

# Kant's Explication and Carnap's Explication: The *Redde Rationem*

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**ABSTRACT:** In this paper I will compare the concept of explication *à la* Carnap and the concept of explication *à la* Kant. This essay should primarily be seen as a comparison of two different philosophical styles, but it is also intended as a vindication of what Kant wrote and what Carnap forgot to read.

## 1. INTRODUCTION

The idea of comparing the concept of explication *à la* Kant and the concept of explication *à la* Carnap should not be seen as an anachronistic and ahistorical attempt without any philosophical relevance to juxtapose two concepts that have the same name but are presented by two philosophers who are separated in time by several centuries. Actually, both the Kantian and the Carnapian concepts were proposed in the context of discussions concerning the right method of philosophizing. In particular, both of them deal with the problem of philosophically clarifying ambiguous and imprecise concepts.

Moreover, the Kantian and the Carnapian ways of handling the concept of explication may be considered as excellent examples of two different philosophical styles, the continental and the analytical. I use these customary terms even though I find the terms *analytical* and *continental* wholly inadequate historically and rather obscure theoretically. With regard to Kant, I prefer to speak of a *discursive style*, where “discursive” has to be understood in a sense I will explain later; as regards Carnap, I would speak of an *ideal-language style*, a style that emphasizes the role and the logical structure of ideal languages.<sup>1</sup> Finally, I believe that the above comparison is important because it permits us to see how the history of the development of philosophical thought has shown that Kant's concept of explication is philosophically more fruitful than Carnap's.

<sup>1</sup>It should be noted that the ideal-language style that is common among philosophers of science has a twin, that is, ordinary-language style, which is more common among philosophers of language. The latter style emphasizes ordinary language and its logical structure. With reference to these topics, see R. Rorty, “Introduction,” in *The Linguistic Turn: Recent Essays in Philosophical Method* (Chicago: University of Chicago Press, 1967) and M. Dummett, *Ursprünge der analytischen Philosophie* (Frankfurt-am-Main: Suhrkamp Verlag, 1988).

But there is another reason for comparing Kant and Carnap—a rather curious one. Even while discussing his concept of explication, Carnap quotes Kant. He falls prey, however, to an amazing series of historical superficialities that lead him “to get hold of the wrong end of the stick.” Therefore, in what follows, I will first examine the Carnapian concept of explication and point out the failure of the Carnapian method. Second, I will show Carnap’s historical oversight. I will then turn to the Kantian concept of explication and argue that Kant, in a certain sense, had explicitly foreseen the fatal flaws in a philosophical program such as Carnap’s.<sup>2</sup> In this paper I want neither to show “how much Kant” there is in Carnap’s works nor to discuss extensively the notion of Carnapian explication but simply to draw the reader’s attention to a small but neglected historical fact and to a larger but regularly neglected theoretical position.

## 2. CARNAP’S EXPLICATION

In the initial chapter of his *Logical Foundation of Probability*,<sup>3</sup> Carnap stresses that his work is devoted to analyzing in a precise and unambiguous way such concepts as confirmation, induction, and probability. But before proceeding to their analysis—to their *explication*, as he calls it—Carnap feels obliged to analyze what explication means, that is, to explicate the concept of explication.

It is worth noting that Carnap’s work is an excellent example of the program carried out by those European neo-positivists who fled to the United States and by their American epigones. As is well-known, this program is characterized by a particular emphasis on ideal languages (such as the logical or mathematical, and especially the calculus of probability) to which each kind of philosophical research (for example, on confirmation, induction, explanation, scientific progress, truth, or measurement) should reduce. This is a program that is thought to originate directly from the European phase of Carnap’s works, that is, from works such as *Die logische Aufbau der Welt* (1929), *Überwindung der Metaphysik durch logische Analyse der Sprache* (1932), and *Logische Syntax der Sprache* (1934). But while these works tackle large and general topics, the 1950 publication turns its focus to the explication of particular concepts.<sup>4</sup>

In the first chapter of his *Logical Foundation of Probability*, Carnap clarifies that “[t]he task of *explication* consists in transforming a given more or less inexact

