

FRANZ BRENTANO ABOUT CONTINUUM AS GENERATED BY INTUITION

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Abstract: The paper considers insufficiently investigated historical and philosophical aspects of the argumentation against the idea of building up of continuum from the perspective of discreteness, and especially Franz Brentano's conception of continuum, in the centrum of which is his view that continuum is generated by intuition. The aim of the investigation is to analyze the mature original Brentano's conception of continuum and to trace out the connection of his views with the views of other philosophical doctrines. The meaning of the theme is in the fact that Brentano is a predecessor of the contemporary phenomenology and analytic philosophy and that he has influenced the philosophical views of some mathematicians-philosophers such as Poincaré. That is why his views are a key for the understanding of contemporary ideas of continuum in these philosophical trends.

Key words: Brentano's philosophy, continuum, intuition, phenomenology, analytic philosophy.

1. Introduction

The theme of continuum and its philosophical dimensions has been repeatedly discussed in philosophical literature. Nevertheless, there are aspects that are not enough investigated and analyzed. One of them is the investigation of the origins of argumentation against the idea of substantiation of continuum from the perspective of discreteness. Some of the first mathematicians that object to the idea are Poincaré, Brouwer and Weyl, and some of the first philosophers – Franz Brentano and Charles Peirce. The topic of the present paper are the views of Brentano about continuum and especially his view that continuum is generated by intuition. The aim of the paper is to throw new light on the above pointed omission in the investigations, and to clarify the influence of Brentano on other contemporary thinkers and actual philosophical trends. It determines the tasks of, first, elucidating of those aspects of Brentano's philosophical views that are important for the understanding of his theory of continuum, second, analyzing in detail Brentano's theory of continuum as generated by intuition,

and third, tracing out the connection of Brentano's conception of continuum with the views of continuum in other philosophical trends. The structure of the paper is subordinated and corresponds namely to these tasks. The actuality of the aims and the tasks is conditioned by the fact that Brentano's ideas, on the one hand, precede some of the most important contemporary philosophical trends as phenomenology and analytic philosophy, and on the other hand, have influenced to some extent the philosophical views of mathematicians with inclination to philosophy such as Poincaré (who was inclined to some extent to phenomenology [Zahar, 2001]) that have investigated the problem of continuum, though he criticizes him for some of his other views.

2. Characteristic aspects of Brentano's philosophical views

In the epoch of Brentano (1838-1917) there is, on the one hand, a renaissance of Kant's philosophy in different forms of neo-Kantianism. However, neo-Kantians reject some important aspects of Kantian thought, and more especially, they are skeptical toward the doctrine of forms of intuition as pure forms (space and time). At the same time alternatives forms of geometry have appeared – first of all non-Euclidean geometry. On the other hand, that time is characterized also with a renaissance of Aristotelianism, and the basis has been laid to the modern investigation of Aristotle and together with this a renaissance of metaphysical investigations. These tendencies have influenced the molding of Brentano's views and he begins to be one of their ardent exponents in that epoch.

The historians of philosophy usually consider Brentano as exponent of the Aristotelian renaissance at the end of 19th century and as a predecessor of Husserl's phenomenology. Therefore, on the one hand, Brentano is a philosopher and metaphysician with a strong classical adjustment, and on the other hand, he is a descriptive philosopher and one of the predecessors of Gestalt psychology [Albertazzi, 2005: 1]. In his works Brentano combines Aristotelianism with scientific psychology. In many respects he analyses even problems that are at present in the focus of cognitive science and artificial intelligence: from the problem of reference to the problem of representation and from the problem of categorical classification to ontology and cognitive analysis of the natural language [Albertazzi, 2008: 372].

