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Russell's debt to Lotze

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ABSTRACT

Between 1896 and 1898 Russell's philosophy was considerably influenced by Hermann Lotze. Lotze's influence on Russell was especially pronounced in introducing metaphysical—anthropological, in particular—assumptions in Russell's logic and ontology. Three steps in his work reflect this influence. (i) The first such step can be discerned in the Principle of Differentiation, which Russell accepted in the *Essay* (finished in October 1986); according to this Principle, the objects of human cognition are segmented complexes which have diverse parts (individuals). (ii) After Russell reread Lotze in June 1897, he claimed that the solution of the dilemma of pluralism or monism depends on how we see space and time: as relational or as adjectival? (iii) Russell decided for the relational conception only after he attended lectures by McTaggart on Lotze in January to February 1898. The lectures helped Russell to advance (from April to June 1898) a new theory of judgment according to which judgments relate terms (individuals) which are distinct one from another. Space and time moreover are series of moments and places with external relations between themselves. The discussions Russell had with Moore in May to June 1898 took place only after Russell developed this conception; they did not cause his philosophical turn.

1. Russell: Hegelian or Lotzean?

Many of today's historians of analytic philosophy find the early philosophy of Moore and Russell to be much more Hegelian than used to be believed. Thomas Baldwin, for example, speaks of 'a Hegelian origin of analytic philosophy'.[1] What is even more striking is that Russell himself insisted that between 1894 and 1899 he *was* 'a full-fledged Hegelian ... Wherever Kant and Hegel were in conflict, [he] sided with Hegel'.[2]

We can explain this belief of Russell and his exegetes' with reference to the fact that Russell's notion of Hegelianism was communicated to him mainly by his oldest friend in Cambridge, John McTaggart, and in particular, by McTaggart's first book, *Studies in Hegelian dialectic*, which was published precisely when Russell took his first steps in articulating his own philosophy, in 1896.[3] Unfortunately, McTaggart's study of Hegel was far from being truly Hegelian. Arguably, 'no one has ever been convinced that the Hegel he described exists outside McTaggart's fertile imagination'.[4]

This contention serves as a convenient introduction to our first claim, which is that the influence of Hegel on Russell was rather vague and general. We can trace it mainly through four instances:

1. The acceptance of the ontological proof of God's existence.
2. The project for a dialectical transition from one science to another and for an encyclopaedia of sciences. The idea was that, when they are developed in isolation, sciences are incomplete and enmeshed in contradictions; this incompleteness can be counteracted only through a dialectical transition to a broader science.

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[1] Baldwin (1991), p. 49.
[2] Russell (1959), p. 42.
[3] Cf. McTaggart (1896). Russell dedicated his *Essay on the foundations of geometry* (1897) to McTaggart.
[4] Passmore (1966), p. 76.

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3. Russell's penchant for paradoxes which helped him to discover the paradox of classes.[5]
4. Russell's main task as a philosopher was, moreover, set out in Hegelian terms: above all, he strove to solve some of the problems of Hegel's (bad) logic and mathematics—to put it aright with the help of ideas from Cantor and Weierstrass.

This, however, was a very loose form of Hegelianism indeed. It only set up the general direction of Russell's philosophy, its broad shape, not its content. The thesis of this paper is that with respect to content, the influence of the German philosopher Rudolf Hermann Lotze (1817–1881) was much more powerful. In short, Lotze gave Russell both the specific themes and problems of his philosophy, as well as ways to deal with them.

This was already indicated in the fact that Lotze figures prominently in all three books of Russell's theoretical philosophy from the turn of the century: *An essay on the foundations of geometry* (1897), *A critical exposition of the philosophy of Leibniz* (1900), and *The principles of mathematics* (1903). In the *Essay*, in particular, a special section is dedicated to the analysis of Lotze's philosophy of space, which is more extensive than the sections dedicated to other philosophers and mathematicians. In *Leibniz* Lotze, not Bradley or Frege, is the most frequently quoted nineteenth century philosopher. Further, the only philosopher of the same century to whom Russell dedicates a whole chapter in the *Principles* was Lotze again: in Chapter LI Lotze's theory of space and substance is discussed.

2. The main characteristics of Lotze as a philosopher: his objectivism and relationism

In order to understand those sides of Lotze's philosophy which gave it the power to influence Russell, we must emphasize that Lotze was a key figure in the philosophy of the time. He influenced practically all the world-philosophies of the late nineteenth and the coming twentieth century: (i) The British idealists,[6] (ii) Husserl's phenomenology,[7] (iii) William James's pragmatism,[8] (iv) Dilthey's philosophy of life[9] and (v) the Neo-Kantians.[10] What was the reason for the phenomenal influence of his philosophy? In order to answer this question, we shall first briefly review some key stages in Lotze's intellectual development.

