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Beiträge zur Geschichte der Sprachwissenschaft

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Beiträge zur Geschichte der Sprachwissenschaft

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The pursuit of science

A study in Saussure's Philosophy of Science through the lens of a historical discussion

ABSTRACT

Saussure's lifetime goal was to define the scientific criteria for linguistics, the study of languages. In light of this, this paper looks at Saussure's discussion of analogy as the source for the various aspects of his theory about the nature of human languages. As part of this study, this paper introduces the history of the concept of analogy, from the classical grammarians and concluding with Saussure clarifying Saussure's position in the history of linguistics. According to the proposal, Saussure was less as a revolutionary and more as a theorist of his time who dealt with the challenges of his contemporaries. His uniqueness, accordingly, is in his ability to recognize the consequences of the conclusions from the conceptual analysis of analogies. Furthermore, this portrayal of Saussure's theory touches on his epistemological and ontological assumptions, more specifically it examines his thoughts concerning the question of what justifies the scientific value of a linguistic inquiry.

1. Introduction

Linguistics, defined as the 'scientific study of language', is probably one of the disciplines in the humanities and in social studies with the strongest aspirations of becoming a science in the positivist sense, defined according to the 'hard' sciences such as physics or chemistry. These aspirations result mostly from the fact that the hard sciences are most often perceived as investigating natural objects,[1] and language is also perceived as such. In many aspects, the history of

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the establishment of linguistics as an independent discipline is intertwined with the effort to confirm that this discipline stands within the positivist demarcation criteria of natural sciences. Consequently, theories within linguistics are often evaluated by their fulfillment of the rigorous standards of a *real* empirical science. It is from this perspective that this paper approaches the scientific aspirations of Ferdinand de Saussure.

As many have noted, it is very clear that Saussure's lifetime goal was to define the scientific criteria for linguistics,[2] the study of languages.[3] Scholars are still trying to reconstruct what exactly Saussure's linguistic theory was and to obtain a clear picture regarding the relationship between the main points of his well-known theory — the arbitrariness of the sign, the distinction between *langue* and *parole*, the dichotomy of synchrony and diachrony, etc. However, Saussure's underlying assumptions about the demarcation criteria for scientific inquiry have not yet been given proper exposure. Other linguists of his time devoted much energy to explicitly state their scientific assumptions.[4] Carefully examining Saussure's own writings and lectures reveals that he also thought in a principled way concerning these issues.

A notion such as 'demarcation criteria' is taken from the field of philosophy of science, a field which aims to study the assumptions and foundations of sciences in general. More particularly, this field focuses on the metaphysical commitments, methods, and implications of the specific sciences and the epistemic validity of what they claim to 'know'. These topics are exactly what we would like to discover with respect to Saussure's approach to linguistics.

The goal of this paper is to provide support for the hypothesis that Saussure's ideas are in line with a positivist approach. The positivist approach to the philosophy of science, as established by philosophers such as John Stuart Mill (1806–1873) in his book *System of Logic* regarding the role of the 'moral sciences', maintains that both the natural sciences and the humanities should share the same paradigm for scientific studies. Accordingly, all scientific explanations have the same *form*: the form of a law which reveals regularities. In turn, I hope to demonstrate that Saussure's approach to linguistics was posi-

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[1] See, inter alia, Lakatos (1977: 1–7), who emphasizes that the standard view among "hard" scientists is that the scientific "knowledge can be only about Nature". This claim does not mean that theories must be realistic, in other words that they are valid only if they describe the natural objects themselves as they are. Theories can still be perceived as merely consisting of laws that predicts the characteristics of the natural phenomena.

[2] See inter alia Bouissac (2010: 9) and esp. ch. 5.

[3] In this context, it is worth quoting the way Saussure began his third course: "The linguistics … is a science for which we can take the definition given by Hatzfeld … and Thomas's Dictionary: 'the scientific study of languages', which is satisfactory, but it is this word scientific that distinguishes it from all earlier studies". (CLG–III: 3).

[4] For example, ch. 1 in Paul (1891), and in all editions of his *Principles*.

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tivistic, or at the very least, he did not want to separate linguistics from the methodology of the so-called 'hard sciences'.[5] One of the main motivations for this claim is Saussure's own criticism of his predecessors, the Neogrammarians:

> A new direction was given to linguistics around 1875. A new school was even formed, <that of the *Junggrammatiker*> … It would have done more good if they had been familiar with the natural sciences, <or sciences other than philology. It is not that they were lacking in critical spirit, but> scientific bases would have been more quickly arrive at. (CLG–II: 91–92)

Here and in other places, Saussure draws connections between linguistics and the natural sciences. It is therefore my goal to demonstrate how Saussure's work is consistent with the assumption that similar principles should govern the scientific study of languages and the natural sciences.

This paper looks at Saussure's discussion of analogy as the source for the various aspects of his theory about the nature of human languages. This proposal depicts Saussure less as a revolutionary and more as a theorist of his time who dealt with the challenges of his contemporaries. His uniqueness, accordingly, is in his ability to recognize the consequences of the conclusions from the conceptual analysis of analogies. Furthermore, this portrayal of Saussure's theory touches on the question of the assumptions he had about what justifies the scientific value of a linguistic inquiry. As mentioned earlier, according to the current paper, Saussure believed that linguistics should follow the paradigm of the 'hard' sciences.

Before we embark on this discussion, I should add a few clarifications:

1. This paper is about Saussure's project to found a linguistic science. It is a historical attempt to understand what he himself had in mind. It is not about how his posthumous publications were received and understood. I will therefore focus mostly on his own writings (WGL) and on the notes of the students who attended his classes (CLG–I–III).[6] References to the published *Course* (CLG), edited by Bally and Sechehaye, will appear only when needed for a comparison to previous scholarship about his work which dealt with this book. At the end of the paper I will even suggest that the published course does not represent what I believe to be a major key for the theory he held, at least for twenty years — the analysis of analogies.

2. Saussure himself never managed to propose a systematic approach to linguistics. Even his own attempts, as reflected in, for example, his manuscript *On the Dual Essence of*

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[5] It has been claimed that Saussure rejected various aspects of such a positivist view. For example, in her recent book, Stawarska (2015, mostly ch. 4) deals with questions similar to those that are raised in this paper, and she reaches the conclusion that Saussure's own notes on general linguistics reveal that he was a phenomenologist, as he placed phenomenological emphasis on the entanglement of the subject within science. See also Bouissac (2004) and Gasparov (2013: 65) for a similar claim.

[6] For a description of these types of studies in Saussure's work, see Bouissac (2010: 123–125).

Language,[7] do not present a systematic theory. Nevertheless, this paper aims to show that we can still reconstruct a somewhat coherent approach from his work that is worth understanding.

3. Discussing the internal developments in Saussure's thoughts is not the goal of this paper. As will become clear from the quotations that will be cited, there are many similarities in Saussure's thoughts from his return to Geneva in 1891 until his second course in 1908–1909. Certain nuances and emphases are different, but these should probably be related to the context in which they were expressed (self-reflections vs. lectures.).

4. This paper focuses, to a large extent, on ontological questions (what does it mean that a language exists?), epistemological questions (what does it mean to know a language?), and methodological questions (what does a scientific study of languages involve?). These questions stand at the heart of Saussure's writings and hold a central part of the first two courses (1907–1909). They appear much less in the third course, and it is a matter of debate whether Saussure changed his mind or simply modified his style.[8] For our purposes, this question is irrelevant as this paper focuses on the ideas he held for most of his life.

The structure of the paper is a follows: in Section 2, I introduce the proposal that Saussure's contributions are revealed through the study of the history of the concept of analogy, beginning with the classical grammarians and concluding with Saussure. To show this, I undertake a survey of the role of analogy in classical grammars and how it was transformed into a type of explanation in historical linguistics in the second half of the 19th century. Section 3 is the heart of the paper, introducing on the one hand how Saussure understood analogy and, on the other hand, the role of analogy in Saussure's larger theory of the faculty of language. It also provides support for my claim regarding his underlying assumptions as to how one should conduct a scientific inquiry. Section 4 discusses an example of the ramifications of a better understanding of the role of analogy in Saussure's thoughts, focusing on what should be the scope of the diachronic studies of language according to Saussure. In Section 5, armed with the information regarding Saussure's analysis of analogy, we return to the history of the notion of analogy in the history of linguistics, as we are in a better position to appreciate Saussure's contribution to our understanding of the the phenomeon. Section 6 provides an interim summary, and Section

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7) WGL: 3–60, see Joseph (2012: 380–388), Chidichimo (2014: 117–122).

8) See Joseph (2000) for a speculation of why Saussure changed his mind. It must be noted that, in most aspects, Saussure was consistent with his previous work in the three courses, besides the role of the society in languages. In addition, he demonstrates some major terminological developments. Thus, it is unclear whether his neglect of ontological and epistemological language indicates that he thought this type of language was appropriate or not. Occasionally, one can still find indications of his old thoughts in the third course as well, as, for example, the note regarding the existence of the language in the brain (CLG–III: 7). However, the discussion of the developments which are reflected in the third course is beyond the scope of the current paper.

7 adds another chapter in the history of the notion of analogy, this time Saussure's theory as it is presented in the posthumous *Course*.

