

# **Kant's Synthetic and Analytic Method in the *Critique of Pure Reason* and the Distinction between Philosophical and Mathematical Syntheses**

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## **Abstract**

In this paper I aim to address Kant's distinction between a synthetic and an analytic method in philosophy. I will first consider how some commentators have accounted for Kant's distinction and analyse some passages in which Kant defined the analytic and the synthetic method. I will suggest that confusion about Kant's distinction arises because Kant uses it in at least two different senses. I will then identify a specific way in which Kant accounts for this distinction when he is differentiating between mathematical and philosophical syntheses. I will examine Kant's arguments in the *Critique of Pure Reason* with the latter sense of the distinction in mind. I will evaluate if he uses the analytic or the synthetic method and if the synthetic method is able to identify, without a previous consideration of some sort of given knowledge, sufficient conditions for deriving some aspects of our knowledge.

## **1. Introduction**

In this paper I aim to address Kant's distinction between a synthetic and an analytic method and see how it can help us to clarify his lines of reasoning in the *Critique of Pure Reason*. Addressing Kant's method in the *Critique of Pure Reason* is an essential task in order to understand the aims and results of the book. Moreover, this undertaking can help us to better appreciate the status of the conclusions reached by Kant. Kant describes the synthetic method as one going from principles to consequences, while the analytic method goes the other way around. He then identifies these different 'directions' of philosophical argumentation with a 'progressive' and a 'regressive'

procedure.<sup>1</sup> This vague formulation is not easy to interpret. If we here understand as principles the principles of the pure understanding and as consequences the aspects of our knowledge they are able to justify, it seems easy to conclude that the synthetic method should be able to identify, without any previous consideration of some sort of given knowledge, sufficient conditions for deducing some aspects of our knowledge. It seems so because in the synthetic procedure the ‘principles’ appear to be sufficient to deduce ‘conclusions’ on some aspects of our knowledge. On the other hand, the analytic method would accept some given aspects of knowledge and identify their necessary conditions. As we will see however, when we look closer to Kant’s own arguments, the identification of the synthetic method with a procedure avoiding any reference to given knowledge in its premises does not seem to be tenable.

Should transcendental proofs follow the synthetic or the analytic method for Kant? Can the synthetic method identify sufficient conditions of knowledge, avoiding any previous consideration of given knowledge? Does the *Critique of Pure Reason* follow analytic or synthetic procedures? These are exactly the questions that I would like to answer.

I will first consider in section 2 how some commentators have accounted for Kant’s distinction. Then in section 3 I will suggest that in order to make sense of Kant’s contrasting claims we should differentiate a broader and a narrower sense that Kant attributes to the distinction between the analytic and the synthetic method. Then in section 4 and 5 I will analyse the broader and the narrower sense of the distinction respectively. The latter identifies a specific way in which Kant deals with this matter when he is differentiating between mathematical and philosophical procedures. To finish, I will analyse Kant’s arguments in the *Critique of Pure reason* with the narrower sense of the distinction in mind. I will focus on the ‘Transcendental Aesthetic’ and on the second version of the ‘Transcendental Deduction’. I will evaluate if he uses the analytic or the synthetic method and if the latter is able to identify, avoiding any

consideration of some sort of given knowledge, sufficient conditions for deriving some aspects of knowledge.

## **2. Guyer, Bird, and Ameriks on the Synthetic and the Analytic Method**

Kant's distinction between a synthetic and an analytic method has been a continuous source of difficulties for many interpreters of the *Critique*. What is particularly puzzling is his claim, made in the *Prolegomena to any Future Metaphysics*, that the *Critique of Pure Reason* uses the synthetic method, while the *Prolegomena* proceeds analytically.<sup>2</sup>

Paul Guyer has argued that Kant's characterization of the synthetic and the analytic method does not mark any relevant difference in the argumentative procedures used in the *Critique* and the *Prolegomena*.<sup>3</sup> Guyer describes the analytic method as one taking the necessity and universality of some propositions for granted and identifying which conditions are necessary for accounting for those propositions. On the other side, the synthetic method avoids any claim of necessity and universality for its premises, even though these characteristics would be essential for its conclusions.<sup>4</sup> Guyer then claims that Kant's contention in the *Prolegomena* does not reflect what Kant actually does in the two books under consideration. More specifically, the *Critique of Pure Reason* often uses analytic methods, thus taking for granted necessary and universal propositions in its premises. Guyer concludes that Kant's distinction is only a source of confusion that reflects the different and contrasting lines of reasoning adopted in the *Critique*. I agree with Guyer that the *Critique* also proposes arguments that follow the analytic method, but I think that Kant's distinction deserves a closer consideration, especially for understanding the differences Kant wants to point out between the *Critique* and the *Prolegomena*.

A totally different view is proposed by Graham Bird, who claims that Kant's distinction only refers to the fact that in the *Prolegomena* Kant examines in details mathematics

and natural science, thus grounding his arguments on established sciences, while the *Critique* proceeds from a scrutiny of experience in general not limited to any particular science.<sup>5</sup> This way of accounting for the distinction between the synthetic and the analytic method is surely right in grasping important differences between the *Prolegomena* and the *Critique*, but a further reflection needs to be carried out. In fact, when Kant defines the synthetic and the analytic method in his logic lectures he does not consider if the premises come from established sciences or not.<sup>6</sup>

Another view on the distinction between an analytic and a synthetic method is proposed by Karl Ameriks, who holds that Kant's main argument in the *Critique*, that is the 'Transcendental Deduction', is a regressive argument.<sup>7</sup> It is Kant himself that characterized the analytic method as a regressive method,<sup>8</sup> but Ameriks claims that his account of the 'Transcendental Deduction' as a regressive argument does not conflict with Kant's claim in the *Prolegomena* that the *Critique* proceeds synthetically. Ameriks aims to challenge those interpretations of the 'Transcendental Deduction' which claim that it identifies sufficient conditions of empirical knowledge. To defend his position, Ameriks maintains that the distinction between the analytic and the synthetic method refers only to the conclusions of an argument, which, in the case of the synthetic method, should be synthetic a priori propositions. He then stresses that his account of the 'Transcendental Deduction' as a regressive argument identifies synthetic a priori propositions both in the premises and in the conclusions of the argument, and is thus compatible with Kant's definition of the synthetic method.<sup>9</sup> As I have already said with reference to Guyer's account, I think that Ameriks is right in identifying a regressive (and in this sense analytic) argument in the *Critique of Pure Reason*. However, Ameriks' way of distinguishing between analytic and synthetic methods does not reflect completely Kant's own presentation of the issue. In fact, Kant does not identify the

synthetic method only by claiming the synthetic a priori character of its conclusions. He seems to be also concerned with other characteristics of the argument as a whole.