Lotze advanced the principles of his philosophy as a very young man. He published the first edition of his *Logic* (Lotze, 1841) and *Metaphysic* at the ages of twenty-four and twenty-six respectively (Lotze, 1843). Of special importance is that these two books were the third instalment of an anti-Hegelian, objectivist movement in German-speaking Europe, which came on the scene in 1837, when Bolzano issued his *Wissenschaftslehre*. Three years later, in 1840, Trendelenburg published his *Logische Untersuchungen*. Later on, when a new surge of philosophical objectivism crested again in the 1870s, Lotze used the opportunity to restate his position in the second editions of his *Logic* (1874) and of his *Metaphysic* (1879).

Georg Misch articulated the objectivism of Lotze's philosophy as follows:[11] closely following Trendelenburg, Lotze advanced a philosophy that did not start from the subject–object opposition. However, while Trendelenburg abolished the dualism between subject and object in philosophy, referring to the concept of movement, which is common to both, Lotze suggested uniting the order between all objects and terms, which is the 'universal inner connexion of all reality'.[12] Especially important in Lotze's theory of order is the concept of relation. He used to repeat: 'it belongs to the notion and nature of *existence* to be related'; or: 'to exist' means 'to be related'.[13] We can call this conception of his *relationism*.

Lotze's motive for accepting relationism as central to philosophy was his metaphysical—indeed, anthropological—belief that 'all who search for truth of any sort, believe in an order of things'.[14] The accepted priority of order and relations in ontology, in its turn, had as a consequence the assumption that nature is a cosmos, not chaos. Furthermore, since man thinks in series—indeed, thinking is an activity of relating—he is a *microcosm*. This point convinced Lotze to jointly study microcosm and macrocosm, a conviction which found expression in his three-volume book on *Microcosm*.[15]

In general, the anthropological stance is central to Lotze's philosophy. Not in sense that he introduced anthropology into philosophy, though. In fact, anthropology was discussed long before Lotze. His innovation was the idea that the fundamental metaphysical and logical problems are to be discussed and answered in terms of human beings with their perceptual and rational characteristics.[16]

3. Lotze's promotion of philosophical logic

Lotze's penchant for objectivism was coupled with another key feature of his as a philosopher: he was scientifically oriented. His credo was that no philosophical theory should contradict scientific results. This should be not a surprise if we keep in mind that Lotze earned the *venia legendi* (a licence to teach at German universities based on a second dissertation) both in philosophy and in medicine. In his medical writings, and above all in the programmatic *Allgemeine Pathologie* of 1842, he rejected vitalism—in any of its forms—more radically than anyone before him.

Lotze, however, was not a lonely pioneer in embracing a scientific orientation in German philosophy. In this he followed his teacher and friend G. T. Fechner (1801–1887); already before these two philosophers, scientific philosophy had also been embraced by Hegel's contemporaries Jacob Friedrich Fries (1773–1843)[17] and Johann Friedrich Herbart (1776–1841).[18] Lotze was unique in another respect. He used to remix particular problems of the philosophy of German Idealism, putting them into a refined, science friendly form.

To cut a long story short, Lotze accomplished this task, compressing the problems of generations of philosophers—above all some

[5] Cf. Milkov (2003), p. 56.
[6] Cf. Milkov (2000).
[7] Cf. Hauser (2003).
[8] Cf. Kraushaar (1938, 1939).
[9] Cf. Orth (1984).
[10] Cf. Gabriel (1989), p. xii. Incidentally, the two leading branches of the Neo-Kantianism, the South-West School and the Marburg School, were inspired by different aspects of Lotze's philosophy. This is not surprising if one bears in mind that the architect of this movement, Otto Liebmann, the author of the ground-breaking *Kant und die Epigonen* (1865), was a student of Lotze's.
[11] Cf. Misch (1912), p. xxv.
[12] Lotze (1879), Sect. iii.
[13] Lotze (1885), Vol. 2, p. 587. 'The proposition, "things exist," has no intelligible meaning except that they stand in relations to each other' (Lotze, 1887, p. 186).
[14] Kuntz (1971), p. 26.
[15] Lotze (1856–1864, 1885).
[16] Cf. Milkov (2006), p. 50.
[17] In the early 1840s Lotze was closely befriended with Fries's student and follower Ernst Friedrich Apelt.
[18] In 1844 Lotze succeeded Herbart as a Professor of Philosophy at the University of Göttingen.

anthropological problems of German idealism—into particular, logically strict theses and theories. A typical example in this respect was his approach to studying thinking: Lotze married thinking to valuing (value) and becoming; logic pursues the first, psychology pursues the second. This also means that one and the same subject, thinking, in this case, can be investigated from two radically different sides. One can investigate its validity—this is what logic does; or one can investigate its development—this is done by psychology.