2. The historical claim of the paper: Saussure as a synthesis of the grammarians and the neogrammarians

Just a few months before his death, in his third course in general linguistics, Ferdinand de Saussure praised the work of classical grammarians. In a few sentences that made their way into the published *Course*, he says the following:[9]

> It is curious to note that here their [the grammarians'] viewpoint was absolutely above reproach. Their works clearly show that they tried to describe language-states. Their program was strictly synchronic … (CGL: 82)

He even claimed that their work deserved the attribute of being 'scientific' more than the studies of the 19th century linguists. In light of this, he describes the scientific endeavors of his immediate predecessors as a regression in the ultimate goal of science — to advance our knowledge about the world:

> Classical grammar has been criticized as unscientific; still, its basis is less open to criticism and its data are better defined than is true of the linguistics started by Bopp. (CGL: 82)

This is a rather surprising statement when we are aware of Saussure's personal background as a disciple of this 19th-century tradition,[10] as is demonstrated in much of his linguistic research,[11] and when considering his previous accounts where he describes the history of linguistics.[12]

Moreover, Saussure does not define which "classical grammarians/grammars" he had in mind. It is, therefore, left to us to conjecture to which grammarians he referred and what aspects of their work seemed to be more scientific than the work of his contemporaries. In another place, when mentioning the "ancient grammar of the Greeks",[13] Saussure gives them credit for invent-

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9) Cf. CLG–III: 105. The fact that this is the source for these sentences is demonstrated in CLG–III: 182–184. See also Joseph (2012: 567).

10) See Joseph (2012: 192–197) concerning Saussure's years in Leipzig.

11) See inter alia Redard (1978), Davies (2004: esp. 25–26).

12) In the second and the third courses, Saussure devoted time for a review of the history of the discipline, and one can find many remarks in his own writings about the earlier stages of linguistics (for example, in WGL: 79–80, 85–86, 140–146. In the second course (CLG II: 70–94), he explicitly used the history of the field instrumentally to introduce topics in general linguistics. In this respect, Saussure followed a tradition already established among previous linguists to devote much time to this history of the discipline as part of their curriculum. Joseph (2012: 194–195) shows that Saussure's history of the field in many respects follows Osthoff's class that he attended in November 1876.

13) WGL: 107.

ing the notion of analogy, adding, in the same context, that they used this notion appropriately. In light of this, and for reasons that will become clear throughout this paper, I believe that the key for understanding the background for his claim regarding the "classical grammarians" and to grasp the core of the differences between Saussure and the Neogrammarians is to focus on the history of the notion of analogy. As explained below, in many senses it is suitable to describe this history in terms of Hegelian dialectical method, which consists of the triad of thesis-antithesis-synthesis.[14] According to such a portrait, Saussure does not completely oppose the Neogrammarians, but instead solves a problem in their approach by returning to ideas that the classical grammarians held, ideas which the Neogrammarians were opposing.

In order to provide support for the proposal of seeing Saussure as a synthesis of the grammarians and the Neogrammarians, I begin with a brief history of the study of languages, concentrating first on the shift from the pre-scientific work of the grammarians to the formation of the linguistic discipline. My report will conclude with the theoretical challenge that linguists dealt with at the end of the 19th century, which raised serious doubts about the scientific foundations of the linguistic discipline. In this context, I propose that Saussure's ultimate goal was to be engaged in the main theoretical challenge of his time. As we shall see, one can regard his proposal as a return to the pre-scientific stage of the study of languages with a modification that allowed him to include similar ideas to those of the classical grammarians within the scientific framework. By focusing on the history of the study of languages, we are following in many senses Saussure's inclinations to discuss the essence of linguistics through the lens of the history of the discipline.[15]

For the sake of our discussion, I momentarily take an over-simplistic approach and summarize the function of the work of a typical classical grammarian as providing instructions as to which analogies one should apply in order to use a given language appropriately.[16] Most notably, in the context of morphology, if one wishes to know which form of the verb should be used for example, a paradigm of the verbal forms in a grammar book would lead to the right answer. These paradigms direct one to produce, through a recognition of some similarity between known forms, a new form that is similar in various respects to an already attested form.[17] It is worth reading the words of Quintilian (ca. 35–ca. 100) in *Institutes of Oratory* when he characterizes what analogy is:

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[14] It is commonly attributed to Hegel, despite the fact the he never used this terminology himself. In fact, it has its origin in Fichte (1795).

[15] See above n. 12.

[16] The first part of Lersch (1838) is probably still one of the best histories of the study of languages through the lens of the notion of analogy. See also Esper (1973: 1–24).

> What it requires is that a writer or speaker should compare whatever is at all doubtful with something similar concerning which there is no doubt, so as to prove the uncertain by the certain. (Book 1, ch. 6, section 1)

In fact, forms in Greek that derive from the verb $\dot{\alpha}\nu\alpha\lambda o\gamma\text{-}\acute{\varepsilon}\omega$ meant attributes such as 'grammatical', 'being part of the grammarian school'.[18]

In most cases, grammarians have either pedagogical or normative goals and their instructions rely on a pristine or a classical stage of a language. Thus, when we consider the parts of the grammar books which provide instructions on how to produce the "correct forms", the grammatical rules in these parts rely on an identification of which grammatical categories are significant in the model language (such as gender, number, case etc.). The paradigms, accordingly, show how to produce new forms according to these categories. The tradition of grammar books established by Dionysius Thrax, for example, with his grammar book *Techne grammatike* (c.170–90 BCE), later continued in the mid-4th century CE with Aelius Donatus's *Ars grammatica* for Latin,[19] aimed at providing "an accurate account of analogies" (Dionysius Thrax 1874: 3) as one of its major goals.

We should, therefore, ask ourselves the following question more broadly: what happened in the scientific track in the first decades of the 19th century? Saussure answers this question in his second course:

> Bopp's originality is great and lies in the following: in having demonstrated that a similarity of languages is not a fact which concerns only the historian and the ethnologist, but is a fact susceptible itself of being analyzed … but having conceived that there was a material for study in the exact relationships of one language to another related language. The phenomenon of the diversity of languages in their relatedness appears to him as a problem worthy of being studied for itself. To throw light on one language using another … < That there is >something to explain in a language had not been suspected: forms are something given that must be learned. (CLG–II: 74a)

In a similar fashion to Thomas Kuhn, who was born a decade after Saussure's death, Saussure regards science as a puzzle-solving enterprise.[20] Thus, the importance of the work of the German philologist Franz Bopp, according to Saussure, stems from the fact that he sought to explain why certain languages are similar on the one hand and different on the other hand. Such a question leads

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[17] The first important work on analogy is found in Marcus Terentius Varro's (116 BCE–27 BCE) *On the Latin Language*. For an extensive study of Varro's linguistic theory, see Taylor (1974); see also Law (2003: 42–51), Lahiri (2000: 4).

[18] Liddell/Scott (1940: 111).

[19] See Law (1997: 55) regarding the medieval applications of the notion of analogy in morphological paradigms.

[20] Kuhn (1962: 35–42).

towards a historical answer and thereby identifies the scientific study of languages as part of the field of history. Having the historical framework, it was only left to the linguists to determine whether such a history should be examined similarly to natural history (as in geology or the study of evolution in biology) or to social history.[21]

It is not my intention to go into the details of the various conceptual developments in the history of German comparative linguistics. For the purpose of the current study, I will skip ahead more than half a century to the work of the Neogrammarians. Even in this case, it is necessary to elaborate at length about this movement, its motivations, and in what respect its disciples differed from their teachers.[22] However, in the scope of our discussion, it is sufficient to mention that they continued the focus on the history of languages, but at the same time they notably exhibited scientific aspirations. Thus, their main goal was to make the study of languages more rigorous and based on clear meticulous methodology.[23]

In the introduction to the first volume of the journal *Morphologische Untersuchungen auf dem Gebiete der indogermanischen Sprachen*, established in Leipzig in 1878 by Hermann Osthoff and Karl Brugman, two important figures in the Neogrammarian movement, they summarized what they believed to be the only two explanations for historical changes in languages:

The two most important principles of the 'neogrammarian' movement are the following:

> First, every sound change, inasmuch as it occurs mechanically, takes place according to laws that admit no exception. That is, the direction of the sound shift is always the same for all the members of a linguistic community except where a split into dialects occurs; and all words in which the sound subjected to the change appears in the same relationship are affected by the change without exception.

> Second, since it is clear that form association, that is, the creation of new linguistic forms by analogy, plays a very important role in the life of the more recent languages, this type of linguistic innovation is to be recognized without hesitation for older periods too, and even for the oldest. This principle is not only to be recognized, but is also to be utilized in the same way as it is employed for the explanation of linguistic phenomena of later periods.[24]

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[21] See Christy (1983) and Koerner (1995: 45–76) for a review of how different sciences were considered to be the paradigm for the science of linguistics. For a discussion concerning this question from the time of Saussure, see Adam (1881). In this respect they follow Wilhelm Scherer who advocated that the study of language must follow the studies of natural sciences (See, Christy 1983: 72).

[22] Jankowsky (1972), Amsterdamska (1987: 121–136) and Davies/Lepschy (2016: 226–276).

[23] Amsterdamska (1987: 128–129), Davies/Lepschy (2016: 249).

[24] Osthoff/Brugmann (1878: xiii–xiv), the English translation, is from Lehmann (1967: 204).

