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# On the genealogy of signification in Peirce's New List of Categories

## Sobre a genealogia da significação na New List of Categories de Peirce

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**Abstract.** Many scholars believe “On a New List of Categories” is a metaphysical or transcendental deduction. The present essay will argue that Peirce derives the categories by *induction* and validates their order by *prescision*. Then the article shall solicit aid from Peirce’s early and later writings to explain how the *new way to list* the categories can serve as a *genealogy of signification*: how the different types of term, proposition, and argument emerge in the process of reasoning as the different types of signs. Thus, the genealogy of signification would then qualify as a *phenomenology of logic* as a *science of semiotics*. Such a science of semiotics will have three types of comparison corresponding to the sign-relation in illation: namely, uniparance, diaparance, and comparance. Then the three types of comparison will occasion three types of relative in different types of propositions: namely, concurrents, disquiparants, and equiparants. Finally, the three types of relative will occasion the different types of sign corresponding to the different types of term: namely, icons, indices, and symbols. With this classification, there is then an explanation of how the process of reasoning is a semiotic process with three forms of valid argument: namely, hypothesis, induction, and deduction.

**Keywords:** Categories. Peirce. Phenomenology. Relations. Semiotics.

**Resumo:** Muitos estudiosos creem que “On a New List of Categories” é uma dedução metafísica ou transcendental. Este ensaio argumentará que Peirce deriva as categorias por indução e valida a ordem delas por prescisão. Depois, o artigo solicitará apoio dos escritos de juventude e maturidade de Peirce para explicar como a nova maneira de listar as categorias pode servir como uma genealogia da significação: como os diferentes tipos de termos, proposições e argumentos emergem no processo de raciocínio como os diferentes tipos de signos. Desse modo, a genealogia da significação se qualificaria, então, tanto como uma fenomenologia da lógica quanto uma ciência da semiótica. Tal ciência da semiótica terá três tipos de comparação correspondendo ao signo-relação em ilação: a saber, uniparance, diaparance e comparance. Depois, os três tipos de comparação ocasionarão três tipos de relativos em diferentes tipos de proposição: a saber, concorrentes, disquiparantes e equiparantes. Por fim, os três tipos de relativos ocasionarão os diferentes tipos de signos correspondendo aos tipos diferentes de termos: a saber, ícones, índices e símbolos. Com esta classificação, há, então, uma explicação de como o processo de raciocínio é um processo semiótico com três formas de argumentos válidos: a saber, hipótese, indução e dedução.

**Palavras-chave:** Categorias. Fenomenologia. Peirce. Relações. Semiótica.



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## 1 Introduction

Many scholars believe the argument of Charles Sanders Peirce’s 1867 address, “On a New List of Categories,” is a metaphysical or

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transcendental deduction (or a Kantian-style derivation).<sup>1</sup> Most scholars often appeal to the major influence Kant had on Peirce's early philosophy and cite the Kantian-sounding language of the New List to support their conclusion.<sup>2</sup> While the endeavor to derive and validate a list of categories is common to Kant and Peirce, the language is only superficially Kantian because Peirce had already rejected core tenets of the critical philosophy prior to writing the New List.<sup>3</sup> Most importantly, Peirce must reject the argument of the Transcendental Aesthetic because space and time are not the pure form of intuition for sensibility, but rather are logical conditions within the process of conception: *We infer* space and time as hypotheses that must explain objects<sup>4</sup>, rather than *intuit* them as sensible conditions for the cognition of an object in general.<sup>5</sup> If space and time are conceptual rather than intuitive, there are three implications of present importance. Peirce must: (1) reject a rigid distinction between sensibility and understanding because space and time do not differentiate these domains; (2) deny that sensibility sets limits for the understanding through space and time; and (3) repudiate an incognizable *Ding an sich* beyond the limits of the understanding as a gratuitous hypothesis that explains nothing. Anything is in principle cognizable because everything is always already conceivable. This conceivability is a sign of another difference between Kant and Peirce. There are, for Kant, singular representations such as intuitions and concepts that require synthesis in judgment for an act of cognition.<sup>6</sup> Thus, the propositional form of judgment in general is logically fundamental for Kant.<sup>7</sup> Whereas, for Peirce, there are no singular representations because the form of syllogism in the valid modes of inference for the natural classes of arguments is logically fundamental.<sup>8</sup> Thus the sign of illation, which always signifies a *process* of reasoning, is more fundamental for Peirce than propositional form. If we can conceive, then any conception is always a process of reasoning already. There are then no singular representations that would render this process possible, but rather the process of reasoning itself is what renders propositions and their terms possible. Moreover, since there is no separate domain of sensibility for intuitive representations, then there is only ever a series of conceptual representations with the form of valid inference if the process of reasoning is truly more fundamental. This is why Peirce, at the beginning of the New List, chose to say *conception* rather than *concept*: The word-choice signals a *process* of reasoning that Peirce had previously analyzed elsewhere. Hence, in the New List, the starting-point of analysis is where the process of reasoning terminates: Namely, at the proposition in the conclusion. But, since the conclusion is a sign of the premisses, the entire process ought to have the form of sign-relation in illation if the

1 Some scholars suppose the New List is a metaphysical or transcendental deduction of the categories or a type of deduction based upon the argument of the first *Critique* (viz. FREEMAN, 1934; FEIBLEMAN, 1946; GOUDGE, 1950; THOMPSON, 1953; MURPHEY, 1961; HAAS, 1964; BUZZELLI, 1972; APEL, 1981; HOOKWAY, 1985; CORRINGTON, 1993; HAUSMAN, 1993; CHRISTENSEN, 1994; ANDERSON, 1995; SHORT, 2007). Others disagree (viz. ROSENTOHN, 1974; ESPOSITO, 1980; DE TIENNE, 1989; ROSENTHAL, 1997; ISHIDA, 2009; ATKINS, 2018).

2 This language is only superficially Kantian because Peirce uses Kantian-sounding terms (e.g., validity, reduction, unity, sensuous impressions, and manifold) with importantly different meanings. Peirce does this, too, with Aristotle's see (2a10-15 apud BARNES, 1984, p. 4) definition of substance in "one of its senses" (W2:49, 1867), the other (non-Aristotelian) sense is discussed below.

3 Peirce rejects synthetic *a priori* propositions (W1:9, 1860), a distinction between phenomena and noumena (W1:60-61, 1861), the transcendental critique of consciousness (W1:73, 1861), the validity of sensibility and pure apperception (W1:76, 1861), the priority of theoretical to practical cognition in the analysis of consciousness (W1:78, 1861), the transcendentalism of space (W1:159-160, 1865), any relation of logic to cognition [or Kant's semi-psychologism] (W1:166-167, 1865), a rigid distinction between inner and outer (W1:167-168, 1865), the logical coherence of the table of judgments and categories (W1:252-256, 1865), transcendental idealism (W1:307, 1865), that space and time are the pure forms of intuition for sensibility, and thus a rigid distinction between sensibility and understanding (PEIRCE, 1993 [1866], p. 647-649). [See also ESPOSITO, 1979; DE TIENNE, 1989; DECKER, 2001; and LEVINE, 2004].

4 PEIRCE, 1993 [1866], p. 649 (see also LEVINE, 2004).

5 That is, space (see *KrV*, A25) and time (A32) are not discursive because neither are concepts but rather pure intuitions. Whereas, for Peirce, both space and time are discursive because each is a conception; moreover, these conceptions are hypotheses, which Kant especially forbids (*KrV*, A xv).

6 *KrV*, A51-A52/B76.

7 More accurately, the propositional form in judgment is *cognitively* fundamental because the faculty of judgment (i.e., the understanding), for Kant, is the most fundamental cognitive faculty for rational beings. Kant announces the fundamentality of the understanding early (1 *KrV*, A xvi/B xvii), then again as the "clue" for the derivation of categories (*KrV*, A78/B104-A79/B105); finally, by reference to their objective validation through the *I think*, where the understanding can *think* the *I* of pure apperception for every intuitive and conceptual representation (including space, time, and the categories) in any possible judgment for the synthetic and objective unity of experience (*KrV*, B136-40 and B143). Hence the centrality of synthesis in judgment is also a sign of the fundamentality of the understanding and thus the propositional form. Peirce rejects this cognitivist frame, so the problem is purely logical for him.

8 Peirce (MS 339 and 723), see Murphey (1961, p. 56-65).

process of reasoning is truly more fundamental. Already, in 1867 (and perhaps before), Peirce found a rationale for the dismissal of a cognition not determined by a previous cognition because cognition is a species of conception that has the form of sign-relation in illation.

A scholar might respond that Peirce could nonetheless emulate Kant's methodology in the New List without these commitments, for the metaphysical and transcendental deduction are at least construable as special types of reasoning. This seems *prima facie* implausible because neither a metaphysical nor a transcendental deduction (nor any other Kantian-style derivation) is a part of Peirce's natural classification of arguments (W2:23-49, 1867). Peirce does not, in other words, seem to believe these even qualify as special types of reasoning. Perhaps, then, Peirce could appeal to either as an informal strategy to derive and validate a list of categories. This is also highly implausible.<sup>9</sup> Kant, in the metaphysical deduction, infamously attempts to derive a list of categories from the putatively exhaustive table of judgments in general logic.<sup>10</sup> Each judgment is a synthesis of *a priori* concepts, while these concepts and the judgments they inform constitute the pure form of understanding.<sup>11</sup> At the level of general logic, these are mere rules for thinking without any content.<sup>12</sup> To acquire content, the pure form of understanding must stand in relation to space and time as the pure form of sensibility.<sup>13</sup> This is the proper province of transcendental logic: Where the concepts with an *a priori* origin in the pure form of understanding prescribe rules for the synthesis of spatiotemporalized intuitions. Kant's crucial claim is that the categories are derivable from these concepts when the pure form of understanding so stands in relation to the pure form of sensibility.<sup>14</sup> Then these concepts become categories that can inform synthetic *a priori* judgments for spatiotemporalized intuitions. Peirce, of course, rejects the logical fundamentality of the propositional form and thus the table of judgments could never adequately model the process of reasoning signaled at the beginning of the New List. More fundamentally, Peirce could never derive a list of categories by a metaphysical deduction because, for him, the domain of sensibility is not clearly separate from the understanding, and therefore no relation between them is possible for a derivation of categories. Peirce, in other words, would simply have to derive the categories from general logic, which eliminates what is most distinctive about the metaphysical deduction. Perhaps, however they are derived, Peirce could still validate a list of categories by a transcendental deduction. But, the entire purpose of the transcendental deduction is to validate the categories by their legitimate use in the synthetic *a priori* judgments they inform.<sup>15</sup> What is this legitimate use? To unify *all* but *only* the intuitions that can appear within space and time as the pure form of intuition for sensibility.<sup>16</sup> How is this legitimation possible? If the division between sensibility and understanding is overcome through the unity of pure apperception: Where the cognizer unifies the pure forms of sensibility and understanding in itself as a numerically identical self-consciousness, so that the categories can necessarily and universally apply to *all* but *only* intuitions by the synthetic *a priori* judgments they inform.<sup>17</sup> Only then is there a proof for the possibility of synthetic *a priori* judgments, and the categories are validated as legitimate only if the synthetic *a priori* judgments they inform are possible. The decisive point, for Peirce, is: *There is no division between sensibility and understanding to overcome.* Peirce would never adopt a transcendental deduction as an informal strategy

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9 Obviously, the interpretation of the Transcendental Analytic is highly controversial. A future essay shall more fundamentally address why the New List is not, and could never be, a metaphysical or transcendental deduction. The claims concerning Kant are simplified conclusions drawn from that essay, which tends to agree with Henry Allison's (1983 and 2015) interpretation of Kant.

10 KrV, A70/B95 and A80/B106.

11 KrV, B103-A78/B104.

12 KrV, A53 and A54.

13 KrV, A77/B102-B103.

14 KrV, A79/B105-A80/B106.

15 KrV, A158/B197.

16 KrV, B165, and B168-169; A158/B197.

17 KrV, B132-140, B143, and A158/B197. The connection between Kant's transcendental unity of pure apperception and Peirce's unity of consistency is also dubious, see De Tienne (1997).

because to validate a list of categories as necessarily and universally applicable to all but only intuitions is meaningless in the absence of a rigid distinction between sensibility and understanding. Moreover, there are no synthetic *a priori* judgments: Peirce rejects outright their possibility, and therefore must reject any strategy that seeks to validate a list of categories by proving synthetic *a priori* judgments are possible.<sup>18</sup> Furthermore, there is no textual evidence that confirms Peirce ever sought to derive and validate a list of categories by either a metaphysical or a transcendental deduction. Indeed, the early writings confirm that Peirce sought to derive a set of categories by *induction* (W1:332-333, 1865) and, in the argument of the New List, the method of *prescision*<sup>19</sup> aims to validate the correct order of their *listing*.

The choice of induction is especially decisive for why Peirce cannot emulate Kant's methodology in the New List or elsewhere.<sup>20</sup> For, in the *Critique*, Kant claims an induction of the categories is fundamentally incompatible with the transcendental philosophy because an inductively derived set of categories would lack the necessary universality to prove that synthetic *a priori* judgments are possible.<sup>21</sup> Of course, such a proof is what constitutes the *idea* of a transcendental philosophy that Kant believes is possible *after* a critique of the proper role of reason within the limits set for the understanding by sensibility.<sup>22</sup> Such a proof is what Kant believes the transcendental deduction accomplishes. Thus, if induction was the method for the derivation of a list of categories in the early writings, then Peirce would never adopt a transcendental deduction for their validation later: Such a proof is neither possible nor desirable for him because neither their necessary universality, nor therefore the possibility of the synthetic *a priori* judgments they would have to inform, was ever a live option. What, then, is the argument of the New List? The present essay shall argue that the New List is neither a metaphysical nor a transcendental deduction, but rather a *genealogy of signification*. From the scholastics, Peirce derives the insight that the form of syllogism in the valid modes of inference is logically fundamental. The sign of illation is what constitutes this process: The conclusion stands in relation to the premisses because the premisses are a sign of the conclusion through illation. If this is true, whether or not Peirce explicitly said so at the time, then the process of reasoning is thoroughly semiotic. The categories must then appear within this process of reasoning, such that each would serve as a necessary element for any type of sign: For the entire process is a sign-relation, so whatever relations that might appear therein are either signs themselves or elements necessary for any possible sign. Thus, the New List would qualify as a *genealogy* because the argument would outline how the process of reasoning *becomes* a relation of signification in illation. Moreover, the argument is *genetic* because this would explain the *origins* of every possible type of sign in and by the process of reasoning. Furthermore, this genetic process is also *autopoietic*: The process of reasoning, thoroughly semiotic itself, is responsible for the component semiotic parts that constitute and maintain reasoning as a semiotic process if the sign-relation of illation is truly fundamental. This is why

18 W1:8-9, 1860. "I have come to the conclusion that our primary conceptions are not simple but complex; that our elementary conceptions are not independent but linked complexedly together; that nevertheless properly speaking we have no *a priori* synthetical propositions, and that axioms are only definitions." This, of course, answers negatively the central question of the first *Critique* (KrV, A 10; B 19) that the metaphysical and transcendental deduction are conjointly responsible for affirmatively answering. Peirce's rejection of an elementary conception's simplicity and independence is also clearly a reference to the categories in Kant's table, which are singular concepts without any intrinsic relations to one another besides the *ad hoc* relations that Kant "discovers" after their derivation and validation.

19 See §1 and § 5 in W2:49 and 51, 1867.

20 Even more decisively, the impetus for Peirce's search of the categories came from a logical fault found in Kant's essay on the figures of the syllogism. As Peirce himself would recount in 1898 (CP 4.02), which led to the recognition that there was a broader set of relations concerning the substitutability of terms in propositions by the valid forms of argument than the traditional logic of subject and predicate can adequately express. This break with the traditional logic of Kant led to the discovery of the categories, so Peirce would never adopt a methodology whose logic he already deemed inadequate prior to writing the New List. As Peirce records in 1865: "There is no difference logically between hypotheticals and categoricals. The subject is a sign of the predicate, the antecedent of the consequent; and this is the only point that concerns logic" (MS 339, see MURPHEY, 1961, p. 63). Then later this led Peirce "to see that the relation between subject and predicate, or antecedent and consequent, is essentially the same as that between premiss and conclusion" (CP4.03, *ibid.*). Peirce would explain in 1880: "By thus identifying the relation expressed by the copula with that of illation, we identify the proposition with the inference, and the term with the proposition. This identification, by means of which all that is found true of term, proposition, or inference is at once true of all three, is a most important engine of reasoning" (CP3.175, see THOMPSON, 1953, p. 4-19). This is the relation that renders a genealogy of signification, and thus a science of semiotics, possible.