I shall outline several points that are important for the understanding of Brentano's doctrine of continuum. First of all it is Brentano's reism. The term itself is coined later and the essence of classical reism is that only things exist. The existence of any non-realities such as universals, categories, relations, etc. is rejected. Only substances, aggregates of substances, and parts of substances are accepted as existing. The last claim gives importance to mereology and in his last works Brentano differentiates three types of whole: the whole in collective sense, the whole as qualified substance, and the whole as continuum. For Brentano, however, not only bodies, but thoughts are also things. Another peculiarity of Brentano's views is the thesis that ontological suppositions are modelled onto linguistic ones, so the language is the source of the fallacies. Language operates with fictions and considers pseudo-objects as if they are objects. The most obvi-

ous example of language which uses fictions is mathematics. Here Brentano is a predecessor of the theories of the language of mathematics developed later in the frameworks of phenomenology by Poincaré and others [Libardi, 2005: 67-68].

Another important point for the understanding of Brentano's conception of continuum is that Brentano does not consider space and time as relations, but subordinates them to his category of absolute accidents. Let us remind that stressing the traditional difference between substance and accident, Brentano divides further accidents into absolute accidents and relations, and to the first ones belong inherence, movement and place [Brentano, 1975: 98-115] Concerning space he says: "The theory of space is the theory of bodies as existing in space, i.e. as localized and as extended. There are, without doubt, real determinations; for after all, what is not real does not exist in the proper sense. Another question is whether they are substantial determinations. Views are in this respect divided. Descartes saw in spatial extension the essence of corporeal substance. (...) Others have, unlike Descartes, denied that extension is a substantial determination..." [Brentano, 1988: 150].

To understand Brentano's theory of time, it is necessary to approach to it from the perspective of two of his most basic doctrines: the first is his reism, i.e. the doctrine that the only existing things in the proper sense of the word 'exist' are the individual things or concreta. The second is his doctrine that the only existing things are things that exist in the present time, i.e. that exist now. On the basis of the first doctrine we cannot say that in addition to the separate individual things there exists also time or space in which these individual things are. On the basis of the second doctrine we cannot say that things are extended in time in the sense in which we can say that they are extended in space. Because "now" is not extended in time, but exists only as a boundary between the past and the future [Körner et al., 1988: xx].

Brentano says "What is time? There is no other name that is more familiar to us, and none that is at the same time so obscure" [Brentano, 1988: 49]. And he continues a little bit further: "To believe that the Aristotelian definition gives us insight into the nature of time would be just as ridiculous as if someone were to say that the essence of warmth consists in the thermometer in so far as this provides the measure for the more and less of temperature" [Brentano, 1988: 50].

The so outlined main aspects of Brentano's philosophical views make it possible to understand his specific and original conception of continuum.

3. Franz Brentano's conception of continuum

3.1. Phenomenological description of continuum and directions of development

Brentano's metaphysics is closely connected with the elaboration of a new theory of continuum that in many respects paves a new way. The analysis of the concepts space and time and of the more general concept continuum occupies the bigger part of his life – from his early attempts to interpret Aristotle to the last years of his life. The investigator of Brentano's work John Bell is not right saying that Brentano begins to study the nature of continuity only in the last

years of his life [Bell, 2005: 202]. The more precise investigators of his life point that Brentano analyses the problem of continuum many times. His first theory of continuum is elaborated still in his research work qualifying for an academic rang in 1866; the second one can be found in his lecture notes in Vienna in 1890-91. The last works on that topic are dated in the last years of his life (1916-1917) [Librandi, 2005: 61]. In the present paper I refer namely to these most mature Brentano's views of continuum.

The starting point of Brentano's theory of continuum is intuition. His theory outlines what can be called "empirical geometry" of inner perception [Albertazzi, 2005: 234]. He says: "All our concepts are either taken immediately from an intuition or combined out of marks that are taken from intuition. It has lately been asserted that it is in this second way that we arrive at the concept of what is continuous" [Brentano, 1988: 1]. Next he adds: "Thus I affirm once more, and with still less contestability, that the concept of the continuous is acquired not through combinations of marks taken from different intuitions and experiences, but through abstraction from unitary intuitions. (...) I dare to assert and shall attempt to prove, it is much rather the case that every single one of our intuitions – both those of outer perception as also their accompaniments in inner perception, and therefore also those of memory – bring to appearance what is continuous" [Brentano, 1988: 6].

