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DAVID DEL BIANCO

The Scientificity of Metaphysics in Lambert and the Precritical Kant

ABSTRACT: In the *Inquiry* (1764) Kant provides a comprehensive meta-metaphysical perspective that includes several issues concerning metaphysics, but he does not address the question of its scientificity. He is subsequently led to do so through his encounter with the account of scientificity Johann Heinrich Lambert provides in his *Neues Organon* (1764), where he identifies systematicity and especially *a priori* nature (i.e. independence from experience) as the fundamental features of scientific cognition, thereby conceiving of science as a system of *a priori* cognitions of the understanding. Kant adopts this account already in the *Inaugural Dissertation* (1770) by conceiving of metaphysics as the science of pure understanding in virtue of its pure cognitions. Moreover, Kant goes beyond Lambert with his science of sensibility grounded on the pure intuitions of space and time, which science Lambert could not have conceived since the only *a priori* cognitions he admits are concepts which, as such, belong to understanding.
KEYWORDS: Kant; Lambert; Metaphysics; Science; *a priori*

1. INTRODUCTION: METAPHYSICS AS AN OVERALL DISCIPLINE, NOT YET AS A SCIENCE

After a decade of works written for both academic and non-academic purposes, but all devoted to specific philosophical issues, in the 1760s Kant shows a new attitude towards philosophy by partially putting aside such specific questions in favour of a reflection on the nature and method of metaphysics conceived as an overall discipline. This reflection, which outlines a clear meta-metaphysical perspective,[1] becomes explicit in the *Inquiry concerning the Distinctness of the Principles of Natural Theology and Morality*, published in 1764 but written at the end of 1762 on the occasion of the competition on metaphysical and geometrical certainty announced by the Royal Academy of Sciences of Berlin in 1761. The results of this investigation, carried out through a systematic comparison between metaphysics and mathematics, are well-known.

1. The meta-metaphysical character of the *Inquiry* is highlighted in the *Introduction*, where Kant writes that "[i]f what is presented in this treatise is itself metaphysics, then the judgement of the treatise will be no more certain than has been that science which hopes to benefit from our inquiry" (*Inquiry*, II, 275). Although a detailed examination of the *Inquiry* cannot be provided here, let me briefly point out that, despite Kant's claim that his treatise "contains nothing but certain empirical propositions, and the inferences which are drawn immediately from them" (*ibidem*; translation modified), I do not think that its overall perspective provides an empiricist framework, especially because Kant's account of experience is anything but clear.

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First, mathematics arrives at its definitions by means of a synthetic method consisting in the "arbitrary combination of concepts",[2] while metaphysics adopts an analytic method consisting in analyzing concepts that are already given "albeit confusedly or in an insufficiently determinate fashion" in order to find the characteristic marks which "the understanding initially and immediately perceives"[3] in them. Second, mathematics examines its universal concepts "under signs *in concreto*" by using numbers or figures, while metaphysics does so "by means of signs *in abstracto*"[4] by using words. Third, mathematics contains few unanalysable concepts and indemonstrable propositions, while these are innumerable within metaphysics, since the whole of human cognition is too vast and varied to be reduced to a few of them. Finally, mathematics is "easy and simple" because it only deals with quantitative magnitudes and a few rules governing their operations, while philosophy is "difficult and involved"[5] because it deals with qualities, which are far more difficult to clarify. The overall result is that metaphysical certainty is sufficient to produce conviction, but is less intuitive and generally much more difficult to achieve than mathematical certainty.

In short, in the *Inquiry* Kant deals with several important questions concerning metaphysics as such that were absent in his previous works. However, there is one which remains unanswered: the question of its scientificity. Despite all its innovations, the perspective Kant outlines in the first half of the 1760s does not address it. This does not mean that he does not conceive of metaphysics as a science: many quotes from several precritical works show that he clearly does,[6] and in the *Announcement* of the lectures of winter semester 1765-1766 he even qualifies it as the "main science [*Hauptwissenschaft*]".[7] However, he does not address the question of what it means to conceive of a discipline, and in particular metaphysics, as a science. This is surprising if we consider that the *Inquiry* is an investigation into the features of such a science: it examines its method, the signs representing its universal concepts, its unanalysable concepts and indemonstrable propositions, the nature of its certainty and so on. All these questions concern a science; but among them we do not find the question that is most important for an investigation on a science, namely: what gives it its status of scientificity or, in other words, what makes a discipline a science? What are the criteria that allows one to qualify a science as such? Kant provides no answer.[8] Despite its several achievements (some of which will remain unaltered even in the critical period),

2. *Inquiry*, II, 276.
3. *Inquiry*, II, 281.
4. *Inquiry*, II, 278.
5. *Inquiry*, II, 282.
6. See e.g. *Inquiry* (II, 275), *Only Possible Argument* (II, 66), and *Negative Magnitudes* (II, 167), where metaphysics is always qualified as a "science [*Wissenschaft*]". This also applies to the 1750s (e.g. *New Elucidation*, I, 416) and even to the 1740s (e.g. *Thoughts*, I, 30).
7. AA II, 308. Translation modified.
8. The question of scientificity remains unaddressed also in the case of mathematics, which Kant assumes as the paradigm of science, although without examining the criteria that make it so.

the *Inquiry* is not a treatise on scientificity. It is a treatise on certainty and distinctness and, as such, it considers both the distinctness metaphysics possesses and the method it must adopt in order to achieve its specific kind of certainty; but it is not a treatise on scientificity. Thus, in the meta-metaphysical perspective of the *Inquiry*, i.e. in the most comprehensive account of metaphysics in all of his entire precritical period, the question of scientificity is still absent.

At the end of its second *Reflection*, Kant writes that to follow the method of the *Inquiry* means entering "the natural path of sound reason [*den natürlichen Weg der gesunden Vernunft*]".[9] This quote recalls and at the same time anticipates the beginning of the *Preface* to the second edition of the *Critique of Pure Reason*, where he speaks of "the secure course of a science [*den sicheren Gang einer Wissenschaft*]".[10] But there is a crucial difference. While in the first quote Kant refers to the path of sound reason, in the second he refers to the path of a science, thus explicitly addressing the question of the scientificity of metaphysics which is absent in the *Inquiry*. Therefore, considering that one of the fundamental questions of the *Critique* will be "*How is metaphysics as a science possible?*"[11] and that the *Inquiry* and the *Critique* are separated by almost twenty years in which Kant's theoretical works only amount to a rather strange book in the *Dreams of a Spirit-Seer* (1766) and to a Latin dissertation that is important but written mainly for academic purposes as the *Dissertation on the Form and Principles of the Sensible and the Intelligible World* (1770), we might ask what it takes for him to move from the "natural path of sound reason" to the "sure course of a science". In other words, we might ask when and how Kant comes to deal explicitly with the question of scientificity.

I argue that this happens a few years after the writing of the *Inquiry*, when Kant is still developing his meta-metaphysical perspective. More specifically, I argue that he is led to address the question of scientificity by his encounter with his contemporary Johann Heinrich Lambert and with the account of scientificity Lambert provides in his *Neues Organon* (1764).[12] To justify this claim, I will first examine (Section 2) Lambert's account of scientificity. After a brief presentation of the overall structure and aims of his work, I will examine the two criteria of scientific cognition he provides, namely (Section 2.1) the systematicity of cognition and (Section 2.2), especially, its a *priori* nature, i.e. its independence from experience, thus showing that he conceives of science as a system of *a priori* cognitions of pure understanding. Then, I will show (Section 3) how Kant adopts this account of science already in the *Inaugural Dissertation* and how this adoption, (Section 3.1) which is clear in his account of metaphysics, at the same time amounts to (Section 3.2) a radicalization of it insofar as it includes a science of sensibility that is completely *a priori* but not intellectual. Moreover, I will briefly consider (Section 3.3) the accounts of scientificity of the most influential philosophers of

9. *Inquiry*, II, 289.

10. *CPR*, B vii.

11. *CPR,* B 22.

12. *Neues Organon oder Gedanken über die Erforschung und Bezeichnung des Wahren und dessen Unterscheidung vom Irrthum und Schein* [*New Organ, or Thoughts on the Discovery and Designation of Truth and its Difference from Error and Appearance*], Leipzig, Wendler 1764.

Kant's time in order to show why Kant cannot have taken his account of scientificity from them. Finally, I will conclude (Section 4) by summarizing the results of previous sections and by highlighting two difficulties which lead Kant from the perspective of the *Dissertation* to that of the *Critique of Pure Reason*. In this way, I also hope to explain why, before changing his mind after Lambert's premature death in 1777, Kant had originally planned to dedicate the *Critique* to him.[13]

2. LAMBERT'S ACCOUNT OF SCIENTIFICITY

The short but interesting correspondence Kant and Lambert had between 1765 and 1770 shows that they knew and admired each other. In the first letter Lambert highlights "the similarity of our ways of thinking",[14] and in his first reply Kant confirms the "fortunate agreement of our methods";[15] moreover, after the former's premature death in 1777, in a letter to Johann Bernoulli of November 1781 Kant recalls the proposal, made by Lambert and accepted by him, to collaborate on a "reform of metaphysics".[16] However, while Lambert writes that he has appreciated Kant's *Only Possible Argument in Support of a Demonstration of the Existence of God*, Kant does not specify which of Lambert's works he is referring to in writing that he has found his philosophy methodologically similar to his own. I suggest that Kant adopts the account of scientificity Lambert provides in his *Neues Organon*, and in particular in the chapter *On Scientific Cognition* [*Von der wissenschaftlichen Erktenntniß*], the last section of its first part. However, before dealing with that, let us take a brief look at the structure of the work.