Analogy, in this context, functions differently from the way it operated previously in the context of the grammarians.[25] It is no longer a method to *produce* 'correct language', but a way to *explain* why a given language was used 'incorrectly'. In other places in this text, they, as did many of their contemporaries, even refer to this phenomenon as "formation by false analogy".[26]

The two explanations the Neogrammarians proposed for the historical changes in languages belong to two different types of phenomena. While sound-shifts are in the realm of phonology ("sounds" in Saussure's description),[27] analogies explain morphological changes ("grammatical forms" in Saussure's description).[28] For the purpose of our discussion, it is necessary to note that, according to the Neogrammarians, there is a clear hierarchy between the two explanations as they emphasize later in the same introduction:

> A principle which we strictly maintain, to the best of our ability, is: only then to take recourse to analogy when the sound laws compel us. Form-association is for us too an 'ultimum refugium'.[29]

In order to understand the reason for this hierarchy, we should assume a positivist approach for the scientific studies according to which all scientific explanations are nomological as they share the form of rigorous laws[30] ("mathematical regularities" in Saussure's words).[31] In light of this, the hierarchy between the two types of explanation is clear and has to do with the different scientific status of the explanations. Laws, which allow no exceptions, provide the ultimate form of scientific explanation. Such laws can be verified and as such provide predictions. This is, however, not the case with analogies. Already in the days of the Neogrammarians[32] linguists noted that an explanation via analogy is ad-hoc, and as such cannot be verified.[33]

The observation that one out of the two types of explanations does not meet the criteria for what a scientific explanation is constitutes a failure for the

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[25] For a detailed study on the different notions and approaches to analogy within the Neogrammarian movement, see Esper (1973: 25–63), Davies (1978), Jankowsky (1990).

[26] See, for example, Osthoff/Brugmann (1878: xii), for the English translation see Lehmann (1967: 203); see Brugmann (1876: 317–320 in a footnote) for a long discussion about the problems with this term (this footnote was partially translated into English by Esper 1973: 30–32).

[27] WGL: 106.

[28] WGL: 106.

[29] Osthoff/Brugmann (1878: xvii–xviii), the English translation, is from Lehmann (1967: 207).

[30] See, Koerner (1989: 204), and Weinreich *et al.* (1968: 115–116).

[31] WGL: 109. See also CLG–II: 47–48.

[32] As also mentioned in Osthoff/Brugmann's introduction (Lehmann 1967: 205–207).

[33] It was most notably asserted by Curtius (inter alia 1885: 39–40); see also Osthoff (1879: 23–24).

potential of linguistics to become a positive scientific discipline.[34] This is the serious challenge that we mentioned earlier with which the young discipline of linguistics had to deal at the end of the 19th century.

I would like to suggest that, to a large degree, Saussure aimed to solve this theoretical problem.[35] According to this proposal, much of what we attribute to Saussure's theoretical innovation stems from his desire to deal with this theoretical failure of the Neogrammarians.[36] As we shall see (below at the end of Section 4), there is only little positive evidence that Saussure had this theoretical problem in mind;[37] however, if we accept this hypothesis many parts of Saussure's theory become clear. Furthermore, our analysis does not depend on this historical fact but stands on its own. In other words, the important part of our analysis is the role of analogy in Saussure's theory and the way he followed the Neogrammarian approach. This part of the proposal will be extensively supported from Saussure's writings and teaching.

Before proceeding, we should keep in mind that, from a positivist point of view, explaining sound-shifts with exceptionless laws remained a perfect scientific method to explain changes in phonology. It is only analogy, as an explanation for a historical change in morphology, that posed a theoretical challenge — as this is not an explanation formed as a law. This information is crucial for understanding some of the ideas that Saussure developed.

3. The role of analogy in Saussure's statements about the faculty of language

My proposal is the following: while for the Neogrammarians analogy was an explanation for linguistic phenomena (historical changes), according to Saussure analogy is the phenomenon itself, or better, an indication to one of the most essential cognitive operations pertaining to languages: the ability to associate between forms. The latter is to a large degree *the* object of the scientific inquiry in linguistics.[38] While some of the Neogrammarians already noticed the connections between association and analogy ("association, that is,

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[34] See also Amsterdamska (1987: 184–186) for a similar description of the problems analogy poses to the scientific endeavor of the Neogrammarians.

[35] See Joseph (2012: 197) for Saussure's notes from his days in Leipzig where he attended a class concerning the nature of analogies.

[36] Cf. Thibault (1997: 82 ff.) for a more classical explanation of why Saussure opposed the Neogrammarians.

[37] CLG–II: 93–94.

[38] Cf. Stawarska (2015: 134–147). Also Cf. Joseph (2000: 310–315), who provides a detailed analysis for the role of analogy in Saussure's courses. The current section, on the one hand, repeats many of the points that Joseph mentions in this paper, but differs on many other significant points.

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the creation of new linguistic forms by analogy"), they did not appreciate enough the significance of this observation, as Saussure did.

In order to be able to compare the role of analogy in the Neogrammarian and the Saussurian frameworks, it is first necessary to understand some of the fundamental ideas Saussure had about sciences in general and the linguist's task in particular.

3.1 Ontology

We delve first into one of Saussure's underlying assumptions regarding the nature of scientific inquiry. For this purpose, one should mention another aspect of his demarcation criteria for scientific inquiry, or more specifically for the independence of a discipline: Saussure had, to some extent, a realistic approach,[39] which requires a natural object to stand at the heart of a discipline.[40] This assumption is evident, for example, in the following paragraph from his inaugural lecture in Geneva in November 1891:

> One can only ask each aspiring discipline to provide as credentials *an object which plays an unquestionable role in the affairs of the universe*, within which human affairs rank above all others; the position which this discipline occupies will be proportionate to the importance of its object of study in the whole grand scheme of intellectual endeavor. (WGL: 93, emphasis is mine)

As will become clear hereafter, Saussure indeed had a clear ontological picture about the natural object which stands at the heart of the linguistic discipline. In addition, many parts of his approach to linguistics are related to this ontological point of view. I, therefore, propose what I believe to be the core of his ideas and provide support from his own writings, as well as from the notes of his students from his lectures (emphases in bold will be mine), in order to demonstrate the sources for this interpretation of Saussure's ideas.

Starting from such a realistic approach for sciences in which one must talk about an object, we can expect a commitment to the physical location of the language. Saussure indeed meets this expectation, and his opinion on this matter is quite explicit: language exists and its location is in the brain,[41] as the following quotes demonstrate:

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[39] Cf. Marrone (2002).

[40] It is striking to compare Saussure's criterion for a discipline with Paul's (1891: xliii). A detailed comparison in this respect is worth pursuing but is beyond the scope of this paper.

[41] See also Amacker (1994: esp. 4, 8). One of the readers of my paper asked how such claims are consistent with Saussure's criticism of the 19th century view that language has to be treated as an organism. In fact, Saussure himself answered this question: "Objections have been made to the use of the term organism: the language cannot be compared to a living being, is at all times the product of those it depends on! However, we can use this word without saying that the language is a being apart, existing outside the mind, independent." (CLG–II: 25). The approach of

Everything which is contained in the brain of the individual, the deposit of forms <heard and> used and of their meaning: <such is> the language.

<div align="right">(CLG–I: 65)</div>

The language is **located only in the brain**.

<div align="right">(CLG–III: 69)</div>

These correlations may be considered as **existing in the brain** along with the words themselves.

<div align="right">(CLG–III: 130)</div>

The word is a living entity in the **mental storehouse**.

<div align="right">(WGL: 81)</div>

As these quotes show, language in Saussure's approach, exists in reality. It is a mental storehouse of forms and this existence has a specific space: the brain. Consequently, it is not surprising that Saussure cared about Broca's anatomical-neurological findings[42] which showed a connection between a certain region in the frontal lobe of the left hemisphere and speech abilities. Saussure even drew conclusions from the relevant phenomena of aphasia and what they tell us about the faculty of language.[43]

It is plausible to assume that Saussure's realistic approach to sciences and his assertion that language resided in the brain have the following two ramifications in his linguistic approach:

1. According to such a realistic point of view, there is a language that exists somewhere (in the brain) — and therefore the linguist's goal is to identify it. He or she must develop, accordingly, a methodology of how to describe the *real* language. A criterion for a good scientific work is a description that corresponds to reality. Thus, consistency of a linguistic theory with the data, for example, is not enough, as long as it is not a description of what is actually in the brain. Saussure would say that linguistic analyses that do not correspond to the actual language which the speakers have in their mind, are merely an "abstraction".
2. Locating language in the brain leads the study of languages towards a cognitive direction.

As we shall see hereafter, Saussure indeed believed in these two ideas, and it is reasonable to argue that they in fact related to his realistic approach and to his specific ontological commitments.

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organism that was criticized by the Neogrammarians and by Saussure believed that the language is a living entity, independent of its speakers, as for example is described in Schleicher (1873). For Saussure, however, the language is organic as long as it is considered as part of the mind/brain. In another place he says also that the problems with Bopp's school result from the fact that they "did not consider the language as a phenomenon, and hence as an exercise of a faculty of the mind" (WGL: 86). See also Weinreich *et al.* (1968: 105-106) who demonstrate how similar idieas can be identified already in the writings of Paul.

42) WGL: 185. One can even find traces of this in the published course (CGL: 10), and its origin is from the third course (CLG–EC: 34); see also Joseph (2012: 575).

43) WGL: 120, 186.

Furthermore, if indeed one believes in these two ideas, linguists then must deal with a serious challenge — there is no direct access to the object of study. Hence, linguists must develop a methodology for how to draw inferences about this inaccessible object from the overt appearances of the language.[44]

Saussure's solution to this challenge is that from the perspective of the scientist, the only empirical access to what exists in the brain is through the cognitive system (I'm using this term anachronistically as this could not be part of Saussure's terminology), for which the brain is responsible. More specifically, it is through the manifestation of the speaker's mental activities, relevant for the use of language, that the linguist approaches, and subsequently analyzes the natural phenomenon of language which exists in the brain.

