From Semiotics
towards Philosophical
Metaphysics

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PREFACE

For more than a quarter of a century, I have been working on the problems of semiotics – the science of signs, sign-systems, and semiotic reality. The consummation of this work came to fruition in my last book, *A Theory of General Semiotics* (2015), which, like this volume, was published by Cambridge Scholars Publishing. While writing that book, I encountered a great deal of serious philosophical problems, and these issues nagged at me constantly. In that work, I asserted that signs and their systems erected and fostered *semiotic reality*, a form of reality that differs from ontological reality, on the one hand, and from our individual mental conceptions of reality, on the other. Yet, what this semiotic reality is, how it appears and functions, and how it diverges from ontology, was not clear, because the very notion of semiotic reality was not part any of the mainstream modern philosophical schools of thought.

I decided to tackle this problem on my own, and published a number of papers about it. It is said that appetite comes with eating, and so it was for me. The more I worked on these issues, the more involved I became; over time, I gradually became engulfed in them. I soon found myself daring to challenge the ingrained notion that metaphysics only deals with the realm of ontology and how it relates to people's mental worlds; adding semiotic reality to the discussion enlarged and deepened that whole conceptual framework. Later, I added another plane to this framework: *virtual reality*. Initially, I envisioned these four realities as if they were all interwoven and intermingled into a single entity. On further consideration, I devised a new model, in which the mental

reality was in the center, like the sun in our planetary system, and the other forms of reality orbited it. The point of this model was to show that it is the human mind that deals with and makes use of all the other types of realities, so it should be situated in the center of the scheme. You can see this model of human existence on the cover of this book; in it, our thoughts issue commands and dispatch them to the other parts of reality, which is thus affected by them.

The essays in this book are divided into three groups based on three aspects of my work on semiotics and its relation to philosophy:

♦ Part I: The incipient semiotic buds that blossomed and led to a new philosophy of being

♦ Part II: How this philosophy evolved and took shape in my writings

♦ Part III: Some practical applications of these ideas

The reader should bear in mind that these essays were composed over a long period of time. As a result, the same concepts are explained in various ways, and sometimes even have slightly divergent meanings, in different essays. Repetitions from one paper to another are also unavoidable and will, I hope, be forgiven. I hope, too, that readers will be lenient in their judgment of my sometimes precipitate views.

Abraham Solomonick   February 2017

PART I.

ESSAYS ON SEMIOTICS

CHAPTER ONE

A NEW MODEL OF SEMIOTICS AS A SCIENCE OF SIGNS, SIGN-SYSTEMS AND SEMIOTIC ACTIVITY

Summary: Semiotic activity is part of the process of cognition. That is, semiotics belongs to the sphere of knowledge attainment, rather than the sphere of ontology. Ontology is concerned with collecting data about what exists, is being perceived, and investigated. From an ontological standpoint, events and phenomena usually occur in an undefined and syncretistic manner. When we try to understand and delineate events, we must first isolate them, and assign them unique and specific forms, which we can then study. In the course of extracting events from a collection of ontological data, people use signs to code the subject-matter they are studying, and process these signs by applying the rules of the sign-systems to which the signs belong. In this way, the domain of semiotics, which we define as the science of signs, sign-systems and semiotic activity, comes into play.

Of late, many amateur semioticians - and even those who call themselves professionals - deny that semiotics is a distinct branch of science, with its own subject-matter and methods of study. On the contrary, they declare it to be a sort of "interdisciplinary method," "interdisciplinary endeavor" (whatever that might be), and the like. Thus, one of the leading contemporary semioticians, Scott Simpkins**,** begins his work, *Critical Semiotics*, in this way:

"Semiotics" could be said to exist only as a topic of discussion.[1]

Although it is commonly referred to as though it were a concretely established discipline (or even a "science"), the legerdemain behind this practice cannot be exaggerated.
And elsewhere in the same work, he says:

If semiotics is considered as a wide-ranging and heterogeneous discussion, then perhaps it follows that it cannot possess basic concepts.[2]

The damaging effect of such statements for the field of semiotics and for its status really cannot be exaggerated. The current state of affairs is described aptly in the well-known text, *Semiotics for Beginners*, by Daniel Chandler:

If you go into a bookshop and ask them where to find a book on semiotics, you are likely to meet with a blank look. Even worse, you might be asked to define what semiotics is - which would be a bit tricky, if you were looking for a beginner's guide. It is worse still if you do know a bit about semiotics, because it can be hard to offer a simple definition, which is of much use in the bookshop.[3]

Let me add that the situation has been this way for a very long time - for more than a century. In fact, not only is it not improving, it is worsening, because more and more people have reached the conclusion that semiotics is anything but a science. As a result, at every conference on semiotics we re-

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[1] Scott Simpkins. Lecture 1 of *Critical Semiotics*. At:
http://www.chass.utoronto.ca/epc/srb/cyber/sim1.html (accessed Feb. 2017).
[2] Ibid., Lecture 2. At:
http://projects.chass.utoronto.ca/semiotics/cyber/sim2.html (accessed Feb. 2017).
[3] Daniel Chandler. *Semiotics for Beginners*. At:
http://visual-memory.co.uk/daniel/Documents/S4B/ (accessed Feb. 2017).

peat the same experience - we find ourselves listening to so-called semiotic papers that discuss anything but semiotic matters. It is useless to protest against this, because the lecturers invariably answer: "You understand semiotics in your way, we in our own specific light." Or: "Since in our presentation we use the concepts *signs* and *meaning,* it falls within the domain of semiotics." Since the discussion of every topic may include these concepts, anything may be presented as falling within the domain of semiotics. This, in fact, accurately sums up the situation; anything and everything is included in the realm of semiotics. Or, as Eugene Gorny put it, "Semiotics is that which is called semiotics by the people who call themselves semioticians."[4]

This deplorable situation arose, in my opinion, because the delimitation of the scope of semiotics has remained frozen since the founders of the field (Ch.S. Peirce, F. de Saussure and Ch.W. Morris) formulated their initial and inevitably incomplete ideas about what might be the nature of our science. Since that time, nobody has dared to reformulate these ideas in the light of new developments in science in general and in the concrete sciences in particular. We continue to cringe before their views, as if they are final and all-embracing. And this servility has brought our science to the lowly state it is in nowadays.

My work attempts to overcome this barrier. While it is firmly based on the classical views cited above, it nevertheless does not treat them as untouchable and inviolable. Rather, it expands classical semiotic theory. This is evident in my conception of what a *sign* is, as well as in my shift of emphasis from the *sign-notion* to the discussion of *sign-systems* and *semiotic activities.*

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[4] Eugene Gorny. *What is Semiotics?* At:
http://www.zhurnal.ru/staff/gorny/english/semiotic.htm (accessed Feb. 2017).
The original quote is entirely in capital letters.

I am convinced that in laying the foundations of any science we must base ourselves on specific philosophical considerations. First and foremost, we should consider what the proposed science does and why it must exist at all. In other words, we must identify what area of human knowledge it covers and from what standpoint.

In my view, the justification for the science of semiotics can be found in the comparison between the two types of *realities* - *ontological* reality and *semiotic* reality. By "reality" I mean something that exists outside of and independently from ourselves. This is a purely materialistic point of view: I proceed from the assumption that something objective, something entirely independent from our senses, exists - something with which we make contact when we come into this world, and which remains after our departure from it. This is ontological reality - the amalgam of data that makes up our external environment.

We confront ontological reality inescapably, because we are part of it and have to adjust ourselves to it. In the process of confronting this reality, we try to comprehend it and utilize this comprehension to our advantage. And through this process, we transplant the ontological reality into another plane, that of *semiotic reality*, a reality that is expressed by signs (sometimes, nowadays, it is also called *virtual reality*).

