**Prolegomenon to Horosemiotics:
Semiotic Ramifications of a Peircean Borderline Distinction**

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It is one thing to explore the borders of semiotics, when one would wonder what its methodological limitations might be, or at what point its activity would begin to infringe on conceptual territories traditionally named after other disciplines. It is another thing to explore the semiotics of borders, when one would wonder what kinds of borders would be open to a semiotic inquiry, in order to fulfill what sorts of theoretical expectations geared toward what sort of applications. This short essay seeks to sketch something more fundamental: the heuristic power of the concept of border when the latter is approached not in terms of limit or threshold, but in terms of a transitional region crisscrossed by rules barely determinate. After positing the question, this paper will first present a fundamental logical distinction recently introduced by Giovanni Maddalena and Fernando Zalamea regarding the nature of analytic, synthetic, and horotic judgments. It will then turn to considerations born out of Peirce's graphical representation of the logical transition from the antecedent to the consequent of a conditional proposition, a transition entailing a move through enclosures bordered by walls or fences, the function of which is to determine the process or progress of inferential inquiry. Such a process of determination will be shown to constitute a strategy enabling inquirers to cope and deal with vagueness, vagueness being the very logical character that affects the border zones of inquiry. At that point our discussion will usher in "horosemiotics" and seek to define it on the basis of Peirce's phaneroscopic categorial theory, attending to his emphasis on "prescision" as a logical type of separation that establishes a special kind of border endowed with unusual heuristic power, and determining what that entails regarding a Peircean semiotic strategy of inquiry. The paper will conclude with proposals regarding how to conduct a semiotic horosis.

The proposed topic for this year's conference, "The Semiotics of Borders and the Borders of Semiotics", was suggested by the current cultural, social, and political climate, deeply anxiogenic and bursting with questions worth exploring, including "limits and possibilities of semiotic inquiry", "questions of border crossing", and "expressions of 'inner' 'and outer', inclusion and exclusion". Given my longstanding interest in Peirce's philosophy, I wondered what kind of paper Charles Peirce would have written on such a thematic occasion. The broad answer to that question is easy to express, although fiendishly difficult to articulate. Peirce would have mulled over the concept of border, or boundary, using the tools afforded by mathematics and formal logic in order to get down to the bottom of it. But he would have also examined it from the standpoint of semiotics, that is, of semiotic logic, and specifically from the standpoint of a subset of that logic: the logic of discovery and of inquiry. And, indeed, it turns out that the logic of discovery and inquiry, whether mathematical, philosophical, logical, or scientific in the widest

sense, is fundamentally a logic of border-crossing and of mapping possible frontiers. It is a logic that, far from being content with merely finding frontiers or setting permanent boundaries, strives to explore zones of uncertainties, blurry thresholds, murky borderlands, regions whose landscape varies at every step. It is a logic that tests borders by making them out tentatively, and then pushing them, or pulling them, in a perpetual hypothetical back and forth, looking experimentally for emerging sustainable patterns.

Italian philosopher and Peirce scholar Giovanni Maddalena has written a few seminal papers in that direction, with help and support of Fernando Zalamea, a polymath philosopher and mathematician from Colombia. Together, they wrote seven years ago an article of great significance, titled “A New Analytic/Synthetic/Horotic Paradigm: From Mathematical Gesture to Synthetic/Horotic Reasoning” (Maddalena 2012). The word “horotic” may not be familiar but is of great topological significance. It comes from a Greek word, *ὄρος* (*horos*). One common translation for it is “border”. It has given rise to the word “horotics”, the latter denoting a specific methodology of inquiry. To understand it, we have to contrast it with two better known methodologies of inquiry. One is the type of inquiry that is *analytic* and that seeks to break whatever is observed down to its components, thereby *losing the very identity* of the object that was at the source of the observation; that type of inquiry yields analytic judgments and conclusions. The other is the type of inquiry that is *synthetic* and seeks to figure out through all kinds of structural combinations or recombinations what sorts of recognizable objects or fragments of objects emerge regularly that present and *maintain a certain determinate identity*. An *analytic inquiry* tends to abstract universals from particulars, while a *synthetic inquiry* seeks to observe how universals replicate or contract themselves into particulars, as is done in mathematics. Mathematicians replicate universals through the act of writing symbols and drawing graphs onto a board or sheet of paper. While drawing and graphing, they keep observing what patterns appear to hold up or evolve through formal graphic transformations. Such an observation yields synthetic judgments.

