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PEIRCE'S LAW OF TRIVIALITY:
THE IMPLEMENTATION OF THE TRIVIMUM
OF LOGIC, RHETORIC AND GRAMMAR.
BASIC CATEGORIES FOR LINGUISTICS AND LITERATURE
STUDIES FROM A UNIVERSAL SEMIOTIC THEORY

Abstract

This article focuses on the aspects that refer to linguistics in the works of Charles S. Peirce. His pragmatic philosophy implemented many other sciences and among them is the traditional trivium of logic, grammar, and rhetoric, which Peirce divided into different kinds of logic, grammar, and rhetoric. While the impact of the work of Peirce on these sciences is weak, the integration of the sciences in his philosophy is interesting as a step in the history of science and his work is an example for eclecticism and historicism of science in the 19th century and the universalism of science deduced from a philosophy that uses the sign as an unitarian principle. Triple constructions are a very common feature in the writings of Peirce, and the trivium is an example of an academic construction Peirce implemented.

Keywords

semiotics, Peirce, linguistics, liberal arts, rhetoric

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1. Introduction: Semiotics as a universal approach to linguistics; Peirce's research and the relation between the sciences in the 21st century

As a semiotician, Peirce was interested in signs and among his subjects of study were also matters we would classify as linguistic matters. We will look at the absorption of linguistic aspects in his semiotic theory. From a contemporary standpoint, semiotic aspects have fixed place in linguistics, basically in the fields of semantics and pragmatics. Semiotics presents itself as a universal theory and a research tool for sign relations and its pioneer Peirce was the one who introduced basic categories of this science. The writings of Peirce implement logic, grammar, and rhetoric, the *trivium* of academic studies existing since Roman time and prefigured in the writings of Aristotle. In the 19th century Peirce introduces divisions into different types of rhetoric, grammar, and logic, which he implements into his system.

Even though Peirce's work is primarily a framework for semiotics as a science, we can see in it the implementation of former sciences and its adsorption to a meta-system. Of course the price for such a complex system was the resulting lack of details of the integrated parts. Neither grammar nor logic and rhetoric have in the writings of Peirce the detailed quality you would expect in each of the disciplines as a single one. The work of Peirce was mathematically motivated and this condition gave his work its theoretical shape reducing argumentation to examples. For instance, Cooke stated that

Peirce was of two minds about whether his scientific fallibilism, the recognition of the possibility of error in our beliefs, applied to mathematics. It will be argued that Peirce can and should hold a theory of fallibilism within mathematics, and that this position is more consistent with his overall pragmatic theory of inquiry and his general commitment to the growth of knowledge. But to make the argument for fallibilism in mathematics, Peirce's theory of fallibilism must be reconceived to incorporate two different kinds of fallibilism, which correspond to two different kinds of truth claims. (Cooke 2003: 158)

But also other branches of science were incorporated. Hausman wrote that

Charles Peirce's semeiotic is inseparable from his account of the three categories of experience and his metaphysics. The discussion summarizes his account of the categories and considers the way they have ontological implications. These implications are then focused on Peirce's Apapism, which is his way of referring to a theory of evolution. Finally, some suggestions are offered for a way the semeiotic with the metaphysical implications, especially their relevance for a theory of

evolution, propose how Peirce might apply them for questions of jurisprudence. (Hausman 2008: 209)

It is of interest also what Marković wrote on linguistic meaning:

Traditional philosophy postulated the identity of mind and word, even an identical structure underlying mind, word, and being – expressed by the triple meaning of the fundamental concept of *logos*. According to Bergson, traditional philosophy is based on a faith in language, on a high opinion of its value. Rationalists do not view language as a problem because they see no discrepancy between its terms and concepts and the essential characteristics of being (universals). However, when a culture is in a period of crisis, sceptics enter the scene who separate words, thoughts, and objects. Thus, according to Gorgias, if being is, it is incomprehensible and cannot be known by man. (Marković 1961)

Further on, elaborating on the philosophy of language Marković said:

In order to explain this dimension of language, philosophy of language had to pass through a stage when language was understood as a dynamic, natural phenomenon, not as the immutable expression of the totality of the mind. (Marković 1961)