This second kind of reality is the result of our dealings with the first, ontological one, but it embodies something different from it. It is also objective; it exists independently from us in the form of different theories, separate signs, and sign-systems. As with ontological reality, we investigate and use semiotic reality, and change it in the process. But semiotic reality is a world in its own right, and in many respects it differs from the ontological reality that it reflects.

In what specific ways does semiotic reality differ from ontological reality? To my mind, there are three main distinctions:

- ♦ Semiotic reality is a human creation.
- ♦ Signs and sign-systems are idealizations of ontological facts.
- ♦ Semiotics is built on the other sciences.

The next sections explain what I mean by each of these statements.

Semiotic reality is a human creation

While ontological reality reveals itself to our senses as a chaotic, syncretic, and non-ordained *something*, semiotic reality, which is derived from our efforts to cope with ontological reality, constitutes a reality of various signs that we ourselves have created. They are organized into sign-systems, which are *continuous, discrete, preordained*, and *inherently consistent*. Because of this, they can be reviewed and reconsidered, changed and improved. In the long run, they can be applied and reintroduced into ontological reality; this last stage represents their final approval and recognition. Thus, the first distinction between ontological reality and semiotic reality is this: ontological reality was created independently of us and was given to us ready-made, while semiotic reality is a completely human product.

From this statement we can draw several very substantial conclusions. The first is that we have to separate - even sever - the treatment of semiotic signs and sign-systems from that of ontological reality. While the study of ontological phenomena belongs exclusively to the spheres of various natural and social sciences, the study of their corresponding sign procedures *also* belongs to the sphere of semiotics. Treating these two

distinct kinds of systems under the general heading of "General System Theory" is a widely accepted, but unfortunately misguided practice.[5]

The second very important conclusion lies in the fact that the creation of signs and their systems is exclusively the result of human activity and cannot be accomplished by animals or by machines. The process consists of the conscious production of signs denoting other things and also comprises the understanding of the symbolic nature of such signs. Neither animals nor machines are able to do this. The belief that machines are capable of dealing with semiotic matters, that even inanimate objects can respond semiotically to stimuli, greatly hampered the development of semiotic science as a special branch of knowledge. Humans can delegate to machines some tasks of transforming signs (by providing the machines with programs for matching signs), but no machine can, as yet, create symbolically charged and meaningful signs. This is the prerogative of the well-developed human mind.

Signs and sign-systems are idealizations of ontological facts

The second difference between the two kinds of realities lies in the fact that signs and sign-systems aim to *reflect* ontological facts and phenomena, and should always remain their manifestations. Signs are idealizations of ontological data; although they are initially created by human beings, in many ways they resemble Platonic ideas. In this sense, they are destined to be only approximations of their referents.

These approximations can have varying degrees of proximity to their referents because they can only reflect a finite number of qualities. If they are taken to one extreme, such

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[5] See, for example, this very popular book: Ludwig von Bertalanffy. *General System Theory* (New York: George Braziller, 1968).

that they are overly similar to their referents, they cease to be signs, and instead turn into ontological objects (as, for example, functional models of ontological occurrences). If they are taken to the other extreme, they can even become false representations of their referents, or representations of non-existent referents. The latter constitute, as the history of science shows, the inevitable initial stages in human gnosis. Even at later stages in human development, there are cases when evil-doers intentionally use signs that misrepresent ontological reality (like in the totalitarian state that George Orwell visualized).

Semiotics is built on the other sciences

The third difference between semiotic reality and ontological reality has to do with the way semiotic reality is constructed. Semiotic reality is built from different kinds of signs, which are frequently combined into sign-systems of various qualities and coherence. But these signs and sign-systems are themselves created within the bounds of various other concrete sciences, each of which deals with ontology from its own vantage point. Each field constructs its own signs and sign-systems, within its own conceptual framework and with the help of its specific methodology. Thus, the other sciences provide the building blocks from which semiotic reality is constructed and the subject-matter that the science of semiotics studies.