21 KrV, A81/B107, and A92/B124.

22 KrV, A13-A14; B 27-28.

Peirce must reject a rigid division between sensibility and understanding: Whatever qualifies as sensible is equally as semiotic as what qualifies as conceptual; the difference is one of degree, not kind, because the conceptual and sensible are a part of the process of reasoning and not otherwise. But, since the relation of signification is at the basis of everything conceivable, the analysis must occur prior to anything that might operate with particular types of sign; for the analysis concerns the process of reasoning that is responsible for *every* possible type of sign. Thus, the New List will begin at the most fundamental level: Logically prior to language, cognition, personhood, even mind itself; supposing neither any metaphysical nor epistemological hypotheses nor any divisions between inner or outer, fiction or reality, reality or nature, and so on. All of these phenomena are either species of some type of sign or a division made possible only through some sign-activity, and thus presupposes where the process of reasoning terminates and the New List begins. Since the starting-point of analysis is the conclusion of a semiotically self-generative process of reasoning, then the component semiotic parts that follow from and maintain this process are the logical conditions for every type of reasoning. Thus, the genealogy of signification is ultimately a *phenomenology of logic* as a *science of semiotics*: How the fundamental types of argument, their constituent propositions and terms, can appear within and maintain the process of reasoning as different types of sign, such that this process of reasoning itself is a semiotic process.

The interpretative strategy of the essay is to *think with Peirce* (or *signify with him*): Not to treat an address written long ago as a dead artifact fit only for rational reconstruction, but a living form of communication in dialogue with the present that is pregnant with possibilities beyond what was actually written in the past. The strategy is, in other words, to interpret Peirce semiotically: Truly, the New List is itself a sign of signs that invite us to participate in their life of significance; inhabiting their mindfulness to appreciate the different ends toward which they might tend. Most importantly, the signs of the New List constitute a sign (however vague) of what a science of semiotics might become if the argument is taken seriously as a foundational basis for semiotic analysis in the present. Obviously, fidelity to the text demands a faithful reconstruction of what was written, but what was written does not exhaust the interpretative possibilities of the text itself. The New List is, in other words, simultaneously a guide and a project: Namely, a guide to continue the project of semiotic analysis itself. An analysis that began but did not end with the publication of the New List in 1867. Faithfulness will require a reconstruction of the major arguments discoverable within the text. Additionally, the essay shall solicit aid from Peirce's other writings. This solicitation will move in two directions: (1) the early writings will aid in a general orientation to how the New List might qualify as a genealogy of signification; (2) the later writings will serve to complete, correct, or clarify implicit ideas and latent lines of argumentation that might contribute to better using the New List as a guide for semiotic analysis in the present. As regards the former, the writings of importance concern nominal hypotheses, the induction and validation of the categories, the natural classification of arguments and the early theory of relations. As regards the latter, the writings of importance concern Peirce's logic of relatives, the distinction between collateral observation and experience, and what that will later become hypostatic (as opposed to prescissive) abstraction. The aim is not to anachronistically impose later ideas and theories on earlier ones, but to more fruitfully appreciate the different ends toward which the signs in the New List seem to tend. "[All] my philosophy," Peirce remarks in 1897, "has always seemed to me to grow."<sup>23</sup> With these words, Peirce invites us to *signify with him* and therefore *grow with his signs*. To assume a standpoint within *his philosophy* is to inhabit the life of signs that constitute this philosophy, and semiotically grow with him and his philosophy: Or, in other words, to freely let his signs *signify us* and us *signify the growth of this philosophy*, so that his philosophy may continue to grow now and in the future. Follow the play of signs, in short, is the interpretive strategy

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23 CP 113-14, 1897. But, the community of inquirers will have to heed the preceding clauses, that this philosophy has grown "out of a contrite fallibilism, and a high degree of faith in the reality of knowledge, and an intense desire to find things out." Thus the present essay was written with an intense desire to find out the inner logic of the new way to list the categories, a high degree of faith in their reality, but a recognition of the fallibility inherent to such an inquiry.

of the present essay: Relinquish oneself to their triadic dance in musement for uberous (but hopefully secure) creative interpretation. Thus, the essay shall attempt to faithfully reconstruct an interpretation of the New List and the early theory of relations, but *muse* throughout over how this reconstruction might fruitfully develop the New List as a guide for semiotic analysis in the present. The entry-point for analysis is the category of relation. This choice is significant: Despite the importance of relation to the New List argument, Peirce's earliest writings on this category are scant. The section on relation in the New List is four sentences long; while the corresponding section in the 1866 draft is only a few longer. Peirce claims, in the 1866 draft, that relation "is so easy to seize upon that no elucidation of it is needed," but must have had a change of heart because a footnote admits that the section "should be enlarged and rewritten." (W1:522, 1866). Alas, the section was neither enlarged nor rewritten. Nonetheless, this is an invitation to let relation signify us, so we may appreciate how the category of relation might grow within Peirce's philosophy as a sign thereof. Though the earliest writings on relation are scant, there are ample clues scattered throughout Peirce's precious few statements that indicate how the 1866 and 1867 sections on the category of relation might have been enlarged and rewritten. Thus, the essay shall collect these statements in an attempt to elucidate why the category of relation is so important to the argument of the New List as a genealogy of signification; but also muse over how this genealogy might have developed if Peirce had enlarged and rewritten the section on relation in the New List and the 1866 draft. But, first, as a preliminary, an overview of Peirce's induction and validation of the categories shall follow to offer the proper context to understand his earlier research on the category of relation.

## 2 On the New List of Categories

The argument of the New List begins with a set of theorems already established. The theorems were previously established in "On a Natural Classification of Arguments," where Peirce establishes validity by reduction in the operations of substitution for the forms of argument (W2: 23-48, 1867).<sup>24</sup> Thus, the starting-point of analysis is where the process of reasoning would terminate in a valid form of argument: Namely, at a proposition in the conclusion. These theorems will then guide the analysis to determine how this reduction is possible for any conception expressible as a proposition in the conclusion of a process of reasoning. That is: (1) the function of conception is to reduce the manifold of sensuous impressions to unity; (2) this unifying function constitutes the validity for the introduction of a conception (W2:49, 1867). Peirce is careful in his choice of words. Rather than *concept*, Peirce chose to say *conception*. This implies the validation will concern a *process* from the beginning and not with *entities* that will later render a process possible. Moreover, this is not any process but the *valid* process of reducing the manifold of sensuous impressions to unity. What would constitute a conceptual process of valid reduction? Logically, the form of valid inference is a process of reasoning whereby the proposition in the conclusion is substitutable for the propositions in the premisses because the former reduces the latter to unity. For example, we can substitute "S is P" for the premisses "S is M" and "M is P" because "S is P" reduces "M" and "P" to unity in virtue of their mutual relation to "S." If conception has the logical form of valid inference, then at the threshold of consciousness there ought to occur a substitution of a proposition for a manifold of sensuous impressions because this conception reduces that manifold to an analogous unity. The substituted proposition is then the conclusion, whatever sensuous impressions are found in the manifold will serve as the premisses, and thus the reduction has the logical form of valid inference because of this substitutability. There is then a gradation of conceptions in this process because there are different levels of unification: The terms unify sensuous impressions at the threshold of consciousness (or other terms within the domain of consciousness), propositions unify terms, and

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<sup>24</sup> On the importance of substitution, see Thompson (1953, p. 10-18); on the use of "validity" and "reduction" by Peirce in this sense, see also Atkins (2018, p. 33-37).

inferences unify propositions. Each level is bound by the same form of reduction, so a gradation of universal conceptions ought to describe every level of unification and thus any reduction of the manifold of sensuous impressions to unity. These universal conceptions are the categories and their necessity consists in the impossibility for any substitution and thus any reduction to unity without their introduction into the process of conception. If the process of conception has the logical form of valid inference, then the categories are the elements necessary for any valid inference. By implication, the categories are the elements necessary for any proposition or term because every valid inference substitutes propositions for one another in virtue of the relations of substitutability between their terms. Therefore, the categories are the elements necessary to describe the genealogy of terms, propositions, and arguments. This genealogy is then obtainable if conception is representable as a process of reasoning through the form of syllogism. This syllogistic form would then represent the valid inference of any proposition from the manifold of sensuous impressions and their reduction to unity through substitution. But first: What is the manifold of sensuous impressions in need of reduction to unity?

A sensuous impression is neither a representation nor an unrepresentable *Ding an sich* but rather is the action of the very thing in itself upon the senses (W1:471, 1866). Logically prior to representation, a sensuous impression is not in itself representable. This is not because there is, beyond the domain of representability, *something* unrepresentable; rather sensuous impressions are the material constituents for *everything* representable, and thus cannot themselves act as representations. Each sensuous impression is individually an infinitesimal stimulus that might become the material constituent of some representation. The manifold of such impressions is then the potentially infinite set of infinitesimal stimuli that can directly act on the senses without the mediation of a representation.<sup>25</sup> Hence this manifold, or any collection of sensuous impressions therein, is in need of reduction to unity if anything is representable at all. As the sum total of whatever might become representable prior to any reduction, the manifold of sensuous impressions must occur at the threshold of consciousness because to be conscious is to represent something; while any representation consequent upon this unification will thus occur within the domain of consciousness. Given the manifold must occur at the threshold of consciousness because of the priority of sensuous impressions to any representation, the first step in the reduction must bring the manifold into the domain of consciousness (but not by a consciousness *of* the manifold). Since sensuous impressions directly act on the senses without the mediation of a representation, then the universal conception closest to sense would simply bring the manifold into the domain of consciousness by becoming present as a manifold in need of reduction to unity, and thus as something representable in consciousness. The universal conception closest to sense is *substance*, which does not *properly* but only *nominally* unifies the manifold, because substance transposes the manifold of sensuous impressions into whatever is present in general (W1:49, 1867).<sup>26</sup> Whatever is present in general is simply everything possibly containable in attention, which is not a unity proper, but the appearance within the domain of consciousness of this manifold as some undifferentiated homogenous wholeness in need of reduction to proper unity. Hence, the wholeness that substance presents to consciousness is the appearance therein of the entire domain of representability *as* representable by consciousness; but substance does not represent anything specifically and therefore does not unify anything properly, so neither is there a consciousness *of* anything. The universal conception of substance is, in other words, a pure *It* within which conscious attention can denote any number of specific *it's* through their comparisons with one another. Given this potentiality for comparison, the sensuous manifold is no longer a set of stimuli intrinsically unrepresentable but a mass of confusing data in need of reduction to unity in some representation by

25 A sensuous impression, in other words, is not (*pace* Kant) an intuition because intuitions are representations (see *KrV*, A320/B377). Thus, by implication, Peirce's manifold of sensuous impressions is not the same as Kant's manifold of sensible intuitions.

26 This is the non-Aristotelian sense of substance. Arguably, the universal conception of substance is what replaces Kant's pure form of sensibility. Compare the interpretation offered of sensuous impressions, the sensuous manifold and substance with Murphey (1961, p. 67-73), Buzzelli (1972, p. 65-67), De Tienne (1989, p. 399-400), Ishida (2009, p. 13-16), and Atkins (2018, p. 39-40).

comparison. The demand for substance's explanation is, in other words, the need for the elimination of this confusion that consciousness will confront in whatever is possibly containable in attention.<sup>27</sup> Thus the present in general, or the pure *It* of substance, solicits a representation of itself if only because of this demand for the elimination of confusion by an explanation. Such a demand is satisfiable in the process of conception by the reduction of the mass of data possibly containable in attention to proper unity.

The role of substance is to present everything representable to attention within the domain of consciousness, but this mass of confusing data could never serve as an explanation of itself. Otherwise, no need for an explanation would ever arise and nothing would require reduction to unity. Consequently, substance must contain only what is denotable because denotability is the mere selection of a candidate for explanation. Such a selection occurs in attention or through the power to isolate some aspect of substance as the denotation of a subject. Then there is an abstraction of some respect from the subject's denotation of substance. This respect is what the predicate signifies, such that the predicate can serve as an explanation of substance. Thus, substance is always the subject but never the predicate. The reduction of the mass of confusing data to proper unity is then accomplishable by the unification of the predicate with a subject. The subject denotes an aspect of substance in need of explanation, or some *it* within the pure *It*, while the predicate explains this *it* in some respect, which eliminates the confusion in whatever was present to consciousness in attention. This unification is possible by virtue of the copula, which relates the predicate to a subject, and thereby reduces the manifold present in substance to the unity of a proposition. The unifying function of the copula in a proposition is the universal conception of being (W1:49-50, 1867).<sup>28</sup> Within the order of conceptions, substance is first and being is final because the former introduces the domain of representability (or whatever is in need of explanation and thus reduction to unity) and the latter introduces a representation (or an explanation that unifies this domain by the reduction of a manifold therein to a proposition). Consequently, substance is the beginning and being is the end of every process of conception. If the process of conception has the logical form of valid inference, then the manifold of sensuous impressions present in substance are the premisses and being is the conclusion. The reduction of substance to being is then a process of reasoning that substitutes the unity of being in a proposition for the manifold present in substance. If there are categories, or a gradation of universal conceptions from the passage of substance to being, then they ought to be discoverable in the series of valid inferences that render this reduction or substitution possible. Whatever the categories might be, these universal conceptions will describe how the predicate can explain an *it* in some respect and how the subject that denotes this *it* stands in relation to the predicate via the copula. Furthermore, this description must occur within the context of a process of reasoning if conception truly has the logical form of valid inference.

The reduction of substance to being occurs whenever a subject denotes an *it* and the predicate explains this *it* in some respect via the copula. A subject acquires a denotation whenever the power of attention selects an *it* within substance, but how does a predicate signify some respect that will explain this *it*? The process of conception responsible for this reduction is near instantaneous, and continuously recurs at every instant, but if this process has the logical form of valid inference, then the substitution of a proposition for a manifold is representable with the syllogistic form. The syllogistic form is not a diachronic representation: Within time, the component parts of the reasoning process will occur continuously but simultaneously. Rather, the syllogism aims to formalize this complex process as a synchronic simplification: As an abstraction of a moment in time that represents what occurs continuously but simultaneously in a linear and stepwise order. Logically, the process is syllogistically formalizable

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27 The demand for substance's explanation is the cause for inquiry, which Peirce will later describe as the *irritation of doubt* and the elimination of doubt (or the reduction of substance to unity) by the *fixation of belief* (or the substitution of a proposition for substance by the method of science) (see W2:242-257, 1878).

28 Compare the interpretation of being offered with Murphey (1961, p. 73), Buzzelli (1972, p. 67-68), Ishida (2009, p. 16-20), and Atkins (2018, p. 40-41).

as a valid inference by hypothesis and induction that occurs as a single double-movement. Peirce himself formalizes this process in the 1866 manuscript, Appendix No. 2, on the hypotheses of space and time (PEIRCE, 1993 [1866], p. 647-649).<sup>29</sup> Suppose there is a mass of confusing data presentable to attention in substance. Within this data there are a set of implicit characters not yet within the domain of consciousness. The power of attention will denote an *it* in substance and substitute this *it* for the mass of confusing data. Simultaneously, there is a substitution of a predicate for the characters implicit in substance that consciousness will simply register as belonging to this *it* denoted. The predicate will then explain this *it* by these characters. Hence the *explanandum*, soliciting a representation of itself, will receive an *explanans*. The *explanans* is the hypothesis that substitutes a *name* for the characters implicit in *it*. The name is a formal item that serves as an empty placeholder with a purely logical function to register these characters as belonging to some *it*. Given the name is logical, the lexical syntax is irrelevant because the process of conception is logically prior to any linguistic phenomena, and thus this syntax is as yet nonexistent. The double-movement of hypothesis and induction is responsible for the substitution of this logical name for those characters. First, these characters must impress themselves upon consciousness. The result is “this *it* is thus.” Second, an introduction of the logical name requires an assumption of the rule “whatever has this name is thus.” Third, together the rule and result are the premisses and from them there is the valid inference by hypothesis of the conclusion “this *it* has this name” as the case. Simultaneously, the rule “whatever *should* have this name is thus” is validly inferred by induction as the conclusion derived from the case and result as premisses. Syllogistically, this complex process is formalizable as a synchronic simplification by Peirce’s rule-case-result model for the modes of valid inference (W2:326, 1878):<sup>30</sup>

<i>Hypothesis</i>	<i>Induction</i>
<b>Rule.</b> Whatever has this name is thus.	<b>Case.</b> This <i>it</i> has this name.
<b>Result.</b> This <i>it</i> is thus.	<b>Result.</b> This <i>it</i> is thus.
<b>Case.</b> This <i>it</i> has this name.	<b>Rule.</b> Whatever <i>should</i> <sup>31</sup> have this name is thus.

Recall the logical name is simply an empty placeholder, a formal item that collects certain characters. The hypothetical aspect of this double-movement substitutes this logical name for these characters and registers them as belonging to some *it*. The inductive aspect registers the logical name, the characters implicit therein, the *it* to which they belong, and substitutes a rule for them. The rule serves as a formal expectation that this logical name ought to entail the relevant characters for some *it* now and in the future. This is how the logical name, irrespective of lexical syntax, can become a predicate that signifies some respect and thus serve as an explanation of whatever *it* a subject may denote. Prior to becoming a potential predicate with an actual signification, the logical name is a perfectly certain and nonprovisional hypothesis because there is no assertion of fact in this double-movement. The conclusion of each inference adds nothing to the premisses: There is only a registration of certain characters as constituting the essence of the logical name now and in the future. Thus, the double-movement simultaneously infers a single conclusion that collates distinct propositions (“this *it* has this name/whatever *should* have this name is thus”), which entails how a logical name (“this name”) generically relates to a set of characters

29 There is a brief treatment of this manuscript in De Tienne (1989, p. 398-399) and Ishida (2009, p. 42-43). Rather than appeal to this manuscript, Atkins (2018, p. 33-35) examines Peirce’s analysis of hypothesis and induction in “On the Natural Classification of Arguments” (W2:23-48, 1867), as Thompson (1953, p. 4-18) did before.