Far lesser known but just as important are what Maddalena and Zalamea have come to call *horotic judgments*. Those judgments are by no means new. They are very common. But their specificity has only been made out recently, in part because analytical philosophers were blind to them. Maddalena (2012: 211) defines them as follows:

A horotic judgment defines a frontier, a border, a sort of pendular differential and integral calculus which focuses on the possibility of relations, that is on the relative *spectrum* of the transformation, and is thus [unable] to detect actual identities.

Admittedly, this definition is not pellucid. It conveys the idea that a horotic judgment represents a zone of transition between an analytic (“differential”) conclusion and a synthetic (“integral”) conclusion, a zone within which inquiry moves back and forth between those two opposite limits as it seeks to capture

the network of possible relations that constitute the spectrum of those transformations that will lead to either limit. As such the horotic judgment is not concerned either with the (synthetic) identity of whatever object of inquiry is at stake, nor with the breaking down of that identity at the analytical level. If the horotic judgment is not concerned either with identity or the loss of it, that is because it seeks to capture, without bias, the spectrum of dynamic possibilities—the potential—that properly constitutes what Peirce called the dynamic object of inquiry (or of semiosis), before it has yielded any conclusion one way or the other. The heuristic strength of a horotic judgment is that it is open to possibilities not yet inferred. It seeks them actively, regardless of ambient paradigms that may have rigidified into methodological standards of research or into established theories.

This all becomes clearer when one attends to the fact that Maddalena has elsewhere characterized the horotic judgment as a “vague” judgment. As a methodology, horotics studies the borders of knowledge and strives progressively, through processes aiming at increased consistency, to discover stable frontiers through the fog of blurry boundary zones, or to redefine more precisely and richly the actual contours of hypotheses and their consequences, especially the actual reach of conceptions and theories, when the latter find echoes within analogous or potentially analogous fields of research. The major difference between vague and general judgments or reasonings is that *general statements are open to further interpretation* of what they entail, while *vague statements restrict or hamper interpretation* through a lack of symbolization of the objects they stand for. Horotic or vague judgments cannot make out the identity of the object calling for observation or explanation, and therefore provide not interpretations but proposals. What they do is to provide richer renditions of elusive objects through various ways of prodding them, pushing their envelope as it were, by formulating guesses that might start with a “what if”: What if we tried this other strategy? What if we moved that thing into a different enclosure? What if we changed the conditions of observation, the conditions of being, the conditions of inquiry? What if we surmised that the elusive object had these or other qualities or properties? Horotics investigates and plays with IFs with bold creativeness.

As already suggested, horotic inquiry mediates and swings back and forth between analytic and synthetic judgments. To understand this, let us turn toward Peirce’s representation of a conditional proposition *de inesse* in his system of existential graphs. A conditional proposition *de inesse* is the simplest kind: it involves no modalities, no may-bes or would-bes. If A is the case in a particular universe, then B is the case in that same universe, period. Let us observe Peirce’s representation of that conditional in Figure 1.

Figure 1

When Peirce devised a graphical representation for the logical passage from antecedent to consequent in a conditional sequence (IF—THEN —), he drew a sign he called a “scroll” made of a circle whose ends cross each other to form an inner loop. The line forming the larger circle’s border (*the locus for antecedents*) he sometimes called a “wall”, while the line forming the inner loop (*the locus for consequents*) he sometimes called a “fence”. The wall’s outloop (also called a “cut”) isolates the antecedent conditions from the rest of the assertible universe, while the fence separates the consequence from the isolation of the antecedents. Either the antecedent conditions are not allowed to exercise themselves in the universe or if they are, then the consequence results in the universe. Whether or not the consequence does belong to the sheet of assertion as would indicate the double loop (outloop and inloop) that encircles it—given that a double cut affirms its content in the same way as a double negation does—depends on whether the scroll is actually *de inesse* or not—and that in turn depends on how actually secure the boundary formed by either loop is. Simple propositional logic or first-order logic might take that security for granted. But that would be to ignore the fact that the world asserted in such a secure sheet of assertion is a complete abstraction—*abstracted from the worlds of possibilities* from which it emanates as one possibility, and *abstracted from the worlds of regularities* of which it is one possible implementation. Horotic inquiry is the kind that does not take the boundary formed by any cut (or loop, or

“sep”, or “wall”, or “fence”) for granted. Horotic inquiry questions whether what is enclosed in any close, inner or outer, or the sum of its contents, is the end of it. Horotic inquiries question the sufficiency of an analytic inquiry as much as the completeness of a synthetic inquiry. How porous are those walls? How elastic are those fences?