Brentano develops a phenomenological description of continuum from the perspective of experience, stemming from the Aristotelian explanation of continuum. For Brentano continuity is a phenomenon of perception and not mathematical construction; he even claims that mathematical and physical theories themselves are description of experience. The concept continuum is derivable through abstraction from any our intuition, because there is continuum both in inner and in outer perceptions.

At the end of the 19th and beginning of the 20th century the problem of continuum has been revived in the debate of the origins of geometry and the attempts for arithmetisation of continuum. At that time the problem attracts the attention of psychologists and philosophers, and Brentano is among them. The concept of dimension is interesting for thinkers combining geometry, physics of nature, experimental psychology and metaphysics; among them are the mathematicians Cantor, Riemann, Poincaré, Hilbert and the philosophers Lotze and Husserl. The theories of these listed thinkers do not always make a clear distinction between physical and perceived type of continuum and this is an ontological ambiguity that is characteristic of the discussions about continuum at that time. It is one of the problems in the centrum also of Brentano's investigations.

Brentano develops his theory of continuum in two directions: on the one hand, he reforms the Aristotelian theory, and on the other hand, he attempts to disprove the mathematical theories developed strictly at that time by Dedekind and Cantor. That is why for the correct understanding of Brentano's theory it has to be compared both with Aristotle's doctrine and with the classical mathematical theories of Cantor and Dedekind.

We can say in respect to the first direction that Brentano's conception of continuum is part of the neo-Aristotelian theory of physics developed in different forms by representatives mainly of German culture – Mach and Helmholtz

– that has generated phenomenological analysis and gestalt analysis of Husserl. All these authors substantiate continuum in the world of perception. Brentano's theory of continuum is similar to Aristotle's one in its approach: continuity is a phenomenon of perception, and is not a mathematical construction. Let me remind that according to Aristotle continuum cannot consist of points; any continuum can be infinitely divided into other continua, but not into discreteness (i.e. into parts that themselves cannot be further divided) [**Körner et al.**, 1988: ix].

The main metaphysical difference between Brentano and Aristotle is that according to Aristotle the parts of a whole are only potential and not actual things. And the main psychological difference is in Brentano's original theory of relations, in his view how to achieve the concept of continuum and in his conception of the relation between the continua and their boundaries. According to Aristotle, the whole is not actual, but only potential, while its parts are actual one. The whole has to be potential, so that its parts to be real [**Aristotle**, 2000, Book 7, 1039a 3-10]. According to Brentano, on the opposite, the whole can be real even if its parts are real. Brentano thinks that continuum consists of infinite sequence of continuous parts, but in contrast to Aristotle he thinks that the parts of a whole are real; thus the parts of continuum and its boundaries are themselves real [**Brentano**, 1977: 45].

As to the second direction of development, Brentano's analysis of continuum focuses on its phenomenological and qualitative aspects which in their essence are irreducible to the discrete. That is why Brentano's rejection of the attempts of mathematicians to build continuum in discrete terms is not a surprising one. Some mathematicians and philosophers raise objections against the idea of discretization or arithmetization of the linear continuum. Yet, a number of mathematicians use the idea of the discrete, so that to grasp continuum as an enough dense set of points, while Brentano rejects the idea that a true continuum can be entirely decomposed into an aggregate of discrete points independently on the fact how much they can be. Besides, one of the main Brentano's criticisms of mathematical theories of continuum at that time is that they reduce the extension of perceptive phenomena to quantitative metric extension and aim at building geometry from algebra.

