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KANT AND MEINONG ON THE METHOD OF MATHEMATICS

The author deals with Alexius Meinong's early writing „Kant's Analytic Judgments And The Doctrine Of Universal Concepts" (1875/6). Kant as well as Meinong discuss synthetic and analytic judgments. Both remain exposed to the accusation of maintaining a psychologistic procedure to attain their results. They remain thus only precursors of a semantically transformed Theory of Knowledge.

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"Non in intellectu sit, quod
non antea in sensu fuerat."

It has been emphasized many times that, when seen from the standpoint of their own scientific philosophy, Alexius Meinong and other members of the Brentano-School did not want to be associated with the Critical Philosophy of Immanuel Kant. In his recently published Graz dissertation about "Judgments And States Of Affairs" (published in Munich, Germany, 2009), Dr. Alessandro Salice repeatedly talked about the programmatic "radical Antikantianism" that we can find in professor Meinong's writings.[2]

It must be mentioned, however, that the early Meinong composed a little work after his study of the writings of the world-famous 18th-century Koenigsberg philosophy professor. The little *opus* which deals with the Critical Philosophy is entitled "Kant's Analytic Judgments And The Doctrine Of Universal Concepts".[3] This work was probably written in the year 1875 or 1876.[4] It provides a basis and the philosophical topics that proved to be crucial for the intellectual development of the founder of the Graz School. In spite of his strategy to commit himself to an explicitly scientific "Object Theory" (the German original of the programmatic work is: "Über Gegenstandstheorie", edited by Ambrosius Barth, Leipzig, in 1904), the founder and Graz university professor Meinong remained inescapably caught up in a philosophy dealing with cognitive functions alone. His views are thus throughout exposed to the threat of psychologism, as I will show in this short essay. Although his important successes as scientific philosopher more than hundred years ago are out of question, he is merely a milestone in the development leading to a new age, he only anticipated the age of a semantically transformed Theory of Knowledge.

(1) Synthetic judgments in Kant's Critical Philosophy:

(1.1) Mathematical judgments are synthetic judgments:

We can anticipate the development of Meinong's early thought when we review the discussion about how to conceptualize mathematical objects. This can be done in delineating the Kantian understanding of mathematics. Already in the introduction to his *Critique of Pure Reason*, the professor from Koenigsberg said:

> "Mathematical judgements are always synthetical. Hitherto this fact, though incontestably true and very important in its consequences, seems to have escaped the analysts of the human mind, nay, to be in complete opposition to all their conjectures. [...] We might, indeed at first suppose that the proposition 7 + 5 = 12 is a merely analytical proposition, following (according to the principle of contradiction) from the conception of a sum of seven and five. But if we regard it more narrowly, we find that our conception of the sum of seven and five contains nothing more than the uniting of both sums into one, whereby it cannot at all be cogitated what this single number is which embraces both. The conception of twelve is by no means obtained by merely cogitating the union of seven and five; and we may analyse our conception of such a possible sum as long as we will, still we shall never discover in it the notion of twelve." (I. Kant, CPR, B 14)

Let us remember that already Plato reminded us that mathematical knowledge is nothing more than a revocation of things that we already knew before. The *locus classicus* is Plato's dialogue *Meno* (80d - 85e). And also for Kant's transcendental criticism of knowledge exemplified in his *Critique of Pure Reason*, we don't have to deal with the attainment of empirical knowledge but with what we can know without experience,i.e. *a priori*, about the human cognition of the world as such. In the introduction to the first edition of his critical masterpiece he said: "I apply the term transcendental to all knowledge which is not so much occupied with objects as with the mode of our cognition of these objects, so far as this mode of cognition is possible a priori" (I. Kant, CPR, A 11f).

According to Kant, synthetic judgments *a priori* are widely used because it lies in the nature of our understanding to think and connect or combine various concepts which are not already contained in the preceeding concepts. The importance of synthetic activity of thought is something that is not contested - even not by Meinong.