This picture is extremely significant for our understanding of Saussure's general approach to the study of language. If this description is on the right track, it indicates that Saussure saw linguistics within the realm of psychology. While readers of the posthumous *Course* might be surprised at such a conclusion, it is in fact already well-known that he explicitly said so in various places,[45] as is reflected in the following passage for example: "Little by little psychology will take practical charge of our science, because it will realize, not that *langue* is one of its branches, but that it is the very basis of its own activity" (WGL: 73).

3.2 The study of language as a mental phenomenon

In this section, I give three principles which, as I will demonstrate, Saussure believed in. These principles are conceptually related and include the two principles found in section 3.1.

1. A realistic point of view: there is only one true analysis of a language, the one that corresponds to what is "in the brain", or better, to language's mental representation. The true analysis is the one that speakers have to their own language.
2. The speakers' analysis of their language consists of associative connections between forms. For example, English speakers recognize a connection between the /s/ at the end of plural forms, such as "dog**s**" and "cat**s**". These associations are *de facto* the speakers' linguistic knowledge, as they constitute their grammatical knowledge.
3. The only way for a linguist to infer that a speaker actually has such an association is when he or she forms a "false analogy", e.g., when a child says in English "mouses" instead of "mice". Otherwise, when known forms are repeated, such as "cats", it is impossible to know how the child analyzes them — whether these forms are recognized as consisting of one element [cats] or two [cat-s].
   It is true that an analogy is a way in which language changes, but more importantly, it

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44) See Bar-Asher (2008) for a discussion about Saussure's epistemological agenda.

45) Amacker (1994), Bergounioux (1995), Fehr (1995), Stawarska (2015: 135–136). For our purposes, it is irrelevant whether linguistics constitutes a unique branch in psychology or not. Cf. Joseph's (2000: 322–327) and Godel's (1957: 182–183) notes concerning this topic.

reveals the associations the speaker has. Analogies make known the type of mental operations human beings use in languages in general. (From the point of view of the speaker, the mechanism through which the child creates the form "mouses" is identical to the one used when "dogs" is expressed. In both cases, morphology is activated.)

As for Claim 1, the following passages demonstrate Saussure's realistic point of view, in various ways:

> Before anything else and before talking of abstractions, **a fixed criterion concerning what can be called real in morphology is necessary**.
>
> Criterion: **what is real** is what speaking subjects have some awareness of, however small; all they are aware of and nothing but what they can be aware of …
> (WGL: 125)
>
> We cannot ask ourselves < in linguistics > if the suffix exists in itself this question is meaningless — **but only if it exists < in > the consciousness < of the speaker >**. For a linguistic element, to exist is to be delimited < from front to back or the reverse > with a meaning < the basic meaning > that the speaker < attributes > to it.
> (CLG–I: 71)
>
> **To know to what extent something exists, we will have to find out to what extent it exists in the consciousness of speakers,** [to what extent] it signifies. < Thus, a single perspective, method: to observe what is felt by speakers. >
> (CLG–II: 49)

These passages teach us about Saussure's realistic approach, from which the linguist's task is to recognize the "real" language, the one that truly "exists" in the speaker's brain. Consequently, Saussure must provide a criterion for how to identify what is real. Since he held the ontological point of view, that the language is located in the brain, it was only reasonable that this cerebral phenomenon has mental representations which are also real. This reality, as we saw in these passages, is "what speaking subjects have some awareness of".

We must add a few words of clarification about Saussure's use of the terms awareness and consciousness. In Saussure's framework,[46] awareness/consciousness is not restricted to whatever is revealed through an act of introspection. For him, "consciousness" or "subconscious" stand for the mental/psychological ability and knowledge, which the mind has or operates with.[47] In fact, Saussure includes under consciousness everything that is not completely unconscious.[48] The latter covers the physiological or physical phenomena (the

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[46] Stawarska (2015: 130–134) demonstrates how the editors of the published course reduced the role of consciousness in Saussure's theory, while it plays a significant role in his own thoughts and in his courses.

[47] See also Joseph (2012: 322), Stawarska (2015: 144–147).

[48] Cf. Joseph (2000: 312–314) who provides a narrower definition for consciousness in Saussure. According to him "Saussure's concept of mind, then still follows the classical model in which consciousness is associated with intention as well as introspection" (2000: 314).

deterministic phenomena); this can be demonstrated, inter alia, in the following passage in which Saussure compares sounds-shifts and analogies:

> These two great factors in linguistic renewal may be opposed from many different viewpoints; we may say for instance that the <u>first represents the physiological and physical</u> side of speech while the <u>second reflects the psychological and mental</u> side of the same act, or that **the first is unconscious, while the second is conscious, always bearing in mind that the notion of consciousness is highly relative, so that we in fact have two degrees of consciousness, the higher of which remains pure unconsciousness compared to the degree of thought which accompanies most of our acts**.
> (WGL: 106)

Thus, for Saussure, everything mental falls under consciousness, even if it is unconscious in the regular use of the term. In other places, he speaks of an "involuntary analysis (via subconscious operations)" (CLG–I: 67). On this topic, Saussure most likely follows the conclusions of his contemporary psychologists,[49] as he is satisfied with traces of cognitive activity related to the faculty of language in order to include the relevant phenomenon inside the realm of consciousness.[50] In the context of linguistics, we should also mention that similar ideas were proposed by the American linguist Whitney,[51] who is among the few linguists that Saussure occasionally mentions.[52]

We turn now to the second claim, that the speaker's analysis of his or her language consists of associative connections between forms. This is not necessarily derived from Claim 1, but it is a reasonable hypothesis of what the Speaker's knowledge consists of. The following passages from the first course demonstrate how Saussure captured the results of this mental operation and how it brings about linguistic knowledge:

> All < the > facts of language, < especially the evolutionary facts, > force us to come face to face with speech on the one hand and on the other **with the reservoir of forms in the mind < or > known by the mind. An < unconscious > act of comparison is necessary not only to create but to comprehend the relationships.** Any word succeeds in expressing something to the mind only because it is immediately compared with everything which could mean something slightly different (facias: faciam, facio). If it is true that we always need the fund of the language in order to speak, conversely everything which enters the language was first

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[49] See Joseph (2012: 304) for a list of possible psychologists who might have influenced Saussure in this respect.

[50] Inter alia WGL: 99, 106

[51] See Whitney (1880: 334) with respect to the notion of the 'will'. See also Joseph (2012: 304), who points out that earlier, in his years in France, Saussure also used the term 'will' in this context and also in WGL: 99. It must be noted, however, that in 1894 Saussure drafted an article in which he was asked to assess Whitney's contribution to linguistics (WGL: 140–156). In this draft, Saussure mentions the various levels of consciousness (WGL: 153), but does not mention this as one of Whitney's contributions. Cf. Joseph (2000: 308–309).

[52] See inter alia Joseph (2012: 255).

essayed in speech a sufficient number of times for a durable impression to have resulted: the language is only the sanctioning of what has already been evoked <by> speech.

This opposition of the language to speech <which> we have here at hand is very important for the light it <sheds on> the study of language. A way of making this opposition particularly noticeable and <observable> is to oppose the language and speech in the individual (language is social, true, but for many things it is more convenient to encounter it in the individual). We then shall be able almost tangibly to distinguish these two spheres: the language and speech :Everything we say owing to the needs of discourse and by a specific operation: such is speech.

Everything which is contained in the brain of the individual, the deposit of forms <heard and> used and of their meaning: <such is> the language. (CLG–I: 65)[53]

After this description, Saussure turns to a more specific description of how the associations operate as well as the results of these operations: linguistic knowledge, which, according to this portrait, is organized similarly to a grammar book:

We detect a link between association and grammar. We shall eventually say that the sum of well-studied associations < — conscious or not — will be equivalent to> the conscious, methodical classifications made by a grammarian …

In association, there are :

1. The grouping of forms: the <word> unit <is> immediately associated with its analogues in the different possible series <in at least two series!>.

<Thus quadruplex will not be isolated in the internal classification but will be associated> with a first series which will be:

I
quadru]pes
quadri]frons
quadr]aginta
then with another:

II
triplex
simplex
centuplex

53) From this paragraph one can see how the distinction between *langue* and *parole* in Saussure's theory is also related to his analysis of the role of association, as already observed by Harris (2001: 30). This psychological process is part of the individual's *faculty of language*, and as such, it is linked to parole, to the analysis of the actual speech; those of its products that get socially sanctioned enter into *langue*. In this passage, at least, the language itself is also something which is in the individual's brain. In the third course, Saussure has changed his mind on these issues. Already Godel (1957: 142–159) noted about the development in Saussure's ideas about the distinction between *langue* and *parole*.

The identity can nowhere be complete (in that case we would have the same word!) but the grouping is done in the name of a community of form and meaning which is only partial. The grouping is what is elementary in association. We have

2. fixing of the value. The language perceives which portion of the word remains constant when it varies the form with its analogues <of the two series>: (in series I this is quadr-, in series II it is -plex). This is the source of the very intelligibility of the word and in any case its precise meaning.