Let us return to the idea that horotic judgments are *vague judgments*. Peirce defined vague propositions as propositions to which the principle of contradiction does not apply. Something vague can at once be a dog and not a dog. What is vague does not provide enough clues to become recognizable with any sort of assurance. Vague propositions are distinct from general propositions, for the latter are propositions to which the principle of contradiction *does* apply, but *not* the principle of excluded middle. Indeed, the proposition “All people are mortal” applies as much to good people as to evil people, and the entire range in between. In Peirce’s 1867 paper “Upon Logical Comprehension and Extension”, while discussing the balance between the breadth and depth of propositions, Peirce took the concept of boundary as an example of a *term without breadth* and stated: “It is not really contradictory . . . to say that a boundary is both within and without what it bounds” (1867b: CP 2.420, W 2.83), for the reason that attributing the property of being *within* what it bounds or of being *without* what it bounds adds nothing to its breadth, or again does not affect the range of applicability of the concept of boundary whatsoever. Grasping this is very helpful because it entails that from that standpoint the concept of boundary is, by definition, vague. It is at once inside itself and outside itself, without contradiction. Vagueness is therefore at the core of the idea of border, as a matter of logic in the first place, and also of metaphysics when taking the full measure of its reality.

Another property of vagueness has already been alluded to: vague propositions, by leaving their object indeterminate in some respect, prevent a determinate interpretation from arising. To the extent that an object of inquiry is indeterminate, to that same extent the sign or complex of signs (such as a theory) that represents it will be vague. Given that horotics is the activity that studies those vague borders, any semiotics of borders would have to depend on horotics. Let us call then such semiotics “horosemiotics”.

A general semiotic study of borders would likely distinguish all sorts of them: borders meant to maintain conservative dualisms that base inclusions on exclusions (either in or out); borders meant to emphasize possibilities of transformation and evolution; borders serving as staging areas where preparations, evaluations, negotiations, and more generally mediations take place. They are also places of transit between areas that are governed by distinct sets of laws. They may be abrupt indexical signs anchoring intransigent criteria of classification, or symbolical signs that usher in distinct teleological choices. Sometimes borders are critical limits or thresholds beyond which states of reality are said to “emerge” that were not conceivable or actualizable short of those limits and yet were readied incrementally for such actualization through some accumulation of energy or other sort of complexified

organization until the limit was reached and conditions fulfilled. The question-begging concept of emergence has no explanatory power on its own but simply points out such transitions as loci for inquiry. As such, emergence turns propositions into possible premises capable of leading to conclusions. The borderlines of inquiry have a well-known inferential and thus directional structure of logical implication, as illustrated in the scroll: IF — THEN —. What are the conditions—the IFs—that drive something to emergence, that is to crossing a border called “THEN”? What are the hypotheses that IF sound would THEN explain what we observe? Borders are iffy barriers meant to be lifted under certain conditions.

There is a passage in Peirce’s text “Issues of Pragmaticism” (1905: EP 2.353, CP 5.450) where he reflects on the distinction between affirmation and denial and then states:

[I]t is to be remarked that there are cases in which we can have an apparently definite idea of a border line between affirmation and negation. Thus, a point of a surface may be in a region of that surface, or out of it, or on its boundary. This gives us an indirect and vague conception of an intermediacy between affirmation and denial in general, and consequently of an intermediate, or nascent state, between determination and indetermination. There must be a similar intermediacy between generality and vagueness. Indeed, . . . an endless series of such *intermediacies*.

The suggestion here is that borderlands—those regions on either side of a vague border—may be nebulous, but that does not imply that the fog is randomly patchy or irregular. So long as we are not dealing with the secondness of a concrete wall or some such, borderlands tend to be zones of transition, of blending, where dynamic processes of transformation occur according to consistent patterns that sustain the series of intermediations. If there is an endless series of intermediacies between vagueness and generality, that suggests that some sort of dynamic, even directional, continuum is at work. Horosemiotics ought to be able to capture that process through some sort of horotic methodology that swings from the analytical to the synthetic, back and forth.