Published in 1764 and more than one thousand pages long, the *Neues Organon* is the first of the two main philosophical works by Lambert, which so far had mainly consisted of writings on mathematics and natural sciences, of which the most important were the *Cosmological Letters* published in 1761.[17] This work is divided into four parts, each one answering one of the questions raised in the *Preface*:

13. See *R* 5024 (AA XVIII, 64).
14. AA X, 51.
15. AA X, 55.
16. AA X, 277.
17. Lambert's second main philosophical work is the *Anlage zur Architectonic, oder Theorie des Einfachen und des Ersten in der philosophischen und mathematischen Erkenntniß* [*Outline of the Architectonic, or Theory of the Simple and Primary Elements of Philosophical and Mathematical Cognition*], published in 1771 but already written in 1764. Before the *Neues Organon*, the most important exceptions to an otherwise entirely mathematical and scientific production are his *Treatise of the Criterion of Truth* and his essay *On the Method to Rightly Prove Metaphysics, Theology and Morality* (written for the competition on metaphysical certainty but never sent), both written in 1761 and published posthumously. On these, see Dello Preite 1979: 47-59 and especially Todesco 1987: 101-159. Although the issue of scientificity is also present in the *Architectonic*, Lambert explicitly addresses it in the *Neues Organon*; therefore, I will only consider this work.

> 1. whether the human understanding is lacking in *powers* to walk safely and with certainty on the path of truth without so much foundering;
> 2. whether the *truth* itself is not sufficiently discernible to the understanding in order not to confuse it so easily with error;
> 3. whether the *language* in which the understanding adorns the truth makes it, through misunderstanding, indeterminacy, and ambiguity less discernible and more doubtful, or places other obstacles in its path;
> 4. whether the understanding lets itself be blinded by *illusion* without always being able to penetrate to what is true.[18]

The first question is answered in the *Dianoiology*, or "doctrine of the laws according to which the understanding directs itself in *thinking*",[19] the second in the *Alethiology*, or "doctrine of *truth*".[20] These disciplines would be sufficient "if the human understanding did not need to bind its cognition to *words* and *signs*, and if the truth did not often show itself to the understanding under a wholly different *appearance*, from which the understanding has to distinguish it, just as from error";[21] therefore, two further disciplines are required. The first, which answers the third question, is the *Semiotics*, or "doctrine of *designation* of thoughts and things", which must clarify "what sort of influence language and signs have on the cognition of the truth".[22] The second, which answers the fourth question, is the *Phenomenology*, or "doctrine of the *appearance*", whose aim is "to make the appearance discernible, and state the means to avoid it and to penetrate to the truth".[23] Moreover, these four sections explain the title of the work: following Bacon and Aristotle, they are "instrumental or […] tools of which the human understanding must avail itself in the investigation of truth",[24] and therefore an *organon* (the Greek word for "instrument" or "tool").

As I have said, I believe that Kant adopts the account of scientificity that Lambert provides in the *Dianoiology*. Here, according to its qualification as the *Doctrine of the Rules of Thinking*, Lambert examines the formal principles of rational thinking; then, after a long inquiry concerning several topics such as concepts, judgments, inferences and proofs, in the ninth and last chapter he finally raises the question of the scientificity of cognition,[25] i.e. of the fundamental features of scientific cognition. This question is initially dealt with through a comparison with experience, of which in the previous chapter Lambert had distinguished three increasingly complex kinds: common experiences, observations and experiments. Common experiences are the most elementary we

18. *NO,* iii. Translation modified.
19. *Ibidem*.
20. *NO,* iii-iv.
21. *NO,* iv.
22. *Ibidem*.
23. *Ibidem*.
24. *Ibidem*.
25. Contrary to Kant, Lambert's interest does not concern (or at least, not primarily) the scientificity of metaphysics, but rather the scientificity of cognition (both philosophical and mathematical) in general.

can have, and consist in "the mere sensation of that which falls under our senses without further intervention";[26] however, if an experience requires our further attention, then it is an observation; finally, if in order to experience something an observation requires us to combine things that in themselves would not be combined or viceversa and, in general, if it requires creating a state of things not normally found in nature, then it is an experiment. Lambert highlights the importance of experience by claiming that it is often "necessary for the foundation and enlargement of our cognition"[27] and adding that it allows us to know "that something *is*, that it is *such and not otherwise*, and sometimes also, *what it is*".[28]

However, having stressed the importance of experience, in the very beginning of the chapter Lambert presents a further and problematic aspect of it by claiming that if we simply settle on empirical cognitions, then all we have is a cognition that is only "*historical* [historisch]", i.e. "merely a *narrative* [*eine bloße* Erzählung] of what is in nature" or, what is the same, a "*common cognition* [gemeine Erkenntniβ]" consisting in what can be known by every human being who "is not robbed of his senses".[29] This remark represents the first step of Lambert's comparison of historical (or common) and scientific cognition, which is focused on two criteria of scientificity that distinguish the latter from the former. The first criterion is systematicity.

2.1. The First Criterion of Scientificity: The Systematicity of Cognition

Although experience is important and sometimes necessary for our cognition, it allows us to obtain only concepts and propositions "each of which subsists, as it were, on its own alone",[30] resulting in a manifold of unrelated cognitions. On the contrary, "scientific cognition is based on the *dependency* of one cognition on another [Abhänglichkeit *einer Erkenntniß von der andern*]".[31] This is the first feature distinguishing it from common cognition since, whereas the latter merely includes particular cognitions without establishing relations between them, the former aims precisely at their coherent organization, i.e. at their systematization.[32] Thus, while common cognition amounts

26. *NO,* §557. My translation.
27. *NO,* §551. My translation.
28. *NO,* §599.
29. *NO,* §600. When the original German (or Latin) text is not in italics, it means that it is originally emphasized by bold (e.g. "historisch", "Erzählung", and "gemeine Erkenntniβ" in this case).
30. *NO,* §601.
31. *NO,* §605.
32. In the *Neues Organon* Lambert does not speak of a "system" of cognitions nor of their "systematicity". However, since these differences are merely terminological and he explicitly refers to a "system [*System*]" of cognitions in several letters, I will speak of system and systematicity. Moreover, the fact that Lambert addresses the issue of systematicity from the very beginning of the chapter shows that his "explanation of the systematic character of scientific cognition" does not occur "in the *Alethiology*" (Arndt 1965: xv) but in the *Dianoiology*.

to a mere "*patchwork* [Stückwerk]", scientific cognition constitutes (or at least aims to constitute) a coherent and interconnected "*whole* [Ganzes]",[33] i.e. a system.

Moreover, in this regard Lambert does not conceive of scientific cognition as something established once and for all and clearly separated from common cognition. On the contrary, he emphasizes that, in order to realize the system it aims at, scientific cognition "investigates" how a particular cognition "can be determined by the other".[34] Thus, scientific cognition actively operates on common cognition, and it does so in two steps. First, it examines empirical cognitions in order to make them more distinct, since "common cognition takes things as they fall under our senses" and therefore "assumes obscure, clear, confused, puzzled and clear concepts without further distinction".[35] Second, scientific cognition "*compares empirical concepts and empirical propositions with each other*" in order to establish "how, if one knows or assumes some, the remaining ones can be found from them", thereby showing "*how they depend on each other*".[36] In this way, we cease to conceive of empirical cognitions "only as broken off pieces or as individual fragments" and see "through what the one can be compared with the other or lets itself be determined by the other",[37] thus satisfying the criterion of systematicity. In short, by showing how a given cognition depends on another and what other cognitions can be derived from it, and, more generally, by establishing the mutual interconnection of cognitions that would otherwise remain unrelated, i.e. by giving them the form of a coherent and internally organized whole as required by systematicity, "scientific cognition shows the richness of our knowledge [*Wissen*]".[38]

However, before moving to the next section let me point out two things. The first is that Lambert's account of systematicity is neither very detailed nor very clear. Despite its importance, he neither develops it nor explains how we are supposed to systematize cognitions; he basically only claims that we must do it by connecting cognitions insofar as some of them derive from or lead to some other, which is rather vague. This also means that systematicity is not a very rigorous criterion for distinguishing scientific from common cognition, since Lambert does not explain what degree of systematicity is sufficient to qualify a cognition as scientific. The second thing, which is more important, is that his criterion of systematicity is anything but original. The view that science must be systematic and not fragmentary was shared by several philosophers at the time, both contemporary to and preceding Kant and Lambert.[39] Therefore, I do not think

33. *NO,* §606.

34. *NO,* §605.

35. *NO,* §617 (my translation). For Lambert's account of the clarity, distinctness and completeness of concepts, see §§8-11. A brief list of tasks to carry out in order to systematize isolated cognitions is provided in §619.

36. *NO,* §610.

37. *NO,* §611.

38. *NO,* §607.

39. In this respect, Van Den Berg writes that philosophers such as Meier, Lambert and Kant "construed the notion of systematicity on the basis of a widely accepted axiomatic idea of science" (Van den Berg 2021: 282), which he calls the Classical Model. Moreover, in the *Ar-*

that the aspect of Lambert's account that leads Kant to address the issue of scientificity is his view on systematicity. On the contrary, I think it is the second criterion Lambert provides, namely the *a priori* nature of cognition.

2.2. The Second Criterion of Scientificity: The a priori *Nature of Cognition*

Lambert introduces the second criterion indirectly by referring to a "deeply rooted prejudice" claiming that

> *one can think no further than the senses reach* [man könne nicht weiter hinaus denken, als die Sinnen reichen]*, and what one cannot immediately experience* [was man nicht unmittelbar erfahren [...] könne]*, consequently cannot see or perceive without taking other cognition into consideration, that extends beyond the field of vision of human cognition and is impossible for us to know.*[40]

Despite its importance, the proper content of this prejudice is ambiguous. It is clear both that it concerns the possibility of cognitions that are independent of experience and that, since Lambert explicitly qualifies it as a prejudice, the epistemological view it presents is in all likelihood wrong; yet such a view is not entirely clear, because the prejudice can be read in two different ways, thus leading to two different epistemological theses, one of which is more demanding than the other.