What is lacking in these accounts of the distinction between an analytic and synthetic method is a close consideration of the different, and sometimes contrasting, meanings that Kant attributes to it. Focusing on these different meanings will allow us to appreciate how the contrasting claims advanced by these commentators only reflect Kant's different uses of the concepts at issue. We will thus be able to overcome some of the problems that arise in relation to Kant's account of analysis and synthesis.

### **3. The Different Senses of the Distinction between Analytic and Synthetic Methods**

It must be taken into consideration that the distinction between an analytic and a synthetic method was not Kant's invention. It was already discussed by ancient mathematicians and it was commonly used by Kant's modern predecessors and contemporaries. 17<sup>th</sup> and 18<sup>th</sup> century discussions on the distinction between analytic and synthetic methods concerned the procedures to be used in philosophical inquiries and demonstrations, and their relationship with mathematics.<sup>10</sup> However, at that time there was not a unique way to understand and present this distinction. Synthesis was often associated with the procedure of Euclidean geometry which starts from definitions, axioms and postulates to obtain theorems and problems.<sup>11</sup> As an opposite to this procedure, one could understand analysis as a process directed toward the formulation of definitions and the identification of axioms. Analysis possessed also a meaning which was connected to the method of the ancient geometer Pappus. This method proceeds by assuming as true the very thing that needs to be proved.<sup>12</sup> Moreover, analysis was used to refer to algebra. Both analysis and synthesis were also associated to Lullus' 'ars magna', which was further developed by Leibniz's 'ars

combinatoria'. In this context analysis identified the process of isolating simple concepts, whereas synthesis was the re-composition of them into complex concepts.<sup>13</sup> Given these different senses of synthesis and analysis it is not always easy to discern which one is used by the author in question. It is also possible to find different senses of the distinction combined together.

In this regard, Kant makes no exception. As we already noted, in his logic lectures he simply stresses that the synthetic method goes from principles to consequences, whereas the analytic method proceeds from consequences to principles. This suggests a model of synthesis and analysis derived from the Euclidean model. However, Kant's vague formulation can be interpreted in various different ways. The ambiguity in Kant's use of the distinction is confirmed by the fact that sometimes he argues that philosophy can proceed only analytically,<sup>14</sup> sometimes he stresses that it can also proceed synthetically,<sup>15</sup> sometimes, as in the *Prolegomena*, he seems to stress that the whole *Critique of Pure Reason* is synthetic.<sup>16</sup> A clue to solve this confusion can be found in Kant himself. In fact, in his logic lectures of the 1780's he identifies different senses in which the distinction between the synthetic and the analytic method can be understood. Accordingly, after having distinguished analysis and synthesis in the usual way as ending and starting with principles, he stresses:

Analytic method is also a means of discovery [Erfindens] and of exposition [Vortrags], in that I speak popularly. The true method of exposition is synthetic, however, for even if I have thought the thing analytically, the synthetic method is what first makes it a system.<sup>17</sup>

In addition to the general meanings associated with the analytic and the synthetic method, Kant here attributes two other senses at first only to analysis. Thus, analysis can be also understood as a method of discovery and as a method of exposition. When referring to discovery, Kant has probably algebra in mind, which in mathematics was

often associated with a method of discovery and named analysis.<sup>18</sup> Nothing further is said about discovery and no synthetic method of discovery is discussed. On the other hand, analytic expositions are opposed to synthetic expositions, which have the characteristic of being systematic.

An important sense in which Kant understands the synthetic method is thus strongly related to a systematic exposition. In this sense, linking synthesis to the derivation of conclusions from principles indicates the systematic presentation of a science starting from its very basic concepts. However, there is at least another sense in which Kant understands the distinction between analytic and synthetic methods and the latter is usually introduced when Kant differentiates between philosophical and mathematical procedures. In this sense synthesis is related to the possibility of a priori deriving non-trivial conclusions from concepts thanks to a reference to intuition.<sup>19</sup>

That said, I think we can identify two main senses in which Kant uses the attribution synthetic with reference to philosophical methods. In a broader sense, the attribution only refers to the form of exposition of Kant's philosophy, while in a narrower sense, used when Kant distinguishes the method of philosophy from that of mathematics, the attribution identifies a distinctive line of reasoning. According to the first sense, this distinction identifies two different ways following which a theory can be presented. Hence, the first *Critique* is synthetic because it proceeds systematically and shows how the whole rests on determinate principles.<sup>20</sup>

#### **4. The Broader Sense of the Distinction**

As I have already said, the most famous passage in which Kant presents the distinction between an analytic and a synthetic method appears in the *Prolegomena to any Future Metaphysics*, where he stresses that the *Prolegomena* and the *Critique of Pure Reason* proceed using very different methods:

In the *Critique of Pure Reason* I worked on this question *synthetically*, namely by inquiring within pure reason itself, and seeking to determine within this source both the elements and the laws of its pure use, according to principles. This work is difficult and requires a resolute reader to think himself little by little into a system that takes no foundation as given except reason itself, and that therefore tries to develop cognition out of its original seeds without relying on any fact whatever. *Prolegomena* should by contrast be preparatory exercises; they ought more to indicate what needs to be done in order to bring a science into existence if possible, than to present the science itself. They must therefore rely on something already known to be dependable, from which we can go forward with confidence and ascend to the sources [...]. The methodological procedure of prolegomena [...] will therefore be *analytic*.<sup>21</sup>

Kant here distinguishes the synthetic method by stressing that it pursues its inquiries within pure reason itself, not relying on any fact whatever. This can suggest that the method of the *Critique* consists in identifying, without any consideration of some kind of given knowledge, some basic propositions which function as sufficient conditions for deriving aspects of our knowledge. Whether this characterization of the method of the *Critique* is adequate or not, what is difficult to explain in this passage is Kant's unspecific claim that the *Critique* proceeds synthetically, which suggests that the 'whole' *Critique* is synthetic.

My suggestion is that Kant, in the *Prolegomena*, does not use the distinction between the two methods in order to identify a specific line of reasoning, but he has in mind two different expository strategies. It is sufficient to compare the tables of contents of the *Critique* and the *Prolegomena* to see how the former is structured according to Kant's division of the human cognitive faculties. In this sense the synthetic nature of the first *Critique* is identical with its systematic structure, which is lacking in the *Prolegomena*.