Peirce suggests sometimes that a *real* border is witnessed only when two distinct continua *that have no common firstnesses* happen to be *contiguous*, such as a blue area infinitesimally close to a red area. The boundary between the two is neither blue nor red, nor neither, nor both. It manifests, even activates, the pairedness of the two, by becoming for each area the active Secondness of the contiguous area (Peirce 1898: CP 6.203, RLT 262). Such boundaries that activate contiguity are not meant to be traversed, nor to be places of mediation. They are places that emphasize oppositions, without themselves being involved on either side: any such boundary is neither the disjunction of those areas nor their conjunction, just the sign and site of their mutual reaction. There is no if/then between the two. The boundary is then merely the sign of their distinction. Such a boundary acts like a pure rhematic indexical sinsign. It is not propositional since it does not indexicalize a qualisign. The red area constitutes its own proposition (or

dicent sign): “This area here is red”. The same holds for the blue area. But the boundary formed by their continuity states nothing of the sort. It merely stands for the limit between two dicent indexical sinsigns, representing itself as strictly non-iconic, and therefore non-resembling anything. Such a kind of boundary is therefore neither a bridge nor a threshold, but a mere wall, ultra-thin but insuperable, created by the very contiguity of incompatible sides.

Not every contiguity is a wall: that depends entirely on the spectra of qualisigns being actualized on either side, and thus on the actual degree of alienation or otherness between or among the sides. It does not take much for a wall to be breached, after all: a mere modicum of shared firsts is all it takes. Imagine you color a little red dot into blue at one point of the boundary, and a little blue dot into red at another point of the boundary. One could argue that nothing changed, apart from an infinitesimal alteration of the boundary: the red area expanded into what was blue territory, and vice versa, but that merely caused the shape of the territories to change ever so slightly without impacting the nature of the boundary whatsoever. That is very true. Now move the blued red dot further inside the red area, and the reddened blue dot further inside the blue area, thus both away from the boundary. We now have a “mostly red” area adjacent to a “mostly blue” area. “Mostly” is the adverb that manifests the alteration that took place: one cannot but acknowledge that each area now shares something in common with the other. Granted, that does not affect the immediate vicinity (or “neighborhood” as Peirce says) of the boundary itself. Yet the possibility that such a boundary has become breachable has now become a reality, because one might say that each area has now an enclave in the other. An element of resemblance has entered the pairedness of the two areas. That one element of commonality, infinitesimal though it may be, is all it takes for a ground of negotiation and mediation to emerge. The red dot in the blue area speaks to the red area, and the blue dot in the red area speaks to the blue area. It therefore becomes possible to bring the two areas into a set of propositions that can be meaningfully concatenated and eventually yield symbolical arrangements.

How could this happen? Imagine the infinitesimal boundary between the red and blue areas widens to an inch. It now has become an elongated narrow surface with its own color (white, for instance) bordering between the red and blue areas, but it is itself reacting against both areas by being contiguous to both, with its own set of two infinitesimal boundaries. The boundary has therefore turned into a third area between the two initial red and blue areas. Let’s call this area a ribbon. Imagine that this ribbon, instead of being white, is a dense mixture of equally distributed blue and red dots, which might look purple at a distance. It would still stand out as a distinct area, but one would experience this ribbon much more as a bridge between the two areas than as a wall. Imagine now that this ribbon gets incrementally decreasingly red and increasingly blue as it transitions from the red side to the blue side, simply by adding more and more blue dots and reducing the number of red dots lengthwise across the width of the ribbon. The visual

