# Resenha

*Book Review*

BELLUCCI, Francesco. *Peirce's Speculative Grammar*: Logic as Semiotics. New York/London: Routledge, 2018.

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Although the designation *speculative grammar* does not make its appearance in Peirce's writings before 1895,[01] the plan to erect an edifice of logical studies in the spirit of the medieval trivium that would reflect the triadic structure and essential relations of a sign to itself, its object and its interpretant, is part and parcel of his semeiotic conception of logic since the *Harvard Lectures of 1865*.[02] Inasmuch as Speculative Grammar contemplates the most fundamental property of every sign, namely, its capacity to refer to something other than itself, and thus, have *meaning* as a necessary prerequisite to "be fit to embody truth and falsity",[03] this first branch of Peirce's semeiotic logic is foundational for its other two branches—Critical Logic and Speculative Rhetoric (or: *methodeutic* as Peirce seems to prefer to call it after 1902),—because it deals with that property of signs which is presupposed both in their capacity to refer to objects (and thus be either true or false) and to represent the *logical* truth of a sign as being a consequence of the truth of other signs (and thus be either validly or invalidly derived from them). Hence, because validity and truth are grounded in 'semanticity', Speculative Grammar, which studies "the modes of signifying, in general",[04] constitutes the *Elementarlehre* of Peirce's semeiotic logic.[05]

With his study *Speculative Grammar: Logic as Semiotics*, Francesco Bellucci does not offer a vaguely systematizing recompilation of the many outstanding papers on Peircean logic and semeiotics he has published, but rather something far more coherent and substantial. He aims at providing us with "as complete an account [of speculative grammar] as possible" (p. 9). Thus, it is a *monographia* in the strict sense of the term that we are holding in our hands and, as it will soon become clear, a marvelous piece of scholarship. Bellucci's reconstruction of the development of Peirce's conception of the foundations of his semeiotic logic succeeds in accomplishing the aim it sets itself with paradigmatic erudition,

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01   Cf. MS 595:22. EP 2:19, 1895.

02   Cf. W 1:175, 274, 304. 1865-66.

03   MS 787:10. 1896.

04   MS 595:22. EP 2:19, 1895.

05   Cf. CP 2.206, 1902.

impressive expository perspicuity and great care for the most minute details—"as though", one is tempted to say, these "were intended for the eye of God".[06] It, therefore, represents one of the most important contributions to this central branch of scholarship in Peirce since Pietarinen's *Signs of Logic*, Short's *Peirce's Theory of Signs* and Stjernfelt's *Natural Propositions*.

As this is a book one can learn a lot from, and—if you are working on Peirce's semeiotics—will *have to* learn a lot from, in what follows I shall first sketch the methodology and general structure of the work. Subsequently, I shall, *en detail,* focus on the main strands of Bellucci's reconstruction, so as to illustrate the value of his work and indicate some fundamental problems he wisely—thus: legitimately—stays away from.

The author's methodological aim to offer of a *purely* "historical reconstruction" (p. 10) of Speculative Grammar that has no other aim but to "understand Peirce's ideas, their genesis, and their development" (*ibid.*), could easily be regarded as revealing a lack of systematic interest. A lack of interest that philosophers, semioticians and logicians accustomed to read historical texts through the lenses of contemporary debates will see exacerbated by Bellucci's exclusive focus on "the 'internal' justification of the evolution of Peirce's ideas on signs"—contraposed to "the 'external' justification of these ideas themselves" (*ibid.*)—and by his ascetic renouncement "to evaluate them or bring them to bear on subsequent philosophical and semiotic discussions" (*ibid.*).

Is there a rationale for this *suspensio iudicii*? And, is it a *skeptical* suspension of judgement or rather a critical *suspensio iudicii indagatoria*? Firstly, it should be noted that an account of virtually any of the central aspects of Peirce's philosophy requires the expositor to come to grips with and find her own ways through the labyrinth of unpublished manuscripts. In the case of Speculative Grammar, the philological challenge is even greater, inasmuch as semeiotics constitutes one of Peirce's central domains of research between 1902 to 1908, while the chronological edition of the *Writings of Charles S. Peirce* has not proceeded further than to the year 1892. Secondly, it should be noted that the task of giving a genetic account of Speculative Grammar requires not only a thorough grasp of Peirce's philosophical development as a whole, but also of his work in the other two branches of the semeioto-logical trivium and, in particular, of his mathematical logic in algebraic and diagrammatic form, which, as Bellucci shows, had the strongest impact on the theory-dynamics *within* Speculative Grammar. Thirdly, the study of Peirce's semeiotics is still catching up to Peirce, well knowing that this will require us to go beyond him at some point, especially as Peirce himself "perceived that his powers were insufficient to cope with the task" (p. 10). As Bellucci is planning to complement his account of the grammatical foundations of Peirce's logical *trivium* with monographs on Critical Logic and Speculative Rhetoric (cf. p. 1), the present volume represents the first part of a project that aims at a complete reconstruction of Peirce's semeiotic logic, in order to—so we assume—become able to contribute to it as soon as the *suspensio iudicii indagatoria* has identified the grounds on which it can build its verdicts. Thus, the author's abstinence from critical judgment, systematic contextualization

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06    CP 8.11, 1871.

and argumentative confrontation with other theory-options serves a higher purpose: the purpose of doing things in that order that promises to do them right.

Although Bellucci's account takes the form of a comprehensive diachronic reconstruction of the problems, ramifications and solutions appearing on each developmental stage of Speculative Grammar, it is nonetheless possible to read his whole account as an analysis of the process that thrice forced Peirce to broaden his conception of the fundamental logical triad and thence undertake 'reforms' of Speculative Grammar.

In the *Minute Logic* of 1902, Peirce realizes that the trichotomy of symbols— term, proposition, argument—is not a subdivision of the trichotomy of signs into icons, indices and symbols, but rather constitutes an independent dimension of signhood which—combined with the first trichotomy—yields a classification of signs that is no longer a taxonomy of classes of signs but rather of semeiotic parameters. Out of nine combinatorially possible classes of signs, six are recognized as semeiotically possible on the basis of unsystematized *ad hoc* rules (cf. p. 199). This "'first reform' of speculative grammar" (p. 196), consequently, generates two tasks. Firstly, the task to broaden the fundamental logical division of term, proposition and argument in such a way that it is no longer restricted to representing parameters of symbols exclusively, but of *all* signs as such. Secondly, the task of identifying those rules of compossibility in accordance with which semeiotic parameters can be combined so as to yield classes of signs. Both tasks are tackled in the context of the *Lowell Lectures of 1903* and its accompanying *Syllabus*, in which Peirce replaces the classic fundamental logical triad with the trichotomy of rheme, dicisign and suadisign and, moreover, identifies the rules of parameter-compossibility for linearly ordered trichotomies.

But in "Nomenclature and Divisions of Triadic Relations", composed in late 1903, Peirce already moves on to the "'second reform' of Speculative Grammar" (p. 256) and introduces a third trichotomy of parameters in which signs are regarded in relation to their own mode of being and thus divided into signs that are possibles (qualisigns), existing events (sinsigns), or generals: types, habits or laws (legisigns). Out of twenty-seven mathematically possible combinations, ten are shown to be semeiotically possible classes of signs.

Finally, in a draft of the "Prolegomena for an Apology of Pragmaticism", Peirce in 1906 replaces the fundamental logical triad of rheme, dicisign and suadisign with the new triplet of Seme, Pheme and Delome. The second of these terms, i.e. the Pheme, "embraces […] not only Propositions, but also all Interrogations and Commands, whether they be uttered in words or signalled by flags".[07] As we shall see, the introduction of this new version of the fundamental logical triad marks the moment in which—thus Bellucci will argue—Peirce's "findings in speech act theory necessitate a new grammatical terminology" (p. 315).