<sup>2</sup>With reference to Kant’s works, I will proceed as follows: (1) for the *Kritik der reinen Vernunft*, I will use Norman Kemp Smith’s translation, *Critique of Pure Reason* (London: Macmillan, 1989), but (according to the usual custom) I will also indicate the original pages, citing the *Werkausgabe* edition (Suhrkamp, Frankfurt-am-Main, 1968, Bände III und IV); (2) for the *Untersuchungen über die Deutlichkeit der Grundsätze der natürlichen Theologie und Moral* and the *Metaphysischen Anfangsgründe der Naturwissenschaft*, I will quote directly from the German texts, even if, for the first, I will refer to the edition within *Kants Werke* (Walter de Gruyter & Co., Berlin 1968, Band II, pp. 273–302) and for the second the edition printed in *Werkausgabe* (Band IX).

<sup>3</sup>R. Carnap, *Logical Foundations of Probability* (Chicago: University of Chicago Press, 1950).

<sup>4</sup>It is of sociological interest to observe that with the end of the European neo-positivist movement and with the flight of its members to Anglo-Saxon countries, the multilingual phase of the history of philosophy of science, which had as official languages French, German and Italian, came to an end. Since then, a monolingual phase has opened, a phase with only one official language: English.

concept into an exact one or, rather, in replacing the first by the second. We call the given concept (or the term used for it) the *explicandum*, and the exact concept proposed to take the place of the first (or the term proposed for it) the *explicatum*.<sup>5</sup> Therefore, explication is that philosophical operation by means of which we may turn from a somewhat ambiguous and imprecise concept (term)—the *explicandum*—that is expressed “in everyday language” or in “a previous stage in the development of scientific language” to a precise concept (term)—the *explicatum*—that is expressed in “a well-constructed system of scientific either logico-mathematical or empirical concept.”

The philosophical tradition characterized by the ideal-language style has met with some success, but it is historically surprising that this tradition continually refers to a need to explicate philosophical concepts even if, paradoxically, this need is neither unambiguous nor precisely stated. In particular, there are two orders of problem: the first concerns the exactness and the completeness of the set of requirements characterizing the explication; the second concerns what Hanna calls the “meaning relation,”<sup>6</sup> namely, the relation between the meaning of the *explicandum* and the meaning of the *explicatum*. Of course, if we want the explication process to have some utility, this kind of relation has to consist in a position somewhere between the complete independence of the two meanings and their complete semantic identity.

Even if it is not our task to enter into such a debate over Carnap's concept of explication, it should be noted that what he proposed is rather imprecise. This state of affairs is paradoxical because the tradition characterized by the ideal-language style, a tradition that wants to be valued for the precision and exactness of its analysis, is not able to provide a precise and unambiguous definition of the key notion on which it relies so heavily. Now Carnap states four requirements for a good explication:

If a concept is given as *explicandum*, the task consists in finding another concept as its *explicatum* which fulfils the following requirements to a sufficient degree:

1. The *explicatum* is to be *similar to the explicandum* in such a way that, in most cases in which the *explicandum* has so far been used, the *explicatum* can be used; however, close similarity is not required, and considerable differences are permitted.
2. The characterization of the *explicatum*, that is, the rules of its use (for instance, in the form of a definition), is to be given in an *exact* form, so as to introduce the *explicatum* into a well-connected system of scientific concepts.
3. The *explicatum* is to be a *fruitful* concept, that is, used for the formulation of many universal statements (empirical laws in the case of a nomological concept, logical theorems in the case of a logical concept).
4. The *explicatum* should be as *simple* as possible; this means as simple as the more important requirements (1), (2), and (3) permit.<sup>7</sup>

<sup>5</sup>Ibid., p. 3.

<sup>6</sup>One of the few relevant works on the “explication of explication” is J. F. Hanna, “An Explication of ‘Explication,’” *Philosophy of Science* 35 (1968) 28–44.

<sup>7</sup>Carnap, *Logical Foundations of Probability*, 7.