With regard to these and related problems Pietrandrea stated that

sign linguistics has always had to deal with the notion of iconicity because sign languages are much more iconic than vocal languages. Formal sign linguists have often tried to explain iconicity apart from descriptions of sign language, considering it as contradictory to the arbitrariness that must rule language organization as a natural consequence of the autonomy and the separateness of language. More recently, functional sign linguists have highlighted the presence of iconicity as a function of the peculiar visual-gestural modality of sign languages. (Pietrandrea 2002: 296)

In *The Meaning of Truth. A Sequel to Pragmatism*, James wrote:

[t]he difference is that when the pragmatists speak of truth, they mean exclusively some thing about the ideas, namely their workableness; whereas when anti-pragmatists speak of truth they seem most often to mean something about the objects. (James 1909)

Then Pape asked:

Are indices a purely linguistic, textual phenomenon or are linguistic indices a special case of a more general type of indexical signs? [...] In this way Peirce's flexible concept of indexicality allows us to connect e.g. the experience of a

condensation trace of an electron in a cloud chamber with that of the trace of a deer in the snow. (Pape 2008: 1)

Further on Neumann argued

that by adopting the nonrepresentational conception of metaphor, meaning-making may be the appropriate perspective for understanding biological systems. In both cases (the linguistic and the biological), boundary conditions between different levels of organization use micro-level disorganization to create macro-level organization. (Neumann 2005: 317)

Von Eckardt criticised Peirce stating that "Peirce's general theory of representation (otherwise known as his "semiotics") has its weak points" (Eckardt 1995: 145). Von Eckardt also mentioned that "at one point Peirce distinguishes between genuine and degenerate symbols. Only the former 'has a general meaning'" (Eckardt 1995: 407).

2. Peirce on languages and the trivium of logic, rhetoric, and grammar

On the study of languages Peirce writes:

The study of languages ought to be based upon a study of the necessary conditions to which signs must conform in order to fulfil their functions as signs. I have gradually been led to conclude that it is best to identify logic with this study, notwithstanding its thus being made to include something which has no bearing upon the strength of arguments. For there is but little of this superfluous matter – too little to make a separate science of – and it is needed for its linguistic and rhetorical applications, as well as having a value simply as truth; and a simpler unity is thus given to logic. I might, therefore, very well call it speculative semeiotic. (Peirce 1904a)

The impact of Peirce philosophy of representational relations between sciences lasted until postmodern philosophy. In the chapter *Linguistics and Grammatology* Derrida wrote in *Of Grammatology* about a science of writing and writing as a representation of speech:

Writing is nothing but the representation of speech; it is bizarre that one gives more care to the determining of the image than to the object. – J.J. Rousseau, "Fragment inédit d'un essai sur les langues". The concept of writing should define the field of a science. [...] The science of writing should therefore look for its object at the roots of scientificity. The history of writing should turn back toward the origin of

historicity. A science of the possibility of science? A science of science which would no longer have the form of logic but that of grammatics? A history of the possibility of history which would no longer be an archaeology, a philosophy of history or a history of philosophy?

Contemporary communication science refers to Peirce and the mathematical concept Peirce employed makes it compatible to postmodern communication. So Wei-Ching and Chuang claim the following:

One of the recent web developments has focused on the opportunities it presents for social tagging through user participation and collaboration. As a result, social tagging has changed the traditional online communication process. The interpretation of tagging between humans and machines may create new problems if essential questions about how social tagging corresponds to online communications, what objects the tags refer to, who the interpreters are, and why they are engaged are not explored systematically. [...] Peircean semiotics can be used to examine the dynamics and determinants of tagging; hence, the various uses of this categorization schema may have implications for the design and development of information systems and web applications. (Wei-Ching and Chuang 2009: 340)

Commenting on rhetoric, Peirce wrote:

In the Roman schools, grammar, logic, and rhetoric were felt to be akin and to make up a rounded whole called the trivium. This feeling was just; for the three essential branches of semeiotics, of which the first, called speculative grammar by Duns Scotus, studies the ways in which an object can be a sign; the second, the leading part of logic, best termed speculative critic, studies the ways in which a sign can be related to the object independent of it that it represents; while the third is the speculative rhetoric. (Peirce 1904b)