The first way consists in focusing on the first sentence, which claims that "*one can think no further than the senses reach*": in this case, the epistemological thesis of the prejudice is that we cannot know what the senses cannot reach, i.e. what we cannot experience. The second way consists in focusing on the second sentence, which claims that "*what one cannot immediately experience* […]*, that extends beyond the field of vision of human cognition and is impossible for us to know*": in this case, the epistemological thesis of the prejudice is that we cannot know only what we cannot *immediately* experience. As said, the fact that both theses amount to a 'prejudice' and that it is shared by those whose cognition is merely common (while Lambert distinguishes scientific cognition precisely from this) implies that the correct epistemological view is the opposite of that affirmed by the prejudice, which therefore is false. However, the problem is precisely that this prejudice is ambiguous because it allows two different readings, leading to two different 'negative' epistemological theses (i.e. theses that identify what we *cannot* know). Thus, if the prejudice is false and the correct epistemological view is its opposite, then we have two 'positive' theses. The first of them is the opposite of the first reading and claims that we *can* think "*further than the senses reach*", while the second is the opposite of the second reading and claims that we *can* know "*what* [we] *cannot immediately experience*". Therefore, the first 'correct' epistemological thesis claims that we can have cognitions that are independent of experience *as such*, while the second claims that we can have cognitions which are independent only of *immediate*

chitectonic Lambert himself admits to having taken the title of this work from Baumgarten's *Metaphysics* (see *Architectonic*, xxviii).

40. *NO,* §601.

experience; accordingly, in the first case the independence from experience is absolute, while in the second it is relative. In any case, the first thesis is clearly more demanding than the second: to claim that we can know what we cannot *immediately* experience is something rather undemanding which an empiricist could concede without much concern, whereas to claim that we can know what we cannot experience *in general* is a much stronger epistemological claim, to which an empiricist would hardly agree.[41] Thus, the problem concerning the interpretation of the quoted passage, and therefore concerning the thesis Lambert indirectly presents, is that it allows both readings, and that Lambert leaves undecided (or at least unclear) which thesis he actually supports.[42]

Leaving the issue temporarily aside in order to deal with systematicity, he returns to the possibility of cognitions independent of experience in §634, where he thematizes this independence in terms of *a priori* and *a posteriori* nature of cognition, writing that

> insofar as one can find propositions, properties, relations, concepts, etc., on the basis of what one already knows without first needing to take these immediately from experience [*unmittelbar aus der Erfahrung*], to that extent we say that we find such propositions, properties, etc., *a priori* […]. However, if we have to use immediate experience [*unmittelbare Erfahrung*] in order to know a proposition, property, etc., we find it *a posteriori*.[43]

Thus, *a posteriori* cognition is cognition obtained through immediate experience, while *a priori* cognition is that which does not require it. These definitions tend to support the weaker epistemological thesis, since Lambert writes that a cognition is *a priori* if we do not need to take it "*immediately* from experience",[44] which does not exclude the possibility (and even suggests) that *a priori* cognitions are those taken from indirect or more remote experiences. In other words, this definition of *a priori* cognition implies that its independence from experience is not absolute (i.e. from experience *as such*) but merely relative (i.e. from *immediate* experience). This weaker sense of the *a priori* is confirmed in the following paragraphs, where Lambert considers its relation to *a posteriori* cognition in further detail:

> one easily sees that these two concepts must be taken *reciprocally* [verhältniβweise]. For if one wanted to infer that not only immediate experiences, but also everything that we can find on the basis of them is *a posteriori*, the concept *a priori* would be

41. I will refer to these theses as "the stronger" and "the weaker" epistemological theses.

42. The clarifications Lambert provides in the following paragraphs are not very helpful since they allow one to support both theses. On the one hand, in §602 he claims that he will provides examples "from the mathematical sciences, because they […] proceed the furthest and at the same time with the greatest certainty in the discovery and determination of what one cannot *experience* [*was man nicht* erfahren *kann*]", thus referring to cognitions that are independent of experience as such, which supports the stronger thesis. However, the actual example he provides in §603 concerns the measurement of the diameter of the Earth and of the distance between planets, which cognitions are only independent of immediate experiences but obviously not of experience as such, which supports the weaker thesis.

43. *NO,* §634.

44. *Ibidem*. Emphasis added.

> used in few of those cases where we can determine something through inferences in advance, because in such a case we would have to thank experience for none of the premises. And in that case nothing at all [*gar nichts*] would be *a priori* in all of our cognition. […] Accordingly, we want to let it be valid that one can call something *a priori absolutely* and *in strictest sense* [*absolute und* im strengsten Verstande] only if we have nothing at all to thank experience for […]. By contrast, we have no difficulty in calling *a priori in the broadest sense* [im weitläuftigsten Verstande] everything that we can *know in advance* [voraus wissen] without first letting it depend on experience […]. After the determination of both of the extreme meanings it can easily be discerned that something is more or less [*mehr oder minder*] *a priori*, according to how we can derive it from more [or less] distant experiences, and that, on the contrary, something is *completely not* [vollends nicht] *a priori* and consequently is *immediately* [unmittelbar] *a posteriori* if we must *experience* it immediately [*unmittelbar* erfahren] in order to know it.[45]

The quoted passage is dense, but Lambert's argument is clear.

The relative nature of the independence from experience of *a priori* cognition had already been hinted at by his claim that a cognition is *a priori* when we do not need to take it "*immediately* from experience",[46] but such a claim was not enough to rule out the possibility of cognitions completely independent of experience. However, now the ambiguity present from the very beginning of Lambert's account of it[47] seems to vanish, since he claims that the *a priori* nature of cognition is not absolute and, on the contrary, must be understood in its relation to its *a posteriori* nature. Lambert clarifies this view by introducing a distinction between a stronger and a weaker sense of the *a priori*, which coincides with his previous (and implicit) distinction between a stronger and a weaker epistemological thesis. Accordingly, a cognition can be *a priori* in the "*strictest sense*" (when "we have *nothing at all* to thank experience for"[48]) or the "*broadest sense*" (when it concerns something "that we can know *in advance* without first letting it depend on experience"). Lambert adds that the strictest sense is not viable since it would qualify as *a priori* only those cognitions that are absolutely independent of experience as such, thus qualifying as *a posteriori* not only those we obtain through immediate experiences but also those we obtain through less immediate (or even remote) ones. However, and this is the crucial point, "if one wanted to infer that not only immediate experiences, but also everything that we can find on the basis of them is *a posteriori* […], in that case nothing at all would be *a priori* in all of our cognition". In other words, the price of thinking an *a priori* as completely independent of experience as such is that we set a standard of cognitive purity that is too high for our cognitions to meet, with the consequence that in all of our cognition there is "nothing at all" that meets it and, therefore, nothing at all that is *a priori* in the stronger sense. However, if the stronger sense of the *a priori* is not viable, we can still assume the weaker. Thus,

45. *NO,* §§637-640. Translation modified.
46. *NO,* §634. Emphasis added.
47. Remember the ambiguity of the "deeply rooted prejudice" seen at the beginning of Section 2.2.
48. *NO,* §639. Emphasis added.

Lambert seems to claim that there is no clear dividing line between an *a priori* and an *a posteriori* that have turned out to be intrinsically intertwined; accordingly, a cognition will be "more or less *a priori*, according to how we can derive it from more [or less] distant experiences".

Let us briefly summarize what we have seen so far. In his inquiry on scientific cognition, Lambert identifies the two criteria for its scientificity in its systematicity and *a priori* nature, with the latter consisting in its independence from experience and taken in the weaker and relative sense. Thus, if we consider both criteria, it becomes clear that he conceives of science as a system of *a priori* cognitions.

However, there is a further aspect of Lambert's account of scientificity to consider, which is particularly important because it shows that, despite what we have just seen, he does *not* reject the stronger meaning of the *a priori*. On the contrary, this stronger sense is rehabilitated and fully legitimized in the second half of the chapter, where Lambert moves from the criteria of scientificity to the specific *a priori* cognitions that, coherently with the first criterion, must be systematized in order to realize his account of science as the system of *a priori* cognitions. Thus, the "investigation that arises here" consists in

> sorting concepts out with respect to this and bringing them into proper classes. And this difference therein primarily depends on the way *in which we arrive at or can arrive at concepts* [wie wir zu den Begriffen gelangen oder gelangen können]. For it is clear that the more we ourselves can have concepts without taking experience into account, the more our cognition becomes *a priori*.[49]

The quoted passage includes both criteria of scientificity by claiming that the concepts we "can have […] without taking experience into account" must be brought "into proper classes". Moreover, it shows that the *a priori* cognitions we are looking for are primarily concepts (and not, for example, propositions).[50] However, since a concept must first of all be possible, Lambert examines the possibility of concepts in general. In the case of empirical concepts, their possibility is not an issue since the fact that common cognition provides us with them is sufficient to prove it.[51] In the case of *a priori* concepts, Lambert does not directly address the issue of their possibility and instead refers to the possibility of forming concepts by means of a "*composition* of individual marks", which can be carried out "*arbitrarily*" as long as we can prove the possibility of the concept we are composing, which until this proof is merely "hypothetical".[52] Thus, he moves from the possibility of arbitrary composition of concepts to its conditions:

> [s]ince composite concepts can be resolved into simpler ones as their marks, one can conceive of completely simple concepts [*ganz einfache Begriffe*] that cannot be resolved further, but that can be determined or denoted through relations to other

49. *NO*, §645. Translation modified.

50. This means that in Lambert's view the faculty of *a priori* cognitions is the understanding. I will return to the importance of this remark in Section 3.

51. See *NO,* §646.

52. *NO,* §650.