This new approach of Lotze's disciplined ethics on the one hand and enriched logic on the other. In other words, it made the old metaphysics an exact, formal discipline, and logic more philosophical.[19]

The introduction of this approach to philosophy led to radical changes in philosophical practice. In particular, Lotze started to investigate philosophical problems bit by bit, piecemeal, so that a later discovery of a mistake in his investigation did not made his overall philosophy false.[20] The product of Lotze's piecemeal philosophy was a number of concepts and theories which were introduced—or merely revived—by him, many of which are still widely discussed today. Here are some of them: (i) the concept of value in logic (its best known successor was the concept of truth-value[21]); (ii) the context principle;[22] (iii) the idea of concept/judgement as a function; (iv) the metaphor of *colouring* expressions and of *saturated–unsaturated* expressions;[23] (v) the objective content of perception or the concept of the given (its best known successor was the concept of sense-data[24]); (vi) the objective content of judgements (state of affairs).[25]

In short, Lotze introduced a whole bundle of philosophical–logical problems and theses which could be further investigated in isolation, independently of his system. In this sense he instructed his readers to regard his philosophy as 'an open market, where the reader may simply pass by the goods he does not want'.[26] Among other things, this characteristic of Lotze's philosophy made him the most 'pillaged' philosopher of the nineteenth century.[27] Many of his theses were embraced without referring to him as the author.

It may be said already at this stage of our investigation that Lotze influenced Russell mainly in this way. While Russell adopted some discoveries of Lotze's philosophical logic, he refused to follow Lotze's overall philosophical system. Typical in this respect is the central role relations play in his philosophy,[28] as well as the objective content of judgements (propositions)[29] and of sense perceptions (sense-data).[30]

4. The principle of teleomechanism

In the last section we discussed the general outlines of Lotze's influence on Russell's philosophy. Now we shall try to track down this influence in more concrete terms.

The first principle of Lotze's philosophy was that all processes and movements—physical, biological, psychological, bodily, social, ethical, cultural—are accomplished in a way that can best be described as mechanical. This assumption helped Lotze to eschew references to 'deep' causes, which were typical of Hegel's speculative philosophy. At the same time, however, Lotze insisted that his 'principle of mechanism' is not the final solution in science—it is only a means used in it for a better understanding of the processes of our environment. Moreover, since the principle of mechanism cannot solve all problems, it clearly indicates—even delineates—that 'higher and essential being' which it cannot discuss.

Lotze specified further that the principle of mechanism can be understood as the way in which purposes are realized in the world. However, it does not specify what these purposes really are. It can be also said that the principle of mechanism is simply a method of research; it is not an *explanation* of life and mind. Indeed, our ideas of forces and natural laws of science do not explain how things really work in nature. To understand this, we must connect them to the realm of the 'highest', in other words to anthropology—to those elements of the living person's knowledge without which they cannot grasp the world.[31]

It is precisely the realm of higher and essential being which brings us to a position from which to understand the processes in these mechanisms.[32] Lotze himself called this conception, combined with the principle of mechanism, 'teleomechanism'. Briefly, the method of 'teleomechanism', or of 'teleological idealism', is to seek the truth in some teleological connection. At the same time, Lotze insisted that scientists should investigate elements of the highest being only when they reach problems of foundations.[33] Before this point, the mechanism is *sine qua non* for understanding the world and its construction (*der Weltbau*). There is no exception from this rule.

The principle of teleomechanism shapes the logic, metaphysics and science through what Lotze calls *idealities*, which serve as concepts of orientation to us. Among them there are ethical values, logical validities and aesthetic worth. In science and metaphysics a central role is played by the idealities of spatial and temporal order, the principle of atomicity and the aforementioned relationism. As discussed in Section 8, Russell adopted the latter group of idealities from Lotze.

5. Lotze's first impact on Russell (in 1896)

The first metaphysical (anthropological) concept which Russell accepted as central to his philosophy under Lotze's influence was that of spatial and temporal order. Its exploration was prominent

[19] One of the motives for embracing this method was Lotze's conviction that if we present different, often seemingly contradictory systems in a formal way, then their contradictoriness vanishes (cf. Misch, 1912, p. xxii). The point is that the formal presentation of philosophical theories eliminates their subjective side; and it is mainly this side that makes philosophical theories animus.

[20] It deserves notice—despite the fact that we are not going to discuss this point here—that this practice was also followed by Russell in his project for Scientific Philosophy which 'deal[s] with its problems piecemeal, and ... obtain[s], as the sciences do, such partial and probably not wholly correct results as subsequent investigation can utilize even while it supplements and improves them' (Russell, 1963, p. 85).