Physics, for example, produces formulas that deal with concrete phenomena. The production of these formulas is preceded by specific physical investigations that produce the ontological data from which the formulas are derived. Similarly, economics produces complex diagrams and charts from the accumulated results of purely economic research. These products of physics and economics belong to the *semiotic world* as well as their own fields. This last world is the field of semiot-

ic activity and constitutes the subject-matter of the semiotic branch of science. The field of semiotics can only succeed, however, *if it is permitted to develop and apply its own tools to the semiotic data that is produced in other fields.*

Thus, in my opinion, *semiotics is a secondary science* - secondary not in its status, which is very high (as I will try to prove), but in that it studies the data that is collected by other sciences and embodied in their signs. Let us, with the help of an example, demonstrate this proposition.

In the middle of the 19th century, Robert Wilhelm Bunsen invented a gas-burning device. In the flames of this burner, which is now known as the Bunsen burner, and is used in virtually all chemistry laboratories, the temperature can reach 2000° C. Bunsen began to use the burner to incinerate different chemical compounds. In the resulting vapors, he saw colored and black lines. After his colleague, the physicist Gustav R. Kirchhoff, introduced lenses to the device, the two researchers observed distinctive colored patterns when they burned specific chemical elements and compounds. Thus, they invented a new method of identifying the chemical contents of a substance - "spectrum analysis." Using this method, chemists very soon discovered many elements that were previously unknown, such as *cesium*, which was named for the bright blue color it produces in the flames of the burner, and *rubidium*, named for the ultra-red color it emits when burned. By using this method, researchers could even determine that the Sun consists of the same chemical elements that are found on Earth; by no other means could we prove this very important fact.

In 1869, the great Russian chemist Dmitry Mendeleyev published his first version of what was later called the "periodic table of elements." In it, he placed all the elements that were known at the time, ordered according to their atomic weights and, in some cases, their valences. Instead of simply

listing them in a single, continuous chain, from the first element to the last, he arranged them based on a repetitive pattern of properties that groups of elements shared, so that elements with similar characteristics appeared in the table in the same column (i.e. periodically). Because of this arrangement, many of the squares in the original table were left empty. Mendeleyev declared that the empty squares represented elements that were still unknown to science. He even dared to predict the qualities of some unknown elements, e.g., of *eco-aluminum* (similar to those of aluminum), *eco-boron,* and *eco-silicon*. Soon after this, in 1875, the French chemist Paul-Émile Lecoq de Boisbaudran, while investigating a substance in the flame of a Bunsen burner, discovered a new element. He managed to extract and examine the new element, and concluded that it appeared to be Mendeleyev's eco-aluminum.

These historical facts do not merely describe a series of events that occurred. They also describe the interplay of scientific research and sign-systems. Spectrum analysis is not only a research method, it is also a sign-system - a system of color signs that can be used to identify the chemical composition of a substance. When Bunsen and Kirchhoff developed the method, they brought a new sign-system into existence as well. The sign-system they developed spurred them and other researchers to further achievements. Similarly, Mendeleyev's periodic table was a sign-system, and it too opened the door to additional discoveries.

This common process is reminiscent of what we do with a car when it fails to ignite: to start the car, we push it down a slope and wait until the motor has warmed a little; once the motor has warmed up, it can be ignited more easily. Similarly, once a sign-system has been created, it makes it easier for people to make additional discoveries. To begin the process, we construct a sign-system that applies to a specific case and describes a particular repetitive pattern. Once we establish

this pattern, we can draw conclusions about the usual state of things or about the normal relations between certain causes and effects. Finally, our knowledge of the pattern spurs us to postulate the existence of additional elements that fit into the pattern, and to investigate these elements.

