



<https://doi.org/10.22363/2313-2302-2025-29-1-105-118>

EDN: FIUCPB


Research Article / Научная статья

## Critique and System: Early and Late Natorp's Philosophy

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**Abstract.** This paper presents an interpretation of the connection between Natorp's early and late philosophy. An analysis of two versions of Natorp's deduction of categories shows the consistent development of Natorp's thought. Each deduction expresses, in Natorp's words, a direction of movement between the centre and the periphery. The early deduction moves from the periphery to the centre by means of the transcendental method. The critical investigation of the conditions of possibility of mathematical-physical science reveals the structure of thought itself. The late deduction is oriented in the opposite direction, from the centre to the periphery. Thought now develops freely and establishes the systematic character of philosophy. We argue that the two deductions complement each other in a single coherent position that accounts for the relationship between critique and system. Philosophical systematics is conceived as the necessary sequel and culmination of an inquiry, the first part of which is developed according to the transcendental method.

**Keywords:** category, critique, Natorp, system

**Information about the conflict of interest.** The author declares that there is no conflict of interest.

**Funding of Sources.** The investigation is a part of the projects PIP CONICET 2021-2023 N°1740, UBACyT 20020220400204BA, PICT 2022-2022-10-00075 and FONDECYT Regular N° 1230072.

### Article history:

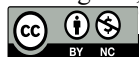
The article was submitted on 09.09.2024

The article was accepted on 15.12.2024

**For citation:** Pringe H. Critique and System: Early and Late Natorp's Philosophy. *RUDN Journal of Philosophy*. 2025;29(1):105–118. <https://doi.org/10.22363/2313-2302-2025-29-1-105-118>

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## Критика и система: ранняя и поздняя философия Наторпа

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**Аннотация.** В данной работе представлена интерпретация связи между ранней и поздней философией Наторпа. Анализ двух версий дедукции категорий Наторпа показывает последовательное развитие мысли Наторпа. Каждая дедукция выражает, по словам Наторпа, направление движения между центром и периферией. Ранняя дедукция движется от периферии к центру с помощью трансцендентального метода. Критическое исследование условий возможности физико-математической науки раскрывает структуру самой мысли. Поздняя дедукция направлена в противоположную сторону – от центра к периферии. Мысль теперь развивается свободно и устанавливает систематический характер философии. Мы утверждаем, что эти две дедукции дополняют друг друга в единой последовательной позиции, которая объясняет отношение между критикой и системой. Философская систематика мыслится как необходимое продолжение и кульминация исследования, первая часть которого развивается в соответствии с трансцендентальным методом.

**Ключевые слова:** категория, критика, Наторп, система

**Информация о конфликте интересов.** Автор заявляет об отсутствии конфликта интересов.

**Информация о финансировании.** Исследование является частью проектов PIP CONICET 2021-2023 N°1740, UBACyT 20020220400204BA, PICT 2022-2022-10-00075 and FONDECYT Regular N° 1230072.

### История статьи:

Статья поступила 09.09.2024

Статья принята к публикации 15.12.2024

**Для цитирования:** *Pringe H. Critique and System: Early and Late Natorp's Philosophy // Вестник Российского университета дружбы народов. Серия: Философия. 2025. Т. 29. № 1. С. 105–118. <https://doi.org/10.22363/2313-2302-2025-29-1-105-118>*

## Introduction

It is generally accepted that there are two successive phases in the development of Natorp's thought. The first period is characterized by the search for a logical foundation of exact sciences and an emphasis on the transcendental method as the key to philosophical inquiry. In a second stage, the late Natorp abandons this methodological perspective and openly criticizes some of his earlier views, to the point of adopting a position that seems to fall outside the boundaries of the neo-Kantian school of Marburg that Natorp himself, together with Hermann Cohen, had established.