[21] The very term 'truth-value' was introduced by Lotze's pupil, Wilhelm Windelband (1924). Cf. Gabriel (1984).

[22] The idea was introduced by Plato and was also addressed by Kant, but after Hegel it remained in shadow. See on this Ryle (1971a [1951], 1971b [1957]).

[23] The last two concepts were embraced by Lotze's student Frege and today are mainly associated with Frege's name.

[24] Cf. Milkov (2001).

[25] Cf. Milkov (2002).

[26] Lotze (1874), p. 4.

[27] Cf. Passmore (1966), p. 51.

[28] Cf. Section 2.

[29] To be discussed in Section 7.

[30] No. v and vi in the list above (cf. Milkov, 2001).

[31] Cf. Lotze (1886), Vol. 3, p. 306.

[32] Ibid., p. 305.

[33] In Russell's terms, we should pursue metaphysical enquiries only when our investigation reaches *indefinables*, such as numbers, space, time, colours, and so on. The discipline which discusses them was called 'philosophical logic' (cf. Russell, 1937 [1903], p. v).

in the *Essay of the foundations of geometry*,[34] where Russell found Lotze's discussion of space and time 'excellent in many respects'.[35]

First of all, Russell accepted Lotze's idea that in order for thinking to be possible at all, its objects must be complex:[36] they must consist of clearly different elements. Indeed, a simple thing 'is unthinkable, since every object of thought can only be thought by means of some complexity'.[37] That complexity can only be achieved when referring to individuals (terms), which are different from any other individual.

In perception, there must be 'at least one "principle of differentiation", an element, that is, by which the things presented are distinguished as various'.[38] Russell called this element 'a form of externality'. His argument here was similar to his argument in defence of complex objects of thinking. The objects of perception must be complex since in order to perceive them, we must differentiate these parts, and in order to differentiate, and then relate them, they must be external one to another.

For human beings forms of externality, space and time are of paramount importance. These are forms of intuition which make our knowledge as such possible. They are given to us a priori, and so are most fundamental.[39] This was a central assumption of Russell's philosophy, and it brought with it a considerable stress on the concepts of space and time in all periods of his philosophical development. The latter point was underlined by Paul Hager, who insisted that 'space and time theories are absolutely central to Russell's philosophy',[40] so that when Russell changed his mind in philosophy, this was, as a rule, a change in his position on space and time.

Furthermore, Russell discriminated between empty space and spatial order. More specifically, he understood empty space as the possibility of the relations between and in spatial figures, which secures their form of externality.[41] Because this space is a mere possibility, he accepted that it is absolutely empty; it is also conceptual and a priori.

The empty space is differentiated through matter. The unit of differentiation is the atom, which is part of the matter. The atoms are unextended in the sense that they have no spatial characteristics: they are points which are connected through spatial relations to other atoms. Straight lines, planes and volumes are spatial relations between two, three and four atoms, respectively.

'Parts of space, or spatial figures, arise only by reference to some differentiating matter, and thus belong rather to spatial order than to empty space'.[42]' The spatial order of matter is different from empty space. Roughly, spatial order is an aggregate of spatial relations which are immediately presented to us.

Our suggestion is that this theory of space is evidence of the influence of (at least) two ideas of Lotze's on Russell. First of all, Russell's distinction between empty space and spatial order followed Lotze's discrimination between extension and place/moment, which he had already made in his first *Metaphysic* (1841) (there was no such distinction in Kant). More specifically, Lotze claimed that extension refers to an infinite multiplicity of possible directions; only a place in space and a moment in time make these possibilities actual reality.[43]

This conception of Lotze's was, in fact, motivated by his objectivism: by his wish to preserve the objective character of space, in opposition to Kant's claim that space is a form of subjective intuition.[44] In particular, Lotze's argument was that if space is only our private form of intuition, to which there is no analogue in the objective world, as Kant claimed, then other beings may have other spaces; these spaces, however, can be never presented to us—not as spatial relations.[45] Lotze further claimed that space and its objective counterpart have the same multiplicity, which makes it possible to learn something from subjective intuition about 'the manner in which what appears to us as space *must* appear to any beings with our laws of thought':[46] its content.