Note that this entire process takes place within the realm of a single science. Both spectrum analysis and the periodic table are sign-systems, but they are chemical sign-systems, worked out through chemical investigation and according to the rules, the logic, and the conceptual framework of that branch of science. They grew out of many centuries of chemical work exploring different elements, defining their qualities, their atomic weights and valences, etc. In turn, these systems provided additional impetus for furthering and advancing chemical insight in the external world. Chemistry as a whole can be presented as the mutual cooperation of direct methods of chemical inquiry and the answering push of semiotic systems on them. In fact, any comprehensive compendium on the subject treats the matter along these lines. That is why it would be unjust and counterproductive to declare these sign-systems to simply be semiotic systems and to include them as they are in the field of semiotics.

Then where does semiotics come into play? It becomes relevant when we approach and analyze these types of facts as semiotic matters, following the lines of inquiry that belong to the field of semiotics and framing the investigation within its conceptual structure. For example, the sign-systems mentioned above could be compared by describing the first as a *linear and continuous* sign-system and the second as a *periodic* sign-system. The relative advantages and disadvantages of each of these types of systems could then be posited, important conclusions about their appropriate spheres of application could be reached, and detailed rules for their construction could be deduced.

In semiotics, each type of sign-system can be investigated separately and compared with similar systems. The results may have significant practical implications. For example, why not compare chemical spectrums with the system applied nowadays in shops for marking different products, or books in libraries? There are definitely some common traits and we may reach some conclusions that are applicable in practical terms.

Nevertheless, one can only expect semiotics to achieve significant accomplishments after we, semioticians, forge out together, with our own conceptual framework, *a conceptual framework* that is shared by and understandable to all of us, or, at any rate, accepted by the majority of semioticians working in the field. What should this framework be? I will try to formulate my answers to this question in the rest of this paper. Before I begin, let me just assert that, in view of the complexity of the issue and the novelty of my views, the answers may be necessarily incomplete and in many respects even erroneous. Still, because somebody must initiate the discussion of the problem, I am taking the risk.

To begin my comments, I will refer to what is called the *formal axiomatization* of semiotics. After that, I will describe the foundations of my model of semiotics in greater detail.

Formal axiomatization of semiotics

This argument for defining semiotics as a science is based on what D. Gilbert, in his *Basics of Geometry*, called *formal axiomatization*. Gilbert identified and outlined the principal concepts of the science of geometry. He then deduced all the other geometric concepts, and the relations between them, from those basic concepts. The concepts he chose were: *point*, *straight line*, and *plane*.

In geometry, the characteristics of these elements can be varied to result in different types of geometry. For example, if

we declare that two parallel lines never cross, we get the geometric system called *plane geometry*. If we declare that parallel lines do meet (and in curved space they do), we get another kind of geometry, like Lobachevsky's or Riemann's.

In a similar way, in the field of semiotics I have identified three interrelated concepts: *sign, sign-system*, and *semiotic activity*. By varying the characteristics of these basic concepts, as Gilbert did in the field of geometry, I can define distinct kinds of semiotics. Thus, the field of semiotics can be treated as a science, just as the field of geometry is. Though formal axiomatization is a necessary step for delimiting a science, it is not a sufficient step. One must also show how these main concepts work, and this is our next task.

My model of a semiotic sign

My understanding of the concept of a sign is based on what was established in the classic works of the field, but I go further than they did on many important points. My view is demonstrated in the following diagram (Fig. 1-1):
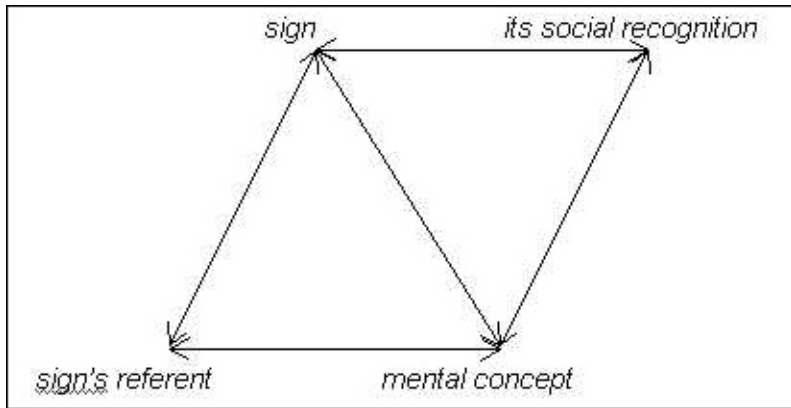