> concepts. Such simple concepts constitute the foundation of the entirety of our cognition and one can justly and in the most proper sense [*im eigentlichsten Verstand*] call them *fundamental concepts* [Grundbegriffe] in order to contrast them with derivative concepts [*Lehrbegriffe*]. Since they have no parts, nothing is to be distinguished in them. […] we can define them at most only through relations because the representation or perception thereof is thoroughly uniform [*einförmig*].[53]

It is possible to form complex concepts by means of an arbitrary composition of concepts that are absolutely simple; therefore, these simple concepts are fundamental insofar as they ground the possibility of composing more complex ones, thus constituting the foundation of our entire cognition. However, the issue of the possibility of absolutely simple concepts arises, and Lambert solves it by noting that

> [s]ince at least two elements are required for a contradiction, because the one must cancel out the other, fundamental concepts necessarily possess nothing contradictory. For since they are not composite, there is nothing in them that could cancel out anything else in it. Accordingly, the mere representation [*die bloße Vorstellung*] of a simple concept constitutes its possibility and this forces itself on us along with the representation.[54]

Traditionally identifying possibility with the absence of contradiction, Lambert proves the possibility of simple concepts by noting that a contradiction needs at least two different elements to occur between them, while simple concepts do not contain different marks which could be the opposite to each other and therefore lead to a contradiction. Thus, a simple concept is possible because it does not contain parts, and therefore it does not contain different marks that can give rise to a contradiction which would qualify it as impossible. In short, the possibility of a simple concepts is a logical consequence of its absolute simplicity.[55]

However, Lambert's decisive remark on the simple and fundamental *a priori* concepts and their relation to scientific cognition appears in §656:

> [s]ince in the dissection of composite concepts we approach the simple or fundamental concepts when we resolve them into their internal marks, it is clear that the farther we go in this resolution, the farther we can proceed *a priori* in scientific cognition, and that our scientific cognition would be *a priori* completely and in the strictest sense [*ganz und im strengsten Verstande*] (§639), if we knew the fundamental concepts in their entirety and [...] the first foundation of the possibility of their composition. For since the possibility of a fundamental concept forces itself on us along with the representation (§654), it arises thereby completely independently of experience [*von der Erfahrung dadurch ganz unabhängig*] such that even if we already have to thank experience for it, experience provides us, as it were, only the occasion [*Anlaß*] for the consciousness of it. However, once

53. *NO,* §653. Translation modified.

54. *NO,* §654. Translation modified.

55. I therefore find that Dello Preite's claim that the criterion of possibility as absence of contradiction "is limited to composite concepts and is not applied to simple concepts" (Dello Preite 1979: 72) plainly contradicts the text.

> we are conscious of it, we have no need to procure the ground of its possibility from experience, because possibility is already present with the mere representation. Accordingly, it becomes independent of experience. And this is a *requisitum* of cognition [that is] *a priori* in the strictest sense (§639) […]. Finally, if we are familiar with the foundation of the possibility of their composition, we are also in a position to form composite concepts from these simple ones without procuring them from experience. Accordingly, here too our cognition becomes *a priori* in the strictest sense (§639).[56]

The importance of this passage consists in the return of the stronger sense of the *a priori*.

The possibility of the simple or fundamental concepts *a priori* is proved by their non-contradictory nature, which is a direct consequence of their absolute simplicity. Moreover, and this is the crucial novelty, this makes these concepts *a priori* in the stronger sense: consisting in the absence of contradiction deriving from their simplicity, their possibility "arises thereby completely independently of experience", which makes these concepts "completely and in the strictest sense" *a priori* and independent of experience, which can only provide an 'occasion' to become conscious of them. In short, the fundamental concepts are *a priori* in the stronger sense because their possibility consists in their purely logical non-contradictory nature, which prevents their origin from being empirical.[57] However, the discovery of the absolute *a priori* nature of fundamental concepts yields an equally important consequence, namely the possibility of a science which is "*a priori* completely and in the strictest sense". Indeed, if our cognition is scientific insofar as it is *a priori* and if its fundamental concepts are *a priori* in the strictest sense, then it is possible to achieve cognitions which are "*a priori* completely and in the strictest sense"[58] and therefore, when they are brought into a system, a science which is fully so.[59] Lambert claims that we can achieve such a science by knowing "the fundamental concepts in their entirety" and "the first foundation of the possibility of their composition"; moreover, the knowledge of the first foundation of the possibility of the composition of simple and fundamental concepts *a priori* in the stronger sense allows us to "form composite concepts from these simple ones without procuring them from experience", thereby extending our cognition that is "*a priori* in the strictest sense", i.e. fully scientific.[60]

56. *NO*, §656. Translation modified.

57. See also *NO*, §660: "the concept […] will be able to be viewed as *a priori* as soon as we can secure its possibility without [having to depend on] experience".

58. E.g. the propositions "two times two is four", "a syllogism in *Barbara* necessarily leads to its conclusion", "a circle is round" are all "completely independent of the actual world" (*NO*, §657) and therefore of experience, i.e. completely *a priori*.

59. Lambert provides geometry, chronometry and phoronomy as examples of such sciences, since they are founded on the completely *a priori* concepts of space and time (see *NO*, §658).

60. I do not entirely agree with Watkins, who claims that "the concepts that constitute [scientific *a priori*] cognition [...] must be [...] 'hypothetical concepts', which are constructed arbitrarily on the basis of individual marks" (Watkins 2018: 183). Hypothetical concepts can be *a priori* (because they can be formed by simple concepts *a priori*), but they are not the only *a priori* concepts nor the most important since our original *a priori* concepts are the funda-

The novelties introduced by the last quoted passage are crucial for Lambert's account of scientificity. The completely *a priori* nature of the fundamental concepts allows him to make room for the stronger sense of the *a priori*, which seemed to have been ruled out[61] and, therefore, to provide an account of scientific cognition that now is fully so insofar as it is grounded on concepts that are *a priori* "completely and in the strictest sense".[62] Thus, if we recall that the *a priori* nature of cognition is joined by systematicity as the other criterion of scientificity, we can conclude that the rehabilitation of the stronger sense of the *a priori* provided by the discovery of the absolutely *a priori* nature of fundamental concepts allows Lambert to strengthen his account of science as a system of *a priori* cognitions, since now the cognitions constituting this system are not (or not only) *a priori* in the weaker sense but in the stronger. In short, this discovery allows him to justify the possibility of a science that includes cognitions that are completely independent of experience, i.e. a science which is fully so since its cognitions are *a priori* "completely and in the strictest sense".

mental and simple ones, whose combination leads to the composite and hypothetical. It is impossible to have hypothetical composite concepts completely *a priori* without first having the completely *a priori* simple concepts which form them. Therefore, the concepts that constitute scientific cognition are primarily the fundamental and simple, and only secondly the composite and hypothetical, as proved also by the fact that "the first foundation of the possibility of their composition" cannot be achieved without having first achieved "the fundamental concepts in their entirety".

61. Note that, strictly speaking, Lambert had *not* explicitly ruled out the stronger sense of the *a priori*. Speaking of cognitions *a priori* in the stronger sense, he had claimed that "whether in such a case something of this kind is to be found in our cognition, that is a completely different [...] question" (*NO*, §639; translation modified); this, however, does not mean that such cognitions are impossible.

62. I therefore disagree with both Wolters and Basso, who claim that the stronger sense of the *a priori* is "too narrow" (Wolters 1981: 79; Basso 2021: 190) for Lambert. Wolters claims that since experience "represents the first step of the constitution" (Wolters 1981: 79) of fundamental concepts, their "meaning is *genetically* connected to experience, but with regard to their *validity* they are thinkable in themselves" (Wolters 1981: 86): while I agree with the second part of his claim, I disagree with the first since, properly speaking, only the "occasion" to become conscious of the fundamental concepts is "*genetically*" connected to experience, while these concepts in themselves are not. Analogously, Basso qualifies Lambert's *a priori* "as an extension of the *a posteriori*", claiming that he "uses the term '*a priori*' to refer to a *relative beginning*, i.e., a beginning intrinsically indebted to preceding experiences" and concluding that "this 'hybrid *a priori*', which allows him to escape rigid dichotomies, can be regarded as Lambert's main contribution to epistemology" (Basso 2021: 190-192). We have seen that Lambert conceives of an *a priori* as a more abstract *a posteriori*, but this is only the weaker or "broadest" sense of it, and he also thematizes a stronger and "strictest" sense consisting in complete independence from experience, as in the case of the fundamental concepts. Moreover, Lambert's account of them shows that it is incorrect to speak of his alleged "skepticism concerning the possibility of the absolute *a priori*", let alone by motivating it claiming that in his view "concretely, all our cognition as such derives from experience" (Dello Preite 1979: 129-130). For the same reason there is no "essential ambiguity in the simple concepts, with regard to which the distinction between *a priori* and *a posteriori* [would not be] very clear" (Dello Preite 1979: 106).

Let us leave Lambert's account by noting that it is far from complete. The meta-philosophical[63] inquiry of the *Dianoiology* has provided the criteria of scientificity, but not all the *a priori* concepts and corresponding sciences. Lambert completes this task in the *Alethiology* and, in further detail, in the *Architectonic* by providing the fundamental *a priori* concepts and the propositions (both axioms and postulates) deriving from them, thereby offering the full list of completely *a priori* sciences.[64] This remaining part of Lambert's overall project is not important for my purposes, and we can move to the next section. However, before doing so let us fix in mind the results achieved so far: (I) Lambert provides an account of scientific cognition that identifies its two criteria in its systematicity and especially in its *a priori* nature; (II) the *a priori* nature of cognition consists in its independence of experience; (III) this independence can be both relative and absolute, but Lambert emphasizes that proper sciences are absolutely *a priori*. Moreover, (IV) since the only *a priori* cognitions are concepts and the propositions deriving from them, which as such pertain to the faculty of understanding, he only admits a science of pure understanding, or a purely intellectual science. With this in mind, let us turn to Kant.