Russell was impressed with this argument of Lotze's and accepted the view of empty space as conceptual precisely in order to preserve the objective character of our knowledge of space. Indeed, Kant's claim that space is intuitive leads to radical subjectivism about space.[47]

Another idea of Lotze's which Russell followed in the *Essay* was his atomism. In fact, Russell already embraced a Lotzean form of atomism which defended a Lotzean-style atomistic philosophy of science when reviewing Hannequin (1896).[48] Lotze, incidentally, formed the conception of atomism in his philosophy of space and time around 1840, when criticizing Jacob Fries' conception that matter is interplay of powers.[49] According to him:

1. Atoms are the ultimate building blocks of the universe: they are idiosyncratic and remain unmodified in all compositions in which they come. Lotze's atoms are thus different from the atoms of antiquity, which were understood as the last elements of reality to have different forms but the same substance.[50]
2. Atoms are 'punctual' (*unräumlich*), without extensions. After all, extension is possible only where there are many points which can be easily identified and differentiated.[51]

Russell embraced both these points.

[34] The book was finished in October 1896 and published in May 1897.
[35] Russell (1897), Sect. 85.
[36] Cf. Lotze's thought (discussed in Section 2) that in order to say something reasonable, we must think of objects and terms in relation to each other.
[37] Russell (1990c [1896]), p. 564.
[38] Russell (1897), Sect. 128. Typically, Russell himself believed that this is an idea of Bradley–Bosanquet's (see ibid., Sect. 187). In fact, it was Lotze's idea, and was adopted by Bradley and Bosanquet.
[39] Here is an example Russell set out that shows the uniqueness of the moments of time as compared to events: two time points can be different only when they are mutually external; in contrast, two events can happen together in time.
[40] Hager (1994), p. xii.
[41] Cf. Russell (1897), Sect. 197.
[42] Ibid., Sect. 204.
[43] Cf. Pester (1997), p. 110.
[44] Lotze's position here was a part of a criticism of the subjectivity of space and time in Kant, which started with the publishing of the abovementioned *Logical investigations* by Adolf Trendelenburg in 1840 and continued until the end of the nineteenth century. Cf. Adair-Toteff (1994).
[45] Lotze (1879, pp. 232 ff.; 1888, pp. 195 ff.).
[46] Russell (1897), Sect. 86.
[47] In support of this argument, Russell refers to Lotze (1879), Sect. 106.
[48] Cf. Russell (1990d [1896]).
[49] Cf. Lotze (2003), p. 85 ff.
[50] Cf. Lotze (1856-1864), Vol. 1, p. 39; Lotze (1885), p. 34.
[51] Cf. Lotze (1879), Sects. 188 ff.; Milkov (2006), p. 35.

6. Lotze's second impact on Russell (in 1897)

After Russell put his *Essay* into print in October 1896, he travelled for three months to the USA where he lectured at Bryn Mawr College and Johns Hopkins University. Later he recalled that 'contact with academic Americans, especially mathematicians, led me to realize the superiority of Germany to England in almost all academic matters'.[52] Back in Britain, he read (in German) Hegel's *Logic* for the first time (in March 1897) only to find that it radically deviated from his own standards of exactness. Looking for a new philosophical inspiration, Russell read Lotze's *Metaphysic* once again in May 1897.

The first fruit of this new reading of Lotze's was not late in coming; it found expression in the paper 'Why do we regard time, but not space, as necessarily a plenum?'[53] Russell wrote in June 1897. Nicholas Griffin speaks of it as 'in many ways an enigmatic little paper': its brevity belies its importance.[54] The paper, it is our claim, would not appear so enigmatic if we read it in the awareness of its having been written under Lotze's influence. This is clear, among other things, from the notes 'Can we make a dialectical transition from punctual matter to the plenum?',[55] written immediately before the paper, in which Russell refers expressively and positively to Lotze.

In 'Why do we regard time, but not space, as necessarily a plenum?' Russell tried a new start in philosophy. Most importantly, it lays even more stress on the logical discussion of metaphysical problems, drawing up in this way a programme which was to be realized in full only in the *Principles*. First of all, in it he distinguished for the first time between two concepts of space and time: (i) as consisting of relations; (ii) as adjectives to the absolute. Secondly, Russell insisted that, for logical reasons, space and time are to be treated in the same way: either as relational, or as adjectival. Thirdly, he claimed that, if accepted, 'an adjectival treatment of space and time would imply both that space and time were plena and that monism was true. On the other hand, a relational treatment would entail that space and time were punctual and that pluralism was true'.[56] In other words, with this claim Russell assumed that 'the question whether space and time are relational or adjectival will decide the issue of monism versus pluralism'.[57] Fourthly, the paper also outlined the theory of the irreducibility of relations to properties and this makes monism problematic; indeed, this is implied from the very formulation of the question of relations or adjectives.[58]

Characteristically, the paper offered no solution to the problems it raised. It did something more important though: it outlined the logical scheme in which he was to discuss the problems of space and time, monism and pluralism, and so on, for years to come.

7. Lotze's third impact on Russell (in 1898)

At the very beginning of 1898 Russell experienced an influence of Lotze even stronger than the first and the second one. A central claim of this paper is that Russell's turn of 1898, when he, in his own words, abandoned British idealism and monism for (Platonic) realism and pluralism, was caused mainly by this impact.