Brentano fights with those mathematicians who want to reach to the concept of continuity not through abstraction of intuitions, but through induction. He points especially to Poincaré who follows the extreme empiricists in the field of sense psychology and that is why he does not believe that we have intuition of continuous space. Brentano's reproach for example to Poincaré is that the last one does not admit the possibility to have intuitions of continuum and especially of continuous time. Brentano considers critically the method of Poincaré for obtaining of continuum and points with satisfaction to the confession that the attempt to receive true continuum in such way has failed [**Brentano**, 1988: 39]. Stemming from the contemporary perspective of mathematics, Brentano's view of continuum also possesses deficiencies. For example, Brentano considers critically Poincaré's views of continuum expressed in *Science and Hypothesis*, and especially the ideas of different powers in continuum [**Brentano**, 1988: 2-4]. He says: "The idea of continua of various degrees of completeness seems also to be incompatible with the true solution to the problem of constructing the con-

tinuum” [Brentano, 1988: 3]. Nevertheless, his main merit is in the emphasis that continuum is generated by intuition.

Here are Brentano’s own words as a generalization of his analysis of mathematical constructions of continuum: “One sees that in this entire putative construction of the concept of what is continuous the goal has been entirely missed; for that which is above all else characteristic of a continuum, namely the idea of a boundary in the strict sense (to which belongs the possibility of a coincidence of boundaries), will be sought after entirely in vain. Thus also the attempt to have the concept of what is continuous spring forth out of the combination of individual marks distilled from intuition is to be rejected as entirely mistaken, and this implies further that what is continuous must be given to us in individual intuition and must therefore have been abstracted therefrom” [Brentano, 1988: 4-5]

Brentano rejects the concepts of an infinite whole and actual infinity and the idea that such whole can be “bigger” than another one. Therefore he does not admit the difference between density (possessed also by rational numbers) and continuity, difference that hardly can be called a phenomenological one. The thought of ordering of the infinite sets according their power is entirely alien to the phenomenological (according to Chisholm) approach of Brentano. On the other hand, the classical mathematical theory does not give description of what is given in perception [Körner et al., 1988: xi, xiii]. However, Brentano is inclined to accept, similarly to Aristotle, the idea of potential infinity and notes: “One could say that something continuous was present where a whole was given that could be thought of as divided not, certainly, into infinitely many parts, but still *in infinitum* into parts. ... Yet ... being continuous and being divisible *in infinitum* are concepts that do not coincide in their content” [Brentano, 1988: 5-6]. In any case, Brentano’s theory of continuum is closer to Brouwer’s one than to that of other mathematicians. There are no evidences if Brentano was known with Brouwer’s intuitionistic conception of continuum, however, Brouwer’s conception is closer to Aristotle’s one than to that of Cantor and Dedekind, because as I have pointed in another place “the success of Dedekind’s approach is a triumph of one of the forms of atomism” [Petrov, 1999: 114]. That similarity is an evidence for the insight and perspectiveness of Brentano’s theory of continuum.

Some of the investigators of Brentano such as John Bell think that Brentano accepts a vague attitude concerning the efforts of mathematicians to construct a continuum from numbers. His view varies from rejection of such attempts as non-adequate to ascribing them the status of fictions. It is not surprising in view of his Aristotelian inclination to consider mathematical and physical theories as true descriptions of empirical phenomena and not as idealizations [Bell, 2005: 206]. However, we shouldn’t forget the initial Brentano’s position – intuition. On the other hand, if Brentano is inclined to consider mathematical and physical theories as descriptions of experience and not as idealizations and if the theories are considered as descriptions, they could represent erroneously the empirical phenomena, as Brentano thinks in regard to Dedekind’s theory. According to Chisholm, if we accept the difference between mathematical and phenomenological conception of continuum, it will be clear that there is no conflict between the theories of descriptive psychology (in Brentano’s sense) and the theories of pure mathematics (in Dedekind’s sense) [Körner, 1988: xi-xii].

3.2. *Essence and characteristics of Brentano's theory of continuum*

Brentano thinks that the continuous is generated by the sense intuition in three phases: First, perception gives us objects with parts that coincide. Second, the concept of boundary is abstracted from such objects and then man grasps that these objects actually contain coincident boundaries. Finally, third, man understands that this is all necessary for the understanding the concept of continuum.