3. KANT'S ADOPTION OF LAMBERT'S ACCOUNT OF SCIENTIFICITY: THE *INAUGURAL DISSERTATION*

As I have said, I argue that Kant adopts Lambert's account of scientificity, thus beginning to conceive of science as a discipline including cognitions completely *a priori*, and that he also radicalizes it, thus going beyond Lambert himself. However, to locate both Kant's adoption and radicalization of Lambert's account of scientificity it is not necessary to wait the almost twenty years separating the *Neues Organon* from the *Critique of Pure Reason*. On the contrary, they occur several years before the *Critique* in the "inaugural dissertation" *On the Form and Principles of the Sensible and the Intelligible World* (1770). Let us consider it in detail.

3.1. With Lambert: Metaphysics as the Science of Pure Understanding

After a first section whose importance is downplayed by Kant himself,[65] in the second he introduces his well-known distinction between understanding and sensibility, with the former consisting in the "*faculty* of a subject in virtue of which it has the power to represent things which cannot by their own quality come before the senses of that

63. The meta-philosophical nature of Lambert's reflection has recently been noted by some scholars, e.g. by explicitly qualifying him as a "'meta-metaphysician'" insofar as he considers both "the foundation of philosophical disciplines" (Rumore 2022: 184) and "metaphysics as a potential science" (Zenker 2022: 128). Already Wolters had correctly spoken of a "turn concerning the theory of science" and claimed that Lambert's philosophy represents a "methodology reflecting on the conditions of possibility of scientific knowledge" (Wolters 1981: 179).

64. See *Architectonic*, §53.

65. In a letter to Lambert (to whom he had sent a copy of the *Dissertation*) he writes that "the first and the fourth sections can be scanned without careful considerations" (AA X, 98). Therefore I disagree with both Laywine's and De Boer's readings, which respectively focus on the fourth (see Laywine 1993: 101-123) and the first chapter (see De Boer 2020: 52-61).

subject", and the latter in the "*receptivity* of a subject in virtue of which it is possible for the subject's own representative state to be affected in a definite way by the presence of some object".[66] Leaving sensibility temporarily aside, Kant distinguishes between two uses of the understanding. The first is the logical use, by means of which "the concepts, no matter whence they are given, are merely subordinated to each other, the lower […] to the higher (common characteristic marks), and compared with one another in accordance with the principle of contradiction".[67] The logical use is therefore neutral with regard to the nature of the cognitions it systematizes, and accordingly it is "common to all the sciences". This is not the case with the real use, by means of which "the concepts themselves, whether of things or relations, are given by the very nature of the understanding: they contain no form of sensitive cognition and they have been abstracted from no use of the sense".[68] The real use belongs only to the discipline which is "the organon of everything which belongs to the understanding" and which "contains the *first principles* of the use of the *pure understanding*",[69] namely metaphysics. Accordingly, Kant writes that

> [s]ince, then, empirical principles are not found in metaphysics, the concepts met with in metaphysics are not to be sought in the senses but in the very nature of the pure understanding, and that not as *innate* [connati] concepts but as concepts abstracted from the laws inherent in the mind (by attending to its actions on the occasion of experience), and therefore as *acquired* concepts. To this genus belong possibility, existence, necessity, substance, cause *etc.*, together with their opposites or correlates. Such concepts never enter into any sensory representations as parts, and thus they could not be abstracted from such a representation in any way at all.[70]

This characterization is a novelty in Kant's account of metaphysics, whose definition in the *Inquiry* qualified it as the "philosophy applied to insights of reason which are more general".[71] With this new definition, Kant no longer focuses on its generality but rather on its independence from experience or, in Lambert's words, in its *a priori* nature.[72]

66. *Dissertation*, II, 392.

67. *Dissertation*, II, 393.

68. *Dissertation*, II, 394.

69. *Dissertation*, II, 395.

70. *Ibidem*. Kant's claim that the concepts provided by pure understanding are "abstracted from the laws inherent in the mind" is unclear. However, this is not important for my interpretation, since what matters to it is Kant's emphasis on their cognitive purity: once we know that they do not derive from experience, the specific features of their origin are not important.

71. *Inquiry*, II, 292. Between the *Inquiry* and the *Dissertation*, Kant provides a further definition of metaphysics in the *Dreams*, where it is qualified as the "science of the *limits of human reason*" (*Dreams*, II, 368). However, since there (as in his previous works) Kant qualifies metaphysics as a science without providing the criteria of this scientificity, the *Dreams* are unhelpful with regard to this question.

72. Kant does not directly use the term "*a priori*" to characterize the independence from experience of metaphysical cognitions. However, in presenting (cognitive) purity as the main feature of metaphysics, he is referring to the same independence from experience that Lambert presents as the criterion of scientificity, i.e. to Lambert's *a priori*, as shown also by his use of

Thus, by including only concepts (more generally, cognitions) that are not abstracted from experience but provided by the "very nature" of the understanding,[73] metaphysics is the science of pure understanding. This purity as the essential feature of metaphysics is highlighted several times throughout the *Dissertation*, for example by qualifying it as "*pure* philosophy".[74] But Kant also highlights the intellectual nature of metaphysical cognitions by devoting the whole Section V to a method aimed at preserving the metaphysical domain by not allowing "*the principles which are native to sensitive cognition* [to] *transgress their limits, and affect what belongs to the understanding*".[75] Finally, although in the quoted passage he does not qualify metaphysics as a science, that he conceives of it as such is proved not only by the fact that in all his precritical works Kant does so, but also by several textual passages: for example, he writes that "in pure philosophy, such as metaphysics, […] *method precedes all science* [omnem scientiam]",[76] that "the exposition of the laws of *pure* reason is the very genesis of *science* [*scientiae genesis*]",[77] that "the method of this *science* [*scientiae*] may not be well known at the present time",[78] and so on. In short, Kant conceives of metaphysics as a science because, by including cognitions absolutely independent of experience, it is pure, i.e. *a priori* and therefore scientific, according to Lambert's account of scientificity as the *a priori* (or, in Kant's words, pure) nature of cognition.[79] Thus, by consisting in a science of pure

the term *a priori* not only in some passages of the *Dissertation* (e.g. at the end of §28) but also in his famous letter to Herz (February 1772). Moreover, Kant's account of metaphysics already represents a radicalization of Lambert's account of scientificity insofar as, contrary to Lambert who admitted both a strong and a weak sense of the *a priori*, Kant only admits the latter.

73. Kant's claim that the concepts of pure understanding are abstracted from the laws of the mind "by attending to its actions on the occasion of an experience [*occasione experientiae*]" clearly recalls Lambert's claim that "experience provides us [...] only the occasion for [their] consciousness" (*NO*, §656).

74. *Dissertation*, II, 411 (emphasis added). I completely agree with Moledo, who presents the novelty of Kant's account of metaphysics as pure philosophy as one of the most important results of the *Dissertation* and as a fundamental step towards the view of the *Critique of Pure Reason* (see Moledo 2016). However, he does not links this issue to the more general question of scientificity, in which that of the *a priori* is included as one of its criteria.

75. *Dissertation*, II, 411.

76. *Ibidem*. This claim reaffirms one of the fundamental theses of the *Inquiry*, namely the necessity of a preliminary meta-metaphysical investigation establishing the proper method of metaphysics and the specific nature of its cognitions, thereby showing the continuity of a meta-metaphysical perspective that had been presented for the first time in the *Inquiry* and that is still present in the *Dissertation*.

77. *Ibidem* (emphases added). It could be objected that in this quote Kant does not refer to pure understanding but to pure reason as the faculty of metaphysical cognitions. However, in the *Dissertation* he has not yet provided the critical distinction between the two, which, as already in the *False Subtlety*, "are not different *fundamental faculties*" (*False Subtlety*, II, 59).

78. *Dissertation*, II, 411. Emphasis added.

79. However, note that Kant's account of metaphysics as pure philosophy represents a first radicalization of Lambert's account of scientificity, since it emphasizes that metaphysical cognitions are completely pure, i.e. completely independent of experience, which means that their

understanding including a system of *a priori* cognitions, Kant's account of metaphysics is a perfect example of science in Lambert's sense.

However, this is not the only example of Kant's adoption of Lambert's account of scientificity, nor the most complete. Indeed, although important, it is not particularly detailed since it includes the two definitions seen above and the fundamental remark on the purity of its cognitions, but not much more since Section IV, which is explicitly devoted to metaphysics, is rather unoriginal and little more than the reproposition of the ontological theses concerning substances and God already presented fifteen years before in the *New Elucidation*.[80] Moreover, an objection can be raised against my reading. One could claim that Kant's view is not that metaphysics is a science *because* of its cognitive purity but, rather and less demandingly, that metaphysics is a science *that is also* cognitively pure. In this case, cognitive purity would only be *one* of the features of metaphysics as a science (and therefore of science in general), but not *the* feature that qualifies a discipline as a science. The answer to this objection is provided by the most complete example of scientificity of the *Dissertation*: Kant's theory of sensibility.

3.2. Beyond Lambert: The Science of Sensibility

In §12, the last paragraph of Section II, Kant interestingly writes that "*there is a science of sensory things* [sensualium [...] datur scientia]".[81] This statement is important insofar as it claims that, since the faculty of sensory things is sensibility, there is a science of sensibility, and therefore not only a science of pure understanding. Moreover, this is Kant's most explicit attribution of a scientific character to a theory concerning a cognitive faculty, since he is as clear as possible in writing that "*there is a science of sensory things*". However, what does it mean that there is a science of sensory things, or a science of sensibility? The reasons for this claim are not immediately clear, since Kant does not explain why a theory concerning sensibility is scientific. In this respect, §12 is unhelpful because it includes topics which seem to have nothing to do with it (e.g. a distinction between physics, psychology and pure mathematics) and introduces new ones (e.g. the "singular form of sensibility" or the "pure intuition") without clarifying them. Thus, the best way to explain Kant's claim consists in focusing on Section III, which concerns *The Principles of the Form of the Sensible World*.