Here is the whole story delivered in some detail. In Lent term (January to February) 1898, Russell attended McTaggart's lectures on Lotze.[59] Russell's notes from these lectures survived, and are deposited at the Humanities Research Centre, University of Texas at Austin. They consist of twenty–four pages of notes on lectures IV to XVI and present Lotze's philosophy in full: logic, metaphysics, psychology, philosophy of religion, motion and matter and atomism, although McTaggart laid special stress on Lotze's metaphysics. The lectures gave Russell an opportunity to thoroughly acquaint himself with the overall system of Lotze's philosophy, and also with its anthropological part.

The changes in Russell's thinking, caused by this third encounter with Lotze's ideas, can be easily discerned in the manuscript 'An analysis of mathematical reasoning', which he started to write on 1 April 1898. Above all, in the introduction to the 'Analysis', Russell accepted an idea which later became leading in the *Principles*: 'Whatever can be a logical subject I call a *term*'.[60] Terms are all those things which can be counted;[61] they have a being. In fact, this idea was the cornerstone of Russell's new theory of propositions, which many authors consider the kernel of his philosophy.[62] Lotze's influence on Russell on this point came from his claim that judgements have an objective content—they relate things (*sie verhalten Sachen*) which differ one from another with necessity.[63]

An idea radically different from 'being' is that of 'existence', which is a predicate. If a term has this predicate, it is called an *existent*. The basic class of existents is composed of the various parts of space and time: places and moments. Being 'forms of externality', places and moments are different from other existents, more specifically, from the things which are in them.[64] In fact, this conception was nothing but the theory of absolute space and time which was to characterize Russell's philosophy until 1912.[65] According to this, space and time are series of absolute moments and places; the real particular moments and places are *in* the absolute ones.[66]

The acceptance of the absolute theory of space and time was further evidence of the groundbreaking changes in Russell's philosophy in April to June 1898—immediately after he attended McTaggart's lectures on Lotze. More specifically, it shows Russell's new theory of judgement as theoretically underpinning his theory of space and time.[67] Indeed, the conception that judgment consists of substantially different elements served as a model for the conception

[52] Russell (1967), Vol. 1, p. 197.
[53] Russell (1990f [1897]).
[54] Griffin (1991), p. 331.
[55] Russell (1990b [1897]).
[56] Ibid., pp. 328–329.
[57] Ibid., p. 331.
[58] Cf. Imaguire (2001), p. 69.
[59] We first learned about them from Passmore's remark made some ten years ago: 'Russell's notes on a lecture McTaggart gave on Lotze still survive' (Passmore, 1995, p. 195).
[60] Ibid., p. 167 (cf. Russell, 1937 [1903], Sect. 47).
[61] We are going to discuss this argument at length in Section 8.
[62] Cf. Imaguire (2001). In fact, Russell changed the term 'judgement' to 'proposition' only in 'The classification of relations' (Russell, 1990e [1899]). The paper was read in January 1899; in it the full conclusions from his March to April 1898 turn were made.
[63] Cf. Misch (1912), p. lviii.
[64] Cf. Russell (1990a [1898]), p. 171.
[65] The first signs of the change of Russell's mind are to be seen in Russell (1992 [1912]).
[66] Cf. Milkov (2005).
[67] Two years later Russell was explicit on this point. Cf. Russell (1993 [1900]), p. 225.

that space and time consist of substantially different moments/places.

In brief, what was new in 'An analysis of mathematical reasoning' was the insistence that the terms are immutable and eternally self-identical and are the constituents of judgements/propositions.[68] In the Preface to the *Principles* Russell called this problem 'pluralism which regards the world ... as composed of an infinite number of mutually independent entities, with relations that are ultimate, and not reducible to adjectives of their terms or of the whole which these compose.[69]' The only thing that he did not elaborate there was the theory of relations.[70]

Immediately after that, in March 1898, Russell started to study Whitehead's *A treatise on universal algebra* and in April, Dedekind's *Nature and meaning of numbers*, after which he ceased to believe that mathematics investigates quantities; instead, he adopted the view that it investigates 'extensive magnitudes' and their structures.[71] This turn faced Russell with the task of laying 'the philosophical foundations of a theory of manifolds'.[72] Our claim is that the intensive examination of Lotze in January and February helped Russell most to change his position in the philosophy of mathematics. To be more specific, Russell did this with the help of his new theory of judgement, which was eventually transformed into a theory of proposition.