The purpose of this paper is to present an interpretation of the relationship between these two phases, which we argue should be understood as different moments of a single argumentative piece. To this end, we will examine two versions of Natorp's deduction of categories in order to illustrate the articulation of the two periods of Natorp's philosophy. Firstly, we will consider *Die logischen Grundlagen der exakten Wissenschaften (LGeW)* and its deduction of the system of the fundamental logical functions. Secondly, we will turn to the *Philosophische Systematik (PS)* and the *Vorlesungen über praktische Philosophie (VP)* in order to discuss their system of fundamental categories. We will argue that while the investigation carried out in the *LGeW* aims at revealing and identifying the main structure of objective thought, the *PS* and *VP* take this result as a point of departure for their own argumentation. In Natorp's late philosophy, the system of categories, established by the *LGeW* as the system of the conditions of possibility of the mathematical science of nature, is rather presented as the foundation of a philosophical systematics.

### 1. The early Natorp and the self-discovery of thought

Natorp considers himself a Kantian not in terms of the content of his philosophy, but rather in terms of the form of his philosophizing. Natorp emphasizes that he does not dogmatically accept any result of Kantian doctrine. He simply adopts the only true legacy of Kant: the philosophical method. This method is the transcendental method [1. S. 194]. According to the transcendental method, philosophy should take a certain *factum* as the starting point for the reflection and proceed to seek the possibility conditions of that fact. In the case of theoretical philosophy, the fact to be considered is experience. But experience is identified with physical-mathematical science. The task of transcendental philosophy, as a theory of experience, will be then to determine the conditions of possibility of the exact sciences.

In carrying out this task, Natorp departs from Kant's doctrine on two crucial points. Firstly, he rejects the distinction between sensibility and understanding as formulated by Kant. For Natorp, in line with Cohen, there are not two sources of knowledge, but only one: thought. Therefore, for Natorp, in contradistinction to Kant, intuition is not a factor of knowledge irreducible to thought but is itself thought. Now intuition is distinguished from concept in that concept is the mere thought of a law, while intuition is the complete thought of an object [1. S. 204]. To be given, i.e. to be intuited, means for Natorp to be completely and uniquely determined by thought. Therefore, intuition is nothing but the result of the full determining action of thought.

Secondly, for Natorp, thought is always thought of being or objective thought. Therefore, the identification of logical functions must be based on the factual knowledge of the sciences, without assuming a merely formal, pre-objective thought from which to make this identification. For this reason, the Kantian strategy

of taking the table of judgements provided by formal logic as a clue to the discovery of all pure concepts of understanding [2. A79= B104-105], is inadequate.<sup>1</sup>

In the *LGeW*, Natorp sets out to establish the logical foundation of the exact sciences according to the transcendental method, taking into account these two objections to Kant's doctrine. Natorp will try to show that the conditions of mathematics and mechanics (including relativistic mechanics) are to be found in the structure of thought itself, without any contribution from an alleged receptivity. These logical conditions of mathematical natural science will be expressed in the so-called system of fundamental logical functions.

The argument of the *LGeW* begins with a minimal notion of thought [*Denken*]. To think is to determine, and the original act of determining consists in separating and uniting. Contrary to the Kantian doctrine, according to which, on the one hand, what is to be determined is passively received as a multiplicity and, on the other hand, spontaneity brings about the determination by unifying that manifold, for Natorp multiplicity and unity are two correlative moments of a single act of determining. In other words, in the act of determining, the relata (that which is to be determined and the determination) do not precede their relation (the act of determining), but emerge from it. Natorp calls this logical structure of separating while uniting and uniting while separating *synthetic unity*.<sup>2</sup>

The investigation goes on to show how thought thus conceived is the condition of the possibility of mathematics and the mathematical science of nature. The crucial point is that thought is their *only* condition.

### 1.1. Quantity and quality

In thought as a synthetic unity, two directions can be distinguished: that of separation, or peripheral, and that of unification, or central. The first is directed towards the manifold and the second towards the unity. Natorp claims that magnitude [*Grösse*], as the universal object of mathematics, is based on this two-sided original logical process. While Kant considers magnitude to be the genus and extensive magnitude and intensive magnitude to be the species, Natorp argues that extension and intension are correlative, as are the two directions of the synthetic unity. The extensive is the extension of the intensive, while the intensive is the intension of the extensive. Accordingly, the syntheses of quantity and quality are presented as the correlative logical foundations of magnitude. Magnitude is the full interpenetration of both directions, which, as Natorp asserts, is carried out in

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<sup>1</sup> Rather, once the laws of objective thought have been established, these should be compared with the laws of formal logic in order to check that the latter corresponds to the former. In Cohenian terminology, the species of judgement should be derived from the species of pure knowledge [3. S. 14].