In Section II, Kant had claimed that sensibility is not merely passive since its representations include not only the matter of sensation but also

> the *form*, the *aspect* namely of the sensible things which arises according as the various things which affect the senses are co-ordinated by a certain natural law of the mind. […] the *form* […] is undoubtedly evidence of […] a certain law, which is inherent in the mind and by means of which it co-ordinates for itself that which is sensed from the presence of the object […]. Accordingly, if the various factors in an

cognitive purity is absolute. In this way, Kant rejects Lambert's dicotomy between a stronger and a weaker sense of the *a priori* and admits only the former.

80. See *New Elucidation*, I, 410-416.

81. *Dissertation*, II, 398.

> object which affect the sense are to coalesce into some representational whole there is needed an internal principle of the mind, in virtue of which those various factors may be clothed with a certain *aspect*, in accordance with stable and innate laws.[82]

Sensibility is not merely passive, since it contains "stable and innate laws" that co-ordinate the matter of sensation. Section III completes this account by specifying that these stable and innate laws are the "principle[s] of the form of the *sensible world*" because they contain "the ground of the *universal connection* of all things, in so far as they are *phenomena*".[83] Thus, identifying such principles with time and space, Kant provides a detailed account of them by highlighting their fundamental features.

With regard to time, the first feature is that it "*does not arise from but is presupposed by the senses*" since "it is only through the idea of time that it is possible for the things which come before the senses to be represented as simultaneous or successive".[84] Kant's argument is well-known: our concept of time logically precedes any temporal characterization of phenomena, since without presupposing it such a characterization, and the representation of temporally ordered phenomena more generally, would not be possible. Note that, by claiming that the idea of time "*does not arise from but is presupposed by the senses*", Kant is claiming that it is independent of experience and therefore pure or, in Lambert's words, completely *a priori*. The same argument also applies to space, whose "*concept* [...] *is not abstracted from outer sensations*":[85] we could not represent things as spatially placed without a logically preceding concept of space, which therefore is not taken from experience but is something we possess prior to it and by means of which we are able to represent empirical objects as spatially characterized. Thus, as in the case of time, the concept of space is independent of experience and therefore pure, or *a priori*. The acknowledgment of the pure or *a priori* character of space and time is followed by that of their singularity. Accordingly, Kant writes that "*the idea of time is singular* and not general"[86] and that "*the concept of space is a singular representation*",[87] since actual things are not represented "*under*" them as under general concepts but as contained "*in*" them as in single, boundless and qualitatively homogeneous quantities. Therefore, time and space are not concepts but, properly speaking,[88] intuitions. Accordingly, Kant writes that "*the idea of time is an intuition*" and adds that "in so far as it is the condition of the relations to be found in sensible things, it is conceived prior to any sensation", with the result that "it is not a sensory but a *pure intuition* [intuitus [...] purus]".[89] The same applies to space, which cannot be taken

82. *Dissertation*, II, 392-393.
83. *Dissertation*, II, 398.
84. *Dissertation*, II, 398-399.
85. *Dissertation*, II, 402.
86. *Dissertation*, II, 399.
87. *Dissertation*, II, 402.
88. Here Kant is correcting his own previous terminological ambiguity consisting in qualifying both time and space as "concepts [*conceptus*]" (and the former also as an "idea [*idea*]").
89. *Ibidem*.

from experience since it is "the fundamental form of all outer sensations": accordingly, "*the concept of space is thus a pure intuition*".[90] Again, note that Kant's emphasis on the purity of the intuitions of time and space refers to the same cognitive purity already thematized by Lambert and presented by Kant himself as the first fundamental feature of time and space. The last of such features emphasizes their subjective nature deriving from their being "the subjective condition[s] which [are] necessary, in virtue of the nature of the human mind, for the co-ordinating of all sensible things in accordance with a fixed law".[91]

In short, in considering the principles of the form of the sensible world, Kant discovers time and space as pure intuitions, i.e. as cognitive elements that are independent of experience and therefore absolutely pure.

Now, we have seen (I) that Lambert's account of scientificity refers to the *a priori* nature of our fundamental cognitive elements, (II) that with the pure intuitions of time and space Kant discovers the existence of pure cognitive elements, and (III) that Kant's purity consists in the exact same independence of experience as Lambert's *a priori*. This being the case, Kant's adoption of Lambert's account of scientificity would be proved if Kant attributed a scientific nature to a theory of sensibility whose main result is the discovery of pure intuitions which are completely independent from experience, since such an attribution would mean that he qualifies such a theory as scientific because it includes pure cognitive elements. But this is exactly what he does. Let us return to the final paragraph of Section II: here Kant had claimed that "*there is a science of sensory things*"[92] but he had not explained why it is so, i.e. why this theory of sensibility is scientific. Now we can answer this question by looking at what Kant has provided with his account of sensibility. He has shown that sensibility includes pure intuitions that are completely independent of experience: this is the reason why there is a science of sensibility. More explicitly, there is a science of sensibility because sensibility includes cognitive elements that are completely independent of experience and therefore completely pure.[93] Thus, since the theory of sensory things includes cognitive elements which are completely pure, then it is a science or, in Kant's words, "*there is a science of sensory things*". Moreover, two further reasons prove that the fundamental feature of time and space which allows the qualification of their theory as a science is their cognitive purity. The first is that cognitive purity is the only feature of space and time that is reasonable to assume as that which makes their theory a science: to claim that a science is such because its objects are not general concepts but "*singular representations*" makes

90. *Dissertation*, II, 402.

91. *Dissertation*, II, 400.

92. *Dissertation*, II, 398.

93. This is also the answer to the objection raised at the end of Section 3.1: showing that the theory of sensibility is a science *because of* its cognitive purity, the *Dissertation* also shows that metaphysics is a science *because of* its cognitive purity, and not merely a science *which is also* cognitively pure. Thus, it shows that in Kant's view the fundamental feature which qualifies a discipline as a science is its cognitive purity, i.e. Lambert's criterion of scientificity consisting in its *a priori* nature.

little sense, and the same applies to the claim that a science is such because its objects are intuitions or because they are not "*something objective and real*". These features are important for Kant's overall account of space and time, but none of them is the decisive element that makes the theory of sensibility a science, as shown by their absence in Kant's account of metaphysics, which is nevertheless a science. This last point leads us to the second reason for assuming cognitive purity as the fundamental feature of science: it is the only feature shared by metaphysics and the theory of sensibility, which are both qualified as sciences. A science cannot be such by including cognitive elements that are single representations or intuitions, because this does not occur in metaphysics (whose cognitions are general representations and concepts): therefore, if the fundamental feature of a science were not its purity but some other feature of the theory of sensibility, then metaphysics would not be a science; but Kant claims that it is. Conversely, a science cannot be such by including intellectual cognitions, because this is not the case of the theory of sensibility; therefore, if this were the fundamental feature of a science, then the theory of sensibility would not be a science, but Kant explicitly claims that it is. The only feature that metaphysics and the theory of sensibility share is cognitive purity, which proves that in the *Dissertation* Kant conceives of a science as an *a priori* discipline; and, since this is Lambert's criterion of scientificity, it proves that he has adopted Lambert's account of scientificity applying it to both metaphysics and the theory of sensibility. Moreover, I have argued that Kant also radicalizes Lambert's account, thus going beyond him: now it is clear why. As shown by his account of metaphysics and reaffirmed by his theory of sensibility, a first radicalization consists in Kant's rejection of Lambert's weaker sense of the *a priori*: the cognitive purity that characterizes both his account of metaphysics and his theory of sensibility is absolute and consists in a complete independence from experience, which leads Kant to reject Lambert's dichotomy and to admit only the stronger sense of the *a priori*. However, leaving aside Kant's radicalization of the sense of the *a priori*, his account of metaphysics is a perfect example of Lambert's account of scientificity because it is a science of pure understanding, i.e. a science as Lambert conceives of it. But with his account of sensibility Kant goes beyond Lambert insofar as he demonstrates the existence of a science that is not intellectual. The theory of sensibility is a science because it concerns completely pure cognitions, yet these are not concepts but intuitions; therefore, the theory of sensibility is not a science of pure understanding but a science of pure sensibility. In this respect, Kant's claim that "the two principles of sensitive cognition […] are not, as is the case with the representations of the understanding, general concepts but singular intuitions which are nonetheless pure"[94] can be reformulated as claiming that the science of sensibility does not concern pure concepts, "as is the case with the representations of the understanding", but pure intuitions, and is nevertheless a science. Such a science represents Kant's overcoming of Lambert insofar as the latter could not have conceived of a science of sensibility, since in his view all the fundamental elements of our cognitions are concepts (and propositions deriving from them) belonging to the

94. *Dissertation*, II, 405.

understanding. On the contrary, Kant's discovery of time and space as intuitions as pure as their conceptual counterpart (i.e. the concepts of metaphysics) leads him precisely to his new science of sensibility and, thereby, beyond Lambert.

3.3. Why Lambert? Other Possible Sources for Kant's Account of Scientificity

According to my interpretation, Kant comes to deal with the issue of scientificity through his encounter with Lambert's account of science as a system of *a priori* cognitions, which Kant adopts and applies to both metaphysics and the theory of sensibility in the *Dissertation*.

However, one could reasonably ask: why Lambert? Why should we assume that Kant's account of science as a system of *a priori* cognitions comes from him and not from others? After all, Lambert is only one of the philosophers Kant explicitly or implicitly dialogues with, and the richness of his precritical period also consists in the variety of philosophical systems he deals with. It is therefore possible that Kant was driven to address explicitly the question of scientificity by other philosophers, and consequently that the account of scientificity in the *Dissertation* is not a novelty of Lambert's philosophy but something Kant found elsewhere. To argue against this possibility, I will briefly consider the accounts of science provided by the main philosophers of Kant's time who implicitly or explicitly appear in his works, namely Wolff, Baumgarten, Meier and Crusius.