The Critique is synthetic because it can organize its contents systematically and show how they derive from very simple rational principles. The possibility to perform this task is what marks the scientificity of the first *Critique*.<sup>22</sup> This sense of synthesis is used by Kant also in the *Critique of Practical Reason* (5: 10). In this text he says that after an analytic recognition of the first principles, the matter should be exposed synthetically starting from them and descending to their conclusions. In this context the synthetic exposition is nothing but the systematic presentation of the contents according to the previously identified principles.<sup>23</sup> On the other hand, the *Prolegomena* is organized around specific questions (e.g. ‘is metaphysics possible at all?’, ‘how is cognition from pure reason possible?’, etc.) which allow us to grasp more easily the problems at stake. The fact that Kant, in the *Prolegomena*, relies on the results of established sciences can also be related to a different expository strategy that does not mark an essential difference in the argumentative procedure.<sup>24</sup>

Unquestionably, Kant also introduces in the passage from the *Prolegomena* elements that suggest two different argumentative procedures (the derivation of the pure laws of reason according to principles in the *Critique* and the reliance on something already known in the *Prolegomena*). This only shows that the different senses of synthesis and analysis we are here identifying are not always clearly distinguished by Kant. That said, the first purpose of Kant in the *Prolegomena* could only have been the discrimination of two different expository strategies (a systematic presentation relating different cognitions to a limited set of principles and a ‘rhapsodic’ exposition introducing essential concepts by means of their derivability from well established sciences), otherwise it would be impossible to understand how the whole *Critique* could be synthetic.<sup>25</sup> This is also suggested by the fact that in the passage from the *Prolegomena* Kant makes explicit reference to a system in connection to the synthetic method. Moreover, he stresses that the *Prolegomena* does not present the science itself, but only

shows that a science is possible. Recall that for Kant scientificity is closely linked to systematicity. Thus, in this context, the attribution ‘synthetic’ is attributed to the first *Critique* in general and is connected to its systematic structure.<sup>26</sup>

## 5. The Narrower Sense of the Distinction

Besides the broader sense of synthesis identified in the previous sections, following which a synthetic exposition is a systematic presentation relating the whole of a science to simple principles, Kant uses the distinction between a synthetic and an analytic method in at least another, narrower, sense. He does so especially when he discusses the differences between the method of mathematics and the method of philosophy.

Kant started to use the distinction between a synthetic and an analytic method in order to differentiate mathematical from philosophical inquiries well before the publication of the first *Critique*. In fact, he thought that one of the main mistakes of the school of Leibniz and Wolff was the confusion between the method of mathematics and the method of philosophy. Kant argued that the mathematical method was unwarranted when it was used to obtain conclusions about real existing objects, as the objects of metaphysics.<sup>27</sup> In 1764, in the so called *Prize Essay*, which bears the title *Inquiry Concerning the Distinctness of the Principles of Natural Theology and Morality*, he then argues that while mathematics can proceed synthetically, philosophy can only proceed analytically:

There are two ways in which one can arrive at a general concept: either by the *arbitrary combination* of concepts, or by *separating out* that cognition which has been rendered distinct by means of analysis [Zergliederung]. Mathematics only ever draws up its definitions in the first way. For example, think arbitrarily of four straight lines bounding a plane surface so that the opposite sides are not parallel to each other. Let this figure be

called a *trapezium*. The concept which I am defining is not given prior to the definition itself; on the contrary, it only comes into existence as a result of that definition. [...] In this and in all other cases the definition obviously comes into being as a result of *synthesis*. The situation is entirely different in the case of philosophical definitions. In philosophy, the concept of a thing is always given, albeit confusedly or in an insufficiently determinate fashion. The concept has to be analysed [zergliedern]; the characteristic marks which have been separated out and the concept which has been given have to be compared with each other in all kinds of contexts; and this abstract thought must be rendered complete and determinate.<sup>28</sup>

In 1764 Kant's strategy for resolving problems that he saw as pressing for the philosophy of his times was the suggestion that philosophy could make any advancement only if it clarified the method it must use. In this context, Kant uses the distinction between analytic and synthetic methods as an essential instrument. Thus, whereas mathematics can start its inquiries by defining its concepts thanks to a synthetic procedure (which is here connected to an 'arbitrary connection of concepts'), philosophy should always start from concepts already given and obtain its definitions as a result of analysis. Mathematics is able to perform this arbitrary connection because its concepts have a special relationship with sensibility. Accordingly, Kant argues that 'in mathematics, the object is considered under sensible signs *in concreto*, whereas in philosophy the object is only ever considered in universal abstracted concepts'.<sup>29</sup>

These claims can be puzzling if read together with the *Prolegomena*. In fact, as we saw in the previous section, Kant there claims that the whole *Critique* is synthetic. Of course, Kant changed his mind since his *Prize Essay* in many respects, but it is easy to see how the difference with the *Prolegomena* lies in a change of focus. Whereas the *Prolegomena* identifies two different expository strategies, the *Prize Essay* tries to isolate two different ways of arguing.

In the *Critique of Pure Reason*, especially in the section entitled ‘Discipline of Pure Reason in Dogmatic Use’, Kant develops the concepts presented in the *Prize Essay* and introduces some relevant changes. First of all, even if he still considers the different ways in which mathematics and philosophy deal with definitions,<sup>30</sup> the syntheticity of mathematics is not confined to its way of defining,<sup>31</sup> but it is something essential to its procedures in general, which Kant identifies as ‘constructions of concepts’.<sup>32</sup> Moreover, here Kant better clarifies the way in which mathematical procedures relate to sensibility. He can do so because he has introduced the concept of pure intuition in his philosophy.<sup>33</sup> Thus, mathematics is synthetic and capable of a priori deriving non-trivial conclusions from its concepts because it can immediately relate its concepts to a corresponding object in pure intuition by means of constructions.

With respect to the *Prize Essay*, in the ‘Discipline of pure Reason in Dogmatic Use’ Kant is also more willing to allow a synthetic procedure to philosophy. Thus, he first stresses that when the concept of a triangle is given to a philosopher ‘he can analyze [zergliedern]<sup>34</sup> and make distinct the concept of a straight line, or of an angle, or of the number three, but he will not come upon any other properties that do not already lie in these concepts’.<sup>35</sup> Then, after a couple of pages he adds the specification: ‘there is, to be sure, a transcendental synthesis from concepts alone, with which in turn only the philosopher can succeed, but which never concerns more than a thing in general, with regard to the conditions under which its perception could belong to possible experience’.<sup>36</sup>

It is true that Kant closes the second reflection of the *Prize Essay* with an opening to a possible future use of synthesis in philosophy,<sup>37</sup> however nothing is said about what this synthesis amounts to. It is easy to see how Kant, at that time, did not have the means to propose a division within synthetic reasoning itself and the synthetic method was thus equated with the method of mathematics. On the other hand, in the *Critique of Pure*

*Reason* Kant thought he had found a peculiar synthetic philosophical argument which was different from mathematical synthesis. As we saw, the narrower sense of synthesis here presented concerns the possibility of a priori relating a concept to intuition. Even though philosophy cannot perform mathematical constructions (immediately relating a concept to an object in pure intuition), it is nonetheless able to connect a priori concepts to pure intuition, in a very different way from mathematics though. Philosophy cannot a priori construct an object in intuition, but it can show how the categories, in relation to the pure intuition of time, function as rules that determine the synthesis of the manifold in intuitions. It is this possibility to connect a priori concepts to intuition that identifies a peculiar philosophical synthesis for Kant.