<sup>2</sup> Natorp argues that this characterization of thought is minimal, because one must presuppose it in order to question it [4. S. 52].

modern mathematics [3. S. 22]. The first direction is towards the manifold of the unity, the second towards the unity of the manifold.

But extension is the *ratio cognoscendi* of intension, while intension is the *ratio essendi* of extension. For this reason, in the *LGeW*, where the fundamental functions of thought are to be discovered, Natorp first analyses the synthesis of quantity.

In the quantitative synthesis, three moments can be distinguished. First, the position of the unity. Second, the position of a series as a manifold of unities. Third, the position of the manifold of unities as a totality. These moments are steps of a single process in which a manifold is posited by thought. The quantitative unity is the positing of the beginning of thought, the multiplicity the unlimited continuation of the process and the totality the conclusion at any given stage, which comprises that which has been gained up to that point, in order to proceed from it as a new beginning in progress to new stopping points, without limitations.

The logical process of quality has the opposite direction to that of quantity. In Natorp's terminology, while the logical process of quantity is directed towards the periphery, the logical process of quality is directed towards the centre. As with the synthesis of quantity, the synthesis of quality can be understood through the examination of three moments. Initially, Natorp considers the positing of the unity. This unity is not to be confused with a numerical unity, but the position of the qualitative unity is rather the position of the identical. Secondly, a manifold of qualitative determinacies is posited and, finally, the unity of this qualitative manifold is established. This third step is the positing of the *genus*.

The crucial difference between the logical processes of quality and quantity is that the quantitative whole is composed of antecedent parts. This whole is therefore compositive. On the contrary, the genus is comprehensive: it is logically prior to its species, which are rather derived from it. The universal is the primordial unity that produces plurality.

Natorp underlines that no numerical unity can be posited without identity and no quantitative manifold without qualitative difference, which in turn can only be conceived from the point of view of the genus. Accordingly, while the synthesis of quantity is the beginning of thought, the synthesis of quality is its origin: "Das Verhältnis zwischen Quantität und Qualität ist das von «Anfangen» und «Entspringen». Nur aus dem Ursprung begreift sich das Denken, aber anfangen kann es nur mit dem – Anfang, welcher der Primärbegriff der Quantität ist." [3. S. 20] „Das an sich Erste aber ist die Ursprungseinheit der dritten Qualitätsstufe; denn durchaus wird im Denken der Umfang der Betrachtung bestimmt durch den Inhalt, die Weite des Gesichtskreises durch die Höhe des Gesichtspunktes, nicht umgekehrt.“ [5. S. 64].

This difference between quality and quantity is expressed by Leibniz and Kant as the difference between the intensive magnitude, in which the qualitative unity of the law is conceived as the source from which the multiplicity of quantitative values first emerges, and the extensive magnitude, which arises merely through the reproduction of a unity that is in itself indeterminate and merely quantitatively conceived. Accordingly, for Natorp, Leibniz and Kant rightly regarded the intensive

magnitude as the foundation of the extensive, just as the unity of synthesis is the logical foundation of the unification of the manifold in thought, or just as the intension of a concept determines its extension. This doctrine of intensive and extensive magnitudes thus confirms Natorp's interpretation of the qualitative unity of the universal as the unity of origin [4. S. 24]. Through this logical priority of quality over quantity, the synthesis of quality enables thought to discover its own activity and its own origin as spontaneity: „Der Stufengang der qualitativen Synthesis selbst [...] darf verstanden werden als der jenen Entwicklung, in der das Denken sich selbst, seinen eigenen Ursprung erst entdeckt.“ [5. S. 60].<sup>3</sup>