30 Peirce himself formalizes this process syllogistically in Appendix No. 2, the rule-case-result model is simply a convenient way to name the different parts of the syllogism (which are left unnamed in the manuscript); otherwise, the analysis is the same.

31 Murphey (1961, p. 70) claims this argument is a *petitio principii*. This is wrong simply because hypothesis and induction do not have deductive validity, and thus cannot violate logical fallacies that govern deduction. More importantly, Murphey misses Peirce’s insight that hypothesis assumes a rule to invent a logical name and induction infers the same rule but now as an anticipation of what the logical name ought to entail. Thus there is no circularity because the rule serves a different function in each inference. To mark this difference, *should* has been inserted into Peirce’s syllogistic formalization of hypothesis and induction in sensation.

(“... this name/... is thus”) as a nonfactual essence. Given the lack of facticity in their explanatory function, Peirce refers to the conclusion of this double-movement as a *nominal* hypothesis (PEIRCE, 1866, p. 647-648).

As a simple conception (or a nonfactual essence), a nominal hypothesis is any absolutely unanalyzable representation. Since a nominal hypothesis is the mere invention of a predicate, there is nothing into which a nominal hypothesis is analyzable. Consequently, nominal hypotheses are the basis for complex conceptions and thus presupposed by analysis. That is, interpreters require a store of potentially significant predicates before analysis is possible and nominal hypotheses are the basis for a possible predicate’s potential significance now and in the future. Indeed, the invention of nominal hypotheses occurs prior to language itself and even to the appearance of any specific objects with qualities in determinate relations with one another. All of this emerges at once from substance in the double-movement of hypothesis and induction at the earliest stages of conception with the invention of nominal hypotheses and thus the possibility of their use. As absolutely unanalyzable representations that explain the facts without asserting any, nominal hypotheses are judgments of sensation. A sensation is the impression of certain characters implicit in substance upon consciousness and a judgment of sensation registers these characters in the double-movement of hypothesis and induction.<sup>32</sup> Such, for example, occurs whenever interpreters register the sensation in [black].<sup>33</sup> Before the valid inference of a conclusion by hypothesis, the sensation is determined by certain characters implicit in substance (“... is thus”) without the representation of what occasions this determination (“this *it* ...”). The result is “this *it* is thus.” The judgment of sensation is possible only if there is an assumption of the rule, which still occurs at the threshold of consciousness but within the manifold present in substance, that “whatever has the name [black] is thus.” That is, the rule substitutes a logical name (“[black]”) for the unrepresented thing (“this *it*”) and generically relates this name with certain characters implicit in that thing (“whatever has the name ... is thus”). From the rule and result, there is the valid inference by hypothesis that “this *it* has the name [black]” as the case. The hypothetical inference validly substitutes the conclusion for the premisses in virtue of the mutual relation the unrepresented thing (“this *it*”) and the logical name (“[black]”) stand in to those characters (“... is thus”). Simultaneously, there is the valid inference by induction of the rule that “whatever *should* have the name [black] is thus” from the case and result. This is a substitution of the conclusion for the premisses, which is the formal expectation that the logical name ought to entail those characters now and in the future. Syllogistically, this complex process is formalizable as a synchronic simplification by Peirce’s rule-case-result model for the modes of valid inference:

<i>Hypothesis</i>	<i>Induction</i>
<b>Rule.</b> Whatever has the name [black] is thus.	<b>Case.</b> This <i>it</i> has the name [black].
<b>Result.</b> This <i>it</i> is thus.	<b>Result.</b> This <i>it</i> is thus.
<b>Case.</b> This <i>it</i> has the name [black].	<b>Rule.</b> Whatever <i>should</i> have the name [black] is thus.

Hence, the double-movement of hypothesis and induction simultaneously infers a single conclusion that substitutes one proposition (“this *it* has the name [black] / whatever *should* have the name [black] is thus”) for several. The conclusion is a nominal hypothesis that judges a sensation (“[black]”) to possess certain characters (“this name [black] ... / is thus”) by registering them as constituting the essence of this logical name. This nominal hypothesis is the basis for the invention of a potentially

<sup>32</sup> A sensation, in other words, is not (pace Kant) a passive representation of an empirical intuition by an appearance (see *KV*, A20/B34) but impressions within the manifold in substance that are presentable to consciousness in attention. There is, then, no reference to anything intuitable in Kant’s sense.

<sup>33</sup> The brackets intend to signify the irrelevance of lexical syntax because of the priority of logical names to predicates and thus nominal hypotheses to language.

significant predicate. The double-movement of hypothesis and induction infers the conclusion as the formal expectation that the logical name (“[black]”) in the nominal hypothesis (“this *it* has the name [black] / whatever *should* have the name [black] is thus”) ought to signify those characters (“... is thus”) now and in the future if applicable.<sup>34</sup> Thus, the logical name in the nominal hypothesis inferred is not yet a predicate with an actual signification. This occurs only when the essence (“... is thus”) of the logical name (“[black]”) embedded in the nominal hypothesis (“this *it* has the name [black] / whatever *should* have the name [black] is thus”) becomes embodied in sensation as the respect of an object’s quality. That is, a predicate signifies some respect only if the predicate can signify some respect of an object’s quality, which would entail that the predicate is signifiable only insofar as the predicate is actually applicable in the proper context and according to the relevant circumstances. With such applicability, there are potential predicates available with an actual signification for use in interpretation; and thus a system of language to orient interpreters to a world of objects in determinate relations with one another in virtue of their qualities.

The embodiment in sensation of the characters that a nominal hypothesis entails is accomplishable by reference to a *ground* (W1:473, 1866).<sup>35</sup> Such an embodiment constitutes the passage from sensation to conception proper, which is the result of a process Peirce will later denominate *hypostatic abstraction*.<sup>36</sup> Since sensation and conception are equally a part of the reasoning process, then the sensible is equally conceptual. The difference is one of degree, not kind: A judgment of sensation registers certain characters at the threshold of consciousness, but occurs in an inferential context nonetheless; while conception is properly within the conscious domain because attention actively separates similar characters from substance to embody a judgment of sensation as a respect of an object’s quality. Thus, a judgment of sensation is the lower limit, while conception proper is the upper limit of the reasoning process. A judgment of sensation is whatever a nominal hypothesis entails. With a store of nominal hypotheses available, an interpreter can appeal to logical names as potential predicates with an actual signification. To actually signify with a potential predicate, an interpreter must hypostatically abstract similar characters from substance to relate to the nominal hypothesis in store. This abstract respect will then relate the essence of the logical name embedded in the nominal hypothesis to the substance abstracted from. As with sensation, the process of conception proper is near instantaneous and continuously recurs at every instant, but nonetheless syllogistically formalizable as a synchronic simplification. The power of attention can denote an *it* in substance, say, the *it* that “stove” denotes. This is a substitution of “stove,” which denotes a specific *it*, for a series of appearances ( $it_1, it_2, it_3 \dots$ ) among the manifold present in substance. Simultaneously, an interpreter differentiates and hypostatically abstracts a respect from this series in which all of the appearances might agree. Suppose there is a differentiation among a series of appearances ( $it_1, it_2, it_3 \dots$ ) and all of them seem to share certain characters, such that an interpreter could hypostatically abstract *blackness* as a respect in which they might all agree. Then *blackness* is the abstract respect that can serve as the ground of agreement between the essence of the logical name embedded in the nominal hypothesis and the substance abstracted from (namely, the *it* that “stove” intends to denote). Consequent to hypostatic abstraction, in other words, an interpreter can correlate the essence (“is thus”) of the logical name (“[black]”) in the nominal hypothesis (“this *it* has the name [black]/whatever *should* have the name [black] is thus”) with a reference to the ground (“*blackness*”). This reference renders

34 Already in 1866, then (and perhaps before), there is a rationale for Peirce’s pragmatic maxim (see W2:257-276, 1878) because the sensational basis for complex conceptions is nothing but implicit entailments of what predicates ought to signify now and in the future if applicable. These entailments are possible observations that become observable once the predicate does signify by reference to the ground. Truly, the genealogy of signification (and Peirce’s later pragmatism) is a semiotic rearticulation in an inferential context of the Latin maxim: *Nihil est in intellectu quod non sit prius in sensu* (“Nothing is in the intellect that was not first in the senses”).

35 Compare the interpretation of the ground and the category of quality offered with Murphey (1961, p. 74-75), Buzzelli (1972, p. 70-72), Ishida (2009, p. 37-48), and Atkins (2018, p. 42-45).

36 “Hypostatic Abstraction”, see Bergman; Paavola (2019). Cf. MS 96, 1905. On Peirce’s theory of abstraction, see Reese (1961) and Zeman (1982).

the judgment of sensation that the nominal hypothesis entails representable to an interpreter as the respect of some object's quality embodied in sensation. That is, the reference to *blackness* can relate the *thusness* of [black] to the *it* that "stove" denotes as an embodied quality of *it* insofar as *blackness* is the ground of agreement between the three of them. Through this reference, there is a substitution of the predicate "black" for the logical name [black]. Now the predicate can actually signify the characters that the nominal hypothesis entails as an observable respect of an object's quality embodied in sensation: Namely, whenever an interpreter hypothetically predicates "black" of any *it* that a subject (such as "stove") may denote. By virtue of hypostatic abstraction, there are then potential predicates available with an actual signification that can explain substance in some respect. This explanation will embody in sensation what was once the essence of the logical name that the nominal hypothesis entails, but now the respect of some object's quality by virtue of a reference to the ground. As an assertion of fact, this is a substitution of an *intellectual* hypothesis for that nominal hypothesis in the proper context and according to the relevant circumstances. For example, "this stove is black" is an intellectual hypothesis wherein the predicate explains the subject as embodying a quality by virtue of reference to the ground: Namely, the stove is such that *it* embodies the quality of *blackness*. This confirms what the nominal hypothesis ought to entail ("this *it* has the name [black]/whatever *should* have the name [black] is thus"), such that there is a substitution of "this stove is black" for that entailment. Thus, the predicate explains the subject by virtue of signifying a quality by reference to the ground and thereby relates the subject to this ground via the copula. As an explanation that eliminates the confusion that confronts consciousness in substance, an intellectual hypothesis properly reduces the manifold present in substance to the unity of being in a proposition that substitutes this propositional fact for that manifold. This reduction or substitution is therefore a consequence of the double-movement of hypothesis and induction after a reference to the ground via hypostatic abstraction. Hence, the lower limit of sensation terminates at the upper limit of conception only after a reference to the ground in a continuous process of reasoning.

The category of relation is virtually omnipresent in the preceding analysis. Within hypostatic abstraction, there is a nexus of relations that render a reference to the ground possible: An interpreter must relate to substance in order to abstract a respect from a series of appearances therein as a ground of their agreement, then this ground must relate the essence of a logical name embedded in a nominal hypothesis to the substance abstracted from; finally, the predicate must signify that a quality relates to a subject via the copula by virtue of referring to the abstract respect as their ground of agreement. With this last relation, there is a substitution of an intellectual for a nominal hypothesis, such that a propositional fact reduces the manifold present in substance to the unity of being by reference to the ground. Since this process of reasoning terminates at being only after hypostatic abstraction, then the category of relation must occur prior to any reference to the ground. But, throughout the process of reasoning, all of these relations antecedently depend upon a set of comparisons: For an interpreter to differentiate the manifold present in substance, there is an antecedent comparison of the relations among a series of appearances; otherwise, no relations would appear as relations within the manifold, which would remain an undifferentiated homogenous wholeness in the absence of comparison. Such a comparison is a differentiation among the relations between appearances within the manifold present in substance to substitute a subject or predicate for them, insofar as the substitution intends to denote an *it* or signify a quality of that *it*. Given the priority of differentiation to the denotable and signifiable aspects present in the manifold of substance, the category of relation must also occur posterior to any comparison. If so, then there ought to occur different types of comparison that occasion correspondingly diverse types of relation that substitute subject and predicate terms differently. Moreover, since the category of relation must occur prior to any reference to the ground, the relations consequent upon the different types of comparison ought to determine diverse types of predicate that signify qualities differently in virtue of referring to diverse types of ground. Since the category of relation is posterior to comparison but prior to the ground, then relation ought to occasion the generation of *signs*: With comparison, there ought to arise

diverse types of relation and these relations will become the types of signification for different predicates by referring to their unique type of ground. Of course, predicates are terms that will diversely signify in different types of proposition. Moreover, if the form of syllogism in the valid modes of inference is truly more fundamental, then propositions will diversely signify in different types of argument. Thus, the argument of the New List is neither a metaphysical nor a metaphysical deduction but rather a validation of the categories as the elements necessary for the *genealogy of signification*: How the categories operate to explain the emergence of the fundamental types of arguments, propositions, and terms as relations of signification for the different types of sign. Moreover, since the categories must operate in the process of reasoning if conception truly has the form of valid inference, then the different types of sign must originate therein from the manifold present in substance. Thus, the categories would explain how the process of reasoning is itself a semiotic process. The genealogy of signification is then a *phenomenology of logic* as a *science of semiotics*: How the valid order of the categories operate to explain the appearance of the different types of sign as the logical conditions necessary to maintain the process of reasoning as the semiotic process responsible for their emergence. Thus, the genealogy of signification ought to terminate with a complete classification of logic: Namely, a classification of terms, propositions, and arguments corresponding to the different types of sign necessary for the possibility of reasoning itself as a semiotic process. What, then, are the remaining categories that operate with the category of relation to generate signs?

The universal conceptions of substance and being are the first and final in the order of conception as a process of reasoning; intermediate to them are the categories of representation (reference to an interpretant), relation (reference to a correlate), and quality (reference to a ground). Peirce's method for the derivation of categories was *induction* (W1:332-333, 1865). The induction of the categories begins with a general observation: Namely, *something is*; without any supposition of what anything might be. This is how Peirce derives the universal conception of being. Then there is the first induction from this general observation: Namely, if *something is*, then everything *that is* must also have some character or *ground* for being *what it is*. This is how Peirce derives the category of quality. Then the second induction from this general conclusion: Namely, if everything *that is* has a ground for being *what it is*, then everything stands in *relation* to some *correlate* on the basis of a *ground*. This is how Peirce derives the category of relation. The third and final induction is from this general conclusion: Namely, if everything stands in *relation* to a *correlate* on the basis of a *ground*, then everything is *comparable* through these relations in a *representation*. This is how Peirce derives the category of representation. The discrete logical steps are absent in Peirce's analysis. Given that Peirce clearly states that each inference was an induction of a specific category, then the steps that would justify their conclusions are reconstructible for every category. To derive the category of quality, Peirce could have taken a random sample of observations that enumerates a class of things, each of which has at least one quality, and thus infer by induction that everything has a quality. To derive the category of relation, Peirce could have taken a random sample of things that enumerates a class of qualities, each of which requires at least some relation to the thing, and thus infer by induction that everything is in a relation. To derive the category of representation, Peirce could have taken a random sample of qualities that enumerates a class of relations, each of which requires at least some comparison that can relate a quality to the thing in a representation, and thus infer by induction that everything is relatable in a representation. Thus the derivation of the categories by induction was *prior* to Peirce's writing of the New List. Consequently, Peirce would not seek to derive the categories *again* by a metaphysical deduction. Instead, as a good scientist, Peirce sought to *report* and *defend* his findings to the Academy. The defense is a *validation* of the categories already derived by induction. Still, then, Peirce could validate the categories by a transcendental deduction. The problem is Kant specifically claims that induction is contrary to the aims of a transcendental philosophy because inductive conclusions are probable and fallible, whereas the idea of a transcendental philosophy requires categories with a necessary universality that exceeds probability

and establishes certainty. Whether the New List is “transcendental” in anything, but the most vacuous sense is therefore highly implausible in the absence of textual evidence. Textual evidence confirms, on the contrary, Peirce *validates* the categories by the method of *prescision*.<sup>37</sup> The method of prescision aims to secure the intrinsic probability and fallibility of a set of categories derived by induction by proving there is nonetheless a logical necessity to their order. Thus what is *new* about the New List is that there is a logically necessary order to their *listing* in a hierarchic and numeric arrangement that reveals their complex relations with one another: A *new* way to *list* the categories. Furthermore, the order of this new list is precisely responsible for the appearance of a new type of logic: Namely, a *phenomenology of logic* as a *science of semiotics*.