With respect to its broader counterpart, this narrower understanding of the distinction between the synthetic and the analytic method is closer to the Kantian distinction between analytic and synthetic a priori judgments. Accordingly, the syntheticity of synthetic a priori judgments is also related to their ability to a priori connect concepts to pure intuition.<sup>38</sup> However, these two distinctions should not be seen as synonymous or equivalent, not least because one classifies judgments and the other methods. In fact, the *Prolegomena* shows that synthetic a priori judgments can be investigated using an analytic method.<sup>39</sup> That said, it seems plausible to suggest that for Kant the synthetic method (in the narrower sense here identified) necessarily involves synthetic a priori judgments. In fact, Kant argues that mathematics and philosophy can proceed synthetically and they are also able to produce synthetic a priori judgments.

Recapitulating the results of the latter three sections, Kant uses the distinction between analytic and synthetic methods in a broader and a narrower sense. In a broader sense the distinction only refer to two different expository strategies, where a synthetic presentation is distinctive for being systematic. This is the sense used in the passage from the *Prolegomena* analysed in section 4. According to it, the whole *Critique of*

*Pure Reason* is synthetic. In a narrower sense, the distinction refers to two different argumentative procedures. Thus, the synthetic method is able to a priori derive non-trivial conclusions from a set of concepts thanks to a reference to pure intuition. On the other hand, the analytic method is not able to produce new knowledge, but is only able to clarify concepts already given.<sup>40</sup> Kant introduces this narrower sense of the distinction when he is dealing with the difference between mathematics and philosophy. In fact, these two sciences can be distinguished by means of the different ways in which they refer to intuition.

We should now ascertain where the *Critique of Pure Reason* can be considered synthetic according to the narrower sense of the distinction here presented. Moreover, we should also see whether Kant's recognition of a synthetic procedure in philosophy involved the possibility of identifying, avoiding any previous consideration of some kind of given knowledge, sufficient conditions for deriving some aspects of our knowledge. In order to do so, I will analyse the arguments which Kant proposes in the first *Critique* and I will try to understand how philosophy can argue synthetically.

## **6. The Analytic and the Synthetic Method in the *Critique of Pure Reason***

As far as an analysis of the entire *Critique* would require a lot more than an article, I will limit my inquiry to the 'Transcendental Aesthetic' and the 'Analytic of Concepts'. I will first consider Kant's arguments for the a priority of space and time. Then, I will analyse Kant's argument for the a priority of the categories in the second version of the 'Transcendental Deduction'.

## 6.1 The 'Transcendental Aesthetic'

In the 'Transcendental Aesthetic' Kant seeks to show that space and time are a priori characters of our experience. Moreover, he wants to demonstrate that they are not conceptual entities, but have an intuitive nature. If we consider the 'Metaphysical Expositions' of space and time we can see that they follow a similar line of reasoning. First of all they argue that space and time cannot be derived from experience and are so a priori representations. Kant presents 3 arguments for sustaining this view:

- (1) space and time cannot be derived from different perceptions but should be considered preconditions of having those perceptions, insofar as otherwise we could not represent sensations as being outside us and next to one another (A 23 B 38), or as being simultaneous or successive (A 30 B 46);
- (2) space and time are a priori necessary representations that are conditions of our intuitions. Accordingly, we cannot think that there is no space, while we can think of a space without objects in it (A 24 B 38-9). As far as time is concerned, we cannot think of a phenomenon that is not in time, while we can consider time without any phenomenon (A 31 B46);<sup>41</sup>
- (3) We cannot account for the necessity claimed by geometrical principles ( A 24) and by objective relations in time ( A 31 B 47) without recognizing the a priority of space and time.<sup>42</sup>

Kant then provides two other arguments for stressing that space and time have an intuitive nature:

- (4) there are only a unique space and a unique time. All spaces and times that we can imagine are necessarily parts of a unique space (A 24-5 B 39) and a unique time ( A 31-2 B 49). This can only be explained assuming the intuitive nature of space and time;

(5) space and time are infinite (A 25, 32 B 39-40, 47-8) and unlimited. Their parts can be determined only by limitation of one unique unlimited space (A 25 B 39) and one unique and unlimited time (A 32 B 47-8).<sup>43</sup> Infinity and unlimitedness are characters that cannot belong to concepts but only to intuitions.

None of these arguments seems to proceed following the narrower characterization of the synthetic method I have given in section 5. They do not a priori derive non-trivial conclusions from a set of concepts thanks to a reference to pure intuition. They surely consider pure intuition as an object, but here pure intuition does not function as a means through which we derive non-trivial conclusions from concepts. On the contrary, they recognize some features of our representations of space and time as given and claim that, given those features, space and time cannot but be a priori and intuitive. These arguments identify some characteristics of our experience and then point out some conditions that are necessary to account for those characteristics. The conditions so identified are necessary conditions for explaining the characteristics in questions and they cannot be isolated without a previous consideration of some aspects of our knowledge taken as given.<sup>44</sup> The structure of the arguments presented in the ‘Metaphysical Expositions’ of space and time thus proceeds as follows:

- (a) our representations of space and time possess characteristics X, Y and Z;
- (b) we could not account for X, Y and Z without recognizing that space and time are a priori and have an intuitive nature;
- (c) therefore, space and time are a priori intuitive representations.

The ‘Transcendental Expositions’ of space and time<sup>45</sup> added in the second edition of the *Critique* do not present a substantially different line of reasoning. Both texts are fundamentally an elaboration of point (3) of our presentation of the ‘Metaphysical Expositions’. They show that we cannot account for synthetic a priori propositions in geometry and in our representation of motion if we do not accept space and time as pure



intuitions. We can thus conclude that the arguments given in the ‘Transcendental Aesthetic’ for proving the a priori and intuitive nature of space and time are fundamentally analytic. In fact, they accept some features of our representations as given and then isolate which conditions are necessary in order to account for them. There are many issues that can be raised in connection with these arguments, but for now it is sufficient to recognize that Kant’s arguments in the ‘Aesthetic’ are analytic and that they can identify necessary conditions of some aspects of our empirical (and mathematical) knowledge taken as given. We should now analyse the ‘Analytic of Concepts’ seeking a synthetic argument in it.

## 6.2 The ‘Analytic of Concepts’

As I have stressed above, Kant presents the synthetic method, in the narrower sense, as a procedure a priori deriving non-trivial conclusion from concepts thanks to a reference to intuition. The so-called ‘Metaphysical Deduction’ of the Categories seems to be one candidate for finding a synthetic procedure in the first *Critique*. In this section Kant identifies the fundamental forms of judgments and classifies them in a table.<sup>46</sup> He then obtains a table of fundamental categories which applies the fundamental forms of judgments to the synthesis of intuitions.<sup>47</sup> Kant begins with a logical consideration of judgments and then draws some conclusions regarding our concepts of objects. This seems to adhere in some way to Kant’s description of the synthetic method in the narrower sense.