Quantity and quality are the determinations that allow magnitude to be founded on mere thought. Magnitude, as an object of thought, finds its logical foundation even as a variable magnitude, for such is the magnitude that is continuously generated from the qualitative unity, as we have seen. However, as Natorp emphasizes, quantity and quality are not yet sufficient to ground scientific experience merely on thought, for they are insufficient to ground on pure thought the scientific knowledge of what is *effectively real*. According to Kant's doctrine, thought reaches that which is actual through the contribution of a non-logical element: sensation. On the contrary, it is the task of the logical foundation of the exact sciences to show that the physical object, as an *actual* object and not merely according to its mathematical determinations, finds its foundation in pure spontaneity, without any receptivity.

To this end, we must remember that Natorp distinguishes between concept and intuition as thought of the law and thought of the object. Intuition is nothing but the result of the full determining action of thought. This *complete* determination of the object by means of mere concepts is the complete determination by means of laws and is thus achieved by positing an integral *system* of laws or dynamic connections.

### 1.2. Relation

The quantitative-qualitative syntheses result in a multiplicity of series of magnitudes that are to be brought into a system. This is achieved when the order of each individual series, which in itself is possible in many ways, is determined by a lawful relation to all parallel series. That is, the order in each individual series becomes determinable by being bound to the condition of an integral reciprocal connection. The method of relation provides the means by which this demand can be fulfilled [5. S. 68].

Relational synthesis is a synthesis of syntheses. The synthesis of relation is a second-order synthesis that builds on the first-order quantitative-qualitative synthesis of magnitude. The logical process of relation is divided into three stages, like those of quantity and quality. The first requirement for the order of series is a fixed measure series as the basis for the whole order. Just as in quantity the first requirement is numerical unity as a quantitative foundation and thus as a means of

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<sup>3</sup> For a discussion of the Cohenian background of this claim, see [6].

determining or measuring multiplicity, and in quality identity as a qualitative foundation and thus as a basis for comparing qualitative diversity, so the first requirement of the synthesis of relation is a basic series which serves as a common, homogeneous and constant measure for all orders. In other words, an identical system of positions or a scale is required in which the course of alterations is inscribed. Natorp claims that the principle of substance, as the old demand for a constant as the basis for determining any change, finds its clarified expression here. Natorp argues that this requirement is also the basis for the concepts of time and space, as well as for the positing of uniform linear motion as the ultimate measure of every change in nature.

Secondly, a law is required to order one series of alterations according to another series, i.e. the alteration from member to member in each series is determined according to that already established for a previous series. This means that in each individual series, each subsequent element can be determined by law from the preceding ones, in a continuous transition. The expression of this requirement, in terms of the lawfulness of the changes in succession, is the principle of causality.

Since this requirement applies equally to all parallel series of alterations, it leads, thirdly, to the further requirement of a continuous dynamic connection of these parallel series in an all-encompassing order of simultaneity. Natorp observes that the legal relation of series to series would be insufficiently grounded, if the requirement of legal correspondence from member to member were extended only to a mere arbitrary set and not to the totality of parallel series of alterations, grounded in a common and fundamental relation. Indeed, as Natorp points out, in that case even this fundamental series itself, and with it any order that presupposes it, would be arbitrarily posited. Thus the first and second conditions are only satisfied if the third is also satisfied: that the lawfulness of alteration in each individual series is conceived as determined by a lawful reciprocal relation to all parallel series of alterations. This requirement is, therefore, that of a continuous reciprocal functional connection or system of alterations, which corresponds to the Kantian principle of simultaneity according to the law of interaction [7. S. 25–28].

### ***1.3. Modality***

As is well known, the Kantian categories of modality do not provide any new determinations of the object other than those of quantity, quality, and relation. Rather, these categories only concern the relation of the object to the faculty of cognition. Natorp claims that Kant's "crucial discovery" is that modality therefore expresses nothing more than the structure of the cognition process itself [5. S. 86].