As the quoted passage shows, what an explication consists of is neither clear nor precise nor unambiguous. First of all, Carnap writes that the requirements have to be satisfied “to a sufficient degree.” But what does this mean? It seems a rather vague and subjective statement. Second, requirements (1), (3) and (4) are also vague and subjective. “Similarity,” “fruitfulness,” and “simplicity” are concepts that no philosopher of science, adopting the ideal-language style or some other style, has ever been capable of formulating with precision and in a “simple” and “fruitful” way.

Only the second requirement appears to be non-vague, precise, and objectively determined. It states that a concept, in order to be explicated, has to be put into an exact form—that is, it has to be introduced into a “well-connected system of scientific concepts.” What Carnap means by this locution is more adequately explained some pages later:

The introduction of a new concept into a language of science—whether as *explicata* for prescientific concepts or independently—is something done in two separate steps, formalization and interpretation. . . . The formalization (or axiomatization) of a theory or of the concepts of a theory is here understood in the sense of the construction of a formal system, an *axiomatic system* (or postulate system) for that theory. . . . The *interpretation* of an axiomatic system consists in the interpretation of its primitive axiomatic terms.<sup>8</sup>

At this point we know that if we want to explicate an ordinary or a prescientific concept, we have to insert its *explicatum* into an axiomatic interpreted system. But we also have to do it in a simple and fruitful way and in such a manner that this *explicatum* is more or less similar to the *explicandum*.

Of course, it is exactly—and only—the second requirement that characterizes Carnap’s explication as a typical moment of the ideal-language style of philosophizing. The other three requirements might be adopted, *mutatis mutandis*, by any other philosophical style, owing to their complete vagueness and subjectivity. Unfortunately, it is precisely this second requirement that reveals itself as the Trojan horse of Carnap’s approach. This is not the right place to venture into this familiar critique, but it is sufficient to recall that it is precisely because of such difficulties that the period known as “the standard view in the philosophy of science” came to an end. This failure can be imputed to the difficult tractability and controllability of the formal tools used by philosophers who adopted the ideal-language style. As the history of philosophy of science teaches us, these tools have created, on the one hand, more problems than they have solved and, on the other, have turned philosophical research into a kind of pseudo-mathematical or pseudo-logical research.<sup>9</sup> Yet, what is more interesting is that if the philosophers who adopted such a style had reflected on what Kant had written about explication, they would not have met with such failure.

<sup>8</sup>Ibid., 15–16.

<sup>9</sup>In order to have an idea of what I am mentioning, it suffices to glance at the discussion about Hempel’s explication of the concept of “qualitative confirmation” or at Carnap’s explication of the concept of “quantitative confirmation” or at his explication of the concept of “explanation.” With reference to these topics, see G. Boniolo and P. Vidali, *Filosofia della scienza* (Milano: Bruno Mondadori, 1999).

### 3. CARNAP'S HISTORICAL OVERSIGHTS

Once we have understood, at least “to a sufficient degree,” what the Carnapian explication entails, we may move on to the historical link between Carnap and Kant, as perceived by Carnap himself:

The term *explicatum* has been suggested by the following two usages. Kant calls a judgment explicative if the predicate is obtained by analysis of the subject. Husserl, in speaking about the synthesis of identification between a confused and non-articulated sense and a subsequently intended distinct, articulated sense, calls the latter the *Explicat* of the former. (For both uses see *Dictionary of Philosophy* (1942), ed. D. Runes, p. 105)<sup>10</sup>

In this passage Carnap clearly wishes to be honest in the attribution of his ideas, and in particular for his notion of explication. He also states that Kant and Husserl used the same concept, or rather—as we would say nowadays—a concept having the same name. However, in mentioning these two German philosophers, he does not directly refer to their works but to the *Dictionary of Philosophy* edited by Dagobert Runes in 1942.

At this point, a sound historical curiosity spurs us on to look in the *Dictionary* for what Carnap indicated. The result of this search is rather surprising. By comparing what Carnap wrote about “explication” and the entry under “Explication” written by Dorion Cairns, we may easily come to the conclusion that what Carnap said on Husserl is in an embarrassing way “similar” to what Cairns had said on Husserl.