At this point we are confronted with the fact that in the first half of 1898 Russell underwent two turns. On the one hand, he abandoned the old Kantian transcendental approach to mathematics and accepted that mathematics is reducible to logic. This turn started when Russell read Whitehead and Dedekind in March to April 1898, and ended at the beginning of July the same year after his exchange of thoughts with Couturat and Poincaré in an intensive correspondence.[73] On the other hand, Russell experienced a philosophical turn which brought him to his Platonic realism, the theory of propositions and the method of analysis of propositions. It was in this respect that the influence of Lotze on him was decisive. It is important to stress that the second turn was supportive of the first one, in the sense that it philosophically underpinned the theory of manifolds / classes which was central to the first turn.[74] How it did this we are going to see in the next section.

8. Russell follows Lotze's philosophical logic

In Section 4 we saw that Russell followed Lotze in assuming that *idealities* are indispensable in philosophy. In this section we shall consider how two such idealities—individuals and series—were introduced in Russell's philosophy in the spring of 1898.

(a) Individuals. It is well known that in the *Principles*, as well as in *PM*, Russell advanced a programme for a symbolic language which is governed by a 'philosophical grammar'. This language has logically simple names and a strict syntax. In ontology,[75] this programme assumes that 'there are "things" [individuals] which have properties and have, also, relations to other "things".[76] Things are not the sum of their properties.

In fact, Russell embraced these principles in the already discussed Chapter 1 of 'An analysis of mathematical reasoning', where he insisted that each term is identical with itself and different from all other terms. He called this kind of difference 'difference of being'.[77] 'It is the kind of difference that numeration depends upon, and it is in virtue of their difference of being that all terms can be counted'.[78] Lotze, for his part, already introduced an idea very close to Russell's 'difference of being' in *Microcosm*.[79]

Our claim is that this assumption was nothing but a metaphysical (anthropological) belief incorporated into Russell's logical symbolism. Russell accepted it only because he was convinced that it alone can explain how human knowledge functions. In other words, the individuals Russell assumed pertained to the Lotzean 'highest and essential being', which gives orientation to his *calculus universalis*—Russell's counterpart of Lotze's mechanism.

(b) Series. Furthermore, Russell believed that the assumption of individuals helps to explain series,[80] and this is important since series are the means by which we can best clarify mathematics, physics and other sciences. Russell put special stress on the fact that the rejection of individuals, for example, in the form of rejection of the identity of indiscernibles, would, above all, make counting impossible.[81] Indeed, 'if a and b have all their properties in common, you can never mention a without mentioning b or count a without at the same time counting b, not as a separate item but in the same act of counting'.[82] Counting is only possible when the elements counted are different, and so they form a series. Besides, the rejection of the identity of indiscernibles would make measurement of magnitudes impossible. Indeed, for measurement to be possible at all, each unit-quantity must be different from all the others.

There are different kinds of series: numbers, points in space, moments in time, causal series of events and so on. In other words, Russell claimed that the construction of series in general—in space, time, colours, numbers—depends upon mutual incompatibility or a real difference in the constitutive elements (individuals). He insisted that the elements of the series must not only be related to one another; they must necessarily differ from one another, and this in such a way that even indiscernibles should not be conceived as identical. Russell's final claim was—he made it explicitly only in 'The classification of relations'[83]—that this can be only achieved if

[68] Cf. Griffin (1991), pp. 297–298.
[69] Russell (1937 [1903]), p. xviii.
[70] Cf. the last paragraph of Section 8.
[71] 'Intensive magnitudes' are aesthetic perceptions like pleasure (cf. Russell (1937 [1903]), Sect. 171.
[72] Griffin (1991), p. 280.
[73] Cf. Milkov (2003), p. 49.
[74] Ray Monk is right when he claims that Russell's acquaintance with Dedekind's *Nature and meaning of numbers*, teaching him 'to regard the notion of order, rather than that of quantity, as the central notion in the definition of number', played a crucial role in Russell's turn of 1898. Monk (1996), p. 116. However, this was only the first part of this turn. What he still needed was a new conception of logic, which is wholly absent from Dedekind's pamphlet.
[75] The marriage of logic and ontology as such in Russell's work is Lotzean idea.
[76] Russell (1959), p. 158.
[77] Russell (1898), p. 168.
[78] Griffin (1991), p. 280.
[79] Lotze (1856–1864), Vol. 3, p. 474.
[80] Lotze called the requirement that we cannot justify series if we do not assume individuals 'law of juxtaposition' (cf. Lotze, 1856–1864, Vol. 3, p. 491).
[81] We see here again a most important characteristic of Russell's philosophy of mathematics and of his logic in general: he connected it inextricably with the real world. For this, too, he was indebted to Lotze.
[82] Russell (1959), p. 115.
[83] Russell (1990e [1899]).

there is an asymmetric transitive relationship between the individuals of every serial order.