This necessitation is due to the fact that, according to Bellucci, the real driving force behind the "third reform of speculative grammar" (p. 286; cf. p. 311)—which starts to emerge in the doctrine that a sign has two objects and three interpretants,— is the insight that *the proposition ought to be differentiated from the act of asserting*

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07    MS 295:29, 1906.

*it*, as "the act of assertion is not a pure act of signification".[08] It is, thus, the 'semantic impurity' or 'pragmatic surplus' of the act of assertion that necessitates the introduction of additional "illocutionary" and "perlocutionary trichotomies" (cf. pp. 310 ff.) that are capable of accounting for the various effects sign-action generates (cf. p. 298). Bellucci's understanding of the nature of the third reform of Speculative Grammar thus is that of a late Peircean speech-act-theoretical turn.

As all three reforms occur between 1902 and 1905, the first half of the book (ch. 1 to 5) deals with the emergence and formation of Speculative Grammar, whereas the second part (ch. 6 to 8) analyzes the dynamics of the aforementioned reforms. Thus, whereas the two initial chapters deal with Peirce's early semeiotic theory (1865-1873), a subsequent triplet of chapters tackles the development from 1880 to 1900, before the last three chapters analyze the progressive 'reformatory' broadening of Speculative Grammar into a General Semeiotic, i.e. into "a theory of all possible kinds of signs, their modes of signification, of denotation, and of information, and their whole behaviour and properties".[09] In a closing chapter, Bellucci eventually focuses on both Peirce's metalogical justification for conceiving of logic as a theory of signs and on his methodological reasons for extending the domain of Speculative Grammar to comprise all forms of signs, including those that he refers to as "emotional and imperative signs" and are to be distinguished from "cognitional signs"[10] or "logons".[11]

Although Bellucci's account doubtless offers its most fruitful systematic contributions in chapters 6 to 8, he nonetheless manages to add substantial insights to the literature in virtually every chapter. Accordingly, his study of Peirce's earliest conception of a semeiotic logic in the *Harvard* and *Lowell Lectures* of 1865/1866 reconstructs in unprecedented detail and clarity the project of a science named "Objective Symbolistic", bringing to the fore how the substance of most later developments is already present in these earliest semeiotic texts and thus also helps us to better understand how Peirce's semeioto-logical inquiries are originally related to his theory of categories, *if* a more nuanced account of his early philosophical development is superadded (see below).

Peirce's "Objective Symbolistic" is his first attempt to present a semeiotic logic in the tradition of Locke's third branch of science named "σημειωτική, or *the Doctrine of Signs*".[12] As Bellucci's reconstruction shows, this first attempt contains a sequence of—as I would put it—'basal theoretical operations' that will remain omnipresent in Peirce's methodology. Let me only highlight the seven most important operations, and permit me to initially skip the first: there is (ii.) the definition of logic in semeiotic terms, which is presented in the context of (iii.) an analysis of the constitutive elements of the sign-relation. Moreover, we can recognize the basal operations of (iv.) a classification of signs and of (v.) a classification of symbols. Finally, there is

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08    SS:34, 1904.

09    MS 634:14 f., 1909.

10    MS 676:6, 1911.

11    MS 675:26, 1911.

12    Locke, *Essay*, IV.21.4.

the basal operation of (vi.) a classification of arguments, including (vii.) an account of inferential validity on the basis of *(ii.)-(vi.)*.

Now, according to Bellucci, this methodological sequence is initially established *independently of* a theory of categories. Rather, it will only be when Peirce has consolidated his system of logic that he can perform "the Kantian step"[13] to derive metaphysical categories from logical forms. In this sense, so Bellucci argues, the first basal operation that we need to add—and which coincides with the first step in the argumentative order of "On a New List of Categories": derivation of categories first (§§1-14), deduction of a system of logical forms next (§15)—represents a reversal of the historical order of discovery which saw Peirce moving *from* conceiving all logical form to be rooted in the sign-relation *to* establishing his precisive gradation of categorial concepts of second intention constituting the intelligibility of sensuous manifolds in the unity of the proposition (pp. 49 ff., 71).

Bellucci's claim that the accomplishment of the operative endeavors *(ii.)* to *(vii.)* which erect Peirce's first semeiotic logical doctrine, "[h]istorically […] came before the problem of determining a new list of categories" (p. 50), however, is only half the truth. As the student of Peirce's early theory of categories (1857-1865) knows, these thoroughly anti-transcendentalist *essays*—i.e. attempts to outline a theory of categories that aims to show that the Kantian categories can only be apprehended *as* concepts under the supposition of their also being structures of being, i.e. concepts that do not only have empirical validity as conditions of the possibility of experience, but are also transcendentally real as conditions of the possibility of "creation"[14]— left Peirce, as he remembers, "blindly groping among a deranged system of conceptions", so that he, "after trying to solve the puzzle in a direct speculative, a physical, a historical, and a psychological manner […], finally concluded the only way was to attack it as Kant had done from the side of formal logic".[15] The approval of the "Kantian step of transferring the conceptions of logic to metaphysics"[16] thus is the result of a categoriological failure that involves a shift from an idealism-more-than-transcendental (before 1865) towards the "realistic phenomenalism of Kant",[17] which is the fruit of a close second reading of and "personal enthusiasm for Kant".[18] Peirce's appreciation of the "Kantian step", therefore, must mature between "Letter Draft, Peirce to Pliny Earle Chase"[19] and the "Harvard Lecture I." (February 1865), i.e. in the second half of 1864, in which he focuses on Aristotelian and Hamiltonian Logic, Boolean Algebra[20] and probably discovers "Prantl, the historian of Logic".[21]

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13    RLT:146, 1898.
14    Cf. W 1:44, 47-49, 85-90, 94.
15    CP 1.563, 1898.
16    RLT:146 1898.
17    CP 8.15, 1871.
18    W 1:160, 1865; cf. W 1:240-256.
19    W 1:115-117, 1864.
20    Cf. W 1:574 f.
21    Cf. W 1:360 (1866).

Unsurprisingly, it is in the "Harvard Lecture I."—in which the project of an Objective Symbolistic is originally exposed—that we still can see how the relational structures articulated in Peirce's former pronominal categories *I-Thou-It* still *guide* him in conceptualizing his logical triads (before the former are then supplanted by the new terminology developing between 1865 and 1867):

> A symbol in general and as such has three relations. The first is its relation to the pure Idea or Logos and this (from the analogy of the grammatical terms for the pronouns I, IT, THOU) I call its relation of the first person, since it is its relation to its own essence. […] The third is its relation to its object, which I call its relation to the third person or IT.[22]

Now, independently of these developmental details, the basal operation in Peirce's account of his semeiotic logic will always consist in (i.) a categorial derivation of the conception of representation or signhood (the schema of all schemata of understanding). The vexed question to what extent this derivation—that Bellucci insightfully reconstructs in line with De Tienne (1996)—is "a metaphysical or a transcendental deduction" (p. 51), however, seems to me misleading, inasmuch as it prevents bringing into view what Peirce—building on Kant (cf. pp. 51-54)—truly accomplishes in "On a New List of Categories": a deduction of the categories "from above" (as Bellucci, p. 54, rightly sees) that moves regressively from a "highest point",[23] i.e. *from* the propositional unity of a sensuous manifold sealed in the conception of Being, *to* its categorial constituents, without requiring a *Leiftaden*, *Transzendentale Deduktion* and *Schematismuskapitel*, because it articulates what remained implicit in Kant's sketchy metaphysical deduction: the *common triadic structure* of those *complex* "functions" or "acts" of the understanding which—as it is operative in both the bringing about of analytical conceptual unities *and* in the bringing about of the unity of a sensuous manifold[24] in the threefold synthesis[25]—is constitutive for establishing our reference to objects in judgments qua "representations of representations",[26] as Hoeppner (2011) has shown. This common triadic structure or *abstract identity of analytical and synthetical acts* of the understanding consists in their (i.) necessary reference to a *sameness* ("reference to a ground"/predicate-term/synthesis of reproduction), which presupposes (ii.) a necessary reference to a numerically *different* entity ("reference to a correlate"/subject-term/synthesis of apprehension), which in turn presupposes (iii.) a necessary reference to an act of mediation ("reference to an interpretant"/*conceptus communis*/synthesis of recognition) which represents the unity of sameness and difference:

> A representation that is to be thought of as common to several must be regarded as belonging to those that in addition to it also

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22   W 1:174, 1865; cf. 165, 169.