Figure 1-1

The above parallelogram can be viewed as a composite of two triangles, one on the left and one on the right. The corners represent the various aspects of sign dependence, and the arrows indicate the interactions between them.

In my diagram, the left triangle represents the model of a sign as it is usually demonstrated, e.g. by Peirce (except for the base line, which is unbroken, and the arrows at the ends of each line). The right triangle is my addition to the model, and it makes all the difference between my variant and all the previous ones. It reflects the distinction between the two realities - the ontological and the semiotic. Within the left triangle we form our signs and our mental ideas by direct contact with the outside world, but within the right triangle we do so through social experience - through the interpretation of the entire body of cultural heritage that we receive through contact with humanity, including what we hear from other people, glean from our education and from reading books, etc. In the long run, our ideas appear to be nurtured from both of these sources, but the second source definitely prevails over the first. That is why its addition to the model of a sign is completely justified.

Another aspect of my expansion of the sign model - the most significant aspect, in fact - is not illustrated in the diagram. It is an extension of Charles W. Morris's theory about different lines of sign analysis.

As is well known, in 1938 Morris published his *Foundations of the Theory of Signs*. In this work, he delineated three approaches to sign investigation: *semantic* - researching the dependence of the sign on its referent; *pragmatic* - studying the connection between a sign and its interpreter; and *syntactic* - seeking out ties and interdependencies among different signs. All three types of investigation are very significant and useful in the organization of sign research. Nevertheless, I think that we should add a fourth element of sign analysis to

his system - the identification of a sign's *degree of abstract-ness*. As the right triangle in my model indicates, I believe signs are the most important component of human heritage. From this I conclude that, in our current state of knowledge, each type of sign has a fixed *charge of abstraction*. *Natural signs* are less abstract than *images,* the latter are less abstract than w*ords,* etc. Thus, the concept of the *degree of abstrac-tion* enables me to construct a system for the *classification of signs* and also allows me to lay the foundations of a *sign tax-onomy*.

Classification of signs and sign-systems

There is no satisfactory classification of signs that is ac-cepted by the majority of semioticians. The nearest thing to an acceptable classification is the one created by Peirce, which divides all signs into three categories: *indices, images* and *symbols.* Even this incomplete, rough, and non-hierarchic classification gave rise to many fruitful studies in the field of semiotics.

The following classification, which was included in my first book on semiotics,[6] is to my mind much more complete, mature, and structured than that of Peirce. It relies on two cri-teria: *basic signs* and *types of sign-system*. Thus, it is not only a classification of signs but of sign-systems as well.

The diagram below (Fig. 1-2) describes my classification system:

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[6] Abraham Solomonick. *Semiotics and Linguistics* (Paris: Editions des Ecrivains, 2001).

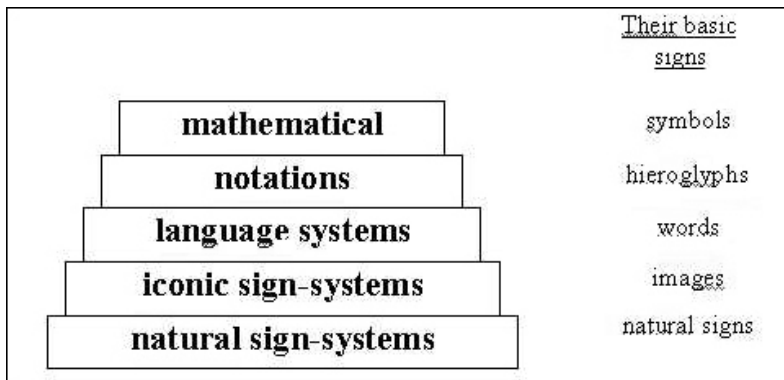|	Their basic signs
mathematical	symbols
notations	hieroglyphs
language systems	words
iconic sign-systems	images
natural sign-systems	natural signs