In recent years, Beatrice Longuenesse repeatedly drew our attention to the fruitfulness of the Kantian conception of synthetic cognition. Longuenesse emphasizes that there is a clear distinction to be made between, on the one hand, the moderate Kantian conception of the affection of sensibility by spontaneity and, on the other hand, the far too idealist conception of the constitution of sensibility by means of spontaneity. According to her 2005 book *Kant on the Human Standpoint*, the founder of transcendental philosophy was right in proclaiming an unbridgeable gap between receptivity and spontaneity, and in her view he was also right in saying that the imagination cannot be the common ground of both, sensibility and understanding.[5]

Synthetic activity presupposes ontologically the material of the synthesis as something "given". In judging synthetically *a priori*, intuition must come to the aid of judgment – the famous Koenigsberg professor speaks about an intuition which is independent from the conscious process of judgmental cognition. In his critical *opus* entitled *Critique of Pure Reason* Kant says:

> "[J]ust as little is any principle of pure geometry analytical. That a straight line between two points is the shortest, is a synthetical proposition. For my conception of straight contains no notion of quantity, but is merely qualitative. The conception of the shortest is therefore [...] wholly an addition, and by no analysis can it be extracted from our conception of a straight line. Intuition must therefore here lend its aid, by means of which, and thus only, our synthesis is possible." (I. Kant, CPR, B 16)

In the theory of judgment merely synthetic judgments are not sufficient because the matter of scientific research remains transcendent for our consciousness. Objecthood cannot be adequately conceptioned or explained with recourse to intuition alone. Synthesis as an

achievement is being devaluated here to a certain degree. Nevertheless, Kant's understanding of synthesis is a viable conception: the being of the matter of cognition is independent from what the process of cognition does with it - objects as ontological entities ("das Ding an sich") cannot be reflectively reached or comprehended. A material ontology of objects is always presupposed as something "given" to consciousness.[6] But then again the type "analytic judgment" (the second type of judgment besides synthetic ones) becomes more interesting again.

(1.2) Analytic judgments imply ontological commitments (Meinong's criticism of Kant):

Alexius Meinong makes a particularly clear distinction between analytic and synthetic judgments, as a mutually exclusive dichotomy. In doing so, he distances himself from synthetic judgments because they can be reduced to cognitive functions and do not refer to the independent object of judgment. Nevertheless, unavoidably a devaluation of analyticity takes place when it comes to mathematical schemata: Meinong agrees with Kant that in mathematical operations we cannot merely speak of an *analysis* of the "given" concepts. But the Graz professor criticized how Kant said and elaborated that.[7] The ontological "givens" for a consciousness must be taken into consideration more seriously in making the analytic-synthetic distinction because else, Meinong says, the conception of analytic judgment is "too narrow". The author of *Kant's Analytic Judgments And The Doctrine Of Universal Concepts* (Orig.: *Kants analytische Urteile und die Lehre von den Universalbegriffen*) thinks in the first place of the ontological commitment we automatically make in affirmative and negative judgments - i.e. judgments which are made on the basis of a *conviction* about a being which is "given" to us as the matter of cognition.

The underdetermination of our notion of analyticity of judgments must be recompensated with a broadened definition of analytic judgments. We can note, Meinong says, that "[...] all knowledge about *relations between representations* can be summarized as something analytic (my translation)."[8]

(1.3) Meinong's possibilism can be understood on the basis of the improved status he ascribes to analytic judgments:

Possibility meaning "possibly being the case" is a mode of being specific to objects of the new Object Theory which was developed and published after 1903. In this theory also impossible objects (like the Meinongian objects of a golden mountain or the round square) find a place because they do not have to exist and are only representations we have. Or better expressed, they find a place because they are not factual but logical entities. Synthetic cognitive functions cannot decide over the existence of objects. Functions of consciousness are certainly not contents of a consciousness. They cannot decide on existence in the real world. The existential quantifier "There is ..." or "There are ..." quantifies only over things in the world. In turn, however, these things can become objects of judgments - but only as logical entities.

To the extent that mathematical objects have being, they cannot be constituted by functions of consciousness. As contents of a judgment, they do not have existence in the external world. So, non-existence is common to both, consciousness-dependent entities and mathematical entities. And this is so in spite of the fact that mathematical objects are not consciousness-dependent because they do not have the kind of being which our perceived entities in the external world possess.

The Meinongian possibilism of entities has been extended to extremes, like for example in David Lewis' Possible Worlds Semantics.[9] Accordingly, Edward Zalta and Bernard Linsky noted many years ago that the Meinongian idea of possible worlds was extended illegitimately in Lewis' work. This has been done through the assumption that even possible worlds are real (in a view called "modal realism"). Back then the discussion was about the "needlessly big ontology" of David Lewis.[10]

(2) The nature of objects in Object Theory:

(2.1) "Schematized reality":