23   KANT, CPR, B 134 n.; cf. § 19.

24   Cf. KANT, CPR A 79/B 104 f.

25   Cf. KANT, CPR A98-104.

26   KANT, CPR A 68/B 93.

have something different in themselves; consequently they must antecedently be conceived in synthetic unity with other (even if only possible representations).[27]

For the middle period of Peirce's development from 1880 to 1895, dominated by work on the Algebra of Logic (including the Logic of Relatives), chapter 3 provides us with a technically sophisticated account of how Peirce's work in mathematical logic transformed his understanding of Speculative Grammar as it is—*incognito*—represented in the first part of the paper "On the Algebra of Logic" of 1885. Here Peirce—as a consequence of the discovery of quantification with his student O. H. Mitchell—for the first time moves to a position that attributes an essential function in reasoning to *each* of the three kinds of signs, inasmuch as (necessarily *symbolically* represented) generality, (necessarily *indexically* represented) reference to a universe of discourse and the (necessarily *iconical*) representation of the arrangement of the parts of an argument are essential components of any reasoning and thus require corresponding semeiotic functions: "We *interpret* symbols and we are *referred to* objects by indices, but the form in which symbols and indices are connected (the syntax of a formula) can only be *observed* in iconic signs" (p. 121), summarizes Bellucci.

This position is then refined in Peirce's first mature attempt to produce a *summa* of his logic in the extensive manuscript *How To Reason* (1894), to which chapter 4 is devoted. Together with the *Minute Logic* of 1901/2 and the *Syllabus* and *Lowell Lectures* of 1903, *How to Reason* represents one of the most comprehensive Peircean efforts to give a systematically, i.e. philosophically grounded account of his complete logic. Again, Bellucci's reconstructive focus on formal grammar pays off substantially, not only because these roughly 600 manuscript-pages could be tackled from a variety of developmental points of view—e.g. by considering if and how Peirce's Evolutionary Metaphysics, worked out in the preceding years, impinges on logical conceptions, or by studying the germs of the coenoscopic conception of philosophy,—but also because Bellucci never forgets to connect the landmarks of his narrative: In *How To Reason* we are, on the one hand, still moving in a theory-architecture in which the main systematic ideas stemming from "On a New List of Categories" (1867) and "On the Algebra of Logic" (1885) are still foundational, while, on the other hand, the analyses of Speculative Grammar gain profile and start to build up a complexity that indicates the necessity to identify additional dimensions of signhood (p. 129-135). This necessity is arising, firstly, with a view on the symbolical nature of quantificational indexical signs establishing a reference to the universe of discourse, which thus leads to a refined typology of indexical signs, comprising *direct-objective* (attention-steerers like pronouns and pointers etc.), *relative* (anaphoric expressions indicating objects of discourse) and *indirect-selective* indications acting as instructions for the selection of objects in quantifying expressions (cf. p. 139-141). Secondly, this need to classify signs in accordance with respects other than their representative character emerges in the context of the differentiation between two kinds of iconic signs operating on different levels of semeiosis: There are icons that are involved by symbols (exciting ideas or likenesses

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27    KANT, CPR B 133-134 n.

of object-properties and relations) and are labelled as "icons of first intention";[28] and there are "monstrative" "icons of second intention"[29] which represent logical form in syntactical arrangements, logical constants and argumentative structures. The specific iconicity of these "monstrative signs" is grounded in their nature as signs that can neither be indicated nor symbolized but only *shown* (cf. p. 142-147).

The broader systematic context, in which the aforementioned taxonomical complications emerge, is defined by the analysis of assertion (cf. p. 136-143, 150-168), which constitutes the basic semeiotic function of an intelligence capable of learning from observation and reasoning[30] and thus becomes the central subject matter of the first branch of an exact logic. This branch is now explicitly referred to as *Speculative Grammar*, inasmuch as "to study those properties of beliefs which belong to them as beliefs, irrespective of their stability […] will amount to what Duns Scotus called *speculative grammar*".[31] As this discipline "must analyse an assertion into its essential elements, independently of the language in which it may happen to be expressed",[32] the reader might desire to hear more about the *linguistic* aspects and backgrounds of Peirce's analysis of the universal structures of assertion,[33] especially because the respective passages from the "Short Logic",[34] or from the *Minute Logic*[35] have not been published in the main editions of Peirce's works. Bellucci, however, prefers to focus on the primordial semeioto-logical aspects and designs chapter 5 as a backdrop on which the reforms taking place after 1900 will unfold.

In this sense, we can see how Peirce's earlier versions of the analysis of assertion already anticipate the pincer-movement of the *Syllabus of 1903* which proceeds by establishing the mutual confirmation of coenoscopic observation (the "rhetorical evidence"[36]) with the a priori deduction of the semeiotic functions necessarily required to represent truth as something that "consists in the definitive compulsion of the investigating intelligence".[37] But we can also recognize that Peirce's conception of assertion still appears to be enclosed in the representationalist horizon defined by the § 19 of Kant's *CPR* (cf. p. 157). As a consequence, Peirce does not as yet realize that assertion is "more an *act* that we perform with a symbol than something inherent to the symbol itself", as Bellucci aptly puts it (p. 163). Moreover, the variety of signs emerging from the analysis of assertion as requiring three elementary semeiotic functions—namely, (i.) an iconic sign of an idea to be attributed to (ii.) an indexically denoted occasion of belief-compulsion to which (iii.) an icon must symbolically be represented to be applicable (cf. p. 157 ff.)—

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28   Cf. MS 787, 1896.

29   Cf. MS 409, 1894.

30   Cf. CP 2.227, 1897.

31   CP 3.430, 1896.

32   *Ibid*.

33   Cf. FERRIANI, 1987.

34   Cf. EP 2:504 n. 5.

35   Cf. MS 427:242-273, 1902.

36   Cf. CP 2.279, 2.333, 1896.

37   MS 787:19, 1896.

emphasizes the existence of *modi significandi* that cut across the taxonomy and thus display the limits of a theory that cannot explain the mixed nature of signs that are both iconic *and* symbolical—like the copula,—or indexical *and* symbolical, inasmuch as a weathercock indicatively asserts while a quantifier symbolically indicates (cf. p. 166 f.). Finally, the years 1895 to 1897 see emerging an approach to the analysis of deductive reasoning that will soon supersede the algebraic methods predilected in the decennia before: logical graphs (cf. p. 168-179).