Wolff provides his most explicit definition of science in §2 (*What is Science* [*Wissenschaft*]) of the *Vorbericht* of his so-called *German Logic*. Here he writes that science is "the ability of the understanding [*Fertigkeit des Verstandes*] to irrefutably demonstrate [*unumstößlich darthun*] all that one affirms on the basis of unquestionable grounds [*aus unwidersprechlichen Gründen*]".[95] The same account also appears with the exact same formulation in §1 (*Nature of Science*) of the seventh chapter, where Wolff reaffirms that "science is nothing but an ability to demonstrate [*eine Fertigkeit zu demonstriren*]".[96] These definitions clearly show that he does not conceive of science as a particular set of cognitions; on the contrary, in his view science consists in the "ability to demonstrate" something. Accordingly, its fundamental feature does not concern the nature of its cognitions but the method by which they are proved, a method with a syllogistic character aiming to demonstrate all cognitions by deriving them from definitions, principles and experiences. Even without examining Wolff's view in further detail, it is clear that his account of science does not qualify it as a system of *a priori* cognitions, since it consists in the inferential procedure by means of which a cognition is proved; but this is not the account of science that emerges from Kant's *Dissertation*. This is enough to show that Kant cannot have taken his views on scientificity from Wolff, as was also to

95. Wolff 1978: 115 (my translation). The exact same definition can also be found in §30 of the *Discursus praeliminaris* to his *Latin Logic*: see Wolff 1983: 13; see also §594. Lambert himself notes that "*Wolf* [sic] had no other conception of scientific cognition than that *everything in it must be proved on the basis of grounds* [*aus Gründen erwiesen werden*]" (*Architectonic*, §15).
96. Wolff 1978: 200. See also Wolff 1983: §598.

be expected considering that Wolff takes mathematical proofs as the perfect example of science and claims that one should try to bring mathematical method into the other disciplines,[97] while Kant had rejected such a project already in the *Inquiry*.

With regard to Baumgarten, it is well-known that Kant used his *Metaphysics* as the textbook for his academic lessons; therefore, if he adopted Baumgarten's account of scientificity, it is reasonable to look for the reason why in this work. However, in the *Metaphysics* Baumgarten provides no definition of science. This is rather puzzling since each discipline he considers (ontology, general cosmology, psychology and rational theology) is qualified as "science [*scientia*]" but without a definition of what a science is. This situation recalls that of the precritical Kant up to the *Dissertation*, as he likewise qualifies metaphysics (and other disciplines) as science without clarifying what a science is. Thus, since Baumgarten does not provide a clear definition of science, let alone a definition of science as a system of *a priori* cognitions, we can exclude that Kant has taken his account of scientificity from him.

With regard to Meier, Kant used his *Excerpt from the Doctrine of Reason* for his lessons on logic: again, if Kant adopted Meier's account of science, it is reasonable that such an account would appear in this work, whose most interesting parts in this respect are the first two, concerning cognition and method respectively. However, two reasons show that it is rather unlikely that Kant's account of scientificity comes from Meier. The first is that Meier is not interested in scientific but rather in "learned [*gelehrte*] cognition" (i.e. "rational cognition that is perfect to a higher or more appreciable degree"[98]), as shown by the title of both the first part of his work (*On Learned Cognition*) and all its paragraphs, which concern "the amplitude of learned cognition", "the greatness of learned cognition", "practical learned cognition" and even "learned concepts", "learned judgements" and "learned rational inferences". Thus, Meier is not interested in how and whether philosophical cognition can be scientific: he is interested in how and whether it can be learned. This does not mean that he does not conceive of the doctrine of reason and of philosophy more generally as sciences: he clearly does so by qualifying the former as the "science [*Wissenschaft*], which deals with the rules of learned cognition and of learned exposition"[99] and the latter as the "science of the universal qualities of things insofar as they are cognized without faith".[100] Rather, it means that his main interest is not, as in the case of both Lambert and Kant, the scientific nature of philosophical cognition, but its learned nature. This leads us to the second reason. Although Meier qualifies such disciplines as sciences and defines science in a rather vague way as "a learned cognition, insofar as it is extensively certain",[101] he speaks of a "*scientific method* [scientifische Lehrart] (*methodus* […] *scientifica*)"[102] qualifying it as "the meth-

97. See Wolff 1978: 200.
98. Meier 2016: §21.
99. Meier 2016: §1.
100. Meier 2016: §5.
101. Meier 2016: §185.
102. Meier 2016: §421.

od" in which "thoughts must be proved from each other […] through a demonstration [*Demonstration*]".[103] He thus speaks of a "*demonstrative* or *scientific method* [demonstrativische *oder* scientifische Lehrart]" and therefore identifies in a rather Wolffian way the scientificity of cognition with the possibility to prove it. Especially this last view, together with Meier's interest in learned rather than scientific cognition and with the consequent absence of a definition of science as a system of *a priori* cognitions in his work, shows that Kant cannot have taken his account of scientificity from Meier.

Finally, scholars have long acknowledged Crusius' importance to Kant insofar as Kant refers to him to carry out his critique of Wolffian philosophy; it is therefore reasonable to ask whether Kant might not have adopted Crusius' account of scientificity. Such an account is provided in §21 of Crusius' *Path to Certainty* [*Weg zur Gewißheit*], a paragraph designed to establish "what belongs to a science in general [*Wissenschaft überhaupt*]". Here he writes that "'science' [*Wissenschaft*], insofar as one defines it objectively and does not conceive it as a capacity of the understanding itself", is "a certain complex of learned truths that has a remarkable extent and which [truths] are treated together by means of a rational ground [*um eines vernünftigen Grundes*]".[104] Thus, Crusius defines science as a set of cognitions whose fundamental features are its "remarkable extent" and a sort of systematicity since this "rational ground" allows the connection of cognitions into a whole. Therefore, aside from the "remarkable extent" which is rather vague, Crusius claims that science is a system of cognitions based on a common "rational ground". However, as we have seen with regard to Lambert, to claim that science must be systematic is anything but original, since essentially all the German philosophers of the time shared this view. Therefore, even admitting that Crusius conceives of science as a proper system, this is not enough to support the reading that Kant took his account of scientificity from Crusius. Moreover, and most importantly, Crusius does not mention the *a priori* nature of cognition as a criterion of its scientificity, nor does he claim that scientific cognitions must be independent from experience, making it impossible to explain on the basis of his views Kant's account of scientificity in the *Dissertation*.

All of these observations show why it is rather unlikely, and in some cases almost impossible, to assume that Kant has taken his account of scientificity from Wolff, Baumgarten, Meier or Crusius.[105] To explain the account of scientificity in the *Dissertation*, we must refer to one that conceives of science as a system of *a priori* cognitions. In other words, we must refer to Lambert's account.

103. *Ibidem*.

104. Crusius 1965: §21. My translation.

105. There is also a chronological argument. Kant was already familiar with their works in the 1750s, as shown by his references to Wolff and Crusius in the *New Elucidation* and by his adoption of Baumgarten's and Meier's works for the academic courses he started to hold in 1755: therefore, if his account of science derived from theirs, then why is this issue absent not only from his writings of the 1750s but also from those of the first half of the 1760s? And why does it arise only later in the decade, and more precisely after Kant's reading of Lambert's works?

4. CONCLUSIVE REMARKS: TOWARDS A CRITIQUE OF PURE REASON

My claim is that Kant comes to explicitly address the question of the scientificity of metaphysics through his encounter with Lambert in the mid-1760s, and that he adopts Lambert's account of scientificity already in the *Dissertation* of 1770. To support this view, I have articulated my argument in three steps. In the first and introductory section, I have briefly recalled the main results of the *Inquiry* to show that the issue of scientificity is the only issue Kant does not address in this otherwise comprehensive meta-metaphysical perspective. In the second section, I have reconstructed Lambert's account of scientificity, showing that in his *Neues Organon* he provides two criteria of scientific cognition, namely its systematicity and a *priori* nature. Examining the latter, I have shown first that Lambert conceives of it as the independence of a cognition from experience, and second that, although his distinction between a stronger and a weaker sense of the *a priori* initially seems to rule out the former, Lambert fully legitimizes it in his account of fundamental concepts, which are completely *a priori* since their possibility is grounded in their absolute simplicity. Thus, I have shown that Lambert conceives of science as a system of *a priori* cognitions, which moreover is purely intellectual since in his views *a priori* cognitions are concepts (and, secondly, propositions deriving from them), and thus pertain to understanding. In the third section, I have shown that this account of scientificity is the same account we find in Kant's *Dissertation*, where both metaphysics and the theory of sensibility are qualified as sciences precisely because they concern cognitions that are completely pure. This shows that the *Dissertation* represents Kant's first adoption of Lambert's account of scientificity. Moreover, I have shown Kant's overcoming of Lambert insofar as he also provides a science of sensibility that is completely pure but not intellectual since it concerns pure intuitions. Finally, I have briefly considered the accounts of scientificity of Wolff, Baumgarten, Meier and Crusius in order to show that it is highly unlikely that Kant took his account of scientificity from them, thereby indirectly confirming that he indeed took it from Lambert.

Let us conclude by taking a look at Kant's philosophical development after 1770. Having reached this point, we might ask what Kant needs to move from the *Dissertation* to the *Critique of Pure Reason*. After all, his overall perspective in 1770 is quite promising: in the *Inquiry* he has achieved significant results concerning metaphysics as a whole, and in the *Dissertation* he has addressed the question of scientificity left unanswered in the *Inquiry* by adopting Lambert's account of science as a system of *a priori* cognitions. Thus, having established that sensibility and understanding are different cognitive faculties and having provided the complete account of the science of sensibility, Kant's only remaining task is to provide the complete account of the science of pure understanding, i.e. metaphysics, since the *Dissertation* is merely a "propaedeutic", aiming to "teach the distinction between sensitive cognition and the cognition which derives from the understanding"[106]. Once this last task is carried out, Kant's overall account of scientificity will include both the science of pure sensibility and the science of pure understanding, i.e. the sciences of both our fundamental cognitive faculties, and it will be complete.