effect would produce a boundary far less abrupt (or “transilient”) than before. The wider the ribbon, the smoother the transition, perhaps. Imagine the ribbon to be much wider. The question might then be asked: where is the border between the red and blue areas? At what locus of the ribbon could one say that the transition to the blue area is complete? Equivalently, one might also ask, where does the ribbon begin, on either side? Where is the border? Where does it begin or end? The answer will likely be similar to the question “how many grains does it take to form a heap?” The answer will be vague. Why? Because the answer cannot possibly be precise: attributing heapness to an accumulation of grains is a *symbolic* performance, not a physical performance. Symbols are not reducible to indices (where each index is a grain). Heapness as symbol will emerge inexactly and yet correctly, for it has nothing to do with a precise count of grains, but everything to do with a predicative attribution of a concept to express an experience. That act is propositional not as a sinsign but as replicated legisign. The continuous ribbon is akin to such a replicated legisign, while the boundary characterized by pure contiguity is a pure sinsign. The ribbon as described in the latter stage manifests a transitional process of continuous modification of a determination, whereby the manifestation of one color loses determinacy incrementally, and the other gains determinacy incrementally. The ribbon hovers over that move from determinacy to indeterminacy and vice versa. Because of its blend of increasing and decreasing vagueness at both its edges, the locus of those edges is uncertain, and therefore the locus of the ribbon itself is uncertain. This is an indication that somehow the two colors no longer clash against each other anywhere: the border that activated their mutual secondness disappeared. What we have instead is a continuous bidirectional crossing, which can be itself orderly or disorderly, transitioning perfectly smoothly at a regular rhythm of increase or decrease, or more chaotically and randomly and therefore less evenly or more oddly, until one begins to perceive that one has reached the area that is now fully red or fully blue, without knowing for sure when that transition was actually completed.

But whether there was such a transition is beyond doubt. Yet it was a transition without a threshold. This does not mean that thresholds cannot be made up, either arbitrarily or through some statistical procedure. What happens in such cases is that some particular limit is assigned an index (often under the form of a numbered quantity or a range thereof), and that indexical mark will then turn into a condition for the affirmation or denial of a certain predicate to a subject, usually to standardize a norm from which follows, or does not follow, a certain conduct or activity. Such a mark is known variously as a borderline, dividing line, demarcation line, cutoff point, a margin, etc.¹ Peirce’s making the boundary line neither red

¹ The concept of a “borderline” denotes, in its substantive form, a division between two distinct, or even extremely distinct, conditions, while in its adjectival form it connotes things that are barely acceptable within a category: “borderline cases” are seen as marginal, uncertain, indefinite, unsettled, or questionable. This stems from the fact that even if a marker separates two distinct states of things most determinately, whatever state of things happens to occur on that very marker could be classed as of either one of its alternatives: healthy or unhealthy for instance (though likely not red or blue if the boundary line is transilient).

nor blue but merely the activation of their mutual secondness works well for properties that are definitely far apart, but not for those that share a few common essential predicates. The presence of so-called “borderline cases” tends to confirm that the boundary referred to is not one of pure contiguity or indexicality, but one affected by iconicity: the border is then *degenerately second* at best.

The latter phrase ushers in Peirce’s conception of degeneracy, which he imported from conics into his theory of categories. In that theory, phenomena of secondness can be pure or degenerate to a first degree (when purity is denied by an admixture of firstness), while phenomena of thirdness can degenerate either to the first degree (with admixture of secondness) or to the second degree (with admixture of firstness). Peirce’s classification of signs (or of sign functions and relations, really) is governed in great part by this principle of degeneracy, combined with the unidirectional dependency of the three categories. That dependency implies that firsts can only determine firsts, seconds can determine firsts or seconds, and thirds can determine firsts, seconds, and thirds, which implies further that thirds can only be determined by thirds. This reminder is useful because the combination of those two rules of degeneracy and dependency (or determination) gives rise to a prescissive classification of limits or borders that would follow the pattern not of natural classes but of phylogenetic classes.²

A First is whatever it is regardless of aught else and thus, in its irreducible suchness, is utterly independent of anything else. But that independence does not imply that firsts cannot be mixed and thus cannot determine one another. Firsts can only determine firsts, but not any first can determine any first. How does one determine the limit between a first and another first? One would have to identify two possible respects: the respect in which some given first can determine another distinct first, which would yield one sort of distinction, and the respect in which some first cannot determine another first. Red can determine yellow in such a way as to produce a new first called orange. But red cannot determine softness or hardness in any sort of way.

Apprehending the limit between any two components of experience requires making a distinction.