The method of prescision is a type of logical separation different in kind from what Peirce will later denominate hypostatic abstraction. The type of logical separation that prescision affords is “*attention to one element and neglect of the other*” or “*in a definite conception or supposition of one part of an object, without any supposition of the other.*” (W2:50, 1867). The peculiarity of prescision is that this analysis or separation is not reciprocal, implying a real logical order among conceptions that insist the analysis or separation occurs in one direction rather than the other and necessarily so (W2:51, 1867). The method of prescision *tests* the relative position of a conception within this order by determining the degree of fundamentality for each; therefore, the test of prescision *validates* a conception as a category if that conception *occasions* or serves as the *rationale* for the introduction of another conception within this order because the former is fundamental for the latter. Suppose *x* and *y* are two conceptions: (1) if *x* is *not prescindible* from *y*, this implies the conception of *y* is not possible without the supposition of *x* because *x* is logically fundamental for and thus necessarily prior to *y*; (2) if *y* is *prescindible* from *x*, this implies the supposition of *y* is possible without the conception of *x* because *y* is not logically fundamental for and thus necessarily posterior to *x*. Thus, if analysis entails (1), then the test of prescision validates that *x* is a category because *x* occasions or serves as the rationale for the introduction of *y* because *x* is not separable from *y*; if analysis entails (2), then the test of prescision validates only that *y* is occasioned or introduced by *x* as their rationale because *y* is separable from *x*. The test of prescision is a method to validate a *hierarchy* among conceptions as categories and to determine a *numerical* order within this hierarchy of categories because the more fundamental occasion the less in a unidirectional series bound by relations of priority and posteriority. Hence, the method of prescision ensures the order of categories is not *ad hoc* but intrinsic to their very conceivability: If this order did not exist, then neither would those categories. The universal conception of being is where the reasoning process terminates in the reduction of the manifold to the unity of a proposition that substitutes being for substance. Consequently, the unity of being is *ultimately* posterior to every category if each is an element necessary for the termination of the reasoning process. Hence, the proper starting-point for the method of prescision is the unity of being, so prescision can then validate the order of categories necessary to occasion the introduction of the unity of being in a proposition. The unity of being in a proposition occurs whenever a predicate signifies that a quality relates to a subject via the copula by virtue of a reference to the ground. If the ground is prescinded from the proposition, then the predicate cannot signify a quality and thus cannot relate a quality to a subject via the copula. Consider the proposition “*this it is black.*” An interpreter cannot conceive of the predicate “*black*” as signifying a relation to *it* without supposing that *it* embodies *blackness*. If then *blackness* is prescinded, this entails the negation of the unifying function of the copula because the predicate “*black*” would not signify a quality for *is* to relate to *it*. Thus, the prescision of the ground entails the negation of the unity of being necessary for the introduction of a proposition. Hence the conception of the unity of being in a proposition is not possible without the supposition of a quality by reference to the ground. This entails the conception of quality is a category

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37 See §1 and § 5 in W2:49 and 51, 1867. Compare the interpretation of prescision offered below with Murphey (1961, p. 73-76), Buzzelli (1972, p. 68-71), De Tienne (1989, p. 400-404), Ishida (2009, p. 21-33), and Atkins (2018, p. 41-42).

because quality is logically fundamental for and necessarily prior to the unity of being, since the ground is not prescindible from a proposition. Consequently, the method of precision validates that the category of quality occasions or serves as a rationale for the introduction of the unity of being in a proposition by reference to the ground. Though the unity of being is prescindible from the category of quality because a proposition is supposable without a conception of a reference to the ground. An interpreter can, in other words, merely suppose “this *it* is black” without conceiving of a reference to the ground of *blackness*. The proposition itself is sufficient for such a supposition; whereas a reference to the ground is necessary for the conception of this supposition but does not constitute such a supposition in and of itself, since this also requires a subject via the copula. Thus, the method of precision validates only that the unity of being is not logically fundamental for but rather necessarily posterior to the category of quality because a proposition is prescindible from a reference to the ground. But the predicate can signify a quality by reference to the ground only if a relation refers to the ground as a correlate. If relation is prescindible from quality, then the predicate cannot refer to the ground by a relation of signification in the absence of a correlate. An interpreter cannot, in other words, conceive of the signification of the predicate ‘black’ without supposing a relation of referral to the ground of *blackness* as a correlate. Thus, the precision of relation entails the negation of a reference to a correlate necessary for the introduction of a quality. Hence the conception of quality is not possible without the supposition of a relation. This entails the conception of relation is a category because relation is logically fundamental for and necessarily prior to the ground, since a reference to a correlate is not prescindible from a quality. Consequently, the method of precision validates that the category of relation occasions or serves as a rationale for the introduction of a quality by reference to a correlate. Though a quality is prescindible from the category of relation because a quality is supposable without conceiving of a relation. An interpreter can, in other words, merely suppose “black” without conceiving of the relation that occasions a reference to the ground of *blackness* as a correlate. The quality itself is sufficient for such a supposition, since the predicate is already available for potential signification; whereas a relation is necessary for the conception of this supposition but does not constitute this supposition in and of itself, since a relation can signify many other correlates besides. Thus, the method of precision validates only that quality is not logically fundamental for but rather necessarily posterior to relation, since a quality is prescindible from relation. But a relation of signification can refer to the ground only if there is a comparison that can signify a relation between the relata in a representation. If comparison is prescindible from relation, then the relata would never become relatable and thus never qualify as a relation in the absence of a reference to an interpretant (or something for which relata are relatable in a representation). An interpreter cannot, in other words, conceive of the predicate “black” as a relation of referral through signification to the ground of *blackness* as a correlate without supposing an interpretant for which the relata are relatable in the representation “this *it* is black.” Thus, precision of representation by comparison entails the negation of a reference to an interpretant necessary for the introduction of relation. This entails the conception of representation is a category because comparison is logically fundamental for and necessarily prior to a correlate, since a reference to an interpretant is not prescindible from relation. Consequently, the method of precision validates that the category of representation in comparison occasions or serves as the rationale for the introduction of relation by reference to an interpretant. Though relation is prescindible from the category of representation because a relation is supposable without conceiving of a reference to an interpretant that occasions a correlate. An interpreter can, in other words, suppose a relation between the predicate “black” and the ground of *blackness* as a correlate without conceiving of the comparison that relates the predicate with the ground. The relation itself is sufficient for such a supposition, since both the relate and correlate are already available for relation; whereas a representation is necessary for the conception of this supposition but does not constitute a relation in and of itself, since a comparison can relate many other relatum besides. Thus, the method of precision validates a logical order of conceptions as a hierarchy of categories with a numerical arrangement in a unidirectional series

bound by relations of priority and posteriority. Hence, *prescision* validates a *new* way to *list* the categories that secures their intrinsic probability and fallibility as inductive conclusions. The new list of categories is necessarily: (1) quality or reference to a ground, (2) relation or reference to a correlate, and (3) representation or reference to an interpretant.

A representation is a comparison that requires a relate, a correlate, and the ground in which they are found to agree (or contrast) for an interpretant that can mediately represent the agreement (or contrast) among a relate and correlate on the basis of this ground (W2:53, 1867).<sup>38</sup> The function of the interpretant is to act as a medium through which the relata (relate and correlate) are relatable (by reference to the ground) through a relation of signification (“S is P”) by comparison in representation. The interpretant is then the medium that can compare the relate (“this stove”) to the correlate (“black”) by signifying a referral to the ground (“*blackness*”) that relates the correlate to the relate in a representation of agreement (“this stove is black”) or contrast (“this stove is not black”). Absent any reference to an interpretant, there is no medium through which relata are relatable and therefore neither representation in comparison nor therefore relation. But these relata must have a source other than the interpretant, for no representation by a comparison would ever arise unless there was a need to represent relations among relata as comparable on the basis of a ground. This need is the elimination of confusion that confronts consciousness in the manifold present in substance and thus the need to reduce this manifold to the unity of being or substitute this propositional unity for that manifold. Thus, if substance was *prescinded* from representation, this would entail the negation for the possibility of any reference to an interpretant and thus the negation for any need to validate categories at all. Hence substance is *ultimately* prior to every category, as being is *ultimately* posterior to them. This ultimate priority and posteriority explains why neither substance nor being are categories: Each indicates the beginning and end of the process of conception, but are not themselves elements necessary for conception because, in their absence, no conception is even possible. Put differently: If conception has the logical form of valid inference, then substance and being are not elements of the process of reasoning but indicate where reasoning must begin and end if reasoning is possible at all. Thus, as logical conditions for the process of reasoning, the categories must occur within this process intermediate to substance and being. Consequently, substance is not *prescindible* from the category of representation without entailing the negation of the condition for possibility of a reference to an interpretant and thus the possibility for the introduction of any category. Though a reference to an interpretant is *prescindible* from substance because substance is the condition of possibility for any representation but does not constitute representation in and of itself. But this is simply a different way to claim that substance is what solicits a representation of itself (as the domain of representability) but is for that reason not itself a representation (or is not self-explanatory). Thus, the method of validation by *prescision* has led the analysis back from whence the inquiry began. At the beginning, the immediate concern was with the synchronic simplification of the passage from substance to being as a process of reasoning. Within that near instantaneous moment, there is a continuous but simultaneous process that nonetheless has the logical form of valid inference. Logically, this process is syllogistically formalizable into a linear and stepwise order as a double-movement of hypothesis and induction. This double-movement transforms sensation into conception via hypostatic abstraction by the substitution of a predicate with a signification for a logical name and thus an intellectual for a nominal hypothesis that properly reduces the manifold to unity. The analysis found that relation was integral to this process of conception. The validation of the categories proves this is not accidental but rather a logical necessity. The method of *prescision* validates that the correct list of categories is a hierarchy with a numerical arrangement into a unidirectional series bound by relations of priority and posteriority. Thus, the category of relation is necessarily prior to a reference to the ground because a reference to

38 The precise role of representation and function of the interpretant is beyond the scope of the present inquiry. For an examination of Peirce's conception of the interpretant, see Liszka (1990) and Aames (2018). See also Murphey (1961, p. 76-84), Buzzelli (1973, p. 73-75), Ishida (2009, p. 60-69), and Atkins (2018, p. 45-46).

a correlate is logically fundamental for the introduction of a quality; but a reference to a correlate is necessarily posterior to the category of representation because a reference to an interpretant is logically fundamental for the introduction of a relation. This is why the analysis found that relation was posterior to the double-movement of hypothesis and induction but prior to a reference to the ground via hypostatic abstraction. Necessarily, then, this is the proper context to discover why the category of relation is so important to the argument of the New List as a genealogy of signification.

### 3 On the Logic of Relatives

#### 3.1 On equiparance and disquiparance

While the conception of relation was a focus of Peirce's earliest studies of Kant and Schiller at least since 1857 (W1:4, 1857), and throughout his work on representation, the first explicit mention of correlation does not occur until the "Logic of the Sciences" in 1865 (W1:334, 1865).<sup>39</sup> There is still an ongoing experimentation with terminology, but Peirce is beginning to uncover the fundamental distinction that will divide the class of relative terms. Peirce, at this time, identifies a correlation that determines an internal quality (or a ground that relates a set of terms amongst themselves) and an external quality (or a ground that relates a term to another distinct from itself). Moreover, in anticipation of the validation of the categories, Peirce specifies that either correlation is possible only if there is a prior comparison in a representation. Even for a relative with an internal quality, such as "this *it* is blue," the occasion or rationale for the correlation is a comparison between the representation of an *it* that embodies *blueness* and everything non-blue, such that "'blue' MEANS 'blue in comparison to.'" <sup>40</sup> A relative with an external quality, on the other hand, always supposes an explicit comparison because the external quality of one term necessarily supposes a relation of referral to another term distinct from itself: "If a man kills a deer, that in comparison to which he is a killer is the deer. No other comparison is *needed*." (W1:336, 1865). Here, the external quality is what the predicate "kills" signifies, which is a ground that refers "man" to "deer" and necessarily so if the predicate is truly applicable to those subjects. The conclusion that only a comparison in the representation for this pair of subjects was necessary for successful predication was premature on Peirce's behalf. Nonetheless, there is still a logical structure of relationality that is beginning to emerge at this time.

Peirce began, in 1866, to denominate the logical structure of the different types of relative with the medieval terminology of equiparants and disquiparants.<sup>41</sup> Even though this structure was still unclear to Peirce, there is a gradual refinement of the distinction between equiparants and disquiparants discernable in the early writings. The first discernible improvement is the terminological identification of the constituent terms for a relative of any species. Every relative has a relate and correlate as *relata*, while the predicate signifies the relation between them by a reference to the ground in which they are said to agree or contrast (W1:475, 1866). The relate is the *relatum* that *founds* (or establishes) the relation, while the correlate is the *relatum* that *terminates* (or closes) the relation founded. An equiparant is a relative whose relate is in agreement with the correlate on the basis of an internal quality. An internal quality signifies a relation of referral to a ground that is *prescindible* from the correlate. Here, the method of precision does not serve to validate a conception as a category, since an equiparant is a species of

39 For an examination of Peirce's early writings from 1857 to 1867, see Murphey (1961), Buzzelli (1972 and 1974), Esposito (1976, 1979, and 1980), De Tienne (1988a, 1988b, and 1989), Brandt (1997), and Levine (2004). For an examination of Peirce's relationship to Schiller, see Dilworth (2014), and Topa (2017).

40 W1:336, 1865. Compare the interpretation of correlation offered especially with Ishida (2009, p. 49-58); see also Murphey (1961, p. 75-77), Buzzelli (1972, p. 72), and Atkins (2018, p. 44-45).

41 W1:347-348, 1866. For a discussion of Peirce's understanding of the medieval distinction between equiparants and disquiparants, and how that understanding evolved into the distinction between concurrents and opponents, see Michael (1974 and 1976).

the category of relation, but rather to determine the order in the logical structure of relationality itself. Consider a proposition in a relation of equiparance, such as “this *it* is blue.” This relation is a proposition of equiparance because the predicate “blue” signifies an internal quality by referring *it* as a relate to *blueness* as a ground of agreement. The relate is a succession of appearances ( $it_1, it_2, it_3 \dots$ ) within the manifold present in substance that constitute the denotation of *it*. This is the result of a differentiation among the appearances and a substitution of a subject for the succession as denoting each appearance relevant to attention. Simultaneously, this differentiation is also a comparison between every relevant appearance to determine if the succession seems to share certain characters. If so, an interpreter can hypostatically abstract the ground of *blueness* that each appearance seems to share in succession. Then the predicate “blue” can signify an internal quality by reference to the ground of *blueness*. Consequently, the predicate “blue” is attributable to *it* in an intellectual hypothesis because each appearance of *it* seems to embody the quality of *blueness* that “blue” signifies. That is, “ $it_1$  seems to embody *blueness*” becomes the relate and “ $it_n$  seems to embody *blueness*” becomes the correlate, where  $n$  is any appearance of *it* in succession that is comparable with  $it_1$ . If the predicate can unify these comparisons, the relation in the proposition of equiparance “this *it* is blue” is substitutable for the succession of appearances, which therefore reduces this manifold to unity as an intellectual hypothesis. But this is merely to assimilate a series of comparable correlates into the relate by virtue of their all seeming to agree with the ground of *blueness* that “blue” signifies. Consequently, there is no difference between relate and correlate in relatives or propositions of equiparance. Accordingly, Peirce almost immediately qualifies that an equiparant is a relative whose relate and correlate are indistinguishable because both are a part of the subject (W1:481, 1866). Thus, the ground in relatives of equiparance is prescindible from their correlate because relate and correlate are indistinguishable from each other in equiparants; in other words, the correlate is dispensable. An interpreter can, in other words, suppose “this *it* is blue” without conceiving of the series of relates and correlates that constitute the denotation of *it* because all of them are already said to agree with the ground of *blueness* that “blue” signifies. Thus, *blueness* is prescindible from the correlate because the correlate is already a part of the relate as the subject that “blue” intends to unify by signifying the internal quality in which they are all said to agree.

The problem is, if the ground of equiparance does not entail a relation of referral of a relate to a correlate, then equiparants would seem to fail to qualify as a proper type of relative. Instead, a relative of equiparance is a proposition that denotes a class of relates (and indistinguishable correlates) with a predicate that unifies these relates (and correlates) by signifying an internal quality in which they are all said to agree by reference to the ground for their being a class. Peirce was aware of the problem and, later in the 1866 draft of the New List, sought to distinguish relatives of equiparance and disquiparance precisely in this respect (W1:525-526, 1866). A proposition of equiparance would, on this interpretation, consist of a subject  $S$  that denotes a succession of appearances as a series of relates and dispensable correlates for some discriminable *it* ( $S = it_1, it_2, it_3, \dots$ ), and a predicate  $P$  that signifies the *monadic* ground in which each of the relates and correlates seem to agree ( $it_1$  embodies  $P$ -ness,  $it_2$  embodies  $P$ -ness,  $it_3$  embodies  $P$ -ness ...), such that  $S$  is  $P$  (e.g., ‘the stove is black’) unifies all those relates and correlates as a class of agreeing things. This is substitution of a proposition for a series of comparisons that successively represent whatever a subject may denote and a predicate might signify by reference to the monadic ground of agreement that they all seem to share. This is a valid conclusion that hypothesis and induction simultaneously infer as an intellectual hypothesis substitutable for those comparisons. The inductive aspect is a generalization from the succession of appearances ( $it_1, it_2, it_3, \dots$ ) to the class that constitutes the denotation of  $S$ , which is substitutable for those comparisons. The hypothetical aspect is the invention of a predicate  $P$  that substitutes a reference to a monadic ground for a succession of appearances that seem to embody that ground ( $it_1$  embodies  $P$ -ness,  $it_2$  embodies  $P$ -ness,  $it_3$  embodies  $P$ -ness ...). Only then is a substitution of the proposition of equiparance — or  $S$  is  $P$  — possible. But neither hypothesis nor induction can determine if each appearance of *it* does seem to embody the

ground. A reference to the ground is via hypostatic abstraction, so a satisfactory account of how an interpreter can determine if a series of appearances seems to embody a ground is necessary. Such a hypostatic abstraction is a comparison of each *it* with certain characters that appear with them, such that those characters are abstractable as a respect for a ground in which they might all agree. To determine if these characters are abstractable as a respect for a ground, then a different type of comparison must contrast them with a set of non-qualifying correlates (W1:526, 1866). Suppose there is a succession of appearances ( $it_1, it_2, it_3, \dots$ ) that seem to embody *blackness*. The determination of this seeming is possible only if these comparisons become the relate ( $x = it_1$  embodies *blackness*,  $it_2$  embodies *blackness*,  $it_3$  embodies *blackness* ...) in a different type of comparison that contrasts this relate with a set of non-black correlates, such that these correlates ( $y = it_a, it_b, it_c, \dots$ ) are *less black* — or seem to embody *blackness* to a lesser degree — than any *it* that might appear in the comparisons that constitute the relate. From this comparison by contrast an interpreter can infer that “*x* is more black than *y*.” From this an interpreter can therefore infer that “*x* is black,” which entails that every appearance of *it* in *x* ought to embody the quality of *blackness*. With this conclusion, an interpreter thus determines how each *it* seems to embody the quality of *blackness* as their ground of agreement. This comparison by contrast can thus explain what neither hypothesis nor induction could: How to hypostatically abstract a respect for a ground of agreement that a comparable series of appearances seem to embody in succession.