The main features of Brentano's continuum can be described in the following way: First, it is an intuitive concept; second, it relates to the appearances of the phenomenal world, i.e. to the contents of concrete actual presentations; third, it is characterized with direction, homogeneity and smoothness; and fourth, it is derived from experience or from characteristic notes drawn from perceptive experience and not from high-level mental operations that use abstract symbolizations. Let me explain especially Brentano's view of direction. Visualizing his view at the example of a straight and curved line, Brentano points that "a double continuity can be distinguished. The one presents itself in the totality of the differences of place that are given in the line... The other resides in the direction of the line, and is either constant or alternating, and may vary continuously or now more strongly, now less. It is constant in the case of the straight line, changing in the case of the broken line, and continuously varying in every line that is more or less curved" [Brentano, 1988: 21-22]. This explanation is given in more detailed form further in the text [Brentano, 1988: 184-185].

The individual characteristics of Brentano's continuum can be grouped as extension, plurality, boundary, plerosis, multiformity and teleiosis. I shall consider consecutively the essence of every one of these characteristics.

The extension is a characteristic of the actual perceptible phenomena; it refers to the structure and forms of filling up of presentations of sense modalities such as color, sound, quality of the perception of contact (touch, taste). Brentano says: "That which is continuous can be classified from a number of points of view. One of the most important is that according to which it is partitioned into what exists as a whole and what exists only in a boundary. A continuum of the first class is for example a body as spatially extended. A continuum of the second class, however, is everything that proceeds in time as such. We wish to refer to the one as *spatially*, to the other as *temporally* continuous. Each thing, in so far as it endures and remains for a period of time entirely unchanged ... appears as something temporally continuous" [Brentano, 1988: 78]. However, he adds: "It would, however, not be acceptable to designate time as fourth dimension of space – and already for this reason: that what is non-spatial, too, can be temporally determined" [Brentano, 1988: 187].

Further Brentano dwells on particularities of temporally continuous and on our presentation of it, as well as on the difference between spatial and temporal continuity: "That which is spatial and that which is assembled in a way comparable to spatial things, share in common with time and with that which is assembled in a way comparable to temporal things that they appear as continuous. In the former case, however, we have to do with continua that exist as whole, in the latter with continua that exist only in a boundary" [Brentano, 1988: 84]. In

another place of his work he also says: “That which is temporally continuous, in contrast, is never such as to exist except according to a mere boundary, although after what has been said earlier we must insist that even here the boundary according to which it exists does not itself exist in isolation from its continuum” [Brentano, 1988: 16].

Brentano classifies continua as primary and secondary. Primary continuum is that which changes independently on other continua and secondary continuum is that which changes on the basis of another continuum. In a sense time is primary continuum, as far as the perception of the area of space is present in time. Therefore, time is a continuous change. In occasion of the difference between primary and secondary continuum Brentano says: let us take something that exist in a long period of time. “Here there is to be distinguished the length of the time in which it exists and in virtue of which it appears as a primary continuum subject to a completely uniform change. (...) In regard to the change of place to which it is subject during this time it is also a continuum, but a secondary one, and here again on can distinguish a continuum in respect both of the variation in distance covered and of the variation in direction” [Brentano, 1988: 185].

For Brentano an essential feature of a continuum is its inherent capacity to generate boundaries and the fact that such boundaries can be grasped as coincident. In perception boundaries never exist isolated. In perceived reality there are no points, lines or surfaces as things in themselves isolated from the area and from the environment in which they are. The point is an inner boundary of a line; the line is an inner boundary of a surface; and the surface is an inner boundary of a solid body. Boundaries are non-independent parts or instances of continuum that contains only definite directions. For example, a straight line contains all points that in respect to a given point display a definite and constant direction and its opposite direction. If we reduce the extension of a given line, we receive point. Brentano says: “We can distinguish continua which exist only as boundary of some other continuous thing from those which belong as boundary to no other continuous thing. ... Boundaries, and among them also continuous boundaries, can be distinguished also however as inner and outer (...) for a boundary to exist it is required to belong to something continuous whose boundary it is, and to be connected with other boundaries of the same continuum. But it can nevertheless be the case that this connection should be missing on one or more sides. It suffices that it is not missing on the remaining sides” [Brentano, 1988: 10-11].