Reacting to the taxonomical difficulties sketched above, Peirce, in the *Minute Logic* (1901-1902), introduces a radically modified approach to the classification of signs which Bellucci reconstructs as the "'first reform' of speculative grammar" (p. 184 ff.). This reform, however, takes place in the broader context of a quite radical architectonic revamping of Peirce's philosophy that is for the first time systematically presented in the *Minute Logic* and subsequently consolidated in the *Carnegie Application* (1902) and in the *Harvard* and *Lowell Lectures* of 1903. The major element of this architectonic reorganization is the triadic organization of Philosophy as a positive coenoscopic science based on common experience which—in the Comtean order of principle-dependence—is preceded by Mathematics only and has Phenomenology (methodologically recasting category-theory), the new Normative Sciences (Esthetics, Ethics and Logic) and Metaphysics as its three main divisions. Bellucci does not spend too much time on elucidating how radical a break with the past Peirce's new architectonic constitutes—and for which it would take "[m]ore than six lectures […] to set forth in the tersest manner the reasons which have convinced me that Philosophy ought to be regarded as having three principal divisions",[38] as Peirce writes in 1903,—but he gives an informative general overview of the *Minute Logic* (pp. 183-188) which elucidates the teleological character Peirce now explicitly ascribes to *logica utens* and consequently is reflected in the normative aspects of its systematic study as a *logica docens* dependent on esthetic and ethical principles (cf. p. 185-188).

The closer analysis of Speculative Grammar is then premised by a highly interesting consideration of the relation of logic to semeiotics (p. 188-193, cf. also p. 353-363) in which Bellucci arrives at a modification of Max Fisch's account of the development of Peirce's semeiotic logic from an early logic-*within*-semiotic to a mature logic-*as*-semiotic.[39] Although Bellucci can confirm that Peirce in the *Minute Logic* factually identifies both disciplines when he defines Logic as "the science of the *general* necessary laws of Signs and especially of Symbols",[40] he nonetheless emphasizes that the mature Peirce's position is rather one better labeled as *semiotics-within-logic*, inasmuch as logic is primarily taken to be a science that deals with arguments and thus with symbols, although the necessary task to provide an account of *all possible* signs is assigned to Speculative Grammar for reasons that will become increasingly relevant in the final years of Peirce's semeiotic inquiries from 1904-1908. Logic, thus Bellucci explains, "is identified with the theory of signs because one of its departments is identified with that theory" (p. 192), so that for

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38   EP 2:146, 1903.

39   Cf. FISH, 1986, p. 338 ff.

40   MS 425:133, 1902. CP 2.93; *emphasis added*.

the mature Peirce the ultimate reason for the identification of Logic with general semeiotics *is* Speculative Grammar. Consequently, the possibility of erecting a logical theory that is thoroughly anti-psychologistic, inasmuch as it sees the actualization of sign-relations in psychological processes such as human thoughts as secondary to their determinant form, is grounded in the possibility of establishing a formal theory of the essential conditions signs need to conform to in order to represent inference.

Bellucci's magisterial account of Peirce's Speculative Grammar in the *Minute Logic* carefully reconstructs the foundations of such as formal semeiotic by moving through that series of basal operations we have noted to be its methodological backbone since 1865. By moving from the categorial division of the significant character of a sign into two degrees of degeneracy (icon, index) and one genuine kind (symbol) to the division of symbols and the grammar of arguments (differentiating abduction; corollarial and theorematic deduction; crude, qualitative and quantitative induction), Bellucci, however, surveys the familiar material of Peirce's semeiotic logic (cf. p. 193-212) with particular interest for what he refers to as "the real novelty of the Minute Logic" (p. 198). What is this novelty?

It consists in the way how the two trichotomies of signs Peirce had been working with for many years are related to each other. Prior to the *Minute Logic* (thus from 1865 to 1901), Peirce was conceiving of the trichotomy of symbols (terms, propositions, arguments) as a *subdivision* of the first trichotomy which has the representative character of a sign—being either a resemblance (icons), a real relation (indices) or a habitual use (symbols)—as its *ratio divisionis*. With the *Minute Logic*, however, Peirce starts to conceive of the trichotomy of symbols no longer as subordinate to the first trichotomy, but rather as coordinate. As a consequence, Peirce's taxonomy of signs is no longer a division of objects into exclusive classes, but rather a taxonomy of "*ways of classifying signs*, i.e. as *semiotic parameters* by the combination of which the classes of signs are obtained" (p. 183). The classification of signs henceforth becomes an operation consisting of two major steps, where the first step aims at the identification of the essential semeiotic parameters, while the second step—on the basis of rules of semeiotic compossibility—must ascertain which combinations of parameters yield possible signs (cf. p. 198). With the six possible classes of signs that can be obtained from combining both trichotomies, we are thus finally able to taxonomically explain symbols that indicate (qua *symbolic terms*) or indices that assert (qua *indexical propositions*).

With Chapter 7, Bellucci's account turns to the most fruitful period in the development of Speculative Grammar: the autumn months preceding the *Lowell Lectures* of 1903 see Peirce also working on a pamphlet designed to provide the audience with a synopsis of his most fundamental ideas concerning his philosophical architectonic in general and his graphic and normative logic in particular. It is in these manuscripts (*MSS* 478, 800, 539, 540) which constitute the material for *A Syllabus of Certain Topics of Logic*, that Speculative Grammar takes on the general form Peirce will try to perfect and expand in the final years of his life. And it is especially with a view on the fermentation of ideas in these complex manuscripts that Bellucci's methodological focus on their compositional history pays its dividends, as nobody has ever with such care and lucidity reconstructed their most likely compositional

sequence (cf. p. 215 f., 259 f.). In doing so he unearths a wealth of insights that allow us to better understand the questions Peirce is asking and the developments these give rise to.

These developments are taking place in the framework of a conception of Speculative Grammar that, by the end of 1903, has become a science the main distinctions of which—whether in the theory of relations or in the theory of signs properly speaking—are all thoroughly grounded in the phenomenological categories of Firstness, Secondness and Thirdness with their respective degenerate modes. Inasmuch as all three Normative Sciences are taken to have a physiological, a classificatory and a methodical compartment, Speculative Grammar is now defined as the "physiological [department]" of a "general theory of signs".[41] The main development this chapter reconstructs is the "second reform" of Speculative Grammar (p. 259) which will eventually lead us from a taxonomy of signs consisting of two trichotomies in "Sundry Logical Conceptions" (*SLC*) to one consisting of three trichotomies in the "Nomenclature and Divisions of Triadic Relations" (*NDTR*). Moreover, Peirce's analysis of the dicisign in *SLC* already prepares the ground for the later typology of interpretants. The first step in the direction of a triple-trichotomy-taxonomy, however, results as an immediate consequence from the first reform of Speculative Grammar in the *Minute Logic*: If the second trichotomy of classes of signs (differentiating between terms/rhemes, propositions and arguments) is no longer construed as a subdivision of the last element of the first trichotomy (differentiating between icons, indices and symbols) of classes of signs, but rather as a *coordinated* set of semeiotic parameters (i.e. of properties signs can have along with other properties), then, as it is no longer necessarily the case that whatever is a symbol cannot be an icon or an index, it becomes a *desideratum* to introduce new terminology for the trichotomy, as this in its former shape was exclusively applying to symbols and not to all signs. Thus, Peirce in *SLC* introduces sumisigns, dicisigns and suadisigns as parameters referring to the explicitness of the relational complexity of a sign that are not exclusively featured in terms, propositions and arguments, but rather in all signs having either one, two or three essential parts made explicit. Whereas this first step concerns the perfecting of the conception of the second triad as reflecting the parameters of a completely independent dimension of signhood (that, eventually, will be grounded in the relation of a sign to its proper interpretant in *MS* 800 and *NDTR*), the second step to be noticed propels us towards the discovery of a third trichotomy (which in *NDTR* will be grounded in the relation of the sign to its own mode of being). As Bellucci had already remarked in an earlier stage of his account, the distinction between quali-, sumi-, and legisigns has its roots in the differentiation between two different modes of generality pertaining to symbols (cf. p. 134, 219). These signs, so Peirce had clearly seen in *How To Reason*, are not only general *formaliter*, i.e. in terms of their signification, but also *materialiter*, i.e. in so far as they exist only as actualizations of a general type (cf. p. 134). But as Peirce now realizes in 1903, existing-as-the-replica-of-a-type is not a mode of being restricted to symbols, but pertains no less to such signs as conventional icons (i.e. *hypoicons*) and linguistically articulated indices (i.e. *subindices*). And as the formulation of the conventions for the Gamma graphs ("graphs of graphs" in which