The proposition “*x* is more black than *y*” is a relative of disquivalence. A disquivalent is a relative that includes the monadic ground of equiparance (e.g., *blackness*) but with a special determination absent in equiparants (W1:527, 1866). The special determination of the monadic ground of equiparance in disquivalents is that the relate of disquivalence necessarily supposes a distinct correlate by predicate signifying a reference to a *dyadic* (as opposed to a monadic) ground. So, for example, the proposition of disquivalence “*x* is more black than *y*” includes the monadic ground in equiparance “*x* embodies *blackness*” and the special determination “*y* is less black than *x*,” which is the contrary ground of the disquivalent. Thus, a disquivalent is the more primitive type of relative than equiparance because the latter are derivable from the former, which is why a comparison by contrast is necessary to hypostatically abstract a ground of agreement from a comparable series of appearances.<sup>42</sup> This is confirmable by the method of precision. If a relative of disquivalence (“*x* is more black than *y*”) is prescindible from an equiparant (“*x* is black”), then there is the negation of the comparison necessary for the determination that some appearances seem to embody the quality of *blackness* rather than others. This entails the negation of hypostatic abstraction, which entails the negation of any reference to the monadic ground necessary for the introduction of an equiparant. Hence the conception of an equiparant is not possible without the supposition of a relative of disquivalence, which is why relatives of equiparance are derivable from disquivalents. This entails that relatives of disquivalence are logically fundamental for and necessarily prior to equiparants, for disquivalents are not prescindible from relatives of equiparance. Consequently, the method of precision validates that disquivalence is the occasion or rationale for the introduction of an equiparant. Though an equiparant is prescindible from a relative of disquivalence because a relative of equiparance is supposable without the conception of a disquivalent. An interpreter can, in other words, conceive of an equiparant such as “this *it* is black” without conceiving of the relative of disquivalence that is the occasion or rationale for the introduction of that equiparant through hypostatic abstraction, which is why equiparants are a different species of relation than disquivalents. Once an interpreter can, in other words, determine that some appearances seem to embody a ground (*blackness*) rather than others, the interpreter can consider this ground itself as the predicate (“black”) attributable to a subject in a proposition of equiparance (“this *it* is black”) without conceiving of the comparisons necessary for this predicate or predication. Thus, relatives of equiparance are not logically fundamental for but necessarily posterior to disquivalents. Both, nonetheless, remain a species of the category of relation; so, the method

42 Or, in the later terminology, relatives of *opposition* are more primitive than those of *concurrence*.

of precision only validates their order as conceptions within the category thereof and therefore cannot validate either as categories themselves. The priority of disquivalence lies in necessarily supposing an explicit comparison between distinct terms, which is why this type of relative can serve as the comparison by contrast necessary for hypostatic abstraction. Consider the relative of disquivalence “*a* killed *b*” (or “*a* is the killer of *b*”). This disquivalent is a proposition that includes the monadic ground “*a* embodies *being a killer*” in the relative of equiparance “*a* is a killer” but with the special determination “*b* was killed by *a*,” the contrary ground of this disquivalent. Every relative of disquivalence, then, has at least two terms—relate (*x*; *a*) and correlate (*y*; *b*)—and the ground is a dyadic relation with an active (“*x* is more black than *y*”; “*a* is a killer of *b*”) and passive form (“*y* is less black than *x*”; “*b* was killed by *a*”) that irreducibly refers the relate to a distinct correlate. The dyadic ground proper to relatives of disquivalence is an irreducible relation because the ground is not prescindible from the correlate without the negation of the disquivalent itself. If the predicate “is more black than” is prescindible from the correlate *y*, then there is the negation of the dyadic ground’s referral of *x* to *y*, which entails the negation of the active disquivalent “*x* is more black than *y*,” which entails the same negation for the passive disquivalent “*y* was killed by *x*.” Similarly, if the predicate “is the killer of” is prescindible from the correlate *b*, then there is the negation of the dyadic ground’s referral of *a* to *b*, which entails the negation of the active disquivalent “*a* is the killer of *b*,” which entails the same negation for the passive disquivalent “*b* was killed by *a*.” Thus, in either case, reduction of the relation to either relate or correlate would entail the negation of the disquivalent, which is why precision entails the negation of the condition for possibility of the introduction of a relative of disquivalence: Namely, every disquivalent requires at least two terms and an irreducible relation that refers the relate to a distinct correlate in virtue of a dyadic ground by a predicate that signifies an external quality between them. Whereas, for equiparants, since there is only a relate (or a subject that denotes a series of relates and correlates) and the monadic ground of agreement, which predicate signifies by an internal quality, then the relation is reducible to the relate and ground because the correlate is dispensable and therefore the ground is prescindible from the correlate.

#### 4 On concurrence and opposition

Peirce originally saw the division of the class of relative terms into equiparance and disquivalence as exhaustive, but was also aware of difficulties with the classification. Most importantly, relatives of equiparance do not seem to qualify as a proper type of relative because equiparants lack a nonprescindible ground that irreducibly refers the relate to a distinct correlate. An equiparant is rather a class-term with a predicate that signifies an internal quality by virtue of a monadic ground of agreement among a series of relates and dispensable correlates. Accordingly, an equiparant does not signify a relation that exists *over and above*, or *between*, a relate and distinct correlate because relatives of equiparance are reducible to their subject (or a series of relates and dispensable correlates) and monadic ground of agreement (among those relates and correlates). Peirce is aware of the problem. On the section concerning relatives in the New List, Peirce dispenses with the medieval terminology of equiparance and disquivalence and instead opts to denominate the difference in the logical order of the conceptions within the category of relation by the terms *concurrence* and *opposition* (W2:55, 1867). The change in terminology more adequately represents the specific difference that truly divides the class of relatives: Namely, one type of relative consists of a nonprescindible ground of *opposition* that irreducibly refers the relate to a distinct and *opposite* correlate, while another consists of a prescindible ground of *concurrence* that is reducible to the relate because relate and correlate *concur*. Thus, what were once equiparants now become relatives of concurrence (or concurrents), while disquivalents become relatives of opposition (or opponents). Since this is a mere change in terminology, the logical order of conceptions within the category of relation still remains the same: Namely, relatives of opposition are more primitive than relatives of concurrence

because opponents are the occasion or rationale for the introduction of concurrents because the former are not prescindible from the latter.

The problem, as Peirce himself would recall in 1895 (CP 1.567), is that the earlier classification conflates *equiparance* with *concurrence* (or relatives with a predicate that signify an internal quality for concurring relates and correlates by reference to a monadic ground); and therefore restricts the domain of *opposition* (or relatives with a predicate that signify an external quality that irreducibly refers the relate to a distinct and opposite correlate by reference to a dyadic ground) to *disquiparance*.<sup>43</sup> Given that disquiparants denominate only the class of asymmetric relations—that is, relatives with an active and passive form, which have dyadic grounds contrary to one another (e.g., “*x* is more black than *y*” and “*y* is less black than *x*” / “*a* is the killer of *b*” and “*b* was killed by *a*”)—then Peirce mistakenly excludes symmetric relations from the earlier classification. Now relatives or propositions of equiparance denominate those symmetric relations to rectify this mistake. An equiparant is, on this interpretation, a species of opponent because every relative of equiparance is a proposition with a predicate signifying an external quality that irreducibly refers the relate to a distinct and opposite correlate by reference to a dyadic ground. Such, for example, is the proposition “*p* is equal to *q*.” The relation is irreducible because the dyadic ground is not prescindible from the correlate without the negation of the referral of the relate to the correlate and thus the negation of the equiparant itself. If “is equal to” is prescinded from *q*, then there is the negation of the referral of *p* to *q*, which entails the same negation of the referral of *q* to *p*. Thus, in either case, the relation is not reducible to either relate or correlate without the negation of the equiparant itself, which is why the dyadic ground is not prescindible from the correlate in relatives or propositions of opposition in equiparance. The difference is that equiparants are a species of opponent that lack an active and passive form because the relate and correlate are interchangeable. Thus, the equiparant “*p* is equal to *q*” is formally identical to “*q* is equal to *p*,” which is why relatives or propositions of opposition in equiparance denominate only the class of symmetric relations. While relatives or propositions of opposition in disquiparance are those whose relate and correlate are not interchangeable, which is why this species of opponent has an active and passive form, and therefore, denominate only the class of asymmetric relations. Peirce successfully disambiguates the different types of relative in “Description of a Notation for a Logic of Relatives” of 1870. Now there is a division of the class of relatives into simple and conjugative. Then the class of simple relatives divides into concurrents and opponents, while opponents divide into equiparants and disquiparants (W2:418, 1870). Given that Peirce uses the language of concurrence and opposition in the New List but without mentioning the complete division of opponents into equiparants and disquiparants, there is at least some justification to *muse* over how the argument as a genealogy of signification might have developed if Peirce had rewritten the sections on the category of relation with the complete classification of relative terms. All that remains is an explanation of how the different types of comparison occasion diverse types of relation that themselves occasion different types of sign by virtue of their reference to a unique type of ground. The analysis will then employ the conceptual tools of the preceding section with the complete classification of relative terms in the context of the 1866 draft and 1867 publication of “On a New List of Categories” to determine why the category of relation is so important to the argument as a genealogy of signification and therefore a phenomenology of logic as a science of semiotics. What role, that is, the category of relation serves in the generation of the different types of arguments, propositions, and terms as corresponding types of sign that constitute the process of reasoning responsible for their emergence and maintenance of reasoning as a thoroughly semiotic process. What role, in other words, the category of relation serves in the genealogy of signification.

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43 The earlier classification also excludes relatives with an *imputed* quality signifying an external quality by reference to a *triadic* ground that irreducibly refers the relate to a distinct and opposite correlate for some interpretant, which is discussed below.

## 5 On the genealogy of signification

### 5.1 On the genealogy of icons in uniparance

The section on the category of relation continues to outline the logically necessary elements in any process of conception (W2:53, 1867). If the process of conception has the logical form of valid inference, then the process is formalizable as a synchronic simplification in a syllogism. The manifold present in substance solicits comparison in a representation, representation occasions relation, and relation occasions a quality that introduces the unity of being in a proposition by reference to the ground via hypostatic abstraction. Whatever sensuous impressions are found in the manifold are the premisses, while being is the conclusion that substitutes a proposition for that manifold and thus reduces those impressions to unity. The hierarchy of categories has this numerical arrangement because the method of precision validates their order in the process of reasoning as logically necessary. Thus, the category of relation is logically fundamental for a reference to the ground because a reference to the correlate is necessarily prior to the introduction of a quality; but a reference to a correlate is necessarily posterior to comparison in a representation because a reference to an interpretant is logically fundamental for the introduction of a relation. Consequently, if conception is truly a process of reasoning, the valid modes of inference must afford the different types of comparison in a representation for the introduction of the different types of relation. Given that relations signify qualities diversely in different types of proposition, then the comparisons that occasion the different types of relation ought to introduce different types of proposition for their signification. Moreover, since predicates signify qualities in relation to a subject for the different types of comparison, then the relations of signification in those propositions ought to introduce different terms as types of sign by referring to different types of ground via hypostatic abstraction. Thus the argument of the New List as a genealogy of signification ought to terminate with a complete classification of logic with the different types of arguments, propositions, and terms corresponding to the different types of sign. Then these types of sign would constitute and maintain the process of reasoning as the semiotic process responsible for their emergence, such that the New List is a phenomenology of logic as a science of semiotics. But, since the analysis will look backward to Peirce's analysis of nominal hypotheses, and forward to the classification of relatives, this phenomenology of logic ought to terminate with a science of semiotics different from the classification of signs that terminates with the New List. The analysis of nominal hypotheses proved that, at the threshold of consciousness in sensation, there are different types of comparison in the double-movement of hypothesis and induction. These are responsible for the invention of a possible predicate with a potential signification as a logical name embedded in the nominal hypothesis inferred by hypothesis and induction in sensation. Then, within the domain of consciousness, the double-movement of hypothesis and induction occurs in conception via a process Peirce will later denominate hypostatic abstraction. The inference by induction is responsible for the substitution of a subject for a comparable series of appearances. While the inference by hypothesis is responsible for the substitution of a predicate (at the threshold of consciousness) for a logical name (or a set of predicates already in the domain of consciousness) and thus an intellectual for a nominal hypothesis (or a different intellectual hypothesis) that properly reduces the manifold to unity. This, as the analysis of relatives has shown, requires a comparison by contrast with a relative or proposition of opposition in disquarance for hypostatic abstraction. Such a comparison would contrast a series of appearances that seem to embody a ground to a greater degree than others. A comparison by contrast is then a survey of the relevant circumstances to determine if a logical name or predicate is applicable. This is what Peirce will later denominate *collateral observation*.<sup>44</sup> But collateral observation always supposes that an interpreter has had a previous

44 "Collateral Observation", see Bergman; Paavola (2019). EP 2.494, 1907.

encounter with the ground to determine the proper context of applicability. This is what Peirce will later denominate *collateral experience*.<sup>45</sup> At the threshold of consciousness, the interpreter has a logical name in store through a nominal hypothesis inferred in sensation. The nominal hypothesis will then determine the proper context of applicability according to novel circumstances by entailing what characters a logical name ought to possess as a possible predicate with a potential signification. Within the domain of consciousness in conception, the interpreter will simply appeal to previous predications to determine a different context of applicability but according to similar circumstances for a potential predicate with an actual signification. The former is a substitution of a predicate for a logical name at the intersection of sensation and conception, the latter a predicate for a set of predicates in need of reduction to unity for conception proper via hypostatic abstraction. Thus, there are two species of comparison in addition to hypostatic abstraction necessary for the process of conception: Namely, collateral experience and collateral observation. If these three species of comparison are syllogistically formalizable along with hypothesis and induction, the *entire* process of conception is truly a reasoning process with them as valid parts for constituents. Since this process terminates with the different types of sign, then the categories, as the logically necessary elements of the process thereof, are responsible for the emergence of any sign therein. Therefore, the argument of the New List would then qualify as a genealogy of signification.

Predictably, the sections after the category of relation concern different types of comparison. These comparisons ought to occasion relatives of concurrence or opposition as propositions, while these propositions should have terms that signify qualities differently by referring to unique types of ground. The first is a comparison between the letters “p” and “b” (W2:53, 1867). At the threshold of consciousness in sensation, “p” and “b” must first appear as logical names with a possible shape for separate nominal hypotheses. Suppose there is a mass of confusing data present to consciousness in substance that requires reduction to unity. The process of conception is near instantaneous and the parts simultaneously occur at every instant. Still, the process is formalizable as a synchronic simplification with the syllogism. First, there are certain characters implicit in the manifold that impress themselves on consciousness in sensation (“... is thus”) by some unrepresented thing (“... this *it*”), such that “this *it* is thus” is the result. To judge the sensation, there is an assumption of the rule “whatever has the name [p] is thus.” From the rule and result, there is the valid inference by hypothesis of the conclusion “this *it* has the name [p]” as the case. Simultaneously, from the case and result as premisses, there is the valid inference by induction of the conclusion “whatever *should* have the name [p] is thus” as a rule. Syllogistically, this complex process is formalizable as a synchronic simplification by Peirce’s rule-case-result model for the modes of valid inference:

<i>Hypothesis</i>	<i>Induction</i>
<b>Rule.</b> Whatever has the name [p] is thus.	<b>Case.</b> This <i>it</i> has the name [p].
<b>Result.</b> This <i>it</i> is thus.	<b>Result.</b> This <i>it</i> is thus.
<b>Case.</b> This <i>it</i> has the name [p].	<b>Rule.</b> Whatever <i>should</i> have the name [p] is thus.