The objects of mathematics don't have being, as the founder of the Graz School says in his 1907 treatise *About The Place Of Object Theory In The System Of The Sciences* (Orig.: *Über die Stellung der Gegenstandstheorie im System der Wissenschaften*) in a passage of the *Comprehensive Edition* (GA, Supplementary Volume) on page 41. They are no material substances but only a "[...] schematized reality, a kind of ideal which nature only to some degree approaches (my translation)." Their special structure is a being-so, a merely conceptional being (Orig.: "Außersein"), as Meinong says. In *The Theory of Objects*, the geometrical figures are the reason for starting the discussion about the nature of the entities which come to our knowledge. Rather than the starting point of a categorization of epistemic subject matters, the general idea of our access to the entities which are objects of knowledge is in question, now. Formal objects are the material. Following the text, the introduction of general Object Theory in the discussion is a consequence of the achievements we have gained from the specialized Theory, which comprises geometry and arithmetics:

> "We have referred above to the fact that specialized (in a certain sense the most specialized) theory of Objects [sic!] has found in mathematics the most splendid representation that could be desired. This luster has long led to efforts to make the procedure, *more mathematico*, accessible to other sciences – I might say, other domains of Objects. We shall scarcely be tripped up by any significant error if we add: whenever such attempts have been undertaken, then to that extent an effort has been made also to do the task of specialized theory of Objects [sic!] in areas outside of mathematics."[11]

Already in 1904, in *The Theory of Objects*, Meinong proceeds from representations, especially of geometrical entities, like circles and triangles, to the extent that they are grasped by our minds. Because metaphysics deals not only with physical but also with psychological facts, metaphysics would stand close to the newly developed discipline. A specific property of the new theory would be its purely "aprioristic character", the founder said.

(2.2) In spite of all this, the founder of the Graz School as well as Kant himself cannot escape the accusation of psychologism:

The consciousness of the epistemic subject as the unreachable starting point is always intentionally directed towards the thing known. The Kantian heritage in the emphasis of the epistemic subject is recognizable and cannot be further reduced or eliminated. The analysis always starts with the own consciousness of the transcendent and unreachable objects of

knowing. Reinhard Kamitz talked in the context of the founder of the Graz School about a *psychological theory of meaning*.

(3) The abandonment of the Kantian position of the dependence of all knowledge on consciousness through the new externalism of a semantically transformed Theory of Knowledge:

It has become clear that the scientifically oriented Graz professor shared quite much with transcendental philosophy, more precisely both share the epistemic problem of an uncontrolled mixing and confusing of internal (Cartesian and tendentially psychologizing) and external criteria of knowing in the search for the ultimate foundations of knowledge.

Only a radical epistemic externalism which can be found in the ontology of language rules as something ultimately "given" can solve the problem common to both. The new insight is that objects which transcend consciousness get determined through mind-independent rules of language use rather than through the functions of a synthesizing activity. And here also lies the difference between dealing with knowledge (incl. processes of knowing) and dealing with truth.[12] Only truth refers to objective reality, as was delineated in the late *Fourth Colloquium About The Theory of Knowledge* in the supplementary volume of the *Comprehensive Edition* of Meinong's works:

> "Then it has become clear that truth is primary when compared to knowledge acquisition, because although truth is a less determinate *Erlebnis*, it still is coined by the relation to an inherent value it possesses. Knowledge has value because it is a true judgment. But through inwardness an increase of value [...] is created (my translation)."[13]

The objectivization of the epistemically "given" happens through an encoding of objecthood in the language rule resp. syntax rule. This is so because syntax provides the order-mechanism of the sentences of the used language or theory, it is an ordering mechanism of the language which describes reality as something that is epistemically important to us – irrespective of the epistemic achievement of a judging epistemic agent. The object of knowledge thus becomes independent from the individual bearer of knowledge – independent from the epistemic agent. Language rules turn out to be mind-independent entities which can be known. The guarantor of objectivity of human reality remains doubtlessly God, but we can mentally grasp only the used descriptive language through decoding and understanding the syntax of the texts resp. understanding the logical syntax of scientific theories as they unfold their structure. With this move, the highly problematic epistemologically relevant distinction made in modern philosophy, the distinction between primary and secondary qualities, had become obsolete for all thinkable classes of objects of knowledge (Recall that the British Empiricist John Locke introduced primary qualities as qualities inherent in the material substances themselves, e.g. mass or hardness of a body – a conception which now had become irrelevant for the new paradigm of our mathematically exact knowledge).

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FOOTNOTES:

[1] Many thanks to the professors Frederick van de Pitte, Robert Burch and Alex Rueger from the University of Alberta for stimulating discussions about the philosophy of Immanuel Kant. This Research Paper also includes the results of the investigations in my dissertation about *Intersubjectivity Of Knowledge In Alexius Meinong And The Early Rudolf Carnap*, accomplished at the Karl-Franzens-University Graz (Diss. Graz, 2008), Department of Philosophy.