Peirce wrote on laws dividing them into *logic*, *universal rhetoric*, and *universal grammar*:

Symbols, as such, are subject to three laws one of which is the *conditio sine qua non* of its standing for anything, the second of its translating anything, and the third of its realizing anything. The first law is Logic, the second Universal Rhetoric, the third Universal Grammar. (Peirce 1865b)

2.1. Peirce on logic

In his theory Peirce uses the expression *Logical Universe*, which he explains as follows:

The logical universe is that object with which the utterer and the interpreter of any proposition must be well-acquainted and mutually understand each other to be well acquainted, and must understand that all their discourse refers to it. (Peirce 1903a)

In a letter to J. H. Kehler Peirce writes

the third branch of logic [...] is] Methodeutic, which shows how to conduct an inquiry. This is what the greater part of my life has been devoted to, though I base it upon Critic. (Peirce 1911a)

Peirce writes about the relation between logic and rhetoric:

The highest kind of symbol is one which signifies a growth, or self-development, of thought, and it is of that alone that a moving representation is possible; and accordingly, the central problem of logic is to say whether one given thought is truly, i.e., is adapted to be, a development of a given other or not. In other words, it is the critic of arguments. Accordingly, in my early papers I limited logic to the study of this problem. [...]. Therefore, I extend logic to embrace all the necessary principles of semeiotic, and I recognize a logic of icons, and a logic of indices, as well as a logic of symbols; and in this last I recognize three divisions: Stecheotic (or stoicheiology), which I formerly called Speculative Grammar; Critic, which I formerly called Logic; and Methodeutic, which I formerly called Speculative Rhetoric. (Peirce 1906a)

Pierce wrote on logical critic:

my doctrine of Logical Critic [...] I recognize two other parts of Logic. One which may be called Analytic examines the nature of thought, not psychologically but simply to define what it is to doubt, to believe, to learn, etc., and then to base critic on these definitions is my real method, though in this letter I have taken the third branch of logic, Methodeutic, which shows how to conduct an inquiry. This is what the greater part of my life has been devoted to, though I base it upon Critic. (Peirce 1911a)

Von Eckardt mentioned:

The interpretant Peirce conceives of the interpretant as a "mental effect" in the mind of the interpreter for whom the sign is a sign. He evidently held two views (early and late) regarding the nature of this mental effect. In his early writings he always

speaks of it as a thought (5.287). Later, he distinguishes three kinds of “significate effects”: emotional, energetic, and logical. (Eckardt 1995: 148)

An important concept is that of ratiocination, which is explained in a following way:

Reasoning-power; or Ratiocination, called by some Dianoetic Reason, is the power of drawing inferences that tend toward the truth, when their premises or the virtual assertions from which they set out are true. (Peirce 1913)

At another place Peirce writes on reasoning:

By “Reasoning” shall here be meant any change in thought that results in an appeal for some measure and kind of assent to the truth of a proposition called the “Conclusion” of the reasoning, as being rendered “Reasonable” by an already existing cognition (usually complex) whose propositional formulation shall be termed the “Copulate Premiss” of the reasoning. (Peirce 1911b)

Peirce discussed meaning facing the function of the word *is* as a grammatical function of producing meaning in language. He considered this study a part of logic:

Logic must begin with analyzing the meanings of certain words, which we shall take up in due order.

The first of these is the word “is,” as when we say, Julius Caesar is dead, a griffin is a fabulous animal, a four-sided triangle is an absurdity, height is the distance from the ground, nothing is that which does not exist. These examples suffice to show that we apply this word to whatever we give a name, whether it really exists or not, or whether we consider it as existing or not. (Peirce 1867b)

2.2. Peirce on grammar

Peirce made a distinction between *formal grammar*, *speculative grammar*, and *universal grammar*. With regard to *formal grammar* he wrote:

We come, therefore, to this, that logic treats of the reference of symbols in general to their objects. In this view it is one of a trivium of conceivable sciences. The first would treat of the formal conditions of symbols having meaning, that is of the reference of symbols in general to their grounds or imputed characters, and this might be called formal grammar; the second, logic, would treat of the formal conditions of the truth of symbols; and the third would treat of the formal conditions of the force of symbols, or their power of appealing to a mind, that is, of their

reference in general to interpretants, and this might be called formal rhetoric. (Peirce 1867a)

As already noted above, Peirce commented on logic and *speculative grammar*:

I extend logic to embrace all the necessary principles of semeiotic, and I recognize a logic of icons, and a logic of indices, as well as a logic of symbols; and in this last I recognize three divisions: Stecheotic (or stoicheiology), which I formerly called Speculative Grammar; Critic, which I formerly called Logic; and Methodeutic, which I formerly called Speculative Rhetoric. (Peirce 1906a)

At another place Peirce was more specific on speculative grammar itself:

All thought being performed by means of signs, logic may be regarded as the science of the general laws of signs. It has three branches: (1) Speculative Grammar, or the general theory of the nature and meanings of signs, whether they be icons, indices, or symbols; (2) Critic, which classifies arguments and determines the validity and degree of force of each kind; (3) Methodeutic, which studies the methods that ought to be pursued in the investigation, in the exposition, and in the application of truth. Each division depends on that which precedes it. (Peirce 1903c)

Still further Peirce claimed:

"Exact" logic, in its widest sense, will (as I apprehend) consist of three parts. For it will be necessary, first of all, to study those properties of beliefs which belong to them as beliefs, irrespective of their stability. [...] As this completes a triad of studies, or trivium, we might, not inappropriately, term the last study Speculative rhetoric. This division was proposed in 1867 by me, but I have often designated this third part as objective logic. (Peirce 1896b)

He also claimed the following:

The science of the general laws of relations of symbols to logoi is general grammar. The science of the general laws of their relations to objects is logic. And the science of the general laws of their relations to other systems of symbols is general rhetoric. (Peirce 1865c)

And at still another place Peirce referred to *speculative grammar* in this way:

All thought being performed by means of signs, logic may be regarded as the science of the general laws of signs. It has three branches: (1) Speculative Grammar, or the general theory of the nature and meanings of signs, whether they be icons, indices, or symbols; (2) Critic, which classifies arguments and determines the validity and degree of force of each kind; (3) Methodeutic, which studies the

methods that ought to be pursued in the investigation, in the exposition, and in the application of truth. Each division depends on that which precedes it. (Peirce 1903c)

Finally, with regard to *general grammar*, Peirce concluded that it is:

[t]he science of the general conditions to which every symbol is subjected in so far as it is related

| a logos is General Grammar
to < a language is General Rhetoric
| an Object is General Logic. (Peirce 1865a)

2.3. Peirce on rhetoric

The rhetoric of Peirce was, *inter alia*, discussed by Colapietro in “Peircean semeiotic and legal practices: Rudimentary and ‘rhetorical’ considerations.” Commenting on Peircian rhetoric Sørensen, Thellefsen, and Moth stated:

C. S. Peirce had no theory of metaphor and provided only few remarks concerning the trope. Yet, some of these remarks seem to suggest that Peirce saw metaphor as fundamental to consciousness and thought. In this article we sketch a possible connection between metaphor and cognition; we understand Peircean metaphor as rooted in abduction; it is part of an intricate relation between experience, body, sign and guessing instinct as a semeiotic mechanism which can convey new insights. (Sørensen, Thellefsen and Moth 2007)

Peirce himself comments on metaphors in the following way:

Hypoicons may be roughly divided according to the mode of Firstness of which they partake. Those which partake of simple qualities, or First Firstnesses, are images; those which represent the relations, mainly dyadic, or so regarded, of the parts of one thing by analogous relations in their own parts, are diagrams; those which represent the representative character of a representamen by representing a parallelism in something else, are metaphors. (Peirce 1902a)

Peirce considered rhetoric as one of the forms of the law and focused of different types of rhetoric:

Speculative Rhetoric
Formal Rhetoric
General Rhetoric
Universal Rhetoric.