3. There will be involuntary analysis (via a subconscious operation) of the first given because it is coordinated not with just one series but with at least two series. Any grouping of analogies also implies the grouping of differences. It is in this that consists the grammarian's <own> proper operation; it is thus that he will be able to separate out the sense of a lower-level unit. (CLG–I: 66–67)

Such passages deserve a longer discussion on the details of how associations and analogies function. In this context, I will only briefly note that, as has been already noticed,[54] one must read Saussure in light of the theory of associationism in psychology and with an empiricist's epistemology as background. Since Locke, associationists have attempted to argue that there is only one mental process: the ability to associate ideas. In this respect, once again Saussure follows the Neogrammarians who already spoke about analogies in terms of association,[55] and more significantly, this places Saussure's epistemology (with respect to the knowledge of a language) within the realm of empiricism.[56] This observation is obviously related to Saussure's position of linguistics within psychology, which was mentioned earlier.

We return now to the linguist's task of identifying "the real language". As noted, the linguist still has the challenge of the inaccessibility of the speaker's knowledge. This leads us to Claim 3, that according to Saussure the linguist's access to associations, to the speaker's linguistic knowledge, is through analogies. This is demonstrated repeatedly in the following passages:

Comparison issues in analysis and the result is <elements which are perceived by the consciousness of the language,> sometimes a radical, sometimes a suffix etc. The language does not know the terms radical, suffix etc., but we cannot deny it the consciousness and use of these differences. **Analogical formation is the verification of this analysis of the language** (CLG–I: 70)

54) Joseph (2012) has noted extensively throughout his book the significance of associationism in Saussure's thoughts. He records the history of the use of this concept in Saussure's own notes and for the possible sources of influence on Saussure in this respect. See specifically Joseph (2012: 304, 395, 412, 509, 597). Some have argued for different uses of the notion in Saussure's work (inter alia Bergounioux 1995), however, even they must admit that it is still a general cognitive operation that functions in various ways in the realm of the faculty of language.

55) For a review of this topic, see Esper (1973: ch. 3).

56) Concerning this topic, see Bar-Asher (2008).

Thus to what extent is there a prefix known to the language … **The only absolute proof: <the> usage that is made <of this prefix> by creative analogy** …

(CLG–I: 73)

Question: What proves that this element -eur can really be isolated in a linguistic analysis?

Conclusion: The grammarian's morphological analysis, **as long as it concords with the analysis of the language attested to by neologism or analogical formations**, cannot be said to be a product of abstraction. (WGL: 125)

It is to these two activities that is attached an immense phenomenon: <the phenomenon> of analogy, what are called the phenomena of analogy, analogical creation, analogical novation (better than innovation) which occurs at every moment.

Something is new, therefore there has been a change. Here is an embarrassing question: if there is change are we in the realm of the diachronic? We have indeed to say that this is a very delicate point in the distinction between synchronic and diachronic. **We need a synchronic fact in order to produce analogy, we need the whole, <the system> of the language**. (CLG–II: 58–59)

Analogy in these descriptions is no longer just the mechanism through which a morphological change takes place, as it was used among the Neogrammarians, but it is, using Saussure's words:

<But it> is a good idea to emphasize at this point the innovative, <creative, and not transformative> nature of the analogical phenomenon. (CLG–I: 63)

The linguistic historical change is the result of the innovative force of analogies, but more importantly, analogy is indicative of a cognitive capacity to compare forms in the mental 'reservoir of forms'. This cognitive function is necessary for the formation of new forms, but also for the comprehension of the relationships among signs in this mental storehouse. This capacity is the engine to create new forms, and while this is indeed relevant for the history of languages, being able to use this engine means also having the knowledge of the relevant grammar. According to this depiction, the actual associations the speaker has in mind constitute the grammar of his or her language. In other words, for Saussure, the existence of a form in the speaker's mind means that it is within the speaker's capacity to use it, that he or she knows how to form new words through analogy. If we return to the example of the English plural morpheme, the suffix /-s/, we know that a child knows that it is a marker of the plural only when he or she forms a new word with a plural, like "mouses". Beforehand all uses of the "s" can be merely lexical knowledge, indicating a repetition of the whole word as heard from adults. Once a new form is produced, it becomes evident which association was formed in the speaker's mind, generalized from various forms ending with a similar sound.

Thus, for Saussure, analogies are the best indications for what is in the speaker's mind/consciousness. These are the cognitive activities pertaining to language as creations of new forms, regardless of whether they exhibit an existing grammar or whether they demonstrate a historical change. Analogies, accordingly, uncover the grammar the speaker knows. (When a child uses "s" as the plural morpheme, he or she actually gets the right analogy in contemporary English; in the history of English it was an innovation.)[57] This is the essence of Claim 3, that analogies reveal the associations the speaker has. Saussure describes the significance of analogies in a similar way:

After providing an example of analogy, hes says the following:

This is not a historical question, but one concerning the conscious state.

(WGL: 80)

In more general terms, the phenomenon [analogy, EABS] represents a mental association of forms, which is directed by *association of the ideas represented* …

(WGL: 107)

We have to <look more closely and say that **analogical creation is of> a grammatical order,** that is to say that any operation of this kind presupposes the consciousness, <the comprehension> of a relationship <of> forms <among each other,> which implies that the forms are considered conjointly with the ideas that they express. (CLG–I: 63–64)

Analogy is creative but prior to this it must be an organizing force by virtue of its classification of received and stored material … Classification must lead to an analysis <of words and of units inferior> to the word. (CLG–I: 71)

Everything which is in the synchronies of a language including analogy (= consequence of our activity) is very well summed up in the term 'grammar' in its quite ordinary usage … **grammatical = meaningful = pertaining to a system of signs = synchronic ipso facto**

(CLG–II: 62)

The close connection between associations and analogies also explains the fact that in various places, Saussure even uses the word "analogy" to describe the associative relations, and not the historical changes, as illustrated in the following examples:

Any grouping of analogies also implies the grouping of differences. It is in this that consists the grammarian's <own> proper operation; it is thus that he will be able to separate out the sense of a lower-level unit (CLG–I: 67)

Every word will fall at the point of intersection of several series <of> analogues

(CLG–I: 68)

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57) See CLG–I: 98, where Saussure says that even the preservations of old forms is in fact the result of analogies.

This terminological interchange may reveal that in fact association/classification and analogy are two sides of the same coin: the one is the mental representation and the other is its overt appearance.

Furthermore, if we follow Saussure's belief that language is what exists in the speaker's conscious mind, and traces of consciousness are empirically recognizable through the activities of speakers, then, **from a scientific point of view, to be part of the language, i.e., to be an entity from a theoretical perspective, is to be part of an association**. This is how a scientist can infer, based on the evidence he or she has obtained (epistemology), what exists (ontology). Indeed, Saussure expresses similar thoughts explicitly:

> **We detect a link between association and grammar**. We shall eventually say that the sum of well-studied associations< — conscious or not — will be equivalent to> the conscious, methodical classifications made by a grammarian.
> (CLG–I: 66–67)

This can also be considered from the perspective of analogies presented above, from the way the associations produce the grammar:

> **Any language at any moment is nothing more than a vast web of analogical formations,** some quite recent, other dating back so far that one can only guess at their origin. Asking a linguist to name some analogical formations is therefore like asking a mineralogist to name some minerals, or an astronomer some stars.
> (WGL: 107)

Again, consider the following description of associations which are revealed through analogues: "Any word succeeds in expressing something to the mind only because it is immediately compared with everything which could mean something slightly different (facias: faciam, facio)" (CLG–I: 65). It is clear that the association here is what one would ordinarily call a paradigm in a grammar.[58] Thus, this is a return to the grammarians' notion of analogy, this time taken from a psychological point of view: if the conscious state of a language is a web of analogies, then the linguistic knowledge in the brain be-

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58) This comment should not lead to terminological confusions. Culler (1977: 45), among many others (as indicated by Harris 2001: 90–91), remarks: "[that] which Saussure calls associative relations, are now generally called paradigmatic relations". The term 'paradigmatic relations' is taken from Hjelmslev (1963: 59), and the question that should be asked is whether it is just a terminological matter — what one calls associative the other calls paradigmatic — or whether there is something deeper behind this terminological difference. Regardless of the more general differences between Saussure and Hjelmslev, it must be argued that Saussure on this matter was unjustifiably understood in light of Hjelmslev. While the latter believed that ontological questions should not be considered in the foundations of a scientific approach to the study of language, the former strongly believed the opposite. Saussure is not using the term 'association' by accident. This term suggests a psychological action through which the mind is connecting (or 'grouping' in Saussure's own terminology) the elements with which it works. See also Fehr (1995: 95–96) regarding the relationship between Saussure and Hjelmslev on these issues.

comes similar to a classical grammar book, since forms are organized according to paradigms (both in the brain and in a classical grammar book), presenting the grammatical categories through associations. The speakers and the grammarians are in many ways similar:

> We have to <look more closely and say that **analogical creation is of> a grammatical order,** that is to say that any operation of this kind presupposes the consciousness, <the comprehension> of a relationship <of> forms <among each other,> which implies that the forms are considered conjointly with the ideas that they express.
> (CLG–I: 63–64)

3.3 A note about the negative aspects of the linguistic unit

In his attempt to understand the nature of the phenomenon of analogy, Saussure realized that analogies rely on associations, which in turn are groupings of elements which are similar in one aspect but different in other aspects. This understanding led to his famous claim concerning the identity of the linguistic unit, which emerges from the recognition of differences, as we saw earlier in the quote from the first course: "Any grouping of analogies also implies the grouping of differences. It is in this that consists the grammarian's <own> proper operation; it is thus that he will be able to separate out the sense of a lower-level unit." (CLG–I: 66–67). This conclusion led to several statements such as the following, for which Saussure is known:

> Language … fundamentally has the character of a system founded on oppositions (like a game of chess <with the various combinations of forces attributed to the different pieces>). As the language exists wholly in the opposition of certains units and has no other substratum <(the language consists only of these units!
> (CLG–II: 18)

This type of an analysis led also to statements such as the following:

> As there is no *unit* (of any order or nature) which reposes on anything other than *differences*, a unit can only be imaginary
> (WGL: 56)

Such statements could be read, and in fact were read, as endorsing a non-realistic approach, as it is hard to hold a realistic approach for languages and to believe in imaginary entities as constituting the language. This interpretation, however, is not necessary, and as the previous discussion should have already demonstrated, it is unlikely that Saussure held such a non-realistic approach. These passages should be read as describing webs of associations in the mind that makeup linguistic knowledge. Once again, Saussure should, I believe, be read in light of an empiricist epistemology, according to which linguistic knowledge is not a native knowledge, but the end-result of a mental process. Linguistic knowledge, accordingly, is based not on observing external units only, but on the mental process of recognizing the differences between them. Thus, acquiring knowledge involves recognition of differences. This is how

the speaker can not only observe old forms and reuse them, but also create new ones. This understanding explains how negative knowledge can become a positive fact, as Saussure explains in the final passage from his manuscript *On the Dual Essence of Language* (as well as in other places):

> This *contrasting of values*, which is a PURELY NEGATIVE fact, becomes a positive fact, because as each sign forms an antithesis with the sum of other comparable signs at a given time, progressing from general to specific categories, it *quite independently of us* ends up delimited in its own value.
>
> (WGL: 60, emphases are original)

The above is only a short description of Saussure's ideas regarding the linguistic units and their ontology. A longer explanation should spell-out its various aspects in more detail and trace the developments in his thoughts about this question. This discussion, however, is beyond the scope of the current paper.

4. The scope of historical and synchronic linguistics according to Saussure

The significance of our reading of Saussure is extremely important for the broader understanding of Saussure's thoughts on the study of languages and it is related to Saussure's distinction between synchronic and diachronic linguistics. The study of 'the conscious state' is an equivalent term in Saussure's terminology to what he otherwise calls 'synchronic linguistics'. Thus, the scope of synchronic linguistics is deeply related to the phenomenon of association and thereby to analogy as well; since, as we saw, analogy is associated with consciousness, this is what the speaker is aware of, according to Saussure. The following short quote from his writings summarizes this point:

> [after providing an example of analogy, EABS] **This is not a historical question, but one concerning the conscious state.** (WGL: 80)

In the second course, Saussure discussed at length the ramifications of this analysis of analogies, and the significance of analogies to the synchronic study of languages. The following passages provide the essence of this analysis:

> Here is an embarrassing question: if there is change are we in the realm of the diachronic? We have indeed to say that this is a very delicate point in the distinction between synchronic and diachronic. We need a synchronic fact in order to produce analogy, we need the whole, <the system,> of the language. <(Another version (B.): It is incontestable that an analogy cannot occur except through the synchronic forces in the system.> (CLG–II: 58-59)
>
> This simple continuous activity by which the language <breaks down> the units which are given to it contains in itself the whole of analogy, <at least> all the elements which enter into the new form. It is an obvious error to think that it is at

the moment when the new form emerges that the phenomenon emerges: > the elements are all given < in the associative groups. > In this formation there are thus two characteristics. It is a creation and it is not a creation: a creation in the sense of being a new combination, not a creation in the sense that these elements need to be already prepared, elaborated such as they will emerge in the new form.

> (CLG–II: 60)

> It is in this sense that we cannot say that there is a change in analogical creation … Wherever we can follow the thing, there the ousting of the form is completely independent of the creation. The other form generally survives and a new phenomenon is needed to eliminate it from the language.
>
> If there is change it is if we consider the language globally, as a whole which is enriched, but there is no change in the sense of substitution of one form for another.
>
> Analogical creation appears as an isolated chapter, <a branch> of the phenomenon <of the general activity> of interpretation, <of the distinction of units:> the language conceives its units and distributes them in such and such a way, and then it can use them for analogical creation. I will therefore not set aside a special chapter for it. Everything which is in the synchronies of a language including analogy (= consequence of our activity) is very well summed up in the term 'grammar' in its quite ordinary usage. (CLG–II: 61–62)

In sum, analogies are important not only for following the evolution of a specific language, as they were depicted within the Neogrammarian framework. They are also our window to the mental knowledge of the speakers. The analogies that speakers produce reflect the associations between forms as they are in their brain. Accordingly, analogies are not an explanation as they were for the Neogrammarians. They reflect the object itself of the linguistic inquiry, the mental activity that forms the grammar, which is the real object in the study of languages according to Saussure. Thus, in this interpretation, Saussure realized that studying analogies is not within the realm of diachronic linguistics, it is a part of synchronic linguistics, and in this respect he departs significantly from the Neogrammarians. This conscious state, as we saw, is the grammar that every individual has, and it is constituted by the faculty of language, which is the ability to form analogies through associations.

This analysis of the phenomenon of analogy, as a matter of fact, solves the theoretical problem the Neogrammarians encountered with the scientific status of analogies as a type of explanation for historical changes. As we saw in Section 2, the theoretical problem with analogies as an explanation for historical changes was that they are always ad-hoc and are not in the form of laws, which is the ultimate form of a scientific explanation according to the positivistic point of view. By shifting analogies from explanations of historical changes to what constitutes the linguistic phenomenon itself (the conscious-state), this problem is removed. Analogies reflect associations, and these associations are linguistic knowledge. This is the actual phenomenon that is being studied by

the linguist; it is not a type of explanation for historical developments of specific languages.

According to this historical description, Saussure's account of analogies was within the Neogrammarians' intellectual world, as his accounts aimed at answering a theoretical problem they encountered. In light of this, it must be remembered from our review of the Neogrammarians and their theoretical challenges that the Neogrammarians held to two mechanisms through which a language changes — sound shifts and analogies. Now, bearing in mind that, according to this depiction of the history of the field, there was no problem with the scientific explanation of sound-shifts (since they are formed as "laws"), this type of linguistic explanation is scientifically legitimate. Hence, we should expect the following division of labor:

Phenomenon to be explained	Type of explanation	Type of phenomena
Historical changes (diachronic linguistics)	Laws of sound shifts	Phoneme (phonology)
Conscious state (synchronic linguistics)	Understanding of the faculty of language (laws of cognitive faculties)	Linguistic signs — association of signifiers and signified (morphology)[59]

Table 1

According to this, the distinction between the study of historical changes (diachronic linguistics) and the study of the conscious state (synchronic linguistics) also relates to the scope of what is being studied in each of them: the former deals with sounds and the latter with morphemes. While this conclusion might be surprising, this is indeed Saussure's description of the various types of linguistics in his manuscript *On the Dual Essence of Language*:[60]

    I.   Point of view of the *état de langue itself*,
       — not different from the *instantaneous* point of view,
       — not different from the *semiological* point of view (or that of the sign-idea),
       — not different from the point of view of *the individual will outside history*,
       — not different from the *morphological* or *grammatical* point of view,
       — not different from the point of view of *combined elements*.
       (The *units* in this domain are fixed by the relationship between meaning and sign, or by the relationship between the signs, which is no different.)

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59) I use the terms "phonology" and "morphology" loosely, as the history of the meaning of this terminology is rather complicated. As can be seen from the quote below, Saussure himself used the terms "phonetic" and "morphological".

60) Signs of similar division are found in previous notes from 1884 as well; see Joseph (2012: 320), and also in a note from 1885 (AdS 374/1f.128 [ancient]; f. 257).

    II.   Point of view of transversal units,
       — not different from the *diachronic* point of view,
       — not different from the *phonetic* point of view (or from that of the *vocal figure*
       — detached from the idea *and detached from the function of a sign*, which comes back to the same thing as in 1),
       — also not different from the point of view of *isolated elements*. (WGL: 6)

Synchronic linguistics covers signs (i.e. morphemes), and following what we saw earlier, this is indeed "the grammatical point of view". It is the study of the relationship between signs, which is another way to describe associations (which are reflected via analogies). In diachronic linguistics, only forms are studied (i.e. the sounds). Forms are "isolated" because the sounds from different stages of a language are compared in diachronic linguistics, and the meaning of the words in which they appear is irrelevant.

These are ideas that Saussure kept for the rest of his life, or at least until the second course he gave where he discussed this issue at length:

> <It will be easily granted that what is phonetic is not grammatical, such that> if the diachronic sphere did not include phonetics, the opposition I have posited <between the matter which falls in the synchronic sphere and that which falls in the diachronic sphere> would be instantly illuminating; **on the one hand we would have: diachronic = non-grammatical, and on the other: synchronic = grammatical**. But it is clear that from the outset it will be asked whether there is not other history to be done besides that of sounds and whether we do not fall back into grammatical subjects. Thus there will be the fact that a word has changed its meaning, or that forms like the dual gradually fall out of usage in a language, or the fact of analogical development. In short, does everything that was assumed to form part of synchrony not have its history, both syntagmas and associations?
>
> **As soon as we get outside of pure phonetics it is in fact much more difficult to draw the limit or to state a radical opposition.** This is the most difficult part of the general division, but I cannot insist on it without getting into delicate considerations. However, in an infinity of cases we will see that facts that we think are grammatical reduce to phonetic facts … Thus the origin of a number of synchronic facts is only phonetic, <consequently> diachronic, and the distinction remains clear. **We have to remember this in order not to rush into <saying> that we are getting outside of phonetics, that we are doing historical grammar: we are in two domains; one extends into a state of things, is synchronic; the other extends in time.** (CGL–II: 67–68)

Following this discussion, the student adds the following remark:

> On the other hand, Prof. Saussure is well aware that we can speak of the history of a declension, of the associative groups we have discussed. But we will always have to note that this history does not have the same character: comprises a multitude of isolated facts some of which will be clearly phonetic and which will join others which have a different character. (CLG–II: 68)

On this note, the student refers to what Saussure called twenty years earlier the "anachronic point of view" which is an "artificial and purely didactic point of view PROJECTING one morphology or one former language state onto another morphology (or onto another later state of the language)" (WGL: 7).[61] Thus, while Saussure admits that one can still speak about the history of languages outside the realm of sounds, he considers this type of study to be artificial. We see here that, until very late in his life, analogy is mostly a reflection of associations, which constitute the grammar and which, in turn, is the essence of synchronic linguistics.