There is a second amazing fact. In this entry there is no mention of Kant. So, from where did Carnap take his reference to Kant? In the same page of the *Dictionary* there are, of course, other entries. In particular there is one entitled “Explicative judgment” written by Vernon J. Bourke. In this entry we read that Kant qualifies a judgment as “explicative” if its predicate is obtained by analysis of the subject. We are thus forced to conclude that in this case also there is an embarrassing “similarity” between Carnap’s words and Bourke’s words. But what is more astonishing is that Carnap made a philosophical error. In this latter entry the use of the term “explication” has nothing to do with the Carnap’s use of the same term but with another way of labeling Kantian analytical judgments!

If we look at the following entries, we realize immediately that they are the only two in which the word “explication” (or a word having the same roots) appears. What may we infer from these facts, knowing that Carnap was one of authors of the *Dictionary*? It seems to me that there are three inferences to draw: (1) Very probably Carnap needed *auctoritates* and believed that the best and the fastest way to find them was to search for them in the *Dictionary* that he had within easy reach. (2) Carnap was not directly aware of the Husserlian discussion on the concept of “explication.” And (3) Carnap grossly confused two uses of the term “explication.” In particular, he had failed to read Kant.

<sup>10</sup>Carnap, *Logical Foundations of Probability*, 3. Carnap is referring to D. Runes, *Dictionary of Philosophy* (New York: Philosophical Library, 1942–1960).

And that is not all. If Carnap had read the *Kritik der reinen Vernunft* from beginning to the end, he would have found the place in the Transcendental Doctrine of Method where Kant discusses the use of the very term “explication” for which he (Carnap) was looking. Moreover, from a reading of the Kantian discussion of the term, he would have probably been alerted to the consequences of his way of interpreting the explication.

Finally, if Carnap had had a strong historical training, as his European roots would have led us to suppose, he would have been aware that Kant had presented a theory of explication about twenty years before the first edition of the first Critique. In fact, in 1764, Kant wrote a brief paper entitled *Untersuchungen über die Deutlichkeit der Grundsätze der natürlichen Theologie und Moral* in which he discussed the very topic in question.

#### 4. KANT'S EXPLICATION

Kant proposes his analysis of the concept of “explication” in the chapter entitled “The Discipline of Pure Reason in Its Dogmatic Employment” within the Transcendental Doctrine of Method of the *Kritik der reinen Vernunft*. However, as mentioned, he had already presented an analysis of the same notion in a paper of 1764, in particular, within a section called “First Meditation” where he compares the methods used to arrive at certainty in mathematics and in philosophy.

According to Kant, the difference between the mathematical method and the philosophical method is this: “Philosophical knowledge is the *knowledge gained by reason from concepts*; mathematical knowledge is the knowledge gained by reason from the *construction* of concepts.”<sup>11</sup> It is precisely by reflecting on the differences between a *constructive* way of proceeding and a *discursive* way (through concepts) that Kant delineates the differences between these two ways of reasoning. In particular, he considers three issues: (1) definitions, (2) axioms, and (3) demonstrations. Let us consider Kant’s remarks on definition, for it is here that the concept of “explication” is discussed: “To *define*, as the word in itself indicates, really only means to present the complete, original concept of a thing within the limits of its concepts.”<sup>12</sup> In this statement *completeness* (as Kant explains in a footnote) is connected with the necessity to furnish in a *clear* manner the *sufficient* characteristics possessed by a concept. By contrast, *originality* is linked to the fact that the determination of the characteristics of the concept is not derived from anything but the construction of the concept itself.<sup>13</sup>

If “definition” can be handled in such a way, Kant can deem this procedure “good” for mathematical concepts but not for empirical or pure concepts,<sup>14</sup> for they “cannot be defined at all, but only *made explicit*.”<sup>15</sup> That is, definition is one

<sup>11</sup>Kant, *Critique of Pure Reason*, 577, B741.

<sup>12</sup>Ibid., 586, B755.

<sup>13</sup>We have to bear in mind that Kant is referring to mathematical definitions, that is to say, definitions of something that is constructed.

<sup>14</sup>A *fortiori*, this also holds for rational concepts, even if Kant does not stress this fact.