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41    MS 478:42, 1903.

graphs are considered *materialiter* and do thus also need to be represented as referring to a specific occurrence of a graph and not to its legisign), the distinction between types and tokens becomes both more general and more urgent in 1903 (cf. p. 249, 259), thus motivating the systematic account of the matter in *NDTR* which will eventually introduce the mode of being of a sign as a third dimension of signhood with its respective trichotomy.

By November 1903, Peirce's Speculative Grammar has thus become a science which presents a substantial portion of its results in the guise of three trichotomies of semeiotic parameters which are grounded in the sign's relation to itself, its object and its proper interpretant. The identification of the three trichotomies, however, will yield no classification of signs as long as the rules determining the compossibility of semeiotic parameters have not been specified, inasmuch as it is only through the combination of parameters that classes of signs can be obtained. Therefore, the question arises whether these resulting classes can be validated as possible on the basis of semeiotic rules of compossibility. Chapter 7 thus closes with an account of Peirce's methodology of identifying the possible classes of signs in *NDTR* (p. 264-278). More on this below.

Peirce's true hothouse of semeiotic insights in the Fall of 1903, however, is the analysis of the proposition, to which Bellucci refers as the "deduction of the dicisign" (p. 220). This deduction is the continuation of the analysis of assertion that we had already seen taking central stage in the Speculative Grammar of 1895-1897 and starts to now yield the most fundamental insights into the structure of the sign-relation itself. The two drafts of the deduction of the dici-sign in *SLC* aim to demonstrate that dici-signs—according to the newly devised terminology for the second trichotomy and on the basis of the division of signs in virtue of their relational complexity— must necessarily be composed of two parts in order to be that kind of sign that "represents its object as if Second to itself".[42] But, in which sense is this so? Why must a proposition (as a kind of dicisign) necessarily represent its object as standing in dyadic relation to itself?

Bellucci introduces us to Peirce's intricate and much reworked demonstration in two major expository steps. Firstly, a proposition is the representation of a fact. As such, however, it needs to represent that its object is such-as-it-is-represented-to-be independently of its being represented. Thus, secondly, the central question arises, how it is possible for a proposition to represent a fact as being independent of itself. As this necessarily requires that the object ought to be represented as having the determinateness it is represented to have, not as *a consequence of the proposition* (i.e. as a relation of reason expressible only symbolically with an argument), but as a consequence of its being whatever it is, i.e. as an existential relation of fact expressible only indexically in a sign that professes of itself to be true, the demonstration of the possibility of such a representation becomes the semeiotically concretized aim of the deduction of the dici-sign. In Bellucci's reconstruction, this deduction might be broken down into three major argumentative steps. In the first step it is shown that it is possible for a dici-sign to represent a fact as being independent of a proposition by representing itself *as an index of its object* (p. 220-

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42    MS 478:0180, 1903.

224). In the second step it is shown that a dici-sign—in order to represent itself as an index of its object—must in the first place be able to *represent itself* as a sign of a certain kind. In the third step (belonging to the second draft of the deduction in *SLC*) it is eventually shown that a dicisign, in order to be represented by its interpretant as *an index* of its object, must be internally structured accordingly, i.e. consist of *two* parts (p. 231-232). *Quod erat demonstrandum.*

There is, however, an important complication occurring in the second step: as Peirce answers the second subquestion concerning the possibility of the self-depiction of the dici-sign by introducing the interpretant of the dici-sign as that semiotic function which allows for the representation of the dici-sign *as* an index of its object (understood as a concrete thing, not as a state of affairs, which would force on us a picture-theory of the proposition that necessarily conceives of propositions as structured entities mirroring structured states of affairs, thus deriving their structure from states of affairs; cf. p. 223 f.), a conception of the sign-relation is emerging which is no longer compatible with the definition of a sign as a triadic relation in which the sign brings an interpretant into the same triadic relation to *one and the same* object to which the sign itself stands, because the interpretant of a dicisign as an index of its object does not represent (and thus does not have) the same object as the dicisign, but rather represents (and has as its object) *the relation of* the sign to its object. In Bellucci's words: "[W]hile the sign represents an object, the interpretant represents the sign's *representation of* the object" (p. 224 f.; emphasis added). As Peirce's *ad hoc* solution of this fundamental problem, namely the introduction of the distinction of a primary and a secondary object of the dici-sign in *MS* 478, boils down to reduplicating the distinction between the relation of the sign to the object and the relation of the interpretant to the object, Peirce will soon be led to consider the possibility of differentiating kinds of interpretants.

As Bellucci rightly emphasizes, however, the idea of differentiating between two semeiotic functions of the interpretant is already palpable in the definition of the sign provided by the final draft of *SLC*. Here Peirce, after having characterized the sign-relation as a triadic relation obtaining between the representamen (as a first), its object (as a second) and its interpretant (as a third), in which the first determines the third "to assume the same triadic relation to its object in which it stands itself to *the same object*",[43] he adds that "besides that, it [the Third] must have *a second triadic relation* in which the Representamen, or rather *the relation thereof to its Object*, shall be its own (the Third's) Object, and must be capable of determining a Third to this relation".[44]

The task of unpacking the consequences of this fresh insight into the existence of a potential plurality of semeiotic functions of the interpretant constitutes the motor of the developments Speculative Grammar takes after the *Syllabus* of 1903. Now, in order to chart the contours of the still expanding territory of semeiotic inquiries to the exploration of which the eighth chapter of Bellucci's developmental account of the years 1904 to 1908 is devoted, it might be useful to first indicate the main directions into which Peirce's semeiotic inquiries move and, moreover, to rehearse

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43   MS 478:43 f., 1903; *emphasis added.*

44   *bid.*; *emphasis added.*

the methodological principles of the classification of signs.

Firstly, there is a "third reform of speculative grammar" (p. 286) to be noted, which consists in the refined articulation of the internal structure of the sign-relation by introducing the distinction of dynamic and immediate object on the one hand, and the differentiation between three kinds of interpretants on the other hand. On the backdrop of this fundamental remodelling of the sign-relation—already adumbrated in the final stages of Peirce's work on the *Syllabus of 1903*—Bellucci, like SHORT (2007) and others before, sees emerging three main taxonomical schemes; namely (i.) schemes based on six trichotomies (1904-1905), (ii.) such based on ten trichotomies (1906-1906), and (iii.) similar tenfold schemes (1908) with which, however, a different approach to establishing parameter-compossibility is taken (cf. p 286). Within this final development, so Bellucci claims (cf. p. 286), Peirce manages to arrive at a final position concerning the first of the two tasks that a complete classification of signs requires (i.e. the task of providing a complete system of semeiotic parameters by trichotomizing the categorial aspects of the sign-relation), but he fails to solve the problems connected to the second (i.e. the task of determining the rules of compossibility of the semeiotic parameters, so as to be able to determine the classes of possible signs).