However, there are some factors that prevent us from accepting this account. The ‘Metaphysical Deduction’ is not able to prove any truth concerning our representation of objects in intuition by itself. It identifies the categories, but it does not warrant the use of these categories in experience. It is only through the ‘Transcendental Deduction’ that the table of the categories, identified in the ‘Metaphysical Deduction’, is able to

show its relevance for human experience and knowledge. It is thus in the ‘Transcendental Deduction’ that we must seek a synthetic argument in Kant’s sense. In this paper I will focus on the second version of the ‘Transcendental Deduction’. This text results from Kant’s reconsideration of one of the main arguments in his *Critique* taking into consideration the reactions received by the first edition. It is thus more careful in presenting the argument in a clear manner. There is now much agreement in dividing the argument offered in the second version of the ‘Transcendental Deduction’ in two steps, even though the details of these steps are widely debated.<sup>48</sup> The first step ends at § 20, while the second step terminates at § 26. The first step shows the necessity of the categories and of the unity of apperception as conditions for having objective representations. On the other hand, the second step takes into account our particular way of intuiting sensible objects and shows how the categories can be objective for beings having human sensibility. I think that this division of the argument is correct and can also help us in identifying where Kant’s argument proceeds synthetically, and so begin my analysis of the first step of the second version of the ‘Transcendental Deduction’. It is impossible to present Kant’s ‘Transcendental Deduction’ without also proposing an interpretation of the argument. I will thus avoid analysing the argument word by word (a task that would be too long for this article) and will instead schematize the basic points that best represent the line of reasoning provided in the first step of the ‘Transcendental Deduction’. The argument can be summarized as follow:

- (d) the combination of a manifold into a concept of an object cannot be derived from the senses, but is an act performed by the knowing subject (§ 15, B 129-30);
- (e) this act of combination presupposes the representation of a synthetic unity of the manifold (§ 15, B 130-1);

- (f) this synthetic unity cannot be the category of unity, insofar as the former must ground the combination of the manifold provided by the categories themselves (§ 15, B 131);
- (g) the representation ‘I think’ must be able to accompany all the representations of a knowing subject (§ 16, B 131-2). The recognition of this unity of the knowing subject rests on a synthetic unity as an activity of the subject (synthetic unity of apperception) (§ 16, B 133-4);
- (h) only the synthetic unity of apperception makes possible the combination of the manifold of intuitions into the concept of an object and is thus a necessary condition of this combination (§ 17, B 136-8);
- (i) the manifold of intuitions is brought under the synthetic unity of apperception through objective judgments (§ 19, B 141-2). These judgments must conform to the fundamental forms of judgments identified in the ‘Metaphysical Deduction’;
- (j) the categories result from the application of the fundamental forms of judgments to the manifold of intuitions (§20, B 143);
- (k) thus, the categories are necessary conditions for the combination of the manifold of intuitions into the concept of an object (§20, B 143).

If this schematization of the first step of the ‘Transcendental Deduction’ were correct, Kant would present an analytic argument that identifies necessary conditions for the combination of the manifold of intuitions into the concept of an object. The combination of a manifold of intuitions into the concept of an object is simply something we do in experience. Given the existence of this combination, the categories are recognized as its necessary conditions. Here we cannot find a reference to the peculiar way in which humans intuit a priori; a reference which allows the a priori derivation of non-trivial conclusions from concepts. The combination of the manifold is accepted as given and the categories are recognized as its necessary conditions. The first

step of the transcendental deduction would thus follow the analytic method and this is confirmed by Kant's claim that the proposition stating that the synthetic unity of apperception is the objective condition of every knowledge is analytic (B 138). This way of presenting Kant's argument renders it less problematic than it is often supposed by many commentators. Of course, the details of the argument still present various points that deserve close attention, but the argument can be defended more easily because it is 'modest' in scope.

Thus, neither the 'Transcendental Aesthetic', nor the first step of the 'Transcendental Deduction' present synthetic arguments in the narrower sense identified above and they recognize necessary conditions for given aspects of knowledge. Let us now consider the second step of the 'Transcendental Deduction'. It is not easy to understand what this section is intended to obtain.<sup>49</sup> It is common to see the second stage of the 'Deduction' as taking into account the particular way in which humans intuit objects, a reference that is neglected in the first stage. However, there are various possible ways of interpreting this latter claim. In my reading, the second step aims to show that not only conceptual combination, but also sensible combination, must conform to the categories. Kant shows this dependence of sensible combination on the categories thanks to a reference to pure intuition (and to time in particular). Kant's strategy consists in showing that the synthesis of apprehension, that is the activity through which we can perceive objects in space and time, rests on a pure synthesis of intuition, which in turn must conform to the synthesis of apperception and thus to the categories of the understanding. It must be noted that this latter claim is not identical to the contention that the categories are directly employed in sensible apprehension. Rather, Kant's claim is better understood as stressing that every sensible representation, insofar as it depends on the synthetic unity of apperception, is obtained in a way that necessarily accords with the categories, even if the categories are not yet employed in a judgment.<sup>50</sup> The possibility of this pure

intuitive synthesis that accords with the categories without directly employing them rests on Kant's account of the relationship between the understanding and the imagination. This is an essential point to fully understand the second step of Kant's 'Transcendental Deduction', but it is also one of the most problematic elements in Kant's *Critique*. It would deserve an in-depth analysis that this article cannot offer and it would also divert our attention from the main purpose of this study.<sup>51</sup> I will thus limit my reference to the role played by the imagination to what is essential to understand Kant's argument. We can summarize the argument in the second step of the 'Transcendental Deduction' as follows:

- (l) the possibility of representing space and time as unities containing a manifold, and thus the possibility of representing any sensible relation within those unities, cannot rest on space and time as forms of human intuition (§ 26, B 160-1, 160-1n.);
- (m) the synthesis of apprehension (which is responsible for the unity of space and time as pure formal intuitions and consequently for the unity of every representation in space and time) can only be performed (thanks to the imagination) according to the synthetic unity of apperception (§ 26, B 161);
- (n) therefore, the synthesis of apperception is a condition of every synthetic unity in experience (conceptual or sensible alike) (§ 26, B 164-5);
- (o) since the synthesis of apperception proceeds according to the categories, any unity in space and time resulting from the synthesis of apprehension (which must accord with the synthesis of apperception) must also accord with the categories (§ 26, B 164-5).

Following this reconstruction of § 26 of the 'Transcendental Deduction', the second step of Kant's argument is intended to show that also sense perception, insofar as every unity and relation in spatiotemporal perception rest on a pure intuitive synthesis, which

in turn must accord with the categories, has to conform to the categories (even though indirectly, through the mediation of the imagination).<sup>52</sup> If even sense perception is indirectly subjected to the categories, it means that they are conditions of experience, insofar as no unity in experience would be possible without them.