Boundaries themselves possess a quality which Brentano calls *plerosis*.¹ Plerosis is the measure of the number of directions in which a given boundary really bounds. For example, a boundary in temporal continuum can be a boun-

¹ From Greek $\pi \lambda \acute{\eta} \rho \omega \sigma \iota \varsigma$ – filling up, fullness, contents. The concept *plerosis* has a connection with the mathematical concept of neighbour and it is one of the most important concepts of Brentano’s synechology (theory of continuum) – the term ‘synechology’ suggests the presence of connection with Peirce’s synechism in the sense that both of them emphasize on continuity, not on discreteness.

dary only in one direction. In a temporal continuum the last instance of a past episode or the initial instance of a future episode bound in the only direction, and the instance marking the end of one episode and the beginning of another can be said that bounds double. However, the boundary of a space continuum is not limited in that respect to the number of directions in which it can be a boundary. In the case of space continuum there are many additional possibilities: here a boundary can bound in all directions in which it is capable to bound, or it can bound only in some of these directions. In the first case we say about the boundary that it exists in *full plerosis*, and in the second case – *in partial plerosis*.

Brentano thinks that the concept plerosis gives an opportunity to give a sense of the idea that a boundary possesses “parts”, even if the boundary has not at all dimensions as it is in the case of a point. So, though the present or “now” is according to Brentano temporally unextended and though it exists only as a boundary between the past and the future, yet it possesses two “parts” or aspects: it is at the same time the end of the past and the beginning of the future. Brentano claims that the existence in the strict sense means existence now; the existing things exist only as boundaries of that which has existed or which will existed or both.

The direction (plerosis) plays a main role in the phenomenal continua. The perceived continua display the direction as a property of boundaries, which depends on the continuum which the boundary in question bounds. According to Brentano there can be plerosis of the direction or there can be no such direction in which a boundary refers to a continuum. Bigger or smaller direction means that there are more or less directions in which a boundary refers to a continuum. The direction of continua coincides with “the freedom of movement” or the levels of freedom (a concept of analytic mechanics).

Further Brentano introduces a difference between continuously many in which the separation of one of its parts leaves the rest unchangeable, and continuously manifold whose parts does not have such autonomy. He says: “What is continuous can be sub-divided in yet another important respect into what is continuously *many* and what is continuously *manifold*” [Brentano, 1988: 32]. The first type refers to space, to extension, and the second one – to the inner time, it is indivisible and is composed of non-independent parts. Any inner perception of a sense object is a continuously manifold. An example of continuously manifold is that which appears from acts of presenting of perception: for example, two places that are not successive and are independent one on the other can be perceived together. An example for a temporal continuously many is a sequence of sounds in some succession, and an example of temporal continuously manifold is a melody or the simultaneous perception of this succession. Brentano points that even Aristotle did not clarified the difference between continuously many and continuously manifold [Brentano, 1988: 34].

Finally, the continua of perception possess also ‘*teleiosis*’², which is the fullness of the velocity of qualitative change of the continua and influences their

² From Greek $\tau\epsilon\lambda\epsilon\acute{\iota}\omega\sigma\iota\varsigma$ – maturity, perfection.

form. Here the velocity expresses the change and variability of perceptive form. In general, the elements that move in the same way in perception express a tendency to be grouped together according to the law of the common “destiny”. For example, let us consider two concentric circles around a common fixed center. The curvature of the inner circle has less intermediate spatial loci to pass through than the curvature of the outer circle, i.e. it has bigger “velocity”.

Finally, Brentano deals with the question if the continuum is contradictory. He points that if the intuition of continuum is accepted, then it is non-contradictory, because contradiction cannot be presented intuitively. In this way it is rejected the impossibility of continuum [Brentano, 1988: 42].