Hence the double-movement of hypothesis and induction in sensation simultaneously infers a single conclusion that validly substitutes one proposition (“this *it* has the name [p] / whatever *should* have the name [p] is thus”) for several. This conclusion is a nominal hypothesis that judges a sensation (“[p]”) to possess certain characters (“... this name [p] / ... is thus”) by a registration of them as constituting the essence of the logical name [p]. Such a nominal hypothesis is the invention of a potentially significant letter with a possible shape, which the nominal hypothesis entails: Namely, whatever is a [p] ought to signify those characters as an identifiable shape now and in the future if applicable. The same process must occur for [b] if [b] is to become a potentially significant letter with a possible shape. But the

<sup>45</sup> “Collateral Experience”, see Bergman; Paavola (2019). Cf. [R] L463:14, 1908.

invention of a logical name in a nominal hypothesis is not yet the use of a potential predicate with an actual signification. This only occurs when the essence (“... is thus”) of the logical name (“[p]”) in the nominal hypothesis (“this *it* has the name [p] / whatever *should* have the name [p] is thus”) is embodied in sensation as the respect of an object’s quality that the predicate signifies by a reference to the ground. The same must also occur for [b].

A reference to the ground occurs via hypostatic abstraction. A hypostatic abstraction occurs when a comparison by contrast determines that some *it* appears to embody a ground to a greater degree than some other appearances. This is a relative of opposition in disquiparance, which entails a predicate is applicable only in the proper context according to the relevant circumstances: Namely, what the predicate ought to signify determines the proper context of applicability and a survey of the relevant circumstances determines if some *it* appears to embody the predicate’s ground to a greater degree than others. At the threshold of consciousness in sensation, the determination of this context of applicability is through the retrieval of the nominal hypothesis as a part of the interpreter’s collateral experience. An appeal to collateral experience will retrieve the logical name as a possible predicate with a potential signification to determine the context of applicability. Within this context, the logical name can apply to some *it* only if there is a survey of the relevant circumstances by collateral observation. Then the logical name can become a potential predicate with an actual signification through a relative or proposition of opposition in disquiparance and thus a hypostatic abstraction. This will result when the disquiparant shall oppose the characters in the appearances of *it* with others, so that these characters are abstractable as a respect for the ground of agreement between the essence of the logical name and the substance abstracted from. Thus, if collateral experience and observation are the premisses, while the conclusion is the hypostatic abstraction, these species of comparison in this triple-movement are syllogistically formalizable as a valid deduction.<sup>46</sup> Syllogistically, this complex process is formalizable as a synchronic simplification with Peirce’s rule-case-result model for the modes of valid inference:

<i>Comparisons</i>	<i>Deduction</i>
<b>Collateral Experience:</b>	<b>Rule.</b> This <i>it</i> has the name [p] / Whatever <i>should</i> have the name [p] is thus.
<b>Collateral Observation:</b>	<b>Case.</b> This <i>it</i> has the name [p] because this <i>it</i> is thus to a greater degree than others.
<b>Hypostatic Abstraction:</b>	<b>Result.</b> This <i>it</i> is thus or <i>it</i> embodies <i>thusness</i> .

The retrieval of a nominal hypothesis through collateral experience serves as a rule to determine the context of applicability. The rule (“this *it* has the name [p] / whatever *should* have the name [p] is thus”) determines the proper context (“whatever *should* have the name [p] is thus”) for the logical name [p] as a possible letter potentially signifying a shape (“this *it* has the name [p]”) if the appearances of *it* share certain characters (“... is thus”). An interpreter can determine if an *it* does embody these characters through collateral observation. This determination is by a disquiparant: Namely, the appearances of *it* successively seem to share certain characters to a greater degree than others. What characters could the logical name [p] entail in this context, and what characters would this succession appear to share? Only the certain *shapeliness* characteristic of the essence implicit in [p], such that each appearance of *it* would seem to successively share *being spherical* and *vertically linear* to a greater degree than other appearances. These appearances become the relate  $x (= it, \text{embodies } \textit{being spherical and vertically linear},$

46 Peirce has not yet distinguished hypostatic from prescise abstraction, nor terminologically identified collateral experience and observation, so there is no syllogistic formalization of the abstraction of a ground by a valid deduction. But this syllogistic form seems to adequately capture the abstractive process; which seems similar to what Peirce will later denominate *theorematic deduction* (see EP2:96, 1901; EP2:297-298, 1903; EP2:502, 1909). Moreover, this abstractive process by deduction complements (and completes) Peirce’s account of nominal hypotheses in Appendix No. 2, which only appeals to hypothesis and induction.

$it_2$  embodies *being spherical and vertically linear*,  $it_3$  embodies *being spherical and vertically linear* ...) that contrasts with others  $y$  ( $= it_a, it_b, it_c, \dots$ ), such that  $y$  seems to embody *sphericity and verticality* to a lesser degree than  $x$ . Thus, this comparison by contrast in the disquarant through collateral observation entails that  $x$  embodies *being spherical and vertically linear*, which entails that every  $it$  in  $x$  ought to embody the same shape or simply that  $it$  is thus. Of course, if  $it$  is thus, and whatever *should* have the name [p] is thus, then  $it$  has the name [p] or “p” is substitutable for [p] in this context because  $it$  embodies *sphericity and verticality* according to the relevant circumstances. Therefore, “p” signifies this shape in that context by a reference to that ground of *sphericity and verticality* as the respect of  $it$ 's quality. This is the result of a hypostatic abstraction, which is the conclusion of a valid deduction from collateral experience and observation as premisses. Given this valid deduction, the intellectual hypothesis “this  $it$  is p” is substitutable for the nominal hypothesis in this context because of those circumstances, which properly reduces the manifold therein to the unity of being in a proposition. The same valid deduction must occur for [b], so “b” is substitutable for [b] in the intellectual hypothesis “this  $it$  is b” for the corresponding nominal hypothesis a part of the interpreter's collateral experience. Only then will [b] become the predicate “b” by signifying that ground of *sphericity and verticality* as the respect of some  $it$ 's quality.

The double-movement of hypothesis and induction are phases in sensation at the threshold of consciousness, while the deduction of a hypostatic abstraction is the passage from sensation to conception proper within the domain of consciousness. This is because a deduction of a hypostatic abstraction is responsible for an explicit reference to the ground, which properly reduces the manifold present in substance to the unity of being in a proposition or the substitution of an intellectual hypothesis for that manifold. Given the process of conception is formalizable with the form of syllogism in valid inferences by hypothesis, induction, and deduction, then the entirety of this conception is a process of reasoning. This process of reasoning terminates, in the previous comparison, with the substitution of “this  $it$  is p” or “this  $it$  is b” for the manifold and thus the reduction of substance to being by a reference to that ground of *sphericity and verticality* as a respect of  $it$ 's quality. Thus, “p” signifies this quality of shape for  $it$  if  $it$  embodies this shape and the line is descending; or “b” signifies this quality of shape for  $it$  if  $it$  embodies this shape and the line is ascending. Because of this reduction or substitution, each proposition signifies that  $it$  is the same as the ground of shape that their predicates signify. That is, every appearance of  $it$  is *similar* to one another in virtue of referring to the mutual ground of agreement for their respective quality of shape. Thus, the predicates “p” and “b” are *icons* of  $it$  because the propositions “this  $it$  is p” and “this  $it$  is b” signify a relation of similarity between every appearance of  $it$  and “p” or “b.” (W2:56, 1867).<sup>47</sup> These appearances are then a series of comparisons among a relate and correlate that is reducible to a class of agreeing things and their ground. Thus, the correlate is dispensable because every relate and comparable correlate *concur* in virtue of their similarity to one another by *iconically* signifying a quality *internal* to themselves as the same class of shape by reference to their *monadic* ground for being a class. This is confirmable by the method of prescision. Thus, “p” or “b” is prescindible from the correlate because there is functionally no correlate in opposition to the relate since every comparable correlate is a part of  $it$  with the relate because of their similarity to one another. This similarity is, in other words, supposable without conceiving of an explicit comparison between every appearance that constitutes the denotation of  $it$  as a class of agreeing things. There is, in other words, nothing besides this class and their monadic ground of *concurrency*. Consequently, the method of prescision confirms that the propositions “this  $it$  is p” and “this  $it$  is b” are relatives of concurrency that iconically signify an internal quality by reference to a monadic ground of agreement because “p” and “b” are predicates that are prescindible from their correlates. The only difference is that “p” and “b” are icons of  $it$  if  $it$  embodies the quality of *sphericity and verticality*, but  $it$  is a “b” if the line is ascending or “p” if the line is descending.

47 At this point, Peirce denominates icons signs with “likenesses.”

Let “uniparance” denominate the type of comparison that occasions or serves as the rationale for the introduction of propositions or relatives of concurrence.<sup>48</sup> Then *uniparance* is the occasion or rationale for the introduction of “this *it* is p” and “this *it* is b” because each proposition is a relative of concurrence with a predicate that iconically signifies an internal quality by reference to a monadic ground.<sup>49</sup> Given that “p” and “b” can act as iconic signs of *it* in either proposition only if there is a reference to their monadic ground, but this reference itself depends upon the introduction of a relative of concurrence by uniparance, then the role for the category of relation in this instance is to occasion the generation of an *icon* as a type of sign and thus explains the origins of *iconic* relations of signification in uniparance.

Now, what type of comparison will occur between the letters “p” and “b,” and what type of relation will this occasion? Such a comparison already supposes there is a store of potential predicates available with an actual signification because any explicit comparison between distinct objects must always occur within a world of objects in determinate relations with one another by virtue of their qualities. There are then qualities already embodied in sensation, so the comparison must occur within the domain of consciousness. Whereas before the analysis was the origin of “p” and “b” in sensation, the comparison between “p” and “b” must then occur in the process of conception proper far after the inference of a nominal hypothesis for either. There is instead a higher-order set of valid inferences by hypothesis, induction, and deduction for successful predication of “p” and “b.” A successful predication will substitute “p” and “b” as iconic signs in a different context but according to similar circumstances from previous predications. A previous predication is a part of the interpreter’s collateral experience, so an interpreter will retrieve these previous predications by appealing to their collateral experience. This is a retrieval of the hypostatic abstraction that allows “p” and “b” to iconically signify a certain quality of shape by referring to their monadic ground. Now, the hypostatic abstraction serves as a rule to determine the proper context of applicability for “p” and “b” to act as iconic signs: Namely, “p” is an icon of *it* if *it* embodies the quality of *sphericity* and *verticality* and the line is descending; while “b” is an icon of *it* if *it* embodies the quality of *sphericity* and *verticality* and the line is ascending. This satisfies the requirements for deduction, since the appeal to collateral experience merely retrieves the conclusion of a deduction for the hypostatic abstraction of a previous predication. Such a retrieval is possible because the conclusion is prescindible from the premisses, since an interpreter can suppose the proposition in the conclusion without conceiving of the premisses that warranted the inference. With the retrieval of this conclusion as a rule of applicability, “p” and “b” are predicable as iconic signs in this context if the circumstances are similar to what the rule entails. Hence a survey of the relevant circumstances by collateral observation is necessary, but now from a higher-order inference by hypothesis and induction within the domain of consciousness. The induction is an inference from a series of comparisons among a succession of appearances ( $it_1, it_2, it_3, \dots$ ) to the class *it*, which substitutes a subject that denotes each appearance relevant to attention for those comparisons. The hypothesis is an inference from a comparison by contrast in a relative of opposition in disquiparance among a series of appearances, which substitutes “p” or “b” for those appearances that seem to embody the ground to a greater degree than others. Then these appearances become the relate  $x (= it_1 \text{ embodies } \textit{being spherical and vertically linear}, it_2 \text{ embodies } \textit{being spherical and vertically linear}, it_3 \text{ embodies } \textit{being spherical and vertically linear} \dots)$  that contrasts with others  $y (= it_a, it_b, it_c, \dots)$ , such that  $y$  seems to embody *sphericity* and *verticality* to a lesser degree than  $x$ . Thus, collateral observation confirms that  $x$  embodies *sphericity* and *verticality*, which entails every *it* in  $x$  ought to embody the same shape. Moreover, this confirms that the circumstances are similar to what the rule entails for “p” or “b” as iconic signs from previous

48 Peirce did not invent neologisms for the types of comparison, but the ethics of terminology (see EP2:263-267, 1903) entails we ought to invent such terms. The term “uniparance” derives from the Latin prefix “uni-” that signifies “one.” The appropriateness of this neologism ought to be obvious at this point.

49 Peirce describes icons (or likenesses) as a community in some quality, but this is also describable as a concurrence in (or similarity to) an internal quality by virtue of a monadic ground.

predications a part of the interpreter's collateral experience. Hence "p" is an icon of *it* if the line is descending, while "b" is an icon of *it* if the line is ascending, because every appearance of *it* seems to embody the same shape. Now "p" and "b" have an iconic relation of signification in a different context but according to similar circumstances and thus are comparable with one another. Then the iconic relation of signification for "p" would become the relate, while the iconic relation of signification for "b" would become the correlate. After their correlation, there is an imaginative experiment with these icons: An interpretant mediately represents "p" as rotating over an invisible axis until the descending line of "p" overlaps with the ascending line of "b" and their spherical shapes coincide. Therewith "b" becomes observable through "p." This imaginative experiment therefore negates their accidental differences—namely, the direction of the line—and the interpretant represents "p as an icon of b" because each concur in the same quality that is internal to themselves as a similar class of shape. Thus, this is a representation by uniparance because the interpretant occasions or serves as the rationale for the introduction of the proposition "p" is similar to "b," which is a relative of concurrence that iconically signifies an internal quality by reference to a monadic ground between the relate and a dispensable correlate. As before, the correlate is dispensable because the concurrent assimilates the correlate "b" and relate "p" into the same class of shape, which is why the interpretant in this uniparance renders "p" a transparent image of "b." Given the process of conception is formalizable with the form of syllogism in valid inferences by hypothesis, induction, and deduction, then the entirety of this conception is a process of reasoning. This process of reasoning terminates with the substitution of "p is similar to b," which reduces the manifold to being by a reference to the monadic ground of shape that both letters share. Given that "p" and "b" can act as iconic signs of one another only if there is a reference to the monadic ground that both letters share, but this reference itself depends upon the introduction of a relative of concurrence by uniparance, then the role for the category of relation in this instance is to occasion the generation of an *icon* as a type of sign and thus explains the origins of *ironic* relations of signification in uniparance.

## 5.2 On the genealogy of indices in diaparance

The letters "p" and "b" are iconic relations of signification that share a monadic ground because of their origins in uniparance, so the iconicity between them was a possibility from the beginning. This implicit iconicity was simply awaiting for an interpretant to objectify their similarity with one another in a proposition by a relative of concurrence in uniparance. The proposition "p is similar to b" is a concurrent because the monadic ground is prescindible from the correlate, since there is functionally no correlate in opposition to the relate; in other words, both "p" and "b" belong to the same class of shape. Similarly, the monadic ground is prescindible from the interpretant in uniparance because each letter has this quality of shape without reference to anything else, since the quality is internal to the terms themselves as belonging to the same class of shape. If the ground of shape is, in other words, prescindible from the interpretant, then "p" and "b" would still qualify as the same shape; the interpretant merely objectifies their possible concurrence whenever there is an explicit representation of this internal quality by uniparance. An external quality, on the other hand, must suppose something besides itself: Namely, a distinct correlate that is in opposition to the relate. After the comparison between "p" and "b," Peirce considers a comparison that involves an external quality. The example is between a *murderer* and *someone murdered*, but for the sake of simplicity the present analysis shall consider a comparison between a *killer* and *something killed*.<sup>50</sup> Such a comparison already supposes there is a store of potential predicates available with an actual signification because any explicit comparison between distinct objects must always occur within a world of objects in determinate relations with one another by virtue

50 The present analysis shall not consider a *murderer* and a *murdered person* because the predicate "is a murderer of" does not signify an external quality, since the ground is a triadic relation among the *murderer*, the *murdered*, and the legal conventions concerning *murder*. Whereas "is a killer of" does signify an external quality.

of their qualities. Hereafter the analysis shall assume there are already qualities embodied in sensation for explicit comparison within the domain of consciousness. Thus, the following analysis shall assume a store of nominal hypotheses already available for use. Truly, a direct appeal to a nominal hypothesis is unnecessary because the invention of a logical name occurs at the earliest stages of conception in sensation prior to any awareness at all. Whereas, in reality, interpreters always experience the process of conception *in medias res*: Every interpreter already finds themselves in the midst of language with a store of potentially significant predicates and a world of objects to which they are applicable. Within this world of signs and their objects, interpreters need only ever appeal to the previous predications a part of their collateral experience to guide them in interpretation. Such an appeal would retrieve the hypostatic abstractions from past predications to use as rules to determine the different contexts of applicability and thus indirectly appeal to the nominal hypotheses that serve as a basis for any possible predicate's potential signification. But this is merely a different way to claim that nominal hypotheses are simple conceptions—or any unanalyzable representation—that every complex conception and thus all analysis presupposes. Indeed, this is confirmable by the method of prescision. A complex conception such as “is a killer” is prescindible from the logical name [killer] because an interpreter can suppose that the predicate “is a killer” is applicable to some subject without conceiving of the double-movement of hypothesis and induction responsible for the invention of this predicate. But the logical name [killer] is not prescindible from the complex conception “is a killer” without negating the sensational basis for the possibility of this predicate's potential signification. Thus, the logical name embedded in the nominal hypothesis is logically fundamental for and necessarily prior to any complex conception such as “is a killer.” Of course, the method of prescision does not validate that nominal hypotheses qualify as a type of category because nominal hypotheses are conclusions for a species of comparison in a special type of representation. That is, a nominal hypothesis is the conclusion of the double-movement of hypothesis and induction in sensation; or a species of comparison that occurs at the threshold of consciousness before the reduction of substance to being. Given this priority to being, a nominal hypothesis is not a comparison that *represents* but rather is the sensational basis for everything *representable*. Everything becomes representable only within the domain of consciousness by the deduction of a hypostatic abstraction and then a higher-order set of comparisons by hypothesis and induction in conception proper. Thus, the method of prescision only validates that there is an order in the category of representation: Namely, sensation is logically fundamental for conception because nominal hypotheses are necessarily prior to everything representable. If the process of conception has the logical form of valid inference, then the method of prescision validates that sensation is the lower and conception is the upper limit in the reasoning process; where the process of reasoning is a continuous stream of comparisons by a lower and higher-order series of valid inferences by hypothesis, induction, and deduction. Thus, the analysis will consider “is a killer of” within the upper limit of the reasoning process; where the higher-order set of valid inferences by deduction, induction, and hypothesis render “is a killer of” predicable for a *killer* and *something killed* by collateral experience and observation.