According to this reconstruction, the structure of the second step of the ‘Transcendental Deduction’ is not so different from the first step. Kant assumes that we perceive intuitive relations in space and time, and space and time themselves as intuitive unities. Then, he argues that this undertaking would be impossible without making reference to the synthesis of apperception and the categories. It thus seems that also the second step of the ‘Transcendental Deduction’ is analytic and identifies the categories as necessary conditions of experience and empirical knowledge.

However, the second step of the ‘Transcendental Deduction’ presents a peculiarity that is really important to Kant. At this stage, Kant is able to find a necessary connection between the synthesis of apperception and the categories (which depend on the understanding), and a pure synthesis of intuition (which belong to sensibility). If we recall Kant’s own words when he introduced the only possible synthesis that was achievable by a philosopher, it is easy to see that he probably had in mind the argument presented in this section of the ‘Deduction’. In fact, in the ‘Discipline of Pure Reason in Dogmatic Use’, in the context of his discussion of the limits of philosophical synthesis, he stressed that: ‘there is, to be sure, a transcendental synthesis from concepts alone, with which in turn only the philosopher can succeed, but which never concerns more than a thing in general, with regard to the conditions under which its perception could belong to possible experience’.<sup>53</sup> The synthesis that a philosopher can perform proceeds ‘from concepts alone’, because it is not a mathematical construction of concepts. This does not mean that philosophy can be synthetic ignoring the conditions of human intuition. On the contrary, a philosophical synthesis must in some way make reference

to intuition in order to be referable to 'possible experience'. Accordingly, Kant, in refuting the possibility to have axioms in philosophy, argues that: 'a synthetic principle [...] e.g., the proposition that everything that happens has its cause, can never be immediately certain from mere concepts, because I must always look around for some third thing, namely the condition of time determination in an experience, and could never directly cognize such a principle immediately from concepts alone'.<sup>54</sup> This means that a category, in order to be considered a synthetic principle, must make reference to the condition of time determination according to the intuitive synthesis we have just identified.<sup>55</sup> This intuitive synthesis should not be confused with mathematical constructions, insofar as it is not able to produce actual objects of intuition. It is a determination of our intuition of time which allows us to perceive objects in accordance with the categories when they are given to us in actual experience. This is confirmed by Kant himself when he says that a category 'contains nothing but the synthesis of possible intuitions',<sup>56</sup> and so it cannot produce a concrete object in intuition, as mathematics does, by means of a priori constructions.

Philosophy is indeed able, according to the narrower sense of the synthetic method identified above, to a priori derive objectively valid conclusions starting from concepts (in this case: the categories). It can only do so by making reference to our forms of intuition and to a pure intuitive synthesis. This pure intuitive synthesis is discernible by a philosophical inquiry that rests on analytic procedures. Philosophy shows how every perceptual synthesis rests on a pure intuitive synthesis, which in turn depends on the synthesis of apperception. The categories, which are the means through which objects are related to the synthesis of apperception in judgments, can thus allow us to derive non-trivial conclusions about our way of synthesizing intuitions in experience. Revealing the possibility to perform this derivation is exactly the *result* of the second step of the 'Transcendental Deduction'. That means that the immediate connection between

concepts and pure intuition possible in mathematics is not reachable by philosophy. In order to perform its derivation of conclusions concerning possible experience (thanks to a reference to pure intuition) from the categories, the *Critique* is thus obliged to first identify a priori conditions of experience (belonging to intuition and the understanding respectively) by means of analysis.<sup>57</sup> This is what Kant does in the ‘Transcendental Aesthetics’ and in the first step of the second version of the ‘Transcendental Deduction’. It is so evident that philosophical synthetic arguments are quite different from the synthetic procedures of mathematics. The latter can immediately derive non-trivial conclusions from definitions and a priori identifiable concepts, the former can only *recognize*, as a *result* of their line of reasoning, the possibility of a priori deriving non-trivial conclusion from the categories.<sup>58</sup> This is a relevant point to take into account in evaluating Kant’s own version of transcendental philosophy.

Of course, Kant’s argument for showing how the categories relate a priori to intuition presents various difficulties and obscurities, especially concerning the role of imagination in determining our perception in accordance with the categories.<sup>59</sup>

However, we can also see that the second step of the ‘Transcendental Deduction’, an argument that Kant himself presents as synthetic, is ‘modest’ in scope. It cannot be seen as identifying, avoiding any previous consideration of some sort of given knowledge, sufficient conditions for deriving some aspects of our knowledge. In fact, even if it shows how we can a priori (but indirectly through a reference to a pure intuitive synthesis) derive some non-trivial conclusions concerning our knowledge and experience from the categories, it rests on the analytic arguments developed in the ‘Transcendental Aesthetics’ and in the first step of the second version of the ‘Transcendental Deduction’. The latter are analytic arguments taking as given some aspects of our experience and knowledge. That is to say, in order to a priori derive from the categories aspects of our knowledge thanks to a reference to pure intuition, we must



first recognize the categories and space and time as necessary conditions of our knowledge and experience. As we saw, this task is performed by the analytic arguments that I have just recalled.

## 6. Conclusion

Following the reflections carried out in this paper, it is possible to draw some conclusions concerning Kant's use of analytic and synthetic methods in the *Critique of Pure Reason*.

First of all, it cannot be argued that the *Critique* proceeds only following a synthetic method, unless one uses the broader understanding of the synthetic method that we have identified in the *Prolegomena to any Future Metaphysics*. According to the latter, the distinction between a synthetic and an analytic method only refers to two different ways of exposition used in the *Critique* and the *Prolegomena* respectively. Bird correctly emphasizes this sense of the distinction.<sup>60</sup> Accordingly, the *Critique* is synthetic thanks to its systematic character.<sup>61</sup> However, this sense cannot be employed to account for those passages in which Kant seeks to differentiate mathematical and philosophical synthesis.

Guyer is thus right when he stresses that in the *Critique* we can find both analytic and synthetic arguments,<sup>62</sup> but he uses a description of the synthetic method that is too demanding, and thus concludes that the argumentative procedures of the *Critique* are inconsistent. According to his presentation, synthetic arguments avoid any claim of necessity and universality for their premises and are able to obtain necessary and universal propositions as conclusions. However, we have seen that when Kant attributes a synthetic method to philosophy he seems to have in mind the recognition of the possibility of a priori deriving some conclusions concerning our experience and perception from the categories, thanks to a reference to pure intuition. This recognition

is the *result* of the second step of the ‘Transcendental Deduction’, which presupposes the identification of space and time as a priori intuitive representations and the recognition of the categories as conditions of the combination of the manifold of intuitions into the concept of an object. As I have stressed above, Kant identifies these elements of our knowledge by following an analytic procedure. Thus, Kant’s method in the *Critique* should be seen as a coordination of analytic and synthetic methods. The analytic stages of Kant’s argument identify necessary conditions in our sensible and conceptual representations, while the synthetic stage is able to show a necessary connection between the latter and the former. In this respect, the different arguments we have analysed in section 6 are different steps of a unique argument.