<sup>15</sup>Ibid., p. 586, B756.

thing but explication (or exposition, as Kant calls it a few lines later) is another. Nevertheless, we must not confuse a purely verbal question with a real question. What is important here is that there is a difference between the way of defining concepts in mathematics and the way of defining concepts in philosophy, even if we have to take into account that “the German language has for the [Latin-based] terms *exposition*, *explication*, *declaration*, and *definition* only one word, *Erklärung*, and we need not, therefore, be so stringent in our requirements as altogether to refuse to philosophical explanations the honorable title, definition.”<sup>16</sup> Therefore, independent of the term used, the *philosophical definition*, that is, the *explication*, is different from the *mathematical definition*. The latter consists of constructing, at the very beginning of the discourse, the concept that we want to use by unambiguously giving the complete set of characteristics that permit us to outline it precisely once and for all. The former, by contrast, is a sort of two-step process. *In the first step*, the concept *explicandum* is investigated in connection with the philosophical context in which it is inserted in order to understand what the characteristics are that should be considered in the second step of its explication. This first step may be also rather imprecise or marked by some ambiguity. *In the second step*, the concept is explicated with a maximum of completeness and precision by paying attention not to fall into the trap of ambiguity.

It should also be noted that Carnap thinks that, before the “explication” of an ordinary or prescientific concept is undertaken, we should begin with its ordinary clarification; otherwise the concept cannot “serve as a basis for an investigation.”<sup>17</sup> This is possible, according to Carnap, by means of “examples” and some “informal explanation” that will permit us to have a “clear enough” idea of what we are speaking about and what we are going to explicate.

Therefore, both Kant and Carnap are considering a two-step process composed of a first moment in which we clarify in a somewhat imprecise way the concept in question and a second moment in which we try to consider the concept precisely and in its entirety. Moreover, as Kant writes, this way of proceeding leads to an “analysis” of the concept in question.<sup>18</sup> Similarly, Carnap writes that in this way he gives an “analysis” of the concept.<sup>19</sup>

May we conclude that they are proposing the same thing? Not at all, even if (1) they are tackling the same need to clarify concepts (terms) philosophically; (2) they give the same name to the clarification process; and (3) both clarification processes are composed of two more or less similar steps. Nevertheless, *there is a*

<sup>16</sup>Ibid., p. 587, B587: “Die deutsche Sprache hat für die Ausdrücke der Exposition, Explication, Deklaration, und Definition nichts mehr, als das eine Wort: Erklärung, und daher müssen wir schon von der Strenge der Forderung, da wir nämlich den philosophischen Erklärungen den Ehrennamen der Definition verweigerten, etwas ablassen. . . .” It should be noted that here Kant uses the term *Erklärung* (to which “explanation” corresponds in the English translation) as a different way of saying “definition.”

<sup>17</sup>Carnap, *Logical Foundations of Probability*, 4.

<sup>18</sup>See the subtitle of Kant’s first meditation in *Untersuchungen über die Deutlichkeit der Grundsätze der natürlichen Theologie und Moral*, namely: “General Comparison of the Methods to Reach Certainty in Mathematical Knowledge and in Philosophical Knowledge.” See also Kant, *Critique of Pure Reason*, 588 (note a), B759 and 589, B760.

<sup>19</sup>Carnap, *Logical Foundations of Probability*, 4.

*substantial difference*. Carnap's explication needs formalization while Kant's explication does not. Indeed, Kant has a very deep aversion to the use of mathematics and to the mathematical method in philosophy:

In philosophy we must not imitate mathematics by beginning with definitions, unless it be by way simply of experiment. For since the definitions [explications] are analyses of given concepts, they presuppose the prior presence of the concepts, although in a confused state; and the incomplete exposition must precede the complete. Consequently, we can infer a good deal from a few characteristics, derived from an incomplete analysis, without having yet reached the complete exposition, that is, the definition [explication]. In short, the definition [explication] in all its precision and clarity ought, in philosophy, to come rather at the end than at the beginning of our enquiries.<sup>20</sup>

Or, as Kant writes at the beginning of the Second Meditation of his *Untersuchungen über die Deutlichkeit der Grundsätze der natürlichen Theologie und Moral*: “nothing has been more detrimental to philosophy than mathematics, in particular *the aping* of its methods where the latter cannot ever be useful.”<sup>21</sup> The reason for this assertion is easily grasped by reflecting on the fact that, according to Kant, mathematics proceeds by constructing concepts, while philosophy proceeds discursively by means of concepts. And it is exactly this reason that induces me to call Kant's style a *discursive* style.