Figure 1-2

In the boxes there are different types of sign-systems. Each type comprises all the sign-systems belonging to it. For example, the language type includes all the natural languages, artificial languages, esoteric ones (like drum languages), etc.

According to my theory, these types of sign-systems developed in the order in which they are arranged in the diagram; they developed in this order in both the ontogenesis of the whole of human society and the phylogenesis of each human individually. The stages of development reflect the increasing complexity of the basic signs on which each type of sign-system is built. Each subsequent stage is built upon the previous one, subsumes it, and develops in its wake. It is thus that the consistent and continuous development of each human being and of the whole race is guaranteed.

There are many kinds of basic signs in every concrete sign-system. Let us randomly choose the sign-system of traffic regulation, for example. In this system, we find many drawings, which I call *images*, many geometrical figures, words, purely color signs, etc. The images are the most outstanding elements in this system; they define the syntactical ties between all the signs in the system and, above all, they define

the patterns of our dealings with the system and with external reality through the system. This is what I call the *logic* of the system. In this particular system, the logic is exclusively "transductive" - that is, it is based on "reading" one sign after another and compiling them into one general picture. (The term "transductive" was coined by Jean Piaget; I rely heavily upon his work in this discussion.) *Basic signs* of higher order demand another type of logic - for example, deductive logic or inductive logic.

The hierarchy of the basic signs is based on their increasing *degree of abstractness*; the more abstract a sign is, the higher its position in the hierarchy. The degree of abstractness of a sign is determined by its relative proximity to its referents.

In my view, *natural signs*, such as stars in the systems of orientation and natural symptoms in medical diagnosis, being themselves part of the picture, are very close to the things they designate. Thus, natural signs are the least abstract signs of any of the types. For this reason, they appeared earlier in human history than images, words, hieroglyphs, and symbols; the complexity of each kind of basic sign determines when it emerges, both in human ontogenesis and phylogenesis, and complexity is a function of degree of abstractness. This is also why it is easy for us to recognize them as *signs* of something else.

Images are connected to their referents by their likeness (similarity or iconicity) to their referents. Because they are not themselves part of the whole, they stand further from their designates and are thus more abstract than natural signs. Each higher level of basic sign has a higher degree of abstractness; *words* are more abstract than images, *hieroglyphs* are more abstract than words, and so forth.

Being further from referents does not mean being less meaningful or less forceful. On the contrary - by distancing

themselves from their designates, signs become more all-embracing. Images comprise a much greater scope of designated objects than natural signs do. A chair that is prepared for me during a reception (and marked accordingly) is a unique object for that particular occasion; the drawing of a chair (an image) represents all particular chairs of this kind, and the word "chair" means all existing chairs in the world. Thus, increased *abstractness* of various types of signs goes hand in hand with their becoming more remote from their referents and with their escalating level of generalization. This seems to be the decisive factor in the creation of increasingly abstract signs and sign-systems in the history of our development as Homo sapiens.

My classification of signs is much more solid than Peirce's tripartite one because:

♦ It conjoins the classification of signs with that of sign-systems.
♦ It aims to be all-embracing.
♦ It has foundations not only internally, in all the existing signs and systems, but also externally, in other fields; we can follow its exposition alongside the empirical findings of developmental psychology and other sciences.
♦ Being built hierarchically, it can serve as a kind of taxonomy for sign-systems that are already established.