The analytic steps take for granted some characteristics of our knowledge and experience and then identify which conditions are necessary to account for those characteristics. These conditions should depend on our subjective standpoint on the object. Contrary to what we were expecting, the synthetic step of Kant’s argument in the ‘Transcendental Deduction’ must be regarded as part of this general strategy. It cannot be equated with an identification of sufficient conditions of knowledge which are identified without a previous consideration of given aspects knowledge. On the contrary, this synthetic step presupposes the isolation of the necessary conditions of our knowledge by means of analysis.

If we read Ameriks’ claim that the ‘Transcendental Deduction’ is regressive as arguing that it takes some aspects of our experience as given and identifies which conditions are necessary to account for them (according to the description of the analytic method I have used in this paper),<sup>63</sup> we can surely agree with him. However, we should add to this analytic step of the deduction, a synthetic one: a step capable of putting together the results of the ‘Transcendental Aesthetics’ and those of the first stage of the ‘Deduction’. Accordingly, synthetic philosophical arguments are not able to identify, avoiding any

consideration of given characteristics of knowledge, the categories as sufficient conditions for deriving some aspect of our knowledge. The peculiarity of these arguments resides in their capacity to identify necessary relationships between the categories and their schemata in pure intuition.<sup>64</sup>

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<sup>1</sup> 'Analytic is opposed to *synthetic* method. The former begins with the conditioned and grounded and proceeds to principles (*a principiatis ad principia*), while the latter goes from principles to consequences or from the simple to the composite. The former could also be called *regressive*, as the latter could *progressive*' (9: 149). References to Kant's work, if not differently indicated, will be given according to the standard edition (1900-), indicating volume and page number. References to the *Critique of Pure Reason* will use A and B to refer respectively to the paging of the first and the second original editions.

<sup>2</sup> 4: 263, 274-5.

<sup>3</sup> Guyer 1987: 6-7, 80.

<sup>4</sup> Guyer 1987: 6.

<sup>5</sup> Bird 2006a: 134-5.

<sup>6</sup> 9: 149.

<sup>7</sup> Ameriks 2003.

<sup>8</sup> 9: 149.

<sup>9</sup> Ameriks 2003: 59-60.

<sup>10</sup> See Tonelli 1959; 1976.

<sup>11</sup> This is for example the picture of the 'mathematical' or 'scientific' method that Christian Wolff famously proposed as a model for philosophical inquiry. On Wolff's method see: Gomez Tutor 2004. However, as noted by Engfer (1982: 227; 1986: 53-4), Wolff only rarely uses the designations: synthetic and analytic method.

<sup>12</sup> Pappus 1986: 82-4.

<sup>13</sup> Engfer (1982) discusses the different meanings of analysis and synthesis in the 17<sup>th</sup> and 18<sup>th</sup> century at length, giving particular attention to Descartes, Leibniz, Wolff and Kant. Also De Jong (1995: 241) identifies three different senses attributed to the distinction between analysis and synthesis.

<sup>14</sup> See for example the so called *Prize Essay* of 1864 (2: 276).

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<sup>15</sup> As he argues in the *Critique* at A 719 B 747. See also 24: 779.

<sup>16</sup> 4: 274-5

<sup>17</sup> Kant 1998: 492-3, Eng. tr. 419.

<sup>18</sup> See Engfer 1986: 54. In a passage from the *Prolegomena*, (4: 276n) even though Kant usually associates mathematics to the synthetic method, he also speaks about a *mathematical analysis*, thus bringing the distinction between a synthetic and an analytic method within mathematics. This is only one example of the way in which Kant's claims on this issue can generate confusion.

<sup>19</sup> I will say more on this in section 5.

<sup>20</sup> See also McBay Merritt 2006. It is true that Kant also stresses that the first *Critique* cannot be considered a system, but only the preparatory work for such a system (B xxxvi). However, it is evident that with respect to the *Prolegomena* it follows a systematic presentation.

<sup>21</sup> 4: 274-5.

<sup>22</sup> See McBay Merritt 2006. It is true that for Kant we should distinguish systematicity of thought and systematicity of exposition. Systematicity of thought is the possibility to show systematic relationships really existing between cognitions. Systematicity of exposition concerns the presentation of these relationships. That is to say, a systematic exposition is possible only because there is a systematicity of thought. However, we can present something that is thought systematically in a non-systematic way (and this seems to be the case of the *Prolegomena*) (On this matter see: Kant 1998: 489-91, Eng. tr. 416-7). Systematicity of exposition is a means to show the systematicity of thought and can be the mark of science.

<sup>23</sup> The fact that this exposition requires a previous analysis here means that the rational principles on which the system is built are not immediately at hand.

<sup>24</sup> This would also explain the fact that in the second edition of the *Critique* Kant introduces arguments coming from the *Prolegomena*. If the *Critique* had had a totally different argumentative structure, this introduction would have undermined the solidity of its results. In fact, as I will try to show later, even when the *Critique* does not take the results of particular sciences for granted, it often identifies characteristics of our experience and regressively determines which are their conditions. This way of arguing is very similar to the one used in the *Prolegomena*.

<sup>25</sup> The fact that here two different expository strategies are at stake is confirmed by another passage in the *Prolegomena*: 'Here then is such a *plan* [given by the *Prolegomena* (*my note*)] subsequent to the completed work [accomplished by the *Critique* (*my note*)], which now can be laid out according to the *analytic method*, whereas the *work* itself absolutely had to be composed according to the *synthetic method*, so that the science might present all of its articulations, as the structural organization of a quite peculiar faculty of cognition, in their natural connection' (4: 263).

<sup>26</sup> Bird's claim (2006a: 134-5) that the distinction between a synthetic and an analytic method only refers to the reliance of the *Prolegomena* on established science well expresses this sense of the distinction.

<sup>27</sup> See Beiser 1992: 40-1.

<sup>28</sup> 2: 276. 'Zergliederung' here refers to analysis, as it is clear from this passage: 'I have sought to show in a short and hastily composed □ work [the *Prize Essay*] that this science [metaphysics] has [...] remained imperfect and uncertain because the method peculiar to it has □ been misunderstood. Its method [Verfahren] is not synthetic, as is that of mathematics, □ but analytic [analytisch]' (2: 308).

<sup>29</sup> 2: 292.

<sup>30</sup> A 727-32 B 755-60.

<sup>31</sup> Wolff-Metternich (1995: 36, 150) correctly shows how in the *Prize Essay* mathematics can only obtain concepts synthetically through definitions. The subsequent judgments which use those definitions are analytic in form.