Brentano’s theory of continuum is the first step toward the construction of geometry of cognitive (perceptive) space. Subsequently, this theory has received a dynamic development by his pupils. For example, a number of investigators of Brentano’s school point that Husserl and Meinong consider the extension (extensity) of continuum as a product of a continuous sequence of growings in any phenomenal property of the continua themselves [Albertazzi, 2005: 266; Albertazzi et al., 2005b: 131-154, 175-200].

4. Conclusion: the connection of Brentano’s conception of continuum with the views of continuum in other philosophical trends

After consideration of Brentano’s conception of continuity the question naturally arises what is the connection between his view and the views of philosophers of other philosophical doctrines and to what extent his doctrine has influenced them or there is a similarity of theses that have been achieved independently. This is topic for separate investigation, here some main points only will be marked.

If the question is aroused concerning the contemporary epoch of Brentano, it has inevitably to be mentioned the so called Brentano’s school that is not, however, a homogeneous philosophical trend. Brentano is considered as a predecessor both to phenomenology and to analytic philosophy, because he is the teacher of a number of founders of both opposing schools. It is an interesting fact that most of his eminent pupils have been originally either mathematicians (for example Husserl) or have at least been inclined to the exact or experimental sciences. Brentano himself had initially hesitated in the choice between mathematics and philosophy, combining analytic adjustment of thinking and philosophical style.

It is frequently outlined in the philosophical literature devoted to Brentano’s philosophy that in many aspects Brentano belongs to the tradition of the Austrian liberalism among whose upholders are Mach and Boltzmann. Characteristic for that tradition is the effort to reform theory of knowledge and logic in particular. This tradition has been continued first by the Vienna circle that declares Brentano as one of its predecessors. Brentano has paved the way for a fundamental investigation of logic, mathematics and theory of knowledge. In the famous *Manifesto* of the Vienna circle it is said about him that “... Brentano ... left aside Kant and the systematic idealist philosophers. The *appreciation by Brentano* and his pupils *of the work of scholars like Bolzano* and others who sought

to give a rigorous foundation to logic became more and more apparent” [Albertazzi, 2005: 313]. However, after that the criticism to Brentano has increased among the Vienna circle, mainly by Moritz Schlick on the basis of the growing hostility to metaphysics. Nowadays it is necessary to investigate the acceptance of Brentano’s thought by Polish and Anglo-American philosophers (first of all by Roderick Chisholm and some others) [Albertazzi, 2005: 314].

There are also philosophers who think that his method, especially in the study of the logic of language, which Brentano himself considers as a starting point in philosophy, has a remarkable similarity with the procedure of the present day empiricism and especially with the analytic philosophy in the Great Britain and the USA. Nowadays, after 1990 Brentano’s thought is spread beyond the Continental Europe toward the Great Britain and the USA due to its closeness with the British empiricism that is approved by Brentano to a great extent and is supported by his personal acquaintance with Spencer in 1872 and by its correspondence with John Stuart Mill. The acceptance of Brentano’s thought in the Great Britain is connected also with its intertwined partially with the British idealism, and partially with the roots of analytic philosophy. The dissemination of Brentano’s ideas in the Great Britain and of his style is a work of Russell and Moore.

According to Albertazzi, the analytic and semantic interpretations of Brentano’s theory of intentionality have had through Russell an influence on Wittgenstein’s *Tractatus* and after that, through these sources, have been canalized in the Austin’s philosophy of language. Brentano’s theory of intentionality has similarities with the logical aspects of the intentional propositions suggested by Roderick Chisholm. After the introduction of the theory of intentionality again in the philosophical debate in 1960s and 1970s by Chisholm and Quine, it is developed in connection with logic and formal semantics following according to the evaluation of other Brentano’s investigators what Quine has termed a progressive ‘semantic ascent’ [Albertazzi, 2005: 321-322].