I would like to elaborate on this last point. My classification (together with that of Peirce) served as the basis for the doctoral thesis of Ahmad Daud Jaffar, defended at Staffordshire University http://www.inst.at/trans/15Nr/01_2/solomoni

ck15.htm - 6.[7] As a specialist in the field of computer pro-
gramming, he examined about forty different business man-
agement programs. And he posed these questions: Which of
the programs are more useful for the suggested aims? Which
are easier for the intended users to use? Which have the po-
tential to be learned quickly and used efficiently? For the an-
swers to these questions, he looked to semiotics, the science
of signs and sign-systems. In the long run, he analyzed the
programs from the point of view of my classification, utilizing
it also as a taxonomy. In this way, he reached conclusions that
enabled him to evaluate the programs as sign-systems and rate
their degrees of efficiency in this way.

Conceptual basis of the proposed semiotics

In the light of what I have said above, I can now suggest
what topics may be included in semiotics, give a brief de-
scription of their characteristics, and mention issues that still
require clarification.

Concerning signs:

♦ The sources of signs: ontological and semiotic reality.
♦ The characteristics of various kinds of signs.
♦ The composition of signs: denotation and connotation
  elements of signs.
♦ The four dimensions of a sign: *semantic, pragmatic,
  syntactic*, and *degree of abstractness.*
♦ Classification of signs into two groups: signs that can be
  used separately and signs that can only be used in sign-
  systems.

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[7] Ahmad Daud Jaffar. *A Semiotic Framework for Measuring Effective
Representations of Business Process* (Ph.D. diss.: Staffordshire Universi-
ty, 2003).

♦ Comparison of basic signs with other kinds of signs in the same system that have a different degree of abstraction.

♦ Open issue: How do basic signs determine the main traits of a system?

♦ Comparison of basic signs and their derivatives.

♦ Open issues: What kinds of derivatives can there be? How are they formed? How do paradigmatic and syntagmatic parameters affect signs?

♦ The addition of new signs in existing sign-systems: their incentives and transparency.

♦ The feasibility of transferring signs of various degrees of abstractness from one system to another system.

Concerning sign-systems and their classification:

♦ Classification by the degree of abstractness of basic signs;

♦ Classification by the structure of the system: linear structure, periodic structure, structure that allows for the addition of new categories;

♦ Open and closed sign-systems: entropy in semiotic sign-systems;

♦ Classification based on whether the sign-system developed chaotically or was planned;

♦ Classification of sign-systems by their application objective: finding items by their signs (e.g., telephone books), describing items that are included in a collection (e.g., library cataloguing systems like the Dewey decimal system or trademark registration systems), the methods of processing of the initial signs (e.g., architectural details in buildings, signs in chemical or physical formulas);

- ♦ Classification by the measure of cohesiveness among signs in the system.
- ♦ The logic of enacting and working with sign-systems.
- ♦ Factors influencing the construction and "maturity" of sign-systems: meta-languages of sign-systems, their systems of notation, their methods of verification (these are often included in the rules for enacting the system), etc.
- ♦ The transfer of data that was collected in one system to another system, and how the relationship between the two systems affects this process.

Concerning semiotic activity:

- ♦ How people work with signs and sign-systems:
- ♦ Theoretical generalizations;
- ♦ Descriptions of separate signs within a single segment of life (e.g., the signs of courtesy in Japanese society in a particular century; decorative elements in the architecture of Ancient Rome);
- ♦ The semiotic laws governing the creation of new sign-systems; The application of semiotic rules to existing sign-systems and the ramifications of this process;
- ♦ Cross-sectional exploration of specific aspects of the development of signs and sign-systems (analyses of various meta-languages, methods of verification of sign-systems, etc.).

This list is necessarily incomplete and should be reviewed and improved constantly. Further details about these matters are available in Russian in my latest work, which I have posted on the Internet.[8]

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[8] Abraham Solomonick. "Positive Semiotics." At:
https://refdb