² The classic form of natural classification has been displaced today by a phylogenetic classification that is less arbitrary because it is based far less on the observation of external resemblances than on deep comparative anatomy, the study of fossils, and on comparative genetics: it pays great attention to evolutionary mechanisms and genealogical relations. One lesson of that classification is that (in Peircean terms), if one can prescind the *Homo* species from the *Chimpanzee* and the *Bonobo* species, as well as from the *Gorilla* species, it happens that the *Gorilla* species cannot be prescinded from *Bonobo*, *Chimpanzee*, or *Homo* species, because all three are filiated to it (descend from it). A phylogenetic classification is not based on speciation/generalization but on the accumulated directional acquisition and fashioning of anatomical features across time and genetic systems. One might therefore say that the phylogenetic classification resorts more to associations by contiguity (of anatomical features or of genetic encodings) and less to associations by resemblance than the classic natural classification. A phylogenetic classification is therefore focused on the stage-by-stage production of progressively altered forms of living beings, which is why the activity of prescision, as a method of defining the real dependent relations that distinguish different species from their genus, is at the logical core of that type of classification. One can *dissociate* distinct species within a genus from one another, even *prescind* them (but only because each can be hypothesized or supposed without the others: it’s a minimal or degenerate prescision that recognizes the absence of filiation among them, which absence allows for a separation). Once a species is examined separately from its genus, though, the inquiry neglects generic components qua generic and focuses on speciated features. The advantage of the phylogenetic classification comes therefore from the fact that the features it distinguishes are identified as genetic stages of development through a prescissive analysis well adapted to the objects of its inquiry.

Peirce distinguished three major types of acts of distinction (“mental separations”): discrimination, prescision, and dissociation. They are each driven by distinct aims and criteria, and their respective wielding yields distinct types of cuts. We know that Peirce’s categories are distinguished not through discrimination or dissociation, but through prescision. What makes prescision especially useful is that it aims at distinguishing unidirectionally interdependent parts, each one of which plays a function not played by any other part, but a function that (1) depends on some anterior function having been executed first, and that (2) subsequently enables some other distinct function to execute itself in turn. Prescision therefore allows distinct stages of a process to be eventually recognized separately from one another, while also exhibiting the nature of their interdependence, or the sequence of conditions that need to be fulfilled in order to reach a certain type of result. Prescision therefore is helpful in the identification of what constitutes the transition from an antecedent to a consequent that in turn can become an antecedent to another consequent which the initial antecedent could not have produced either directly or through the repetition of an identical operation. Prescision distinguishes sequential stages of transformation that are not iterative or repetitive but that produce an effect the kind of which could not have been obtained at an earlier stage, and which itself sets the stage for the production of a subsequent effect of yet another kind (unless that stage happened to be the ultimate stage). Prescision is therefore good at distinguishing processual boundaries that characterize evolving continua.

One more reminder about prescision and the way Peirce used it in “On a New List of Categories” (1867a). What Peirce showed in that text is that whatever occasions a distinct stage of explanation within a process of representation regarding some puzzling experience cannot be prescinded from that stage, while that explanatory stage, once identified, can be prescinded from what occasioned it. In other words, whatever is being represented or explained cannot be prescinded from whatever concurs to its representation or explanation, while whenever a stage of that process of explanation or representation has been achieved, it can be prescinded from the prior stage that ushered it. Yet again: Nothing can be prescinded from whatever is part of the process of explaining it, but each stage or step of that process of explanation can be prescinded from what it contributes to explain. If an element of explanation cannot be prescinded from what it explains, then question-begging has occurred: the explanation is taking for granted something that ought to have been explained.

The inferential process at the heart of explanation is that of hypothesis. We saw that in Peirce’s description of a scroll, an antecedent is *walled* in together with a *fenced-in* consequent. It now appears that, in the case of a hypothetical IF, prescision is the act, not of formulating a set of conditional rules, but of focusing attention on the antecedent for its own sake, removing it from the wall that encloses it, discarding the fenced-in consequent, and then readying that antecedent for a new round of hypothesis wherein it is turned itself into a puzzling outcome in need of a hypothetical explanation. Prescision, from

that standpoint, turns out to be a horotic tool of the first order, because it sorts out relations of genetic dependencies in the blurry fog that separates the indeterminate from determination.³ It identifies what part of the spectrum of the possible tends to merge with what other part of it so that a structuring third eventually emerges, ready to fulfill a symbolic function within a broader genetic continuum akin to a process of inquiry. This matters especially when such systems of dependencies are generative processes subject to evolution and thus to correction and adjustment.