The conception of the predicate “is a killer of” is a comparison between a relate that embodies the quality of *being a killer* and a correlate that embodies the quality of *being something killed*. A successful predication will substitute “is a killer of” for a series of comparisons among a succession of appearances in a different context but according to similar circumstances from previous predications. A previous predication is a part of the interpreter's collateral experience, so an interpreter will retrieve these previous predications by appealing to their collateral experience. This is a retrieval of the hypostatic abstraction that allows “is a killer of” to become predicable for a relate that embodies the quality of *being a killer* and a correlate that embodies the quality of *being something killed*. Now, the hypostatic abstraction serves as a rule to determine a different context of applicability for the predicate “is a killer of” if the circumstances are similar. This satisfies the requirements of deduction, since the appeal to collateral experience merely retrieves the conclusion of a deduction for the hypostatic abstraction from a previous

predication. There is then a survey of the relevant circumstances to determine if these are similar to those from a previous predication, but now by a higher-order inference by hypothesis and induction within the domain of consciousness. The induction is an inference from a series of comparisons among a succession of appearances ( $it_1, it_2, it_3, \dots$ ) to the class  $it$ , which substitutes a subject that denotes each appearance relevant to attention for those comparisons. The hypothesis is an inference from a comparison by contrast in a relative of opposition in disquivalence among a series of appearances. What sort of characters would a series of appearances share if those appearances seem to embody the quality of *being a killer* to a greater degree than others by collateral observation? Examples from an interpreter's collateral observation are various and perhaps indefinite, but circumstantial relevancy will limit their number in the proper context of applicability. Enough are sufficiently familiar, such as "having guilt," "exhibiting shame," "covered in blood," and so on. Observations such as these are a part of the interpreter's collateral experience from previous predications, so an interpreter will tend to search for those that are relevant to the context of applicability. Once a succession of appearances seem to satisfy a number of such observations, the interpreter can then determine in a series of comparisons among these appearances that each seems to embody the quality of *being a killer* successively to a greater degree than others. Then these appearances become the relate  $x$  ( $= it_1$  embodies *being a killer*,  $it_2$  embodies *being a killer*,  $it_3$  embodies *being a killer* ...) that contrasts with others  $y$  ( $= it_a, it_b, it_c, \dots$ ), such that  $y$  seems to embody *being a killer* to a lesser degree than  $x$ . Thus collateral observation confirms that  $x$  embodies *being a killer*, which entails every  $it$  in  $x$  ought to embody the same ground. Moreover, this confirms that the circumstances are similar to what the rule entails for *being a killer* from the previous predications a part of the interpreter's collateral experience. Thus, the inference by hypothesis can substitute the predicate "is a killer" for that series of comparisons because collateral observations confirm what collateral experience entails for the proper applicability of this predicate in a different context but according to similar circumstances. Hence the series of comparisons in the higher-order set of valid inferences by deduction, induction, and hypothesis are responsible for the substitution of the proposition "this  $it$  is a killer" for those appearances through collateral experience and observation. This is a substitution that reduces the manifold present in substance to the unity of being by reference to the ground of *being a killer* for every appearance of  $it$  relevant to attention. But, if  $it$  embodies the quality of *being a killer*, then a question naturally arises: Namely, what did  $it$  kill? Whereas before the comparison between "p" and "b" involves a direct observation of a quality that is internal to the terms themselves, the conception of the predicate "is a killer" points toward another object of which an interpreter can become indirectly aware by the direct observation of  $it$ . For an interpreter could ask: Guilt from what? Shame for what reason? Blood by which source? Why, in other words, does  $it$  appear to satisfy such observations that seem to qualify  $it$  as embodying the ground of *being a killer*? There is then a compulsion in the direct observation of  $it$  to conceive of another object to determine if  $it$  truly satisfies the observations that render "is a killer" predicable of  $it$ . After a sufficient number of additional observations, an interpreter may conclude that "is a killer" is not truly predicable of  $it$  because  $it$  does not satisfy the requirements of collateral observation. Perhaps, for example, the guilt (shame, blood, ...) is explainable solely in reference to  $it$ . Then the direct observation of  $it$  would not entail the conception of anything else for an interpreter to become indirectly aware. Other observations may lead to an indirect awareness of something else, but the conception of this object could nonetheless disqualify  $it$  as embodying the quality of *being a killer*. Such would occur, for example, if the guilt came from a mistake, the shame from ridicule, or the blood from an innocuous source. All of these additional observations are comparisons of  $it$  as a relate that lead to an indirect awareness of another object that an interpreter must conceive of as a distinct and opposite correlate, which determines if  $it$  is a killer of something else. Some of these correlates may disqualify  $it$  from *being a killer* of anything else, but some could confirm that  $it$  stands in relation to *something killed*. Whenever this occurs, the predicate "is a killer" is truly predicable of  $it$  and the conception of  $it$  as embodying the quality of *being a killer* entails a relation to *something killed*. Then  $it$  becomes the relate  $a$  and the conception of  $a$  entails a comparison

that represents *a* as embodying the quality of *being a killer*, which entails a relation to a distinct and opposite correlate *b* that an interpreter will represent as embodying the quality of *being something killed by a*. For every *killer* supposes *something killed*, while anything *killed* supposes some *killer*. Thus, if *a* truly embodies the quality of *being a killer* and *b* embodies the quality of *being something killed by a*, then “is the killer of” is truly predicable of “*a* and *b*.” Then the proposition “*a* is a killer of *b*” is substitutable for those comparisons in a different context but according to similar circumstances through collateral experience and observation. Given the process of conception is formalizable with the form of syllogism in valid inferences by hypothesis, induction, and deduction, then the entirety of this conception is a process of reasoning.

The reasoning process in the previous comparison terminates with the substitution of the proposition “*a* is the killer of *b*,” which properly reduces the manifold present in substance to the unity of being. This proposition is a relative of *opposition* because the predicate “is the killer of” signifies an *external* quality of the relate *a* to a distinct and opposite correlate *b*. Thus, the proposition “*a* is a killer of *b*” signifies an external quality by reference to a *dyadic* ground that irreducibly refers *a* to *b*. This is confirmable by the method of precision. If the predicate “is the killer of” is prescinded from the correlate *b*, then there is a negation of the relation between *a* and *b*, which entails that *a* cannot embody the quality of *being a killer* because *b* cannot qualify as *something killed by a* in the absence of a relation to *a*. Similarly, though, if the predicate “is a killer of” is prescinded from the relate *a*, then there is a negation of the relation between *b* and *a*, which entails that *b* cannot embody the quality of *being something killed by a* because *a* cannot qualify as *being a killer* in the absence of a relation to *b*. Thus, the relation is not reducible to either relate or correlate without the negation of the opponent itself, which is why the ground is not prescindible from either term and therefore entails a dyadic relation between them. Thus, the proposition “*a* is the killer of *b*” is a relative of *opposition in disquiparance* because there is an active and passive form for this opponent: Namely, the active disquiparant “*a* is the killer of *b*,” and the passive disquiparant “*b* was something killed by *a*,” which has the contrary ground of the active form. Hence the two terms mutually implicate one another in a factual correspondence: That is, *a* is a killer only if *b* was something killed by *a* and *b* was something killed only if *a* is the killer of *b*. This factual correspondence is an *indexical* relation of signification (W2:56, 1867). For their mutual implication determines the possibility for a comparison that can represent *a* as an *index* of *b* in the active disquiparant “*a* is the killer of *b*,” and thus a comparison that can represent *b* as an *index* of *a* in the passive disquiparant “*b* was something killed by *a*.” Thus, both active and passive forms must obtain if a relative of *opposition in disquiparance* is truly substitutable, which is why the dyadic ground is prescindible neither from the active and passive form nor the disquiparant itself. Of course, future inquiry may discover that *b* was in fact *not* something that *a* killed. Then *a* no longer qualifies as a *killer*, so there is no rationale to introduce the proposition “*a* is a killer of *b*” because the passive form of this disquiparant is false. Nonetheless, the concern is with the logical conditions for successful predication rather than the truth-conditions of propositions that successfully predicate. Thus, whether or not *a* is truly a killer of *b* does not alter the fact that, in order to qualify as a *killer*, *a* must stand in a factual relation to a distinct and opposite correlate *b* as embodying the quality of *being something killed by a*. That is, successful predication of “is a killer of” requires every *killer* to relate to *something killed*; or, conversely, that everything *killed* relates to some *killer*. Only then is there a rationale for the substitution of the proposition “*a* is a killer of *b*” and afterward inquiry can determine if the proposition is true or false throughout the course of future inquiry. Let “*diaparance*” denominate the type of comparison that occasions or serves as the rationale for the introduction of propositions or relatives of *opposition in disquiparance*. Then *diaparance* is the occasion or rationale for the introduction of “*a* is the killer of *b*” because this proposition is a relative of *opposition in disquiparance* that indexically signifies an external quality by reference to a dyadic ground that irreducibly refers the relate to a distinct and opposite correlate for a factual correspondence. Given *a* and *b* can act as indexical signs of one another in the proposition “*a* is a killer of *b*” only if there is a

reference to their dyadic ground of factual correspondence, but this reference itself depends upon the introduction of a relative of opposition in disquarance by diaparance, then the role for the category of relation in this instance is to occasion the generation of an *index* as a type of sign and thus explains the origins of *indexical* signification in diaparance.

The interpretant in diaparance represents the relate as an index of a distinct and opposite correlate by reference to a dyadic ground of factual correspondence. That is, the interpretant in diaparance is the medium through which a relate is indexically signifiable as standing in a factual relation of correspondence to a correlate other than itself. While the predicate that signifies an indexical relation is not prescindible from the correlate in propositions or relatives of opposition in disquarance without the loss of the dyadic ground of factual correspondence, the predicate is nonetheless prescindible from the interpretant in diaparance. The dyadic ground is prescindible from the interpretant in diaparance because diaparance neither occasions the factual correspondence between the relate and correlate in disquarants nor determines the intrinsic significance of their indexical relation. The relative of opposition in disquarance itself confers the role of an index upon the relate because a factual correspondence, if true, obtains between the relate and correlate independently of any representation in diaparance. The interpretant in diaparance merely *represents* (or presents the factual relation again) in propositional form, such that the interpretant presents the relate as an index of the correlate again in a *representation* by diaparance. Thus, the factual correspondence exists beyond this *representation* in diaparance, such that the facts and their intrinsic significance through their indexical relations with one another *compel* the interpretant to mediately *represent* them as *indices* of each other in whatever relatives of opposition in disquarance they happen to occur. That is, there is a *compulsion* for the interpretant to *represent* the relate as in itself indexically signifiable because this relate compels the interpretant to *represent* a distinct and opposite correlate as a factual correspondent in some disquarant. Suppose, for example, an *it* embodies the quality of *being a killer*. Then this *it* is also a relate *a* that entails a dyadic relation of factual correspondence to something else. If an interpretant in diaparance *represents* this relate, then this *representation* will compel the interpretant to *represent a* as an index of *b* as a distinct and opposite correlate in the disquarant '*a* is the killer of *b*' because *b* must embody the ground of *being something killed by a*. But the indexical relation still obtains whether or not there is any reference to the interpretant in diaparance, which is why their factual correspondence has a compulsive effect on diaparance and not conversely. That is, if true, the relative of opposition in disquarance '*a* is the killer of *b*' is a real relation among facts that are indices of one another whether or not an interpretant has or will ever *represent* them in diaparance. For, if true, *a* is still a killer and *b* remains *something killed by a*, such that *a* is an index of *b* (or *b* an index of *a*), even if no interpretant has or ever will *represent* this relation of factual correspondence. Thus, the dyadic ground is prescindible from the interpretant because the factual correspondence between *a* and *b* would still obtain even if diaparance never *represents* their indexical relation in a disquarant. The prescindion, in other words, does not entail the loss of the irreducible referral of the relate to a distinct and opposite correlate. Hence, an indexical signification is reducible to the relate, correlate, and their dyadic ground of factual correspondence because the interpretant in diaparance is dispensable. Given that relatives of opposition in disquarance are propositions that signify factual relations among indices, then diaparance is also the origins for any distinction between inner and outer, fact and fiction, culture and nature. Because only in diaparance is there a *representation* of something beyond representation in comparison, which is why the interpretant is dispensable and therefore the dyadic ground of factual correspondence is prescindible from the interpretant in diaparance. This is why a comparison by contrast for a hypostatic abstraction is necessarily through a relative or proposition of opposition in disquarance by diaparance: Namely, an interpreter must compare the facts to determine if there is truly and really any agreement among their qualities for successful predication to occur in the proper context and according to the relevant circumstances.

### 5.3 On the genealogy of symbols in comparance

The third and final comparison is between the French word *homme* and the English equivalent *man* as entries in a French-English dictionary (W2:53, 1867). Clearly, if an interpretant can represent the parts of a dictionary, then the sensational basis for nearly every complex conception has already long been established. Such a comparison will then most decidedly occur at the upper-limit of the reasoning process within the domain of consciousness for conception proper. Because a dictionary already supposes a world of signs and their objects, which entails a store of potential predicates with an actual signification for a system of language to guide them in interpretation. Thus, the words *homme* and *man* are already signs that are a part of an interpreter's collateral experience if any comparison between them is possible. Hence, an interpreter can appeal to the hypostatic abstractions that correspond to each sign from their past predications through collateral experience, while collateral observation will confirm what this entails for the proper context of their applicability. By an appeal to this collateral experience, an interpreter can represent *man* as signifying a two-legged creature endowed with rationality and *homme* as also signifying a two-legged creature endowed with rationality. This satisfies the requirements of deduction and determines the proper context of applicability for either *homme* or *man* from their past predications. Of course, these past predications presuppose a familiarity with the French and English language that is a part of an interpreter's collateral experience. With this linguistic proficiency in French and English, the problem then becomes: How can an interpretant in some type of comparison represent *man* as signifying the same object that *homme* signifies? To become comparable with one another, an interpretant must represent the signification of *homme* as the relate  $p$  and the signification of *man* as the correlate  $q$ . Then the interpretant would survey the relevant circumstances in collateral observation: Namely, through a higher-order set of valid inferences by hypothesis and induction, the interpretant would recognize the parts of a French-English dictionary and determine their proper use in this context. Of course, such a recognition is also a part of the interpreter's collateral experience, so circumstantial relevancy will tend to guide an interpreter on how to use a French-English already. Thus, the interpretant will compare  $p$  as the proper entry for the French definition of *homme* and compare this with  $q$  as the English definition of *man*. Thus, the interpretant in this comparison can represent  $p$  as signifying the same object that  $q$  signifies because both share the same definition according to collateral experience and observation. Given the process of conception is formalizable with the syllogism in valid inferences by deduction, induction, and hypothesis, then the entirety of this conception is a process of reasoning. This process of reasoning terminates with the substitution of the proposition "*homme* is a sign of *man*" (or the relate  $p$  signifies the same object that correlate  $q$  signifies) for substance; which properly reduces the manifold present therein to unity by reference to the ground of *being a two-legged creature endowed with rationality* that both words share in virtue of their identical definitions in a French-English dictionary.

The reduction of manifold occurs with the predication of "is a sign of" to *homme* and *man*, which substitutes the unity of being in the proposition "*homme* is a sign of *man*" for substance. But this proposition is not a relative of concurrence. Even though the proposition entails that *homme* and *man* signify the same object, the correlate  $q$  is not assimilatable into a class of agreeing things with the relate  $p$  and their ground of agreement. There is a ground that  $p$  and  $q$  share: Namely, the abstract definition that corresponds to the signification of each word. But the relation of signification that each word stands in to their abstract definition is not a relation of similarity: Neither *homme* nor *man* are similar to a two-legged creature endowed with rationality because a word is not similar to a creature. Thus, the proposition "*homme* is a sign of *man*" is not a relative of concurrence because neither *homme* nor *man* are icons of a two-legged creature with rationality, and therefore, neither are they icons of one another. Hence, the type of comparison that occasions or serves as the rationale for the introduction of the proposition "*homme* is a sign of *man*" is not a uniparance. Rather than a relation of similarity, the comparison between *homme* and *man* represents these words on the basis of convention. More specifically, the

interpretant in this comparison represents *homme* and *man* as signifying a two-legged creature endowed with rationality according to the different conventions from the linguistic communities of French and English speakers. Hence, neither *homme* nor *man* could act as icons of one another in any uniparance because the signification of each word belongs to a different language with a sensational and conceptual origin unique to each. The sensational origin of *homme* and *man* are the different nominal hypotheses of French and English speakers, while their conceptual origin is the etymological histories unique to each sign in the French and English languages. Thus, the linguistic communities of French and English speakers came to use *homme* and *man* differently and independently of one another according to their own conventions because the French and English languages have distinct histories and thus diverse words with unique etymologies. Hence, the proposition "*homme* is a sign of *man*" could never act as a relative of concurrence in any uniparance because *homme* and *man* are irreducibly different words; which entails the ground of *being a two-legged rational creature endowed with rationality* is not prescindible from the correlate because each word has that ground in virtue of a distinct linguistic history. Since a proposition is either a relative of concurrence or opposition, then the proposition "*homme* is a sign of *man*" is an opponent.