In light of this, it is also not surprising that in various places Saussure states that there is no synchronic study of the sounds of the language:

> Among the objects which diachronic linguistics deals with figures phonetics above all, all of phonetics. It falls as a whole into diachronic linguistics: there is no synchronic phonetics (CLG–II: 65)[62]

For our purposes, it is important to see that his main reason for the exclusion of the study of sounds from the realm of synchronic linguistics has to do with the nature of the *laws* that can be stated in each of the domains. This point came a little bit earlier in the same course. Saussure begins with a definition of a law:

> < Without wishing to exhaust the notion of law, it is certain that > the term law evokes two ideas:
> 1) that of regularity < or order > on the one hand, and
> 2) that of its imperative character, of an imperative necessity. (CLG–II: 47)

The "imperative necessity" here, is what twenty years earlier he called "mathematical regularities" (WGL: 109), and it is clear from the context that he had in mind the Neogrammarian idea of sound-laws without exceptions. This is the reason why what seem to be synchronic laws are not really laws according to Saussure, since "The synchronic examples whatever they may be offer a regularity, an order, but that is all: law = arrangement = formula of an established order. There is no imperative character." (WGL: 109).[63] Diachronic regularities, however, are more imperative. In the third course he

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[61] In this context, Saussure mentions two points of view besides those of "the état de langue itself" and "of transversal units". The additional two are also historical by their nature; however, he mentions problems with each of them (one is 'artificial' and the other is 'irrelevant'). All these discussions are extremely important for a broader evaluation of the legitimate scope of the historical study of languages according to Saussure. It is specifically relevant for the discussion on how his ideas differ from other approaches that preceded him and those that came after his time. In particular, it is relevant for an assessment of the criticism the Prague School of Linguistics had of Saussure's dichotomy between diachronic and synchronic studies of languages. Cf. Čermák (1997).

[62] See also WGL: 18, and for a longer discussion see 35–39, see Joseph (2012: 499–500). A detailed analysis of this discussion is beyond the scope of the current paper.

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states it quite explicitly: "A diachronic law expresses an imperative which is carried out whatever the resistance" (CLG–III: 117).

In sum, it seems reasonable that Saussure followed the Neogrammarian positivist approach that only laws (without exceptions) are explanations. Therefore, the only relevant phenomenona for historical linguistics are sound-shifts. Since one cannot form such laws for synchronic phonological facts, phonology is not a part of synchronic linguistics. As for analogies, they are accordingly not explanations, they are the reflections of the conscious state — hence they are the phenomenon that is being studied in synchronic linguistics, this is the explanandum rather then the explanation. While it is clear that analogies make changes in languages, this is merely a reflection of a different set of associations in different periods of a language. Saussure even explicitly says that his analysis of analogies is related to the fact that "in analogy we cannot speak of laws":

> For the historian there is an opposition between what is brought by phonetic change on the one hand, and analogy (not in itself!) on the other. And this point gave rise to a specific dispute: the opposition was accompanied by the statement that phonetic laws are invariable in their effects, without exception, < **whereas in analogy we cannot speak of laws.** Today we cannot say that the terms of the question were well chosen. > Thus there are two points: 1) the language is filled with analogical formation; 2) **while analogical formation cannot be reduced to laws, phonetic change has the absolute character of a law** (CLG–II: 93-94)

While analogy is a formation, a creation at the synchronic level, sound-laws are changes, and they have "the absolute character of a law". This assertion reveals that he shared the positivistic point of view the Neogrammarians held.

5. Back to the history of analogy

Armed with this background about Saussure's understanding of analogies, we can return to our discussion in Section 2 with a better understanding of Saussure's self-perception as a classical grammarian.

According to our proposal, Saussure's theory emerged as a direct response to an internal discussion within the Neogrammarian school. In fact, from his own notes we know that in 1878 young Ferdinand attended a class by Brugmann dedicated to analogy and to the different approaches for this process (already using the terminology of associations).[64] Additionally, it must be noted that Saussure was by no means the first to make the move of shifting the notion of analogy from a diachronic explanation to a type of cognitive activity.

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[63] At this point of the course, Saussure still debating on how much historical phonological changes are indeed laws, but as we shall see hereafter, later in the course he was very clear about this point.

[64] Joseph (2012: 197).

Other Neogrammarians already described analogy in somewhat psychological terms,[65] most notably Paul.[66] They, however, did not realize the full significance of this move, that linguistics is no longer just a historical science, since analogy is not an explanation anymore, but an indication of a psychological phenomenon that should not be studied solely through historical lenses.[67]

In light of this depiction of Saussure's position in the history of linguistics, his statements about the classical grammarians, with which we began this paper, become clearer. For the grammarians, as we observed, a grammar (at least in the realm of morphology) is to a large degree a set of analogies, a set of rules on how to form new forms based on similarities. The case is similar for Saussure who asserted that this is what constitute a big part of the cognitive linguistic phenomenon as well. Linguistic knowledge is based on comparing and associating forms, and as a result, analogies are being made. The rules of the grammarians on how to create a new undocumented form are similar to the mind's operation that results in the creation of new expressions.

Given this description of analogy, it becomes clear why, in many senses, it is appropriate to describe the history of the concept of analogy in terms of the Hegelian dialectical method, which consists of the triad of thesis-antithesis-synthesis, as the following summarizes:

— For grammarians the study of languages consists of describing analogies (*thesis*).
— Historical linguistics was an *antithesis* to the world of the grammarians, as they offered a scientific way to study languages. They aimed to develop a historical branch of knowledge and to recognize the processes through which languages evolve. Analogy was thus recognized as one of the major types of development, or to be more accurate, it proposed a cause for historical changes.
— This concept encounters a serious methodological problem, since expla-

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65) For a detailed review concerning the question of how the Neogrammarians and their contemporaries perceived analogy, whether it was conceived as a synchronic or diachronic phenomenon, see Vallini (1972), Esper (1973), and Davies (1978).

66) See Cherubim (1973), Reis (1978), and Vanneufville (2008). As for the influence of Paul on Saussure, even Antal (1985: 127) who in general downplays the influence of Paul on Saussure (cf. Koerner 1972a; 1973), admits the affinity between Saussure and Paul with respect to analogy. For a more recent discussion, see Koerner (1995: 83–85).

67) See Joseph (2012: 324) for a specific comment made by Saussure in his notes from his classes in Paris in which he compares his own approach with Paul's. Saussure acknowledges the similarities between his conception of what language is, but at the same time mentions that he could not understand why Paul "seems to oppose descriptive and comparative grammar to historical grammar, as if the latter did not rest equally on description within comparison". In this passage, Paul is the only person he mentions as a representative of the "historical school" (a term which he criticizes). The relevant passage is from a notebook from 1885 (AdS 374/1f.128 [ancient]; f. 257). I wish to thank the Bibliotèque de Genève, Department of Manuscripts, for providing me with a copy of the relevant documents.

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nations for morphological changes by analogy do not seem to meet the criteria of a scientific explanation, as they are not shaped in the form of laws.
— Saussure is the *synthesis*. He does not completely oppose the Neogrammarians, but instead solves a problem in their approach by returning to ideas that the classical grammarians held. He does so by turning analogy into the psychological phenomenon itself — the cognitive mechanism which forms the grammar.

Again, in his inaugural lectures in Geneva, Saussure provided a very similar description for this history:

> … *analogical* operations, *analogical* facts. The term was borrowed from ancient grammar of Greeks, who employed it for a quite different notion, and took a viewpoint very different from ours; **but it turned out to be appropriate, since the result of these operations tends to re-establish analogy or formal symmetry** … an *analogy* provides the basis for the thinking behind the phenomenon. In more general terms, the phenomenon represents the mental *association of forms*, which is dictated by the *association of the ideas* represented.　　　(WGL: 107)

The grammarians, accordingly, were on the right track, since analogy in the new sense (a description of a historical process) is an indication of associative relations, which is similar in substance to what analogy was in the classical grammarians' terminology.

6. A summary

The following scheme summarizes the picture of how I see the logical connections between the various parts of Saussure's theory that have been discussed so far, starting from his realistic point of view of science, moving on to the consequences of what is a scientific study of languages, and finally how analyzing language scientifically should be done:

Ontology: the language exists and its location is in the brain.

Data:

    Desideratum: from the perspective of the scientist, the only empirical access to what exists in the brain is through the speaker's consciousness, more specifically through the manifestation of the faculty of language. Therefore, the scientist seeks the cognitive operation pertaining to language.
    Actual data: neologism and analogy.