Bellucci introduces Peirce's principles of sign-classification on the basis of the three-principles-reconstruction given in BURCH (2011). Thus, we start out by claiming that each trichotomy produces triads consisting of three ordered elements: <1, 2, 3>. We add, secondly, that the Triads themselves are linearly ordered : I. <1, 2, 3>, II. <1, 2, 3>, III. <1, 2, 3> etc. On this basis, a third principle of combination specifies that in order to obtain a—as one could say—*mathematically* or *combinatorially possible* class of signs, we have to form a triplet of elements $\{m/n/n\}$ to which each of the three triads contributes one element, e.g. {1/1/2} or {3/3/2}. As the *combinatorially possible* classes of signs in a system with three triads of sign-parameters, based on three trichotomies of an elementary respect of the sign-relation—i.e. of the sign (i.) to its mode of being, (ii.) to its object, (iii.) to its interpretant—are $3^3$ = 27, the question arises how many of these are *semeiotically* possible (cf. p. 265). A task, we might add, that is analogical to the one Aristotle needs to tackle after having established the four logical forms of non-modal premisses[45] and the three figures of the syllogism which,[46] as is well known, consists in identifying the *logically* valid syllogistic argument-schemes within the 192 mathematically possible ones.

Analogically, a set of rules needs to be established which allows us to distinguish the combinations which are *combinatorially* possible from those that are *semeiotically* possible. As the set of rules that Peirce gives in *NDTR*[47] is incorrect, as it factually does not allow us to obtain the table of ten classes of signs worked out in *NDTR*,[48] and as he will not come to a correct statement of the rules of parameter combination before 1908 (cf. p. 267), Bellucci's statement of the rule

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45    ARISTOTLE, *An. Pr.* I, 1-2.

46    ARISTOTLE*, An. Pr.* I, 4-6.

47    Cf. EP 2:290, 1903.

48    Cf. EP 2:296, 1903.

stays in line with Burch[49] and SHORT, according to whom "nothing can determine anything of a higher category than itself".[50] Or, as Bellucci's puts it (p. 266), who *cum* Short also assumes that, as each preceding trichotomy acts as the *determinant* of a subsequent *determined* trichotomy, the same relation consequently also holds of the elements of the triads: "a *determinant* element in a combination cannot have a lesser categorial value than the *determined* element" (p. 266). Accordingly, the ten classes of semeiotically possible signs are: {1/1/1} = rhematic-iconic qualisign or *qualisign*; {2/1/1} = rhematic-iconic sinsign; {2/2/1} = rhematic-indexical sinsign; dicent indexical sinsign = {2/2/2}; {3/1/1} = rhematic-iconic legisign; {3/2/1} = rhematic-indexical legisign; {3/2/2} dicent-indexical legisign; {3/3/1} = rhematic symbolic dicisign or *rhematic symbol*; {3/3/2} = dicent-symbolic legisign or *dicent symbol*; {3/3/3} = argumentative-symbolic legisign or *argument*.

On the backdrop of this reconstruction of Peirce's 'ten out of three'-classification, it is easy to understand the nature of the problem which arises once additional trichotomies are identified and corresponding triads of parameters are established: Will there still be a linear order in which *determinant* triads determine subsequent *determined* triads? If not, then the project of a complete classification of all possible signs seems to become impossible. Peirce held on to this project, but he neither succeeded in arriving at a satisfactory linear ordering nor in fully working out an alternative non-linear approach (cf. p. 334-348), thus leaving the task in its generality unresolved (cf. p. 286).

The distinction between two kinds of objects and three interpretants, which introduces three additional relates into the sign-relation, emerges in a letter Peirce writes to Victoria Welby in October 1904.[51] The reason for introducing these new elements, however, does only start to become clearer in October 1905, when several entries in the *Logic Notebook* allow us to reconstruct the new 'post-*NDTR*' classification of signs, as it takes shape in manuscripts and letters of the years 1904 to 1905.[52]

The first thing to gain clarity in this transitory context, is the relation of the old three relates of the sign-relation to the three new ones: The object that was since 1865 referred to as the object *tout court*, and the relation to which grounded the triad of icon-index-symbol, is now referred to as the *dynamic object*. Moreover, the interpretant that was since 1865 referred to as the interpretant *tout court*, and the relation to which (since 1903) grounded the triad of rheme-dicisign-suadisign, is referred to as the "Significant Interpretant",[53] "signified interpretant"[54] or "representative interpretant"[55] in the transitory period in which Peirce operates with six trichotomies. Thus, the new distinctions that become particularly pressing to comprehend, both in their motivation and in the outlook they encapsulate,

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49   Cf. BURCH, 2011, p. 94 f.

50   Cf. SHORT, 2007, p. 240.

51   Cf. SS:32-35.

52   Cf. MSS 914, 939, 517, 284, and L 67 and L 107.

53   MS 339:252r, 1905.

54   SS:34, 1904.

55   MS 339:253r, 1905.

are those referred to with the terms (i.) 'immediate object', i.e. the "object as it is represented", (ii.) 'immediate interpretant', i.e. the "interpretant in itself", and (iii.) 'dynamic interpretant', i.e. the "interpretant as it is produced".[56]

As Bellucci shows, the theoretical outlook in which Peirce takes (i.) the immediate object to play its role is that of quantification. The *ratio divisionis* of the relation a sign has to its immediate object, thus, is not that to another entity, but rather to a *part of* the dynamic object, namely to its quantity. In this sense, the relation of a sign to its dynamic object is either vague, actual, or general, i.e. particular, singular or universal. As this specification is only possible as the specification of a dicisign, "the immediate object", thus Bellucci summarizes his analysis, "is the manner in which the dynamic object is *quantitatively given* (i.e., *quantified*) within a propositional context" (p. 293).

Building up on SHORT's[57] "brilliant intuition" of a 'speech-act-theoretical' motivation guiding Peirce in his hexadic reconfiguration of the sign-relation for the sake of obtaining further trichotomies (p. 298), Bellucci, furthermore, offers a reconstruction of Peirce's conception of (ii.) the immediate and (iii.) dynamic interpretant which sees these distinctions as originating in the Peircean insight into the necessity of distinguishing between *propositional content* and *act of assertion*. Now, as Bellucci shows with reference to *NDTR* (cf. p. 297 and EP 2:292 f.), Peirce in 1903 was still tending to assimilate assertion with the psychological act of judgment as he had been doing in the 1890s when both terms were sometimes even identified, inasmuch as a proposition was taken to be a semeiotic structure the purpose of which is to assert a fact (cf. p. 295 ff.). The distinction between proposition and assertion, however, is worked out immediately after having delivered the *Lowell Lectures*, when Peirce, in "Καινὰ στοιχεῖα" (Winter 1904), writes that "[o]ne and the same proposition may be affirmed, denied, judged, doubted, inwardly inquired into […], taught, or merely expressed, and does not thereby become a different proposition".[58] Consequently, the trichotomy that has as its *subiectum divisionis* the relation of the sign to the immediate interpretant has its *ratio* in the differentiation of the representative matter which the sign determines the interpretant to take on as being either "feeling (Interjection), Action (Imperative), Sign (Indicative)".[59] And this means that (ii.) the immediate interpretant ought to be construed as a sign's relation to its communicative purpose (being either an interjection, an imperative or an indicative), thus producing the sign with a respective *interpretant in view*, while the trichotomy which has as its *subiectum divisionis* (iii.) the relation of the sign to the dynamic interpretant, might be construed as having its *ratio* in the differentiation of instrumental modes of determination of the immediate interpretant through the mode of sign-action "by Sympathy, by Compulsion, by Reason".[60] Based on this reading, thus, the triad of the dynamic interpretant gives us the modes of bringing about the intended interpretive effects specified in the triad of the immediate interpretant. Dynamic and immediate interpretant would thus relate

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56    SS:32, 1904.