## 5. WHY KANT WOULD HAVE BEEN RIGHT IN CRITICIZING CARNAP

It should be noted that Kant has no aversion to mathematics or to its application or to its method. Actually, as we know by reading the *Metaphysischen Anfangsgründe der Naturwissenschaft*, it is precisely thanks to mathematics that he gives a privileged place to physics. Moreover, “I claim, however, that in any given theory of nature there is as much *true and real science* as it contains *mathematics*.”<sup>22</sup> What is interesting here is that an “*eigentliche Wissenschaft*” is, according to Kant, not only a mathematicized discipline but an axiomatized and interpreted discipline, as we would say nowadays and as Kant himself had written some pages before:

Only that whose certainty is apodictic can be called *true and real science*. . . . Exactly because that totality of knowledge is systematic can it be called *science*. Moreover, if the organization of knowledge in such a system is a chaining together of principles and consequences can it even be called *rational science*.<sup>23</sup>

<sup>20</sup>Kant, *Critique of Pure Reason*, 588, B758–59.

<sup>21</sup>Kant, *Untersuchungen über die Deutlichkeit der Grundsätze der natürlichen Theologie und Moral*, 283: “. . . nichts der Philosophie schädlicher gewesen sei als die Mathematik, nämlich die Nachahmung derselben in der Methode zu denken, wo sie unmöglich kann gebraucht werden.”

<sup>22</sup>Kant, *Metaphysischen Anfangsgründe der Naturwissenschaft*, ix: “Ich behaupte aber, dass in jeder besonderen Naturlehre nur so viel *eigentliche Wissenschaft* angetroffen werden können, als darin *Mathematik* anzutreffen ist.”

<sup>23</sup>*Ibid.*, v: “*Eigentliche Wissenschaft* kann nur diejenige genannt werden, deren Gewissheit apodiktisch ist. . . . Dasjenige Ganze der Erkenntnis, was systematisch ist, kann schon darum *Wissenschaft* heissen, und, wenn die Verknüpfung der Erkenntnis in diesem System ein Zusammenhang von Gründen und Folgen ist, so gar *rationale Wissenschaft*.”



For Kant, physics is the right place to apply mathematics and its method, not philosophy. In philosophy mathematics causes damage and Kant does not spare ironic and disdainful words for those philosophers (“*Meistern in dieser Kunst*”<sup>24</sup> he calls them) who have been ensnared by the mathematical method. We can see why he does so by following the differences between mathematics and philosophy at the level of definitions, axioms, and demonstrations.

With regard to the level of *definitions*, we have already noted that a philosopher explicates while a mathematician defines. If a philosopher defined, he would construe the concept with all of its notes *ab initio*. But, in such a way he would bar his own chances to investigate whether the aspects upon which to dwell have been fixed at the beginning. Moreover, the philosopher who wants to ape the mathematician in using definitions instead of explications runs the risk of believing that his definitions are right while they may in fact be wrong. Conversely, the philosopher who explicates is well aware that his explications may be wrong and incomplete and in such a way, during his analysis, he can suitably modify them.<sup>25</sup> Recall (as Kant emphasizes in a footnote) that “philosophy is full of faulty definitions, especially of definitions which, while indeed containing some of the elements required, are not complete. . . . In mathematics definition belongs *ad esse*, in philosophy *ad melius esse*.”<sup>26</sup>

Let us turn to *axioms*. In this case Kant is disconcerted by those philosophers who want to follow the mathematical method and who consequently put axioms and not principles at the beginning of their discussions. In mathematics there can be axioms “since by means of the construction of concepts in the intuition of the object it can combine the predicates of the object both *a priori* and immediately, as for instance, in the proposition that three points always lie in a plane.”<sup>27</sup> They are not allowed in philosophy where principles have to be “deduced” (in the Kantian sense).<sup>28</sup> Mathematical axioms, on the other hand, do not need to be “deduced.” “Philosophy has therefore no axioms, and may never prescribe its *a priori* principles in any such absolute manner, but must resign itself to establishing its authority in their regard by a thorough deduction.”<sup>29</sup>