106. *Dissertation*, II, 395.

However, the eleven years passing between the *Dissertation* and the *Critique of Pure Reason* show that the realization of this project is more difficult than expected. More specifically, in the attempt to provide a complete account of metaphysics as the science of pure understanding, Kant becomes increasingly aware of difficulties concerning the very core of his project, i.e. the account of metaphysics as a science and therefore, given his adoption of Lambert's account of scientificity, the account of metaphysics as a system of *a priori* cognitions. In my view, these fundamental difficulties are two.

The first and most important appears in Kant's well-known letter to Herz of February 1772. Here he writes that, since in the *Dissertation* he "was content to explain the nature of intellectual representations in a merely negative way, namely, to state that they are not modifications of the soul through the object", he had "passed over the further question of how a representation that refers to an object without being in any way affected by it can be possible": it is the famous question asking "what is the ground of the relation of that in us which we call 'representation' to the object?".[107] In other words, if the pure concepts of the understanding are neither produced by the affection of given objects nor produce them, then how do they relate to objects? The *Dissertation* provides no answer. There are many ways to interpret this problem. Following Kant, we can interpret it as pertaining to the relation of the *a priori* concepts of pure understanding to their objects; or as pertaining to their origin, since it is not explained by their rather vague abstraction "from the laws inherent in the mind"; or as pertaining to the spontaneity of pure understanding, since the problem is the justification of concepts it provides. I find all these interpretations plausible and even complementary. However, I think that all of them are different formulations of a single and more general question which, unsurprisingly, is the question of scientificity. In the *Dissertation*, Kant identified the fundamental feature of the scientificity of metaphysics in the purity of its cognitions, thus qualifying it as the science of pure understanding. However, if this is the case, not being able to explain the relationship of such cognitions to objects means having a science that lacks what already in 1772 Kant calls "validity [*Gültigkeit*]", since it is unable to explain the relation of its cognitions to objects. In Lambert's words, the metaphysics of the *Dissertation* remains "stuck in mere terminology"[108] because it cannot explain the origin and objective validity of its pure cognitions, which therefore remain mere words of an ungrounded metaphysical theory. Most importantly, since Kant identifies the main flaw of the *Dissertation* with the absence of an explanation establishing "how a representation that refers to an object without being in any way affected by it can be *possible*",[109] being unable to explain the origin and validity of pure concepts means being unable to explain their "possibility", i.e. the "possibility" of pure cognitions. But this purity is precisely the fundamental feature of scientificity. Thus, being unable to explain the "possibility" of the pure cognitions of metaphysics means

107. AA X, 130-131.

108. AA X, 52. Translation modified.

109. AA X, 130-131. Emphasis added.

being unable to explain the "possibility" of their scientificity, and therefore the possibility of the scientificity of metaphysics itself as the system of such cognitions. In short, and in terms that project us directly into the critical period, the question of the letter to Herz is basically the same question of the *Critique of Pure Reason*: "*How is metaphysics as a science possible?*".[110]

The second, less-known difficulty concerns the ambiguity of Kant's concept of metaphysics. The *Dissertation* provided no clear distinction between pure understanding and pure reason, thus reaffirming the view of the *False Subtlety* that "*understanding* and *reason* […] are not different *fundamental faculties*".[111] Accordingly, metaphysics was qualified as the science that includes "the *first principles* of the use of the *pure understanding*",[112] but it could have been qualified as the science that includes those of the use of pure reason with the same theoretical legitimacy. However, this view begins to falter in the same period, and even in the same year, as the letter to Herz. In the *Logik Philippi*, which includes the lectures on logic Kant gave in May 1772, he distinguishes between "concepts [*conceptus*]" and "ideas [*ideae*]", the former being "universal concepts of the understanding [*allgemeine Verstandesbegriffe*]" and the latter "universal concepts of reason [*allgemeine Begriffe der Vernunfft*]".[113] Thus, although both faculties include universal representations (since "a concept [*Begriff*] is a universal representation [*eine allgemeine Vorstellung*]"[114]), they are nevertheless different. The same distinction can be found in some *Reflexionen* of the 1770s. In R2835 Kant writes that a "representation *a priori*" is either a "notion [*notio*]" or an "*idea* [*idea*]",[115] and in R2836 he defines the former as an "intellectual concept [*conceptus intellectualis*]" (i.e. a "concept [*Begrif*]" which "even with regard to the content [*dem Inhalte nach*] originates from the understanding [*aus dem Verstande entspringt*]"[116]) and the latter as a "concept of reason [*Vernunftbegrif*]" which "cannot have an object within experience [*keinen Gegenstand in der Erfahrung*]".[117] Thus, although maintaining their cognitive purity by claiming that their concepts are both "pure [*pur[i]*]", already in 1772 Kant begins to distinguish between understanding and reason. However, this is problematic: if pure understanding and pure reason are different faculties, then the concept of metaphysics of the *Dissertation* is ambiguous. There it was the science of pure understanding and, since the distinction between pure understanding and pure reason was still absent, it could just as well be defined as the science of pure reason since, more generally, there metaphysics was the science of the pure cognitive faculty, which in this work is still one and the

110. *CPR,* B 22.

111. *False Subtlety*, II, 59.

112. *Dissertation*, II, 395.

113. AA XXIV, 451.

114. *Ibidem*.

115. AA XVI, 537.

116. *R* 2837 claims that "notion is a concept that [is] not taken from experience" (AA XVI, 539) and that the object of an idea "cannot be found within experience" (AA XVI, 540).

117. AA XVI, 538-539. Thus, Kant's account of notion and idea is the same he provides in the *Stufenleiter* (see *CPR,* A 320/B 377).

same faculty. However, after the distinction of both *Logik Philippi* and *Reflexionen* this is no longer true. If pure understanding and pure reason are different faculties, then to provide the complete account of an indistinct "metaphysics" that does not distinguish between them is inadequate. Accordingly, Kant's discovery of the difference of the two faculties leads to a change in his account of metaphysics, and therefore to a change in the task outlined in the *Dissertation*. If metaphysics is the science consisting in a system of *a priori* cognitions, then this task becomes the exposition of the metaphysics of both pure understanding and pure reason, i.e. of the system of *a priori* cognitions of both pure understanding and pure reason. However, several questions arise: what are the concepts of pure understanding and what those of pure reason? In what are they similar and in what do they differ? How do they relate to each other and to experience? Do they both form a coherent system? If so, how? All these questions, still unanswered, are crucial for Kant's account of the scientificity of a metaphysics that has turned out to be twofold.

The questions raised by both difficulties will find answers only in the *Critique of Pure Reason*. There, the account of metaphysics as a science deriving from Kant's solutions to them will join the science of sensibility that he has already established in the *Dissertation*, thus completing his project of a scientificity including the science of pure sensibility grounded on intuitions, the science of pure understanding grounded on categories and the science of pure reason grounded on ideas, all completely *a priori*. In my view, this also explains why, as shown by *R* 5024, Kant had originally decided to dedicate the *Critique* to Lambert: because, although radicalizing it and bringing it to a level of complexity and originality unknown to him (and not only to him), it is Lambert's account of science as a system of *a priori* cognitions that Kant adopts in order to establish metaphysics as a science. In this sense, the *Critique* will represent Kant's complete development of Lambert's account of scientificity. Thus, although it will be Kant who will make metaphysics enter "the safe course of a science", I hope to have shown that this course was initially shown to him by Lambert.

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ABBREVIATIONS

All citations from Kant's writings, letters and *Reflexionen* (*R*) refer to the volume and page number from the Akademie-Ausgabe (AA): *Werke. Akademie-Textausgabe*, 23 vol., Berlin, De Gruyter, 1902-1923. Translations are from *The Cambridge Edition of the Works of Immanuel Kant*, Cambridge, Cambridge University Press, 1992-2012: *Correspondence*, ed. by A. Zweig, 1999; *Critique of Pure Reason*, ed. by P. Guyer and A. W. Wood, 1998; *Theoretical Philosophy 1755-1770*, ed. by D. Walford and R. Meerbote, 1992.

Architectonic = Lambert, J. H. 1965b. *Anlage zur Architectonic, oder Theorie des Einfachen und des Ersten in der philosophischen und mathematischen Erkenntniß*, Riga, Hartknoch 1771; repr. Olms, Hildesheim.

CPR = *Critique of Pure Reason* (A = first edition, B = second edition).

Dreams = *Dreams of a Spirit-Seer Elucidated by Dreams of Metaphysics.*

Dissertation = *Dissertation on the Form and Principles of the Sensible and the Intelligible World.*

False Subtlety = *The False Subtlety of the Four Syllogistic Figures.*

Inquiry = *Inquiry concerning the Distinctness of the Principles of Natural Theology and Morality.*

Negative Magnitudes = *Attempt to Introduce the Concept of Negative Magnitudes into Philosophy.*

New Elucidation = *New Elucidation of the First Principles of Metaphysical Cognition.*

NO = Lambert, J. H. 1965a. *Neues Organon oder Gedanken über die Erforschung und Bezeichnung des Wahren und dessen Unterscheidung vom Irrthum und Schein*, Leipzig, Wendler 1764; repr. Olms, Hildesheim. Partially translated in E. Watkins, *Kant's Critique of Pure Reason. Background Source Materials*, New York, Cambridge, 2009 (and modified if needed).

Only Possible Argument = *The Only Possible Argument in Support of a Demonstration of the Existence of God.*

Thoughts = *Thoughts on the True Estimation of Living Forces.*

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David Del Bianco
Università degli Studi di Milano
ORCID: 0000-0003-0793-5274
david.delbianco@unimi.it