The proposition "*homme* is a sign of *man*" is a relative of opposition because the relate (or the signification of *homme*) irreducibly refers to a distinct and opposite correlate (the signification of *man*). The correlate is distinct from and opposes the relate because each word has a different signification in virtue of the etymological histories unique to each for their respective languages. This is confirmable by the method of precision. If the predicate "is a sign of" is prescinded from the correlate, then no comparison would relate the signification of *homme* to *man*, which entails the negation of the possibility for the introduction of the proposition "*homme* is a sign of *man*." Similarly, if the predicate "is a sign of" is prescinded from the relate, then no comparison could relate the signification of *man* to *homme*, which entails the negation for the possibility of the introduction of the proposition "*homme* is a sign of *man*." Thus, reduction to either relate or correlate would entail the negation of the proposition itself, which entails that this proposition is a relative of opposition because there is a ground that irreducibly refers the relate to a distinct and opposite correlate. But this proposition is not a relative of opposition in disquarance, nor therefore is their comparison by any diaparance, because the ground is not dyadic. The ground is not dyadic because there is not a factual correspondence that exists beyond their representation in comparison, so there is no compulsion for the interpretant to represent *homme* as an index of *man*, nor either as an index of a two-legged creature endowed with rationality. Thus, the proper conception of *homme* or *man* does not necessarily entail something else as their factual correspondent, nor of each as an index of the other. An interpretant could simply represent *homme* as signifying a two-legged creature endowed with rationality without ever having to represent *man* as signifying the same object or vice-versa. Such would occur, for example, whenever a French speaker ignorant of English uses the word *homme*; or an English speaker ignorant of French uses the word *man*. Without a mutual implication between these words as indices of one another in a factual relation, the proposition "*homme* is a sign of *man*" cannot act as a relative of opposition in disquarance for any diaparance. Indeed, this is confirmable because the proposition "*homme* is a sign of *man*" does not have an active and passive form. There is no factual relation beyond their representation in comparison because the signification of either word is merely a consequence of their use according to the conventions of their respective languages: Namely, *homme* and *man* signify their objects by stipulation rather than by compulsion, such that neither word would exist beyond the communities of French and English speakers. Through the object that each word signifies would continue to exist in the absence of these linguistic communities, *homme* and *man* only signify this object because French and English speakers *impute* to them the quality of their abstract definition. French and English speakers, in other words, stipulate that such a quality belongs to either word according to what they intend them to signify. This *imputed* quality is a consequence of an act of stipulation and then a conventional association between *homme* and *man* and the objects

they intend to signify according to their habitual use by French and English speakers. This association is what the etymological histories unique to each sign entails for however long English and French speakers continue to impute this quality to these words. Those signs with a conventional and habitual significance are *symbols*, such that *homme* and *man* have a *symbolic* relation of signification to their objects.<sup>51</sup> Hence, the proposition “*homme* is a sign of *man*” is more properly expressible as “*homme* is a symbol of *man*” (or *homme* is a symbol of the same object that *man* symbolizes). Given the conventional and habitual significance of symbols, the interpretant in the comparison between *homme* and *man* is necessary. For there is always a need for a medium to possibly impute the quality of *being a two-legged rational creature* to either sign in order for them to signify the objects of their intended signification. This is confirmable by the method of prescission. If the predicate “is a symbol of” is prescinded from the interpretant, then there is the loss of the comparison that represents *homme* as signifying the same object that *man* signifies. Similarly, if the predicate “is a symbol of” is prescinded from the interpretant in either proposition “*homme* is a symbol of a two-legged creature endowed with rationality” or “*man* is a symbol of a two-legged creature endowed with rationality,” then there is the loss of the comparison that represents either words as signifying the objects of their conventional and habitual signification. Thus, reduction to either relate, correlate, or ground would entail the negation of the proposition itself, or the propositions that constitute their comparison. Hence, *homme* and *man* are symbols that signify an imputed quality by virtue of a triadic ground that irreducibly refers the relate to a distinct and opposite correlate for some interpretant. Therefore, their comparison with one another similarly shares such a triadic ground of conventional and habitual signification.

Once an interpretant has imputed the quality of *being a two-legged rational creature* to *homme* and *man*, then a comparison between *homme* and *man* is possible. With the collateral experience of the French and English language and how to use the parts of a dictionary, an interpretant compares the symbolization of *homme* with the symbolization of *man*, and determines that *homme* symbolizes the same object that *man* intends to symbolize. Thus, there is the substitution of the proposition “*homme* is a symbol of *man*” for substance, which reduces the manifold present therein to unity. This comparison entails that wherever *homme* occurs an interpretant can substitute *man* for *homme*. Thus, the propositions “*homme* is a symbol of *man*” and “*man* is a symbol of *homme*” are equivalent, since the terms are interchangeable for one another without the loss of any significance. Given this equivalence, the proposition “*homme* is a symbol of *man*” is a relative of opposition in *equiparance*.<sup>52</sup> This entails that the propositions “*homme* symbolizes a two-legged rational creature” and “*man* is a two-legged rational creature” are also equiparants. Because the interpretant in these comparisons determine that wherever a two-legged rational creature occurs the signs *homme* and *man* are substitutable for this object as their symbols. This mutual substitutability is why an interpretant can substitute *homme* for *man* and *man* for *homme*. Thus, the propositions “*homme* is a symbol of *man*” and “*man* is a symbol of *homme*” are equiparantly relative to one another because of this mutual substitutability that an interpretant can determine in a comparison. Let “*comparance*” denominate the type of comparison that serves as the occasion for propositions or relatives of opposition in *equiparance*.<sup>53</sup> Then, *comparance* is the occasion for the introduction of the proposition “*homme* is a symbol of *man*,” which is a relative of opposition in *equiparance* that symbolically signifies an imputed quality in virtue of a triadic ground of conventional and habitual significance that irreducibly refers the relate to a distinct and opposite correlate for some interpretant. Given *homme* and *man* can act as

51 Peirce (W2:56, 1867) describes symbols (or *general signs*) as imputative, but the necessity of an interpretant for the imputation of a quality entails a conventional and habitual association between symbols and their objects and thus a triadic ground among the relate, correlate, and interpretant.

52 Peirce fails to notice that propositions with symbols can stand in relations of *equiparance* to one another, which is remarkable because this would explain why propositions are substitutable for one another in a valid deduction.

53 The neologism for this type of comparison derives from the Latin prefix “com-” which is a translation of the Greek prefix “sym-” in part of the root of the Greek word for “symbol” and thus intends to describe how “*comparance*” is the type of comparison that occasions symbolic relations of signification.

symbolic signs of one another in the proposition “*homme* is a symbol of *man*” only if there is a reference to their triadic ground of conventional and habitual significance, but this reference itself depends upon the introduction of a relative of opposition in equiparance in comparance, then the role for the category of relation in this instance is to occasion the generation of a *symbol* and thus explains the origins of *symbolic* relations of signification in comparance.

## 6 Conclusion

Every conception in each example of comparison is formalizable with the syllogism in valid inferences by hypothesis, induction, and deduction; so conception is truly a process of reasoning that terminates with the substitution of a proposition for a manifold of sensuous impressions and thus the reduction of substance to the unity of being. The categories are the logically necessary elements for every conception because without their introduction into the reasoning process there is neither a substitution of a proposition nor therefore a reduction of substance to the unity of being. Peirce derives the categories by induction, while precision is the method for their validation into a logically necessary order with a numerical arrangement bound by relations of priority and posteriority among a hierarchy of conceptions. Hence, the category of relation is logically fundamental for a reference to the ground because a reference to a correlate is necessarily prior to the introduction of a quality; while a reference to a correlate is necessarily posterior to the category of representation because a reference to an interpretant in comparison is logically fundamental for the introduction of a relation. Given every conception in each example of comparison can act as a sign in a proposition only if there is a reference to their unique type of ground, but this reference itself depends upon the introduction of a relation by comparison, then the role for the category of relation in each example is to occasion the generation of a certain type of sign and thus explain the origins of each type of sign in the different types of comparison. Thus, the argument of the New List is a validation of the correct *list* of categories, which were previously derived by induction, and this new way to list the categories explains the generation of every possible type of sign. Thus, the argument of the New List qualifies as a genealogy of signification and therefore is a phenomenology of logic as a science of semiotics. Hence, the New List terminates with a complete classification of logic where terms, propositions, and arguments correspond to the different types of sign necessary for a science of semiotics. Since the present analysis solicits aid from Peirce's early and later writings, this analysis terminates with a classification of signs different from the science of semiotics at the end of the New List. There are three species of sign that correspond to the division of terms: A term is either an *icon* (“is a p”), *index* (“is a killer of”), or *symbol* (“is a man”). Then, three species of sign that correspond to the division of propositions: A proposition is either a relative of *concurrence* (“p is similar to b”), a relative of opposition in *disquiparance* (“a is the killer of b”), or a relative of opposition in *equiparance* (“*homme* is a man”). But, what of the division of arguments? If conception has the form of valid inference, then the different types of comparison ought to afford the different forms of argument that validly substitute the diverse types of proposition, which signify differently with the different types of term by reference to their unique types of ground. Thus, the different types of comparison will act as the different types of sign-relation in illation that differentiate the valid forms of argument. A hypothesis is a form of valid argument in which the premisses *concur* with their conclusion in virtue of an *iconic* relation of signification because the sign-relation in illation is a representation by *uniparance*. An induction is a form of valid argument in which the premisses *disquipare* with their conclusion in virtue of an *indexical* relation of signification because the sign-relation in illation is a representation by *diaparance*. A deduction is a form of valid argument in which the premisses *equipare* with their conclusion in virtue of a *symbolic* relation of signification because the sign-relation in illation is a representation by *comparance*. Thus, the three species of sign that correspond to the division of arguments are the different types of

comparison that illation signifies: Namely, the sign-relations in illation by uniparance, diaparance, and comparance. If the comparison in illation determines the conclusion is similar to the premisses, then the sign-relation is a uniparance and the argument is a hypothesis. If the comparison in illation determines the conclusion is a factual correspondent of the premisses, then the sign-relation is a diaparance and the argument is an induction. If the comparison in illation determines the conclusion is equivalent to the premisses, then the sign-relation in illation is a comparance and the argument is a deduction. A uniparance is the type of comparison that occasions a relative of concurrence, which is a proposition that iconically signifies an internal quality by virtue of a monadic ground among a class of relates and dispensable correlates. A diaparance is the type of comparison that occasions a relative of opposition in disquiparance, which is a proposition that indexically signifies an external quality by virtue of a dyadic ground of factual correspondence that irreducibly refers the relate to a distinct and opposite correlate. A comparance is the type of comparison that occasions a relative of opposition in equiparance, which is a proposition that symbolically signifies an imputed quality by virtue of a triadic ground of conventional and habitual significance that irreducibly refers the relate to a distinct and opposite correlate for some interpretant. Consider an instance of deduction: All *hommes* are men, this *it* is a *homme*, therefore, this *it* is a man. The conclusion “this *it* is a man” is equivalent to the premisses “All *hommes* are men” and “this *it* is a man” because everything that *homme* symbolizes is a symbol of what *man* symbolizes; so the conclusion *equipares* with the premisses because of their equivalence. Thus, the sign-relation in illation (“therefore”) is a representation by uniparance, so the argument is a valid deduction. Consider an instance of induction: *it*<sub>1</sub>, *it*<sub>2</sub>, *it*<sub>3</sub> is a killer are observations of *a*, and *it*<sub>1</sub>, *it*<sub>2</sub>, *it*<sub>3</sub> is a killer of *b*, therefore, *a* is a killer of *b*. The conclusion is a factual correspondent of the premisses, since each *it* is an index of *b* because of the observations of *a*; so the conclusion *disquipares* with the premisses because of this factual correspondence. Thus, the sign-relation in illation (“therefore”) is a representation by diaparance, so the argument is a valid induction. Consider an instance of hypothesis: *b* is *P*<sub>1</sub>, *P*<sub>2</sub>, *P*<sub>3</sub>, ..., and *p* is *P*<sub>1</sub>, *P*<sub>2</sub>, *P*<sub>3</sub>, ..., therefore, *p* is *b*. Thus, the conclusion is similar to the premisses, since *b* and *p* are icons of the same set of predicates; so the conclusion *concurrs* with the premisses in virtue of the mutual iconicity between *p* and *b*. Thus, the sign-relation in illation (“therefore”) is a representation by uniparance, so the argument is a valid hypothesis. Therefore, the New List qualifies as a genealogy of signification and is an argument for a phenomenology of logic as a science of semiotics. Hence, a science of semiotics is possible because of the categories.

This phenomenology proves that conception is a reasoning process by uniparance in hypothesis, diaparance in induction, and comparance in deduction that are together responsible for the emergence of icons in concurrents, indices in disquiparants, and symbols in equiparants. All of which maintain the reasoning process as a semiotic process through the sign-relations in illation and therefore render a science of semiotics possible. Since the analysis solicits aid from Peirce’s early and later writings, the phenomenology of logic terminates with a science of semiotics different from the one found in the New List (W2:57-58, 1867). Still, the New List can qualify as a genealogy of signification because the argument terminates with a classification of logic where the different types of terms, propositions, and arguments correspond to the different types of sign. The difference is that terms, propositions, and arguments correspond to the division among the types of symbols in the New List. But, the present analysis found that icons, indices, and symbols correspond to the different types of predicate-term. Thus, there is a category error in Peirce’s classification because icons and indices are not a species of symbolic signification. There is also no mention of what type of sign the subject-term might be. Indeed, the present analysis did not find a solution to this problem either because Peirce did not recognize that the subject-term is an index until much later when quantification became a part of the logic of relatives. Moreover, some propositions do not involve a symbolic relation of signification because relatives of concurrence and opposition in disquiparance are rather propositions that involve iconic and indexical relations of signification. Only relative of opposition in equiparance involves symbolic relations of

signification. There is then a similar category error in Peirce's classification because the section on the category of relation was neither enlarged nor rewritten to include concurrents, disquiparants, and equiparants. Finally, Peirce fails to identify the relatives in the diverse types of proposition with the valid inferences that correspond to the different forms of valid argument. Plausibly, the failure to identify the three different types of comparison that the relation of illation signifies for the different forms of valid argument is what led to this omission. Peirce does relate icons with hypothesis, indices with induction, and symbols with deduction. This at least implies how those propositions might relate to the different forms of valid argument, which is what the analysis above attempts to elucidate with a modified version of Peirce's phenomenology of logic as a science of semiotics. This modification is a consequence of *musings* over how the genealogy of signification might have developed if Peirce had enlarged and rewritten the sections on the category of relation in 1866 draft and 1867 publication of "On a New List of Categories" with resources drawn from the early and later writings. This is additional proof that the role for the category of relation is to occasion the generation of signs and thus explain the origin of each type of sign in the different types of comparison. Hence, the fact that Peirce did not enlarge and rewrite those sections on the category of relation is probably why the classification of signs in 1867 has those category errors. Perhaps, with the burden to present "the gift I make to the world" (W2:1, 1867) in the requisite time, Peirce did not have a chance to enlarge and rewrite those sections. Regardless, this is an invitation for the community of inquirers to gladly receive his "gift" and *muse* over how those sections might have been enlarged and rewritten, so the New List can still remain a guide for semiotic analysis in the present. Such *musament* is what the present analysis has attempted for an uberous (but hopefully secure) creative interpretation concerning the genealogy of signification in Peirce's new way to list the categories.

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## List of Abbreviations<sup>54</sup>

The works of Charles S. Peirce are cited as follows:

*Collected Papers of Charles Sanders Peirce*: volume (v) and paragraph (p) (CP v,p).

*The Essential Peirce*: volume (v), page (p) (EP v:p).

*Writings of Charles S. Peirce*: volume (v), page (p) (W v:p).

The work of Immanuel Kant is cited as follows:

*The critique of pure reason (Kritik der reinen Vernunft)*: KrV followed by A [1781] and B [1787], and original page(s).

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<sup>54</sup> Editor's Note: This list of abbreviations follows the rules described at: [https://en.wikipedia.org/wiki/Charles\\_Sanders\\_Peirce\\_bibliography](https://en.wikipedia.org/wiki/Charles_Sanders_Peirce_bibliography). Accessed on: 18 Dec. 2021.