Finally, we come to *demonstrations*. Here Kant is equally peremptory: “Mathematics alone, therefore, contains demonstrations, since it derives its knowledge not from concepts [as philosophy does] but from the construction of them, that is, from intuition, which can be given *a priori* in accordance with the concept.”<sup>30</sup> In

<sup>24</sup>Kant, *Critique of Pure Reason*, B753. It should be noted that the English translation is somewhat misleading and without irony. Kemp Smith translates “*Meistern in dieser Kunst*” as “experts in mathematics” (584), which may be read in a laudatory sense.

<sup>25</sup>*Ibid.*, 588, B758–59.

<sup>26</sup>*Ibid.*, 588 (note a), B759.

<sup>27</sup>*Ibid.*, 589, B760.

<sup>28</sup>As is well known, Kant takes his sense of the term “deduction” from the juridical language: “Jurists, when speaking of rights and claims, distinguish in a legal action the question of rights (*quid juris*) from the question of fact (*quid facti*); and they demand that both be proved. Proof of the former, which has to state the right or the legal claim, they entitle the *deduction*” (*Ibid.*, 120, B116).

<sup>29</sup>*Ibid.*, 590, B761–62.

<sup>30</sup>*Ibid.*, 590, B762.

philosophy, Kant argues, there is “*acroamatic* (discursive) *proof*.”<sup>31</sup> That is, in philosophy, there is no room for demonstration but only for argumentation. The demonstration is an “apodeictic proof [*apodiktischer Beweis*]”; the acroamatic or discursive way (namely, by way of arguments) leads to proofs that may be discussed and that do not always follow the rules of deductive inference. On the other hand, the *Beweis* both of the *Grundsätze der reinen Verstand* (in the *Kritik der reinen Vernunft*) and of the *metaphysische Anfangsgründe* (in *Metaphysischen Anfangsgründe der Naturwissenschaft*) has to be understood exactly as an acroamatic proof, that is, as an argumentative justification, and not as an apodeictic proof or demonstration.

Hence, in mathematics and in those disciplines where the mathematical method can be used (such as physics) one has to start from axioms; one has to define concepts and justify theses by means of demonstrations. In philosophy one has to explicate concepts as the work is developing; one may use principles but they have to be argumentatively justified in the same way as all the other proposed theses. This is to say that, for Kant, one has to proceed acroamatically in philosophy, for in philosophy we have to adopt a *discursive style*.

## 6. THE REDDE RATIONEM

From what has been discussed, we may conclude that Kant uses “explication” with the same aim as Carnap. But if Kant had lived in Carnap’s time, he would never have accepted the view that explication involves a formalization by means of logical-mathematical tools. Kant would not only have refused the second requirement of the Carnapian explication but would also have warned Carnap that in this way he was perverting the nature of philosophy by transforming it into something hybrid that would lead to disastrous results, as has indeed happened.

The reason for such conclusions is that only mathematics proceeds by constructing concepts. Doing this in philosophy is dangerous because we “can by this method build only so many houses of cards.”<sup>32</sup> It is true that mathematics is successful in its own sphere, but this has nothing to do with its applicability to philosophy: “Mathematics presents the most splendid example of the successful extension of pure reason, without the help of experience. Examples are contagious, especially as they quite naturally flatter a faculty which has been successful in one field, [leading it] to expect the same good fortune in other fields.”<sup>33</sup> And this has actually happened. The success of the precise and exact axiomatic method of mathematics has infected many philosophers. Following Carnap, they have tried to export the mathematical method to philosophical domains, hoping to find there the “same good fortune.” Unfortunately, this has not happened, and Kant was right.

<sup>31</sup>Ibid., 591, B763.

<sup>32</sup>Ibid., 585, B755.

<sup>33</sup>Ibid., 576, B740.