9. Russell misinterprets his own philosophical development

Russell delivered many documents which recount how his philosophy developed. Unfortunately, they were very often misleading. We pointed out one such misinterpretation at the beginning of the paper: Russell always stressed that in 1896 to 1898 he was a Neo-Hegelian, despite abundant evidence that he was not. Furthermore, he told us that 'towards the end of 1898' he and Moore rebelled against both idealism and monism. The latter claim is clearly false: 'Russell was always a pluralist',[84] also in the *Essay*. The former claim is at least controversial: Russell's turn was from a transcendental idealism to Platonic realism which, strictly speaking, is idealistic too. After the analysis we made in Sections 7 and 8, we have good reasons to rename Russell's 1898 turn a 'turn towards a new theory of judgement/propositions'.

In this section we are going to see how misleading were Russell's recollections about both when exactly did he made his dramatic turn to a new theory of judgement/proposition and also who pushed him to take it. Russell's answer was that (i) it happened in the second half of 1898; (ii) it was under Moore's influence.

First of all, this claim contradicts what Moore himself wrote on this point: He only spoke about 'mutual influence' between Russell and himself[85] in elaborating closely related theories of judgement that were later developed in a joint theory of propositions.

But how did Russell and Moore came to their closely related positions? By way of answer, we shall point to the fact that Moore borrowed his realist theory of judgment from Franz Brentano and his friends.[86] This, however, was not the end of the story. Brentano's theory of judgement, in its turn, only remixed Lotze's realistic theory of judgement. This point was already underlined by Georg Misch: 'Brentano agrees with Lotze in the crucial point that judgment—through the thinghood [*Sachlichkeit*]—refers to reality'.[87] As we already have seen, Russell, for his part, borrowed his theory of judgment directly from Lotze.

Of course, we do not want to challenge Russell's avowal that, when, in November 1898, he read for the first time Moore's 'On the nature of judgement', in which the latter articulated his relational theory of judgment, it appeared to him as a revelation. Russell only misinterpreted the reasons for this: he didn't learn that theory from Moore, but rather saw in it his new theory of judgment from April to June 1898 expressed in a clear and articulate way.

This claim can be underpinned with two more facts which were already cited in the literature:

(i) There is 'an unmistakable similarity of approach between the "Analysis" and these works of Moore ['The nature of judgment' and his second dissertation]. Yet Russell had written the "Analysis" before he read Moore's Fellowship dissertation of 1898'[88]—Russell read it in November 1898. Moreover, 'the theory of judgment in the "Analysis" is very much more elaborate than that in either Moore's second dissertation or "The nature of judgment"'.[89]Drawing an inevitable conclusion from these facts, Nicholas Griffin underlined that Moore's two dissertations of 1897 and 1898, as well as his paper 'The nature of judgement', cannot be the source of the changes in Russell's logic in April 1898.[90] Unfortunately, Griffin did not investigate other possible sources—for example Lotze—which may have led to the changing of Russell's mind: despite the fact that Griffin was the first to note that 'Russell had a Lotzean phase in 1897 to 1898'.[91]

(ii) Russell met Moore in 1898 for discussion first on 10 May, in other words when a good deal of 'Analysis' was already committed to paper. Besides, from some published letters of Russell's it is clear that at these discussions it was Russell who delivered ideas to Moore, not vice versa: '[Russell was] talking mainly to Moore, who seemed on the whole inclined to assent to what [he] had to say'.[92] The same at their second discussion on 18 June: 'He [Moore] was not at all discouraging' to what Russell told him.[93]All these pieces of evidence seem to confirm our claim that Russell changed his philosophy in 1898 mainly under the influence of Lotze, not of Moore.

10. Epilogue

By way of epilogue we would like to emphasize that if the claim of this paper—that between 1896 and 1898 Russell was considerably influenced by Lotze—is correct, this will lead with itself a considerable change in our picture of Russell. Above all, we will look at his self portrait as a philosophical realist more sceptically. We will be aware that Russell's philosophy, also from his most realistic years, was impregnated with metaphysical—anthropological, in particular—considerations which he inherited from Lotze.

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[84] Griffin (1991), p. 306.
[85] Moore (1942), p. 15.
[86] Cf. Bell (1999).
[87] Misch (1912), p. xvii n. 2. This is very well seen in the example of the history of the concept of state of affairs. In was introduced by Lotze in 1874, only to be embraced by Carl Stumpf in 1888, and a couple of years later by the early Husserl (cf. Milkov, 2002).
[88] Griffin & Lewis (1990), p. 159.
[89] Ibid., p. 160.
[90] Cf. Griffin (1991), p. 298.
[91] Ibid., p. 37.
[92] Griffin & Lewis (1990), p. 159.
[93] Ibid., p. 160.

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