<sup>32</sup> A 713 B 741.

<sup>33</sup> The distinction between concepts and intuitions was already introduced in the brief essay *Concerning the Ultimate Ground of the Differentiation of Directions in Space* (2: 375-83) and it was also considered in the so called *Inaugural Dissertation* (2: 385-419).

<sup>34</sup> That 'zergliedern' is here immediately connected to analysis is clear from a passage on definitions that comes later: 'the former [philosophical definitions] come about only analytically through analysis [analytisch durch Zergliederung] [...], while the latter [mathematical definitions] come about synthetically' (A 730 B 758).

<sup>35</sup> A 716 B 744.

<sup>36</sup> A 719 B 747.

<sup>37</sup> 2: 290.

<sup>38</sup> See B 15-7 for the relevance of intuition for synthetic a priori judgments in mathematics and geometry, and A 155 B 194 for the relevance of the intuition of time for a priori synthetic judgments in general.

<sup>39</sup> The argumentative procedures of the *Prolegomena* can be considered analytic in the narrower sense here presented. In fact, I will argue later in this paper that the argument we can consider synthetic in the first *Critique* is to be found in the second step of the B 'Transcendental Deduction'. There is not an

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equivalent of this argument in the *Prolegomena*. Thus, even if the Critique inquires ‘how are synthetic a priori judgments possible?’ (B 19) it could coherently answer to this question analytically. It could do so by assuming that there are synthetic a priori judgments in experience and science and by clarifying these judgments through analysis.

<sup>40</sup> Confront the passage from the *Prize Essay* with A 718 B 746.

<sup>41</sup> It must be borne in mind that while time is a condition of all phenomena, space is only a condition of external phenomena.

<sup>42</sup> This point is removed from the ‘Metaphysical Exposition’ of space in the second edition and is addressed in the ‘Transcendental Exposition’.

<sup>43</sup> Kant actually introduces the argument that different spaces can only be limitation of an unlimited space at (4) (A 25).

<sup>44</sup> To be sure, it could be claimed that the a priori intuition of space can function as a sufficient condition for obtaining basic geometrical truths, but this is too strong a claim, since we would also need to define fundamental geometrical concepts. Moreover, the elaboration of synthetic mathematical truths is not the task of the philosophical arguments given in the *Critique*. With respect to geometry, philosophy can only recognize the necessary conditions for obtaining its synthetic a priori truths. In this respect, Kant argues that the philosopher is not able of drawing any synthetic conclusion from mathematical concepts (A 716-7 B 744-5).

<sup>45</sup> B 40-1, 48-9.

<sup>46</sup> A 70-6 B 95-101.

<sup>47</sup> A 76-83 B 102-9.

<sup>48</sup> See Henrich: 1969; Allison 1983: ch. 6; Bird 2006b: ch. 14; Pereboom 2001.

<sup>49</sup> Accordingly, various interpretations of this step have been proposed: Henrich 1969; Allison 1983: ch. 6; Bird 2006b: ch. 14; Pereboom 2001.

<sup>50</sup> The difference between these two claims can be grasped thanks to one of Kant’s examples. At B 163-4 Kant claims that we can perceive the freezing of water only by identifying relations in time that accord with the category of cause. This does not mean that in the perception of the freezing of water we are already subsuming our experience under the category of cause. We are not yet performing a judgment which attributes the concept of cause to this experience. On the contrary, our temporal perception of the freezing must accord with the rules governing the synthesis of apperception, even if concepts of the understanding are not directly employed yet. Our perception must be able to be subjected to a judgment involving the categories (in this particular case the category of cause). The fact that our spatiotemporal perception accords with the categories is due to the mediating role of imagination explained at § 24 (B 150-6.), in the chapter on ‘Schematism’ (A137-47 B 176-87) and elsewhere, but this is too vast an issue to be addressed here.

<sup>51</sup> For an account of Kant’s concept of imagination see: Ferrarin 1995a; 1995b.

<sup>52</sup> As I have already stressed, this is not equal to say that the categories are directly employed in sense perception, but that the pure intuitive synthesis carried out by the imagination results in relations that necessarily conform to the categories, even if the categories are not used in a judgment yet.

<sup>53</sup> A 719 B 747.

<sup>54</sup> A 732-3 B 761.

<sup>55</sup> Accordingly, as noted by Wolff-Metternich (1995: 155-6), philosophical principles can only be indirectly synthetic. See also A 248.

<sup>56</sup> A 719 B 747.

<sup>57</sup> This accords with Kant’s attempt to show, in the ‘Transcendental Deduction’, how the categories can be used to derive synthetic conclusions *only* within possible experience. The impossibility, in philosophy, to derive anything from the categories, before this limitation is established, prevents the direct use of the categories as sufficient conditions of knowledge.

<sup>58</sup> Also McBay Merritt (2006: 528-9) stresses that the second step of the ‘Transcendental Deduction’ is synthetic because it is able to connect a priori concepts to intuitions. However, according to her description of the synthetic method, the latter is able to ‘grasp the *idea of the whole* correctly and from this to see all those parts in their reciprocal relation to one another by means of their derivation from the concept of that whole in a pure rational faculty. This is the “synthetic” stage of inquiry’ (McBay Merritt 2006: 527). This seems to adhere more closely to the broader sense of synthesis I have previously identified, following which the *Critique* is an exposition of the powers of reason starting from very basic principles. This task cannot be limited to the second step of the ‘Transcendental Deduction’. According to it the whole *Critique* is synthetic, insofar as it follows the internal division of Reason’s faculties. It seems to me that if we want to determine in which sense only the second step of the Deduction is synthetic we need to apply the narrower understanding of the synthetic method, which is used by Kant when he distinguishes between mathematics and philosophy.

<sup>59</sup> The role of imagination is further clarified in the chapter on the ‘Schematism’ and in the ‘Principles’ of the understanding. The estimation of Kant’s arguments for the role of imagination in our perception

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should thus not be limited to the ‘Transcendental Deduction’, but should also take into account these sections of the *Critique*.

<sup>60</sup> Bird 2006a: 134-5.

<sup>61</sup> See McBay Merritt 2006.

<sup>62</sup> Guyer 1987: 6-7, 80.

<sup>63</sup> Ameriks 2003: 59-60.

<sup>64</sup> I would like to thank the following persons for insightful comments on previous versions of this paper: Stefano Bacin, Graham Bird, Alfredo Ferrarin, Marcus Willaschek and the *European Journal of Philosophy* anonymous referee. I have also profited from presenting this work at conferences in Groningen and Milan. Moreover, the possibility to discuss these issues with the people attending Marcus Willaschek’s colloquium in Frankfurt am Main has been of invaluable help. To finish, I would like to thank the Humboldt Foundation for providing the financial support for my research in Frankfurt.