The considerable renaissance of Brentano in the USA has begun in 1950s with the work of Chisholm that converts Brentano’s direct realism with its psychological and experimental basis into philosophy of mind with a significant linguistic consideration of the problem of intentional inference and a direct connection with the analytic interpretation that is given of Brentano in the Great Britain. This presentation of Brentano still continues in the USA especially among philosophers such as Daniel Dennett who is interested in the problem of spirit–body and in the theory of intentionality. This line of succession has its critics who think that the adherents of analytic philosophy did not understand the essence of Brentano’s programme [McAlister, 1976: 152]. Chisholm also did not understand the difference between reality and existence which is essential for Brentano’s metaphysics [Albertazzi, 2005: 324].

Finally, Brentano’s thinking has striking analogies with Whitehead’s process philosophy though there are no data of any influence between them. The metaphysics of both thinkers makes a connection between philosophy and cognitive processes. Brentano and Whitehead share anti-behaviorist and anti-mentalistic position; both uphold the presence of different formats in the representation. In contrast to the classical idea of substance both thinkers

suggest metaphysics of events independently if the last ones are called ‘intentionale Beziehungen’, occasions or actual entities considered as inner interrelated. Stemming from analytic point of view, Brentano and Whitehead share the idea that science and metaphysics are founded on the basis of the immediate experience and thus that the meanings of the concepts essential for the physical science have to be understood in these terms. They consider the present not as instantiate one, but as spreading within a scope of time and embracing the edges of the present and the future. In fact, space and time are considered as characteristics of events and co-exist (or are co-present) as phases of inner connection between the events themselves [Whitehead, 1959: 185-186].

With these intuitions both Brentano and Whitehead have helped to lay the basis for the construction of the theory of continuum founded on principles that differ from the mathematical principles suggested by Dedekind and Cantor. The difference between them is that the originality of Brentano is in analyzing of the structures of representation from the point of view more of relation whole–parts and of the specific qualities and relations, while Whitehead is interested more in the “corporeal rootedness of the immediacy of perception based on feeling as the primary ontological category” [Albertazzi, 2008: 375].

REFERENCES

- Albertazzi, Liliana. 2005.** *Immanent Realism. An Introduction to Brentano.* Berlin, New York: Springer.
- Albertazzi, Liliana. 2008.** Franz Brentano (1838-1917). – In: Weber, Michel and Desmond, Will (Eds.). *Handbook of Whiteheadian Process Thought. Vol. 2.* Frankfurt: Ontos Verlag.
- Aristotle. 2000.** *Metaphysics.* (Translated into Bulgarian by N. Gochev and I. Hristov). Sofia: SONM.
- Bell, John L. 2005.** *The Continuous and the Infinitesimal in Mathematics and Philosophy.* Milano: Polimetrica.
- Brentano, Franz. 1975.** *On the Several Senses of Being in Aristotle: Aristotle’s Metaphysics Z, I.* (Translated by R. George). Berkeley: University of California Press.
- Brentano, Franz. 1977.** *Aristoteles und seine Weltanschauung* (ed. by R. Chisholm). Hamburg: Meiner.
- Brentano, Franz. 1988.** *Philosophical Investigations on Space, time and the Continuum.* (Translated by Barry Smith). New York: Croom Helm.
- Körner, Stephan and Chisholm, Roderick. 1988.** Editors’ Introduction to the English Edition. – In: Brentano, Franz. *Philosophical Investigations on Space, time and the Continuum.* (Translated by Barry Smith). New York: Croom Helm.
- Libardi, Massimo. 2005.** Franz Brentano (1838-1917). – In: Albertazzi, L., Libardi, M., Poli, R. (Eds.). *The School of Franz Brentano.* Kluwer Academic Publishers.
- McAlister, L. (Ed.). 1976.** *The Philosophy of Franz Brentano.* London: Duckworth.
- Petrov, Vesselin. 1999.** *First Steps towards the Mystery of Continuum.* Sofia: ETO Publishing house. (In Bulgarian).

Whitehead, Alfred North. 1959. *The Concept of Nature*. Michigan: The University of Michigan Press, 2nd printing. (First published by the Cambridge Univ. Press, 1920).
Zahar, Elie. 2001. *Poincaré's Philosophy: From Conventionalism to Phenomenology*. Chicago and La Salle. Illinois: Open Court.

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