The *philosophical trivium* consists of *speculative grammar*, *logic*, and *speculative rhetoric*, as stated verbatim: “The sciences of speculative grammar,

logic, and speculative rhetoric may be called the philosophical trivium.” (Peirce 1895). Elaborating on *speculative rhetoric* Peirce claimed the following (as noted above with regard to logic and grammar):

I extend logic to embrace all the necessary principles of semeiotic, and I recognize a logic of icons, and a logic of indices, as well as a logic of symbols; and in this last I recognize three divisions: Stecheotic (or stoicheiology), which I formerly called Speculative Grammar; Critic, which I formerly called Logic; and Methodeutic, which I formerly called Speculative Rhetoric. (Peirce 1906a)

In particular, *speculative rhetoric* is defined as below:

The speculative rhetoric that we are speaking of is a branch of the analytical study of the essential conditions to which all signs are subject – a science named semeiotics, though identified by many thinkers with logic. (Peirce 1904b)

Peirce wrote on *speculative rhetoric* that

a speculative rhetoric, the science of the essential conditions under which a sign may determine an interpretant sign of itself and of whatever it signifies, or may, as a sign, bring about a physical result. [...] In the Roman schools, grammar, logic, and rhetoric were felt to be akin and to make up a rounded whole called the trivium. This feeling was just; for the three essential branches of semeiotics, of which the first, called speculative grammar by Duns Scotus, studies the ways in which an object can be a sign; the second, the leading part of logic, best termed speculative critic, studies the ways in which a sign can be related to the object independent of it that it represents; while the third is the speculative rhetoric just mentioned. (Peirce 1904b)

Peirce further elaborated on *speculative rhetoric (rhetorica speculativa)*:

But besides being logical in the sense of demanding a logical analysis, our inquiry also relates to two as a conception of logic. The term “logic” is unscientifically by me employed in two distinct senses. In its narrower sense, it is the science of the necessary conditions of the attainment of truth. In its broader sense, it is the science of the necessary laws of thought, or, still better (thought always taking place by means of signs), it is general semeiotic, treating not merely of truth, but also of the general conditions of signs being signs (which Duns Scotus called *grammatica speculativa*), also of the laws of the evolution of thought, which since it coincides with the study of the necessary conditions of the transmission of meaning by signs from mind to mind, and from one state of mind to another, ought, for the sake of taking advantage of an old association of terms, be called *rhetorica speculativa*, but which I content myself with inaccurately calling objective logic, because that conveys the correct idea that it is like Hegel's logic. (Peirce 1896a)

At another place Peirce formulates his ideas about *speculative rhetoric* in the following way:

Logic is the science of the general necessary laws of Signs and especially of Symbols. As such, it has three departments. Obsistent logic, logic in the narrow sense, or Critical Logic, is the theory of the general conditions of the reference of Symbols and other Signs to their professed Objects, that is, it is the theory of the conditions of truth. Originalian logic, or Speculative Grammar, is the doctrine of the general conditions of symbols and other signs having the significant character. It is this department of general logic with which we are, at this moment, occupying ourselves. Transuational logic, which I term Speculative Rhetoric, is substantially what goes by the name of methodology, or better, of methodeutic. It is the doctrine of the general conditions of the reference of Symbols and other Signs to the Interpretants which they aim to determine... (Peirce 1902c)

It is also worth citing what Peirce wrote on speculative rhetoric as a part of the trivium (commented on in the previous sections):

“Exact” logic, in its widest sense, will (as I apprehend) consist of three parts. For it will be necessary, first of all, to study those properties of beliefs which belong to them as beliefs, irrespective of their stability. This will amount to what Duns Scotus called speculative grammar. For it must analyse an assertion into its essential elements, independently of the structure of the language in which it may happen to be expressed. It will also divide assertions into categories according to their essential differences. The second part will consider to what conditions an assertion must conform in order that it may correspond to the “reality,” that is, in order that the belief it expresses may be stable. This is what is more particularly understood by the word logic. It must consider, first, necessary, and second, probable reasoning. Thirdly, the general doctrine must embrace the study of those general conditions under which a problem presents itself for solution and those under which one question leads on to another. As this completes a triad of studies, or trivium, we might, not inappropriately, term the last study Speculative rhetoric. This division was proposed in 1867 by me, but I have often designated this third part as objective logic. (Peirce 1896b)