Since the object is built up by the synthetic process in cognition, the stages of this process must correspond to just as many stages of cognition of the object. These are the modal stages of object cognition. We have seen that the synthetic process takes place in its three basic directions in an identical sequence of stages. The first one was an arbitrary first approach, necessary for the initiation of the process. The

object is posited as numerical, qualitative and substantial unity. This corresponds to the first modality stage: possibility. Possibility means the positing that it is so, which is necessary for knowledge to begin at all, but which must prove itself in the execution of the process.

The second stage is the very realization of the process. In quantity, this is the stage of positing a manifold. In quality, that of comparison. In relation, the pursuit of causal relations among alteration series. Natorp argues that this progressive determination of the indeterminate is the proof of the existence of that which was first posited as merely possible. It is the determination of the still undetermined that must be added for the possible to become actual (the *complementum possibilitatis*).<sup>4</sup> For this reason, actuality is never given [*gegeben*], but is an eternal task [*Aufgabe*], which can only receive relative solutions in experience [5. S. 94].

Finally, the third moment in every kind of synthesis is the provisional conclusion of the procedure at a certain stage, which, however, only prepares the renewal of the same procedure at a higher stage. In quantity, this is the closed manifold; in quality, the determinate differentiation under the genus; in relation, the simultaneous connection as a provisional systematic interconnection of the causal series established up to that point. This corresponds to necessity, understood as the foundation of what exists in law. If induction leads to the law as a general expression of a closed set of facts, deduction derives the facts from the law and thus determines them as not only actual but necessary.

The analysis of modality synthesis leads to two fundamental results that are closely related. On the one hand, the reduction of the object to the constituent functions of thought is finally completed. For Kant, the possibility of an object depends on its agreement with the formal conditions of experience, while the existence of the object depends on its agreement with the material conditions of experience, i.e. with sensation. Therefore, for Kant the existence of the object is conditioned by a non-logical element, which can only be received by sensibility in perception and cannot be produced by the spontaneity of thought.<sup>5</sup> By contrast, for Natorp, to be given in perception signifies nothing but to be completely determined by the synthetic processes described above. Thus, it is not perception that provides the definite connection of the logical determinations by which the object is determined, but it is rather the connection of the logical determinations by which the object is determined that first gives perception a definite content. Perception only denotes a certain stage in a constantly progressing connection of thought determinations [7. S. 29]. Thus thought no longer depends on the contribution of a source irreducible to it for the knowledge of what exists, as is the case in Kantian doctrine, but, for Natorp, thought alone can found the object as actual. Existence is “complete objectivity” [*volle Gegenständlichkeit*] [5. S. 83], i.e. the consummation of the objective synthesis of thought. For this reason, Natorp claims that modality is precisely the sharp and conclusive expression of the ideality of the object [5. S. 84].

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<sup>4</sup> For critical observations on this point, see [8. S. 164].

<sup>5</sup> See [9].



On the other hand, the logical investigation of the exact sciences turned out to be the "clue to the discovery" of all transcendental syntheses and the structure of the process of cognition. Thought as a synthetic process is revealed in the analysis of the logical conditions of the object of mathematics and mathematical science of nature. Natorp argues that mathematical thought is not merely methodical thought, i.e. thought that develops according to the procedures described above, but is *the* pure methodical thought. Mathematical thought is nothing but the universal [*allseitig*] development of the pure procedures of thought [3. S. 29]. For this reason, the analysis of the complete development of mathematical cognition, i.e. that of the object of mathematical natural science as an *actual* object, reveals the full structure of spontaneity. The transcendental method is nothing but the self-discovery of *logos*.

In this analytic path of self-discovery, the process of thought has been progressively presented in terms of the syntheses of quantity, quality and relation.<sup>6</sup> Finally, the underlying structure of all these syntheses has been shown in the three moments of modality. Once this primordial act of thought has been discovered, the path can be taken in the opposite direction, going through each stage in reverse order: "Wollte man einen solchen analytischen Gang durchaus umgehen, so dürfte man überhaupt weder von der Quantität noch von der Qualität beginnen sondern allermindestens von der Relation, noch richtiger von der Modalität; ja es müsste von dem letzten Zentrum ausgegangen werden, in welchem auch das Logische noch ungeschieden eins ist mit dem Ethischen, die Kategorie oder der Grundsatz (Kants) mit der Idee." [11. S. 45].