57    Cf. SHORT, 1982, p. 293 ff.

58    EP 2:312, 1904.

59    MS 339:252r, 1905.

60    MS 339:252r, 1905.

to each other as *means* relate to *ends*, or, to put it more prudently: the distinction of types of interpretants starts to reflect a normative outlook in its ordering.

Bellucci's interpretation, however, does not dwell too long on this classificatory scheme: As much as October 8th, 1905, is the day on which Peirce produces the first classificatory scheme based on six trichotomies that is terminologically explicit enough to be intelligible, this is also the day on which he quits the hexadic system and starts to work on classifications with decadic bases exclusively. As this move is actually nothing but a consequence of the thorough grounding of all semeiotic distinctions on the phenomenological categories and thus already formally prescribed by the approach taken in the *Syllabus of 1903*, one could be surprised not to see Peirce approaching the matter from a purely formal point of view earlier. Now, according to this point of view, in any triadic subdivision there will be one first (*I*), two seconds (*II.i* and *II.i*) and three thirds (*III.i, III.iii, III.iii*), thus also two subdivisions of *II.ii* (i.e. *II.ii.1* and *II.ii.2*), two subdivisions of *III.ii* (i.e. *III.ii.1* and *III.ii.2*) and three subdivisions of *III.iii* (i.e. *III.iii.1, III.iii.2, III.iii.3*). This will thus give us a classificatory system with ten trichotomies of parameters, in which we will find one division according to the nature of the sign (*I*), one division according to the immediate (*II.i*) and two according to the dynamic object (*II.i.1* and *II.1.2*), one according to the immediate (*III.i*), two according to the dynamic (*III.ii.1* and *III.ii.2*) and three according to the third interpretant (referred to as 'representative' in 1905, but also as 'normal' and 'final' in subsequent years): *III.iii.1, III.iii.2, III. iii.3*. As Bellucci suggests (p. 307 f.), Peirce's move to the hexadic system might be motivated by the decision to bracket the question concerning the linearity—and thus: definiteness—of the ordering of the trichotomies, in order to first determine which trichotomies must be considered, "before order can be brought in".[61]

Now, on the basis of the exegetical maxim that "by reconstructing the steps by which Peirce came to his tenfold taxonomy of signs in October 1905, we are *ipso facto* reconstructing his speech act theory" (p. 311), Bellucci arrives at a quite coherent general picture and interpretation of the hexadic classifications Peirce produces in 1905 and 1906. The key components of this account, building up on SHORT[62] and PIETARINEN[63] are two. Firstly, there is the insightful projection and localization of Peircean distinctions on the blueprint of speech act theory with its differentiation of *locutionary act* (i.e. the uttering of *meanings* embodied in the sign's relation to the 'representative' or 'final' interpretant qua rheme, dicisign or argument), *illocutionary force* (i.e. the using of signs with a definite communicative intention playing out in the sign's relation to its immediate interpretant qua interrogative, imperative, or assertoric) and *perlocutionary acts* (i.e. the effects of a sign materializing as its relation to the dynamic interpretant qua feeling, fact or sign). Secondly, there is a systematically very fruitful account of *the nature of* the ordering of the three interpretants ensuing from the speech act theoretical reading: If we interpret the immediate and the dynamic interpretant as the Peircean demarcation between conventional and natural effects of signs (cf. esp. p. 312 f.), it becomes

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61    MS 339:253r, 1905.

62    Cf. SHORT, 1982 and 2007.

63    Cf. PIETARINEN, 2006.

possible to comprehend the *immediate interpretant* as the conventional interpretant *represented by* the sign, i.e. as "the sign that a sign *aims to* procude", while the *dynamic interpretant* is the interpretant causally determined by the sign, i.e. "the sign that it [the sign, A.T.] *actually* produces", so that the *normal interpretant* eventually becomes the *télos* of semeiosis which "sufficient scientific consideration of the sign *ought to* produce" (p. 315).

Thus, with a view on the interpretive problems soon provoked by Peirce's introduction of the seemingly alternative division of interpretants into the emotional, energetic, and logical in "Pragmatism" of 1907,[64] Bellucci can confirm Short's interpretation of the division of the interpretant into immediate, dynamic and final (hereafter referred to as *IDF-trichotomy*) as a "»modal gradation« among interpretants" (p. 327) which expresses "the essential structure of Peirce's later semeiotic", as SHORT[65] puts it. As this structure is "essentially purposive" (*ibid.*), we might say that it discloses the normative dimension of Peirce's "Normative Semeotic",[66] whereas the division of the interpretant into emotional, energetic, and logical (hereafter referred to as *EEL-trichotomy*), at least according to SHORT, "places thought in a naturalistic context, where it may be seen as a development of more primitive forms of semeiosis".[67]

Bellucci, however, hopes to develop a genetically more coherent and systematically nuanced approach when he suggests conceiving of *both* divisions of the interpretant as "the instruments by which speculative grammar came to include a pioneering speech act theory" (p. 327). Accordingly, so he argues, the modal gradation (i.e. the *IDF*-trichotomy) was needed "to differentiate the illocutionary, perlocutionary and locutionary levels of analysis", while the *EEL*-trichotomy, "from 1905 onwards" (p. 327 f.), was designed to provide "a typology of perlocutionary effects" (p. 328).

Now, this is true only in so far as this triad factually functions as a subdivision of the *dynamic interpretant* in spring 1906;[68] but it cannot escape attention that it also appears as the subdivision of the immediate interpretant in 1904,[69] and as a subdivision according to the "*Purpose* of the Eventual [i.e. final, A.T.] Interpretant" in Summer 1906;[70] a view that eventually seems to be confirmed in Peirce's last classification of signs produced in 1908, where the *EEL*-trichotomy, i.e. the very triad of interpretants consisting in a subdivision of what might be called the 'event-type-category' of the interpretant (feeling, action, thought) is, again, not conceived of as a subdivision of the perlocutionary (i.e. of the non-conventionally determined effects of the sign), but rather as a subdivision "[a]ccording to the purpose of the final interpretant", aiming either at being "[g]ratific", or "[t]o produce action", or "[to produce self-control".[71]

As a consequence of these interpretive frictions, Bellucci's fine interpretation of the *EEL*-trichotomy as the main conceptual tool used to purge the pragmatic

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64   Cf. EP 2:409 ff.
65   SHORT, 1996, p. 496.
66   CP 2.111, 1902.
67   SHORT, 1996, p. 495.
68   Cf. MS 339:275r, 1906.
69   Cf. L 463:030, 1904.
70   MS 339:285, 1906; *my emphasis*.
71   MS 463:0134-0145, 1908.

