This way, the argumentation is circular; the functions of unity are searched for in knowledge in order to discover judgments, and, from here on, categories are discovered – as they are in fact functions of unity. The discovery of the categories, taken apart from the table of judgments has, in fact, a criterion, and is, from this perspective, complete. However, the starting premise is not apodictic; it is only assertoric. The thing that Kant cannot guarantee is the completeness of the table of judgments. More than that, the relation between judgments and the corresponding categories is not one that can be argued, but it is rather self-evident, as the third observation mentions (§11⁷). It is understood that the connection between them must be, in a way, self-evident, because, in the end, the same unification function is the subject of this issue;

⁶ I. Pârnu (2004) identifies two functions of the categories: a logical one and an “ontological- immanent” one, structurally defining the object of possible experience.

⁷ The §11 and §12 paragraphs do not appear in the 1781 edition; they were added in the 1787 edition.

nevertheless, the terms designating these functions are different. This is the case of any term, which, at the level of language, means more than the notion initially corresponding to it. Kant does not mention the relation between the judgments of quantity and the corresponding categories. If, in the case of other correspondences, one could say that there is a relation of order, meaning that the first category of quality corresponds to the first judgment of quality and so on, as far as quantity is concerned, this relation does not seem to be obeyed.

I think that the category of unity rather corresponds to the singular judgment, and the category of totality corresponds to the universal judgment. The relation between the singular judgment and the universal one is the same as the relation between unity and totality.

The second observation concerning the table of categories says that a third category results from the union of the second one to the first one. In the case of totality, it is obtained by unifying plurality with unity, in such a way that a synthetic unity is obtained. Therefore, if a horizontal correspondence can be established between the two tables, then the singular judgment should be placed ahead of the universal one. However, going back to the derivation of the third category from the first two, this fact does not make that particular category a derived one. It represents an original act of the pure intellect, because even the union of the first two categories is, in itself, an original act for each group.

The first observation regarding the table of categories is, in fact, a grouping of types: the first groups are categories that regard the objects of intuition (pure or empirical) and are called mathematical, and the last two groups are categories that regard the existence of objects (in relation to one another, or in relation to the intellect) and are called dynamical. The third observation states the correlation of the community with disjunctive judgment, which “nicht so in die Augen fallend” (Ibid., B112). Disjunctive judgments include a whole divided into pieces, and these pieces exist in reciprocal relations, like an aggregate, not in a serial relation, in one direction. In this type of whole, the parts are not subordinated to one another, but are in relations of reciprocal causality, not including their existence.

Kant’s appreciation that this relation can be encountered in the case of a body in which the parts attract and reject each other led to

exaggerated interpretations, as can be seen in the chapter dedicated to the principles of pure intellect.

This is the metaphysical deduction of the categories, a chapter that Kant placed in front of the transcendental deduction of pure concepts. The connection between these chapters is not tight enough, so that transcendental deduction could have been easily placed before the metaphysical one. A. C. Ewing argues that, in fact, the order of the two deductions *must* be reversed; otherwise, the metaphysical argumentation has no meaning (Ewing 1938).

I believe that both deductions discover different determinations of the same reality – the categories; these determinations do not involve, essentially, the existence of a connection of causality between them, in such a way that an order for their presentation could be established with necessity. The metaphysical deduction *discovers* the titles of categories, and the transcendental deduction *establishes* their objective validity. Of course, it is preferable that an argumentation starts with an act of discovery and not with an act of legitimating, although, in this case, legitimating is not done for each particular category, but for what a category is in general.

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