Peirce also uses the term *formal rhetoric*:

We come, therefore, to this, that logic treats of the reference of symbols in general to their objects. In this view it is one of a trivium of conceivable sciences. The first would treat of the formal conditions of symbols having meaning, that is of the reference of symbols in general to their grounds or imputed characters, and this might be called formal grammar; the second, logic, would treat of the formal conditions of the truth of symbols; and the third would treat of the formal conditions of the force of symbols, or their power of appealing to a mind, that is, of their reference in general to interpretants, and this might be called formal rhetoric. (Peirce 1867a)

The science of the general conditions to which every symbol is subjected in so far as it is related

| a logos is General Grammar
 to < a language is General Rhetoric
 | an Object is General Logic. (Peirce 1865a)

Peirce comments on *formal rhetoric*:

We come, therefore, to this that logic treats of the reference of symbols in general to their objects. In this view it is one of a trivium of conceivable sciences. The first would treat of the formal conditions of symbols having meaning, that is of the reference of symbols in general to their grounds or imputed characters, and this might be called formal grammar; the second, logic, would treat of the formal conditions of the truth of symbols; and the third would treat of the formal conditions of the force of symbols, or their power of appealing to a mind, that is, of their reference in general to interpretants, and this might be called formal rhetoric. (Peirce 1867a)

Peirce also defines the term *general rhetoric*:

The science of the general laws of relations of symbols to logoi is general grammar. The science of the general laws of their relations to objects is logic. And the science of the general laws of their relations to other systems of symbols is general rhetoric. (Peirce 1865c)

Peirce writes about *general rhetoric* as can be seen in the re-quoted passages and their continuation:

The science of the general conditions to which every symbol is subjected in so far as it is related

| a logos is General Grammar
 to < a language is General Rhetoric
 | an Object is General Logic. (Peirce 1865a)

The science of the general laws of relations of symbols to logoi is general grammar. The science of the general laws of their relations to objects is logic. And the science of the general laws of their relations to other systems of symbols is general rhetoric. (Peirce 1865c).

Peirce uses the quality of being perspicuous, a word derived from Latin *perspicuitas* used as a rhetorical term:

[...] in any case in which the lines of identity become too intricate to be perspicuous, it is advantageous to replace some of them by signs of a sort that in this system are called selectives. A selective is very much of the same nature as a proper name; for it denotes an individual and its outermost occurrence denotes a wholly indesignate individual of a certain category (generally a thing) existing in the universe, just as a proper name, on the first occasion of hearing it, conveys no more. (Peirce 1903a)

Peirce uses the term *universal rhetoric*:

Symbols, as such, are subject to three laws one of which is the *conditio sine qua non* of its standing for anything, the second of its translating anything, and the third of its realizing anything. The first law is Logic, the second Universal Rhetoric, the third Universal Grammar. (Peirce 1865b)

At another place Peirce speaks about a *universal art of rhetoric*, specifying that

a universal art of rhetoric, which shall be the general secret of rendering signs effective, including under the term "sign" every picture, diagram, natural cry, pointing finger, wink, knot in one's handkerchief, memory, dream, fancy, concept, indication, token, symptom, letter, numeral, word, sentence, chapter, book, library, and in short whatever, be it in the physical universe, be it in the world of thought, that, whether embodying an idea of any kind (and permit us throughout to use this term to cover purposes and feelings), or being connected with some existing object, or referring to future events through a general rule, causes something else, its interpreting sign, to be determined to a corresponding relation to the same idea, existing thing, or law. [...] In the Roman schools, grammar, logic, and rhetoric were felt to be akin and to make up a rounded whole called the trivium. This feeling was just; for the three essential branches of semeiotics, of which the first, called speculative grammar by Duns Scotus, studies the ways in which an object can be a sign; the second, the leading part of logic, best termed speculative critic, studies the ways in which a sign can be related to the object independent of it that it represents; while the third is the speculative rhetoric just mentioned. (Peirce 1904b)

Transuational logic is also called *speculative rhetoric* in Peirce's works:

Logic is the science of the general necessary laws of Signs and especially of Symbols. As such, it has three departments. Obsistent logic, logic in the narrow sense, or Critical Logic, is the theory of the general conditions of the reference of Symbols and other Signs to their professed Objects, that is, it is the theory of the conditions of truth. Originalian logic, or Speculative Grammar, is the doctrine of the general conditions of symbols and other signs having the significant character. It is this department of general logic with which we are, at this moment, occupying ourselves. Transuational logic, which I term Speculative Rhetoric, is substantially what goes by the name of methodology, or better, of methodeutic. It is the doctrine of the general conditions of the reference of Symbols and other Signs to the interpretants which they aim to determine. (Peirce 1902d)

Another notice on *speculative rhetoric* mentions the following:

In coming to Speculative Rhetoric, after the main conceptions of logic have been well settled, there can be no serious objection to relaxing the severity of our rule of excluding psychological matter, observations of how we think, and the like. The regulation has served its end; why should it be allowed now to hamper our endeavors to make methodeutic practically useful? But while the justice of this must be admitted, it is also to be borne in mind that there is a purely logical doctrine of how discovery must take place, which, however great or little is its importance, it is my plain task and duty here to explore. (Peirce 1902c)

In *Investigation and the Settlement of Opinion* Peirce (MS 180 (Robin 364)) expressed the following view:

The early history of sciences before they begin to be really investigated, especially of psychology, metaphysics, etc., illustrates as well as anything the pure effect of this method of fixing opinions. The numerous well-defined species of doctrines which have existed on such subjects and their progressive historical succession gives the science of the history of philosophy considerable resemblance to that of paleontology. (Peirce 1872)

In another of his works Peirce commented on *metodeutic*:

No. 27 of Methodeutic. The first business of this memoir is to show the precise nature of methodeutic; how it differs from critic; how, although it considers not what is admissible but what is advantageous, it is nevertheless a purely theoretical study, and not an art; how it is from the most strictly theoretical point of view, an absolutely essential and distinct department of logical inquiry; and how upon the other hand, it is readily made useful to a researcher into any science, even mathematics. (Peirce 1902b)

Peirce used the expression *methodeutic* for *speculative rhetoric*:

[...] I extend logic to embrace all the necessary principles of semeiotic, and I recognize a logic of icons, and a logic of indices, as well as a logic of symbols; and in this last I recognize three divisions: Stecheotic (or stoicheiology), which I formerly called Speculative Grammar; Critic, which I formerly called Logic; and Methodeutic, which I formerly called Speculative Rhetoric. (Peirce 1906a)

Elsewhere, writing on logic Peirce commented on *speculative rhetoric*:

Logic is the science of the general necessary laws of Signs and especially of Symbols. As such, it has three departments. Obsistent logic, logic in the narrow sense, or Critical Logic, is the theory of the general conditions of the reference of Symbols and other Signs to their professed Objects, that is, it is the theory of the conditions of truth. Originalian logic, or Speculative Grammar, is the doctrine of the general conditions of symbols and other signs having the significant character. (Peirce 1902d)

Finally, Peirce claimed the following about *speculative rhetoric*:

So, cultivators of the art of reasoning found themselves long ago obliged to institute a speculative grammar which should study modes of signifying, in general. It is best regarded as separate from logic proper; for one of these days philologists may take it in hand, for which logicians will thank them. An art of thinking ought also to recommend such forms of thinking as will most economically serve the purpose of Reason. (...) Since this is the general foundation of the art of putting propositions into effective forms, it has been called speculative rhetoric. The sciences of speculative grammar, logic, and speculative rhetoric may be called the philosophical trivium. (Peirce 1895)

3. Closing Remarks

The weakness of Peirce's work is his need of a permanent superstructure of signs and the incorporation of signs in order to create new meanings. While its merits lie in the creativity and consistence of the applied principles, the linguistic features of Peirce's work is obvious. On the linguistic surface the operations that the philosopher employs appear as neologisms, the terms refer to themselves and to his philosophy, but the impact of Peirce's philosophy for the linguistic studies is minimal. Universalism has lost its importance as positivistic science or philosophy. Peirce's basic work, however, is actually of high importance and has today still an impact, since it approaches the incorporated disciplines for a methodological perspective.

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