maxim of 1878 in "Pragmatism" (cf. p. 328-330), does not cohere with his general speech-act-theoretical reconstruction of Peirce's theory of the interpretant, as he is interpreting the *EEL*-trichotomy in "Pragmatism" as a subdivision of the final interpretant. Bellucci is ready to admit these incongruencies (cf. p. 328, par. 2) and, moreover, points out clearly that the *EEL*-trichotomy "is the most difficult to interpret", as it "seems to be linked to neither the illocutionary, nor the perlocutionary dimension of analysis", and Peirce "*never* explains what he meant with it]" (p. 344, my emphasis). – Now, *this* might be a bit exaggerated, as the determination of the subdivision as being performed "according to the purpose of the final interpretant"[72] or "according to the Purpose of the Eventual interpretant"[73] indicates that we are here dealing with a dimension of signhood that seems to be essential for a "Normative Semeotic",[74] i.e. for a theory of signs developed on the basis of two pre-logical normative sciences grounding Logic in the order of principle-dependence. Namely, firstly "*ethics* [which] studies the conformity of conduct to an ideal", and secondly *esthetics,* being the "theory of the ideal itself", which studies "the nature of the *summum bonum*" by working out a "theory of the deliberate formation of […] habits of feeling".[75] Thus, *if* it is true, as Peirce claims in 1902, that "[i]t is absolutely impossible that the word «Being» should bear any meaning whatever except with reference to the *summum bonum*", and *if* "[t]his is true of any word",[76] then *some* conception of the *summum bonum* seems to be necessarily incorporated in the final interpretant of any possible sign, thus constituting the ultimate horizon in which signs can have a potential meaning for sign-producing agents that are not the creators of the world they live in. Or, in other words: the trichotomy of the final interpretant in accordance with its purpose, is a subdivision the *ratio divisionis* of which are "ways of life",[77] "classes of men",[78] "human lives",[79] "types of men",[80] or "Suicultural, Civicultural, and Specicultural Instincts".[81] As this categoriological "Division of Human Life into Life of Enjoyment, Life of Ambition and Life of Research"[82] is patterned on Aristotle's distinction of three βίοι or 'designs of life' that the Stagirite interprets as different apprehensions of the μέγιστον ἄγαθον qua εὐδαιμονία that are embodied in the praxis of those devoting their life primarily to certain esthetic ideals—pleasure, political action or contemplation,[83]—we might say that the *ratio divisionis* of the EEL-trichotomy is a division in accordance with βίοι

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72   L 463, 1908.

73   MS 339:285r, 1906.

74   CP 2.111, 1902.

75   EP 2:376 f., 1906.

76   CP 2.116, 1902.

77   MS 407:1, 1893; and MS 604 (n.d.).

78   CP 1.43 f., c. 1895; and MS 14:6, 1895.

79   MS 1334:16-18, 1905.

80   EP 2:445, 1908.

81   MS 1343:34 ff., 1903.

82   MS 477:01, 1903.

83   ARISTOTLE, *EN*, 1095 b14-1096 a5.

or grasps of the *summum bonum*, which, in turn, is rooted in the different modes of being of the respective esthetic ideals apprehended. There are, however, good reasons to conceive of problematizations of the kind raised here as not belonging to Speculative Grammar as such, but rather to the third branch of semeiotics which considers signs in their thirdness, i.e. in their utility for their interpretants.

Bellucci's account of the final stage of Peirce's efforts to produce a complete classification of signs (p. 330-348) in the years 1907-1909 confronts us with a thinker who even at the end of his life preserves the intellectual power to start from scratch in order to further deepen analyses of conceptual distinctions and systematic interconnections. In this sense, the new conceptions of collateral observation and of the continuous predicate are shown to be intimately related to the ongoing development of Peirce's analysis of the structure of the proposition and of his conception of the immediate object (cf. p. 321-325, 331-340) as "the manner in which the sign indicates the dynamic object" (p. 336).

Moreover, Bellucci sketches how Peirce in 1908 and 1909 embarks on a methodological journey that has the potential to free him from the constraint of operating on the basis of a linear order of the trichotomies of semeiotic parameters. This move was necessitated by the fact that even though we can know that on the basis of ten linearly ordered triads the *mathematically* possible combinations amount to $3^{10} = 59.049$; and even though we have some reasons to assume that the ordering relation should be derivable from the hierarchy of relations of determination obtained within the sign-relation, so that "[I.] the dynamic object determines [II.] the immediate object, which in turn [III.] determines the sign, which in turn determines [IV.] the 'destinate' (final) interpretant, which in turn determines [V.] the 'effective' (dynamic) interpretant, which in turn determines [VI.] the 'explicit' (immediate) interpretant" (p. 342; roman numerals added by A.T.); nonetheless, we have no proper basis to apply the two rules of parameter compossibility—namely $R_1$: "[A] Possible [First] can determine nothing but a Possible', and $R_2$: "[A] Necessitant [Third] can be determined by noting but a Necessitant",[84] conjointly implying that all possible combinations of semeiotic parameters satisfy the partial ordering $O_{sp}$: "first element ≥ second element ≥ third element" (p. 285 f.)—to the decadic system of trichotomies, as long as we do not know how to position the four other trichotomies in relation to the four linearly ordered ones (cf. p. 340 ff.). Consequently, in the classifications of December 1908 that are all developed in versions of a letter to Victoria Welby, we are surprised to see Peirce approaching the business of classification by focusing exclusively on the compossibility of two trichotomies, namely on the compossibility of the elements of the trichotomies of the sign in itself and of those of the sign's relation to the immediate object.

The reason for this puzzling approach that seems hopelessly inadequate for determining all possible classes of signs on the basis of ten trichotomies of paramaters emerge in Peirce's last entries concerning the taxonomy of signs in the *Prescott*

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84   SS:84, 1908; my additions in brackets.

*Book*[85] and the *Logical Notebook*[86] of October and November 1909. As Bellucci conjectures, Peirce eventually arrives at the conclusion that a linear ordering of all ten trichotomies is methodologically problematic, and thus resorts to an approach that exploits the idea of there being generalizable relations obtaining between couples and triples of trichotomies belonging to the same *orders of classification* (e.g. 'immediate trichotomies' and 'dynamic trichotomies' of the relation of the sign to the object and the interpretant), which thus "suggests a method of study"[87] that is proceeding step-by-step without having to presuppose a linear order. I am not sure in which sense this method—barely sketched by Peirce and thus only roughly unpacked by his interpreter—"presupposes that the trichotomies are *hierarchically* rather than *linearly* ordered" (p. 348), as Bellucci claims. Of course, the "'tree of trichotomies'" (p. 348) he seems to have in mind and which we can easily draw on the basis of Peirce's retrospective appreciation of the "excellent notation of 1905 Oct 12",[88] gives us three levels of complexity, where seven trichotomies—of the sign's relation to the dynamic object (*II.ii.1* and *II.ii.2*) and the various non-immediate interpretants (*III.ii.1*, *III.ii.2*, *III.iii.1*, *III.iii.2*, *III.iii.3*)—are third-order divisions (i.e. subdivisions of subdivisions), two trichotomies—of the sign's relation to the immediate object (*II.1*) resp. to the immediate interpretant (*III.1*)—are second-order divisions, and only one—the mode of being of the sign in itself (*I.*)—is a first-order division; but the way Peirce articulates himself on November 1st 1909 in *The Logic Notebook* might also be read as representing purely heuristic reflections concerning the question of which paths of inquiry ought to be considered as the most fruitful avenues across the wonderland of 59.049 *mathematically* possible classes of signs. The identification of such heuristic paths along which additional laws of compossibility of parameters of signs seem more likely to be discovered would not necessarily have to imply anything about the form in which the trichotomies themselves are related to each other in the universe of formal semeiotics. But these are speculations. The last entries in the *Logic Notebook* from November 1st, 1909 rather seem to show that Peirce's immediate answer to the methodological problems sketched above consisted in starting anew—with a definition of a sign as an *ens*.[89]

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85    MS 277:077, 1908.

86    MS 339:360r, 1909.

87    MS 339:360r, 1909.

88    MS 339:360r, 1909.

89    Cf. MS 339:360r f., 1909.

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