Consequences:

    • From a scientific point of view, for a linguistic entity, to be part of the language is to be part of an association.

- If the conscious state of a language is a web of associations, then the **linguistic storage in the brain is in fact similar to a classical grammar book.** (The speakers and the grammarian are in many ways similar.)
- This is the study of the conscious state — what Saussure often calls the synchronic point of view. Thus, the scope of synchronic linguistics is everything that falls under the phenomenon of associations and its reflection via linguistic analogies; in other words, it is associated with morphology/grammar.
  Having in mind that there was no problem with the scientific explanation of sound-shift as they are formed as laws, this type of linguistic study is scientifically legitimate. Hence, we get the division of labor described in Table 1.

7. Analogy in Saussure's posthumous publication

In order to complete the history of the notion of analogy that is relevant for Saussure, we should focus on the history of this notion in Saussure's thought, with special interest in the published *Course*.

It is not completely clear when Saussure realized that analogy is not really an explanation for historical changes[68] and to what extent this realization was a direct influence of other linguists such as Paul. It is evident, however, that already in his return to Geneva in 1891, these thoughts are apparent. In his inaugural lectures, Saussure embodies the Neogrammarian outlook in many aspects and talks as a member of this school, but on the other hand, when he comes to "analogical changes", he speaks about the "analogical facts". After assigning credit to the "ancient grammar of Greek", he says the following (quoted earlier):

> In more general terms, the phenomenon [analogy, EABS] represents a mental association of forms, which is directed by *association of the ideas represented* …
>
> Any language at any moment is nothing more than a vast web of analogical formations, some quite recent, other dating back so far that one can only guess at their origin. Asking a linguist to name some analogical formations is therefore like asking a mineralogist to name some minerals, or an astronomer some stars.
>
> (WGL: 107)

This theory was put forward in the most explicit way in the first installment of the course. In fact, a significant part of the first course, given during the academic year 1906–07, was dedicated to the notion of analogy. In this course, Saussure introduced the various aspects of his synchronic linguistics, including: the dichotomy between form and idea (CLG–I: 66 — which was developed later in the third course into the opposition between signified and signifier); the distinction between *langue* and *parole* (CLG–I: 64-65); the value of the linguistic unit (CLG–I: 67); the distinction between synchronic and diachronic linguistics (CLG–I: 85); and as the discussion in his lectures reveals,

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[68] Joseph (2012: 197, 304, 324).

these are all related to associations and their reflection in the phenomenon of analogy.

For reasons that are not completely clear to me, in the second installment of the course (1908–09), Saussure talked less about analogy, but as noted earlier, he still mentions it. Later, in the third course (1910–11), analogies appear even less. While, as was noted earlier, Saussure generally spoke less in psychological terms in the third course,[69] he still discussed at length the derivatives of his analysis of the phenomenon of analogy, but he did so almost without referring to the notion of analogy itself. The significance of this is not completely clear. It is hard to believe that he did not still think, for example, that the associative relations[70] are revealed through analogical formations.

As is well-known, the role of the third course in Saussure's posthumous book is very significant.[71] It is unclear, however, whether Charles Bally and Albert Sechehaye, the editors of the posthumous book, were aware of this change in Saussure's treatment of analogy and made a rational choice to assume that Saussure, whom they knew well, was developing his theoretical view as the years progressed and that, therefore, the formulations in the third course should be treated as more definitive than those in the first course. Or, they could have missed the role of analogy in Saussure's thoughts, as they placed the material concerning analogy only in the fourth chapter of part 3 of the book which concentrates on Diachronic Linguistics.[72] The justification to separate the discussion on analogy from the material concerning the associative relations in part 2, which discusses Synchronic Linguistics, is unclear, since he never made such a separation, not even in the third course. In his lectures and writings, as we saw above, the two were always connected — one is the appearance of the other. Evidence that this separation is artificial and misrepresentative of Saussure's own thoughts can be located in sentences such as "the association may spring from the analogy of the concepts signified" (CGL: 126). Ironically even in the book we find claims such as "Analogical Phenomena Are Not Changes" (CGL: 162), taken from the second course.[73] Without the background from the earlier courses, one can only be perplexed as to why

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[69] I refer again to Joseph (2000) for possible reasons to this change of style/ideas.

[70] See, for example, CLG–III: 132–133.

[71] Godel (1957: 98 ff.)

[72] This mistake on the part of the editors has been recognized before; see, for example, Vallini (1972) and Stawarska (2015: 136). The account above, as much as I am aware of, is the first to recognize the differences between Saussure's various courses with respect to the notion of analogy.

[73] As Godel (1957: 100, 108–110) has already noted, while in general the posthumous course relies on the third course, the part on diachronic linguistics relies mostly on the second course, but this part still uses terminology from the third course, which leads the reader to some confusion.

the following passage is found in the part of the book about diachronic linguistics: "In short analogy, considered by itself, is only one side of the phenomenon of interpretation, one manifestation of the general activity that singles out units for subsequent use. That is why I say that analogy is entirely grammatical and synchronic" (CGL: 166).

And similarly, one can only wonder why, in the middle of the discussion about diachrony, Saussure returns to syntagmatic and associative relations, the core of synchronic linguistics (ch. V in part 2), and says the following: "Any creation must be preceded by an unconscious comparison of the materials deposited in the storehouse of language, where productive forms are arranged according to their syntagmatic and associative relations.". The answer for this confusion might be simple: the various parts of the analysis, the analysis of associations and their relationship to analogies, were separated only in the published *Course*. Whenever Saussure spoke about analogies, he related them to the cognitive ability to associate between forms.[74]

8. Concluding remarks

While various historians of linguistics speak about Saussure in terms of a revolution,[75] this paper proposes a more moderate picture. Our main claim is that in the various aspects of Saussure's ideas, the nature of human language and the cognitive faculty behind it developed from his analysis of the phenomenon of analogy (which to some extent already appears in Paul's work). This proposal, therefore, depicts Saussure less as a revolutionary and more as a member of the linguistic community of his time, who dealt with the challenges of his contemporaries. His uniqueness, accordingly, relies on his ability to follow the consequences of his analysis of analogy.

Furthermore, this portrayal of Saussure's theory touches upon the question of which assumptions he had about what justifies the scientific value of a linguistic inquiry. According to our description, Saussure believed that linguistics should follow the paradigm of the 'hard' sciences, and, as we can see, what he wrote and expressed in his classes is consistent with this assumption.

This paper has only hinted at how the various parts of Saussure's famous ideas derived from his analysis of the psychological phenomenon of analogies which rely on the cognitive ability of association. It has not provided a complete account of this matter. For this purpose, a more detailed analysis of what

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[74] See above Section 3.2 in which this point was emphasized.

[75] Inter alia, Koerner (1972b: 273), Holdcroft (1991: 134), Harder (1996: 423), Attridge (2004: 90), Maniglier (2007: 179), Chiesa (2008: 5), Béguelin (2009: 9, 11), Paolucci (2012: 81). One can also mention in this context the title of the conference "Révolutions saussuriennes", which took place in Geneva on June 19–22, 2007.

analogy is, according to Saussure, is required. This paper has demonstrated that for Saussure analogy is not an explanation but the linguistic phenomenon itself. Thus, we have focused on what Saussure calls *the language faculty*. The *language*, the sum of the shared analogies of a linguistic community, is beyond the scope of the current analysis.[76] All these issues, which were not covered in this paper, will be included in a future study that will continue from this paper.[77]

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Works by Ferdinand de Saussure

CGL   Bally, Charles / Sechehaye, Albert. Eds. in collaboration with Albert Reidlinger. *Course in General Linguistics* trans. from the French by Wade Baskin. New York: Philosophical Library 1959.

CLG–EC Engler, Rudolf 1968. *Course de linguistique générale, edition critique*. Wiesbaden: Harrassowitz.

CLG–I   Komatsu, Eisuke / Wolf, George. Ed. and trans. *Premir cours de linguistique générale (1907), d'après les cahiers d'Albert Riedlinger. Saussure's First Course of Lectures on General Linguistics (1907) from the notebooks of Albert Riedlinger*. Oxford: Pergamon 1993.

CLG–II   Komatsu, Eisuke & George Wolf. Ed. and trans. *Deuxième cours de linguistique*

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[76] Languages as such are arbitrary, and in fact can be studied, according to Saussure, only as objects of historical studies (WG: 98), since their objects of study are not natural.

[77] One important issue that we did not discuss in this paper is Saussure's remarks about the language as a social phenomenon. *Prima facie*, the existence of the language in the brain is inconsistent with the view that the language is a social phenomenon. However, until the last years of his life, in Saussure's writings the social aspect only sanctions which analogies remain at the realm of the individual (and hence must be abandoned) and which become legitimate (see, for example (CLG–I: 65–66; CLG–II: 15; WGL: 208)). In other places, Saussure regarded the social aspect as the function for which the language is being used for communication (WGL: 203, CLG–II: 3–4). In the last years of his life, Saussure changed his mind significantly with respect to the role of the society in understanding the linguistic phenomenon (see Jospeh 2000: 315 ff.; this is in fact also reflected in his notes for this course, WGL: 238). See also Weinreich *et al*. (1968: 120–122), who already reached similar conclusions about the role of society in this Saussure's approach based on CLG itself.

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WGL Bouquet, Simon / Engler, Rudolf / Sanders, Carol / Pires, Matthew. Writing in General Linguistics. Oxford: Oxford University Press 2006.

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