From this ultimate center discovered by the transcendental method, the investigation will no longer proceed to the development of a logical foundation of the exact sciences, but to the establishment of the systematics of philosophy.<sup>7</sup> Let us now turn to this problem, and with it to the discussion of Natorp's late philosophy.

## 2. The late Natorp and the self-development of thought

The transcendental analysis of the physical-mathematical sciences showed thought as the only foundation and origin of being. More precisely, being and thought were presented in full correlation: being is only being for thought, while thought is always thought of being. Thus, an ultimate result is reached, which Natorp describes with the expression "It is" [Es ist].<sup>8</sup> Natorp is thereby referring to the point of origin at which thought and being coincide:<sup>9</sup> „So aber ist in diesem

<sup>6</sup> Pelegrín sees a synthetic aspect of the method in this progression [10].

<sup>7</sup> Marx overlooks this connection between Natorp's early and late philosophy in [12].

<sup>8</sup> „Das schlechthin Erste kann ja nur im Rückgang vom nicht schlechthin Ersten, der „Reflexion“ (d.h. dem vom Nichtursprünglichen zum Ursprung Zurückgewandten Blick), sich darstellen.“ [13. S. 33].

<sup>9</sup> Dufour contrasts the early problem of the thought of being ("pensée de l'être") with the late problem of the being of thought ("être de la pensée") [14. P. 206ff].

Nullpunkt alles mitgesetzt: Sein und Denken, Sein als Denk-Sein, Denken als Sein-Denken, das „Es ist“ und das „Es wird“, es ist im Werden und es wird im Sein.“ [13. S. 32].

This point zero is a singularity. Natorp calls it a *wonder*: „das Wunder aller Wunder, das Wunder, dass überhaupt etwas „ist.““ [13. S. 22].

In Hegelian terms, Natorp's "It is" means "being, pure being, without further determination." [13. S. 57].<sup>10</sup> It is the "Daß" that logically precedes any "Was". The indeterminacy of this point, however, contains the pre-determinacy of the upcoming determinations, which are necessary because the stadium of the not-yet-determined must be overcome [13. S. 35]. The origin is understood as the  $\pm 0$ , the beginning that contains the directions of its unfolding. This singular point is the beginning of the development of thought.

From this zero point, Natorp aims to establish a system of fundamental categories that describes the way in which thought develops and produces the spiritual, going beyond the foundations of the exact sciences towards a philosophy of culture. This system of *fundamental* categories corresponds to the system of the fundamental questions of philosophy.<sup>11</sup> Natorp sharply distinguishes it from the system of categories *in general* [13. S. 16]. While the former is closed, the latter is open, because it concerns the answers to these questions, which, precisely because of the structure of thought, are never final.

Whereas in the logic of the exact sciences the system of the fundamental logical functions is obtained from the conditions of the possibility of mathematics and mathematical physics, the system of the fundamental categories of philosophical systematics is developed *categorically*. The analytic approach, i.e. the approach starting from the periphery and going back to the centre, is replaced by the description of the development from the centre to the periphery.<sup>12</sup> This leads to a new arrangement of the system of categories [13. S. 17].

The description now begins with the last stage of the analytical path: the categories of modality. These are the categories that rule the structure of the system of categories. We have already seen that modal categories were presented as the moments of the cognition process in scientific knowledge. Now they are understood as the moments of the development of *logos* from the singularity of the origin.

## 2.1. Modality

The beginning of the logical activity corresponds to the first modal category: possibility. The execution of this activity corresponds to the second modal category:

<sup>10</sup> Cramer criticizes this identification as a mere "façon de parler". He does not make any connection between the *result* of the periphery-centre oriented investigation and the *beginning* of the inverse inquiry. See [15. S. 322].

<sup>11</sup> The system of the fundamental philosophical questions is the philosophical systematics.

<sup>12</sup> „Auch das ist keine wirkliche Abweichung, daß bei Kant die Modalität am Ende der Kategorientafel zu stehen kommt, bei uns dagegen am Anfang. Kants Gang der Darlegung ist, wie er selbst hervorhebt, analytisch, d. h. von der Peripherie zum Zentrum erst zurückgehend, während wir vom Zentrum aus die Entwicklung zur Peripherie hin beschreiben wollen.“ [16. S. 46].

necessity. Finally, the accomplishment of the task of *logos* corresponds to the third modal category: actuality. Thus, while the first modal category is possibility, the second one is no longer actuality, but necessity [13. S. 111]. Natorp describes the first moment as that of the “Let there be!” [Es werde!] [16. S. 43], which opens the process of becoming. The second moment is that of progress, which is *directed* progress because only that becomes for which the possibility has been given beforehand. This direction has at the same time the strict sense of the determinacy of the sequence of what precedes and follows, in what it is called the logical before and after. Thus it has the sense of necessity. The third moment is the emergence of what has become. This is the moment of actuality. Actuality is the highest “Seinswert” [13. S. 112]. Possibility and necessity are only possibility and necessity of the actual. Actuality is the first foundation of all necessity and possibility. Actuality is pre-formed in possibility, eternally aspired to in necessity, but never reached by it. Natorp emphasizes that the actual, or that which is “woven together from the individual threads”, carries within itself the creative power of weaving. It creates and is not merely created. The actual is *natura naturans* and not just *natura naturata* [16. S. 44]. The process ruled by the categories of modality is therefore endless.

## 2.2. Relation

The categories of modality are the first categories, but they only open the system. They provide the law for its development, but do not carry it out. As Natorp puts it, legislative and executive power must also be distinguished in logic [16. S. 45]. Legislation, as the determination of the *modus* or *how*, is the task of the categories of modality, while execution is rather the task of the categories of relation. They bring to implementation what modality only expressed as a demand and preliminary sketch. Modality brings logical movement to definition. In this respect it remains static, in the sense of providing the static preconditions for the required dynamics. The progress from modality to relation is therefore analogous to that from possibility to necessity; the first two orders of categories correspond to each other in the same way as the first two phases of each of them.<sup>13</sup>

If modality achieves the foundation of legality in general, then the question arises as to the foundation of determinate laws, for these are the means for the execution of the demands made by modality. The first condition for the necessary determinacy of the law is the determinacy of that to which it applies. This is what the ancient philosophical concept of substance, the Aristotelian ‘underlying’, means. Substance is thus the first category of relation. Substance responds to the requirement of determinacy of the bearer of the law, so that the law itself may be determined and not remain stuck in the indeterminacy of mere legality in general [16. S. 54]. At the level of relation, it plays the same role as possibility at the level of modality.

<sup>13</sup> Natorp talks now about “Phase” and no longer about “Stufe” or “Stadium” [13. S. 80].

The second category of relation is causation, which corresponds to the modal category of necessity [16. S. 56] and [13. S. 211]. The second phase of relation is the second condition for the necessary determinacy of the law. Legality, as demanded by modality, is executed by means of *causal* laws. This second condition is intimately related to the third one, because for Natorp the possibility of establishing determinate causal laws requires the construction of their total system. Only the infinitely determined is factually determined [16. S. 58]. The *determinate* character of causal laws is only achieved in the consideration of their “boundless relativity” to every other law, just as natural science sets itself the task of tracing the individual causal connections back to the energy exchange in an integrally connected mechanical universe [16. S. 57]. This corresponds to the category of interaction, the third category of relation. In it, the mere *Unendlichkeit* of the second phase deepens into *Überendlichkeit*, and the actual character of relation is completed [16. S. 59].

Just as actuality is the first foundation of all necessity, only the dynamical system, that makes causal laws possible, has full actuality. The unconditional unconditionally precedes everything conditional. Thus also the interaction precedes the merely linear conditionality of causation [16. S. 60].

### 2.3. Individuation

While the second phase of modality, i.e. necessity, corresponds to the categories of relation, the third phase, i.e. actuality, corresponds to the last group of fundamental categories, which Natorp calls categories of *individuation*. These fulfil the last requirement expressed by the categories of modality and reach the singular.

According to the Kantian doctrine, the task accomplished by the categories of individuation can only be performed by intuition. If we consider the application of the Kantian categories of quantity and quality to the sensible manifold, extensive magnitudes correspond to the pure form of intuition, while intensive magnitudes correspond to the matter of intuition, insofar as this can be cognized a priori. Sensation, on the other hand, must be given a posteriori.

As we have said, extension is the *ratio cognoscendi* of intension, while intension is the *ratio essendi* of extension. For this reason, on the analytic path of discovering the fundamental functions of thought, or as Natorp puts it, on the path from the periphery to the centre, quantity was analyzed first. On the contrary, in the present course from the centre to the periphery, Natorp begins with quality. Natorp claims that the first phase of individuation corresponds to Kantian quality, while the second phase corresponds to quantity. The two relate to each other as the possibility phase of individuation and the necessity phase of individuation, just as substance was the possibility phase of relation and causality was the necessity phase. Natorp argues that the two phases of individuation require a third which corresponds to actuality in modality and interaction in relation. Natorp calls this *position* or *location*. Position is not extension or intension, but *presence*. This is how spontaneity produces what, for Kant, can only be passively received. Only such

an act can achieve the full positivity of actuality and the concrete fulfilment of interaction. This third category completes individuation and the system of fundamental categories [16. S. 69].

## Conclusions

The analysis of two versions of Natorp's deduction of categories, an early and a late one, shows the consistent development of Natorp's philosophy. Each deduction expresses, in Natorp's words, a direction of movement between the centre and the periphery. The early view moves from the periphery to the centre by means of the transcendental method. The investigation of the conditions of possibility of mathematical-physical science reveals the structure of thought itself. The late view is oriented in the opposite direction, from the centre to the periphery. In this case, deduction proceeds according to the immanent legality of thought expressed by the categories of modality. Thought now develops freely and establishes the systematic character of philosophy. Just as Kant starts from the question of the possibility of mathematics and the natural sciences to determine the possibility of any a priori knowledge and, in particular, of metaphysical knowledge, Natorp uses the transcendental analysis of the exact sciences to reveal the structure of *logos* and to investigate the scope and limits of its possible development. In Hegelian terminology, the inquiry of the early Natorp can be said to have a phenomenological character,<sup>14</sup> in that it is the "ladder" that leads us to absolute knowledge. The late Natorp, on the other hand, starting from this result, which precedes any distinction between subject and object,<sup>15</sup> develops the system of categories categorically, thus presenting a neo-Kantian counterpart of a science of logic. Philosophical systematics is conceived as the necessary sequel and culmination of an inquiry, the first part of which is developed according to the transcendental method<sup>16</sup>: „Dies alles wird freilich von vielen heute beanstandet werden als metaphysische Anmaßung. Man meint dann uns zurückweisen zu müssen auf den Grundsatz der „Erkenntniskritik“. Wir behaupten vielmehr: nur so wird der Forderung der Kritik wirklich genügt.“ [13. S. 44].

In summary, critique and system are brought together as two sides of the same coin: „Nur damit wird der Kritizismus radikal und total und überwindet allen Schein des bloßen In-Frage-Stellens, geschweige Verneinens. Nur damit wird die Philosophie systematisch, eben indem sie kritisch, radikal kritisch wird, und kritisch, indem sie systematisch wird; System, aber System der Kritik; Kritik nicht bloß *am* System (als gäbe es das erst einmal vor ihr, ohne sie), sondern Kritik selbst *als* System, als *das* System.“ [13. S. 46].

<sup>14</sup> Sijmons overlooks this point in [17].

<sup>15</sup> On this issue, see [18. S. 207ff]. See also [19].

<sup>16</sup> On the contrary, Wetz and Heintel argue that Natorp's late philosophy overcomes Marburg neo-Kantianism. See [20; 21].

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