[2] A. Salice: 2005. *Judgments And States Of Affairs. A Comparison Between Alexius Meinong And Adolf Reinach.* Dissertation written in German at the Karl-Franzens-University Graz. Diss. Graz, 2005, 8 ff. (Later published with Philosophia Publishing, Munich, 2009).

[3] A. Meinong: : 1978. "Kant's Analytic Judgments And The Doctrine of Universal Concepts". In: *Comprehensive Edition. Supplementary Volume*, 1-17 (Orig.: "Kants analytische Urteile und die Lehre von den Universalbegriffen". In: *Gesamtausgabe. Ergänzungsband.* R. Kindinger, R. M. Chisholm [et al.] (eds). Graz: Akademische Druck- und Verlagsanstalt, 1-17).

[4] The years 1875 or 1876 are assumed to be the years in which the little work was composed. See: A. Meinong. *Comprehensive Edition* (Orig.: *Gesamtausgabe. Ergänzungsband*, X, 1, Graz: Akademische Druck- u. Verlagsanstalt 1968-1978).

[5] See the chapter "Synthesis and Givenness". In: B. Longuenesse: 2005. *Kant on the Human Standpoint.* Cambridge, UK: Cambridge University Press, 64-78. For the significance Kant attributes to the theory of judgment, see R Hanna: 2009: "But Kant's theory of judgment differs sharply from many other theories of judgment, both traditional and contemporary, in three ways: (1) by taking the capacity of judgment to be *the central cognitive faculty of the human mind*, (2) by insisting on the semantic, logical, psychological, epistemic, and *practical priority of the propositional content of a judgment*, and (3) by systematically embedding judgment within *the metaphysics of transcendental idealism.*" Entry: Kant's Theory of Judgment. In: *Stanford Encyclopedia of Philosophy.* Stanford, CA: Stanford University Press (http://plato.stanford.edu/entries/kant-judgment/).

[6] The difference between formal and material ontology (formal ontology consisting in "formal axiology", "formal logic" and "formal practice") is delineated very well in R. Corazzon: 2011. *Theory and History of Ontology from a Philosophical Perspective* (www.ontology.co).

[7] For Kant's additional use of intuition in order to aide mathematical (synthetic) judgments, see CPR, B 16.

[8] A. Meinong: 1978. "Kant's Analytic Judgments And The Doctrine of Universal Concepts". In: *Comprehensive Edition. Supplementary Volume*, 8 (Orig.: "Kants analytische Urteile und die Lehre von den Universalbegriffen". In: *Gesamtausgabe. Ergänzungsband.* R. Kindinger, R. M. Chisholm [et al.] (eds). Graz: Akademische Druck- und Verlagsanstalt, 8).

[9] D. Lewis: 1986. *On the Plurality of Worlds.* Part One. Kundli: Blackwell Publishing.

[10] B. Linsky and E. Zalta: 1991. "Is Lewis a Meinongian?" In: *Australasian Journal of Philosophy*, Vol. 69, 452. Less radical interpretations than Lewis' like e.g. the coherence of such entities like winged horses or round squares in other logical worlds different from ours (that is in w2, w3, ... etc.), has been discussed in Maria Reicher: 2010. "Nonexistent objects". In: *Stanford Encyclopedia of Philosophy.* Stanford, CA: Stanford University Press (http://plato.stanford.edu/entries/nonexistent-objects/) in section (5.1): The Other World Strategy.

[11] A. Meinong: 1960. "The Theory of Objects" (Translated by Isaak Levi, D.B. Terrell, and R.M. Chisholm). In: *Realism and the Background of Phenomenology.* Ed. by Roderick M. Chisholm. Glencoe, Ill.: Free Press, 101.

[12] A. Meinong: Index-Entry "Truth". In: "Index Of Logic And The Theory of Knowledge". *Comprehensive Edition. Supplementary Volume,* 120 (Orig.: "Wahrheit". In: 1978. "Sach-Index zur Logik und Erkenntnistheorie" (zusammengestellt 1888 - 1903). In: *Gesamtausgabe. Ergänzungsband.* R. Kindinger, R. M. Chisholm [et al.] (eds). Graz: Akademische Druck- und Verlagsanstalt, 120).

[13] A. Meinong: "Fourth Colloquium About The Theory of Knowledge". In: *Comprehensive Edition. Supplementary Volume*, 340 (Orig.: "Viertes Kolleg über Erkenntnistheorie". In: *Gesamtausgabe. Ergänzungsband.* R. Kindinger, R.M. Chisholm [et al.] (eds). Graz: Akademische Druck- und Verlagsanstalt, 340).