It is precisely because precision drives Peirce's category theory that it also drives his dynamic classification of sign functions. One of the specificities of Peirce's semiotics is that it helps distinguish and sequence the boundaries of semiotic processes. It follows that Peirce's semiotic theory provides a sequential series of distinct stages of sign functions, each of which conditions the execution of other sign functions according to its distinct categorial power of determination. Let's keep in mind that it is one thing for a *semiosis* experience to occur, and quite another for a *semiotic* analysis of that same experience to take place. What I want to suggest is that, besides conducting a semiotic analysis of a given semiosis experience that would seek to break it down into some sequence of semiotic patterns, something else can also be conducted: a semiotic "horosis", an excellent word first used by Fernando Zalamea.⁴ It sits well between analysis and synthesis. A semiotic *horosis* would focus on the distinct stages of an inquiry leading to the formation of a hypothesis, proposing new sets of correlations and collateral observations, devising new protocols, expanding the fields of application, challenging old boundaries, questioning established paradigms, and so on.

How to conduct such a semiotic horosis, which essentially swings like a pendulum from analysis to synthesis and back, is directly suggested by the table of sign functions. That table maps out plausible series of categorially dependent questions that may drive observation by predicting what kind of forms ought to become observable under formal semiotic conditions, and by suggesting how to formulate subsequent questions or directions of investigation based on the categorial forms of results already obtained. While Peirce's classification of signs is not exactly genetic since there is no way for a rhematic iconic qualisign at one end to generate an argument symbolical legisign at the other end (a first cannot

³ Other horotic tools include paradoxical thinking, the systematic questioning of binary distinctions, and fundamentally any sort of design thinking and the exercise of imagination as worked out by Farouk Seif (Seif 2019).

⁴ The word "horosis" was coined by the late Roberto Perry and used by Fernando Zalamea in 2010 in the opening paragraph of his paper "Horosis y Cienopitagorismo para el siglo XXI" (Zalamea 2010b): "La 'horosis' (neologismo, de *horos*, borde) puede entenderse como el estudio sistemático de las *trans*/formaciones de información a través de *fronteras* bien definidas. Completando la diada análisis/síntesis, la horosis es una forma de terceridad peirceana que media pendularmente entre la descomposición analítica y la recomposición sintética". Translation: "'Horosis' (neologism, from *horos*, edge) can be understood as the systematic study of the *trans*/formations of information across well-defined frontiers. Completing the dyad analysis/synthesis, horosis is a form of Peircean thirdness that pendulously mediates between analytical decomposition and synthetic recomposition". See also Fernando Zalamea's book, *Los gráficos existenciales peirceanos* (Zalamea 2010a), where horosis is defined as the study of the borders of knowledge. Also relevant is Zalamea's paper "Formas de *horosis* en la arquitectónica peirceana" (Zalamea 2012).

determine a third), yet once it is admitted that firsts do not generate seconds, nor seconds thirds, but that seconds are a direct consequence of the togetherness of firsts (inevitably canceling their possibilities into clashing actualizations), and thirds a direct consequence of the togetherness of seconds (their conditioning organization), then what is genetic is the categorial combination of firsts, seconds, or thirds present in each sign category genuinely or degenerately. A combination of rhemes is all it takes to engender a propositional sign, and a combination of propositions is all it takes to engender an inferential sign. The operation of combination is quintessentially symbolical. That matters a great deal because the only way out of vagueness is through symbolization, and symbolization occurs only through a continuum of interpretation. This is why border zones are fundamentally zones of inquiry. That is their very nature.

Horosemioticians are well aware that borders are variously relational. Borders are the loci formed by the edges, blurry or not, of their contiguous vicinities. They may be biological, in the form of complex sensitive membranes that regulate infiltrations and exfiltrations. They may be institutional, ideological, political, conceptual, geometrical, physical, social, and so on. They may be impassable walls or passable fences. It is the job of horotics, and horosemiotics, to prescind borders from their enclosures and to test their elasticity, their contiguity, their continuity, and the possibility of transplanting them elsewhere through analogies and other inferential or notational strategies. The goal is not only to identify and surmount obstacles on the road of inquiry, but to install signposts suggesting new directions and express the need for further map-making.

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FIGURE 1

The enclosure is written on the sheet of assertion but
its contents are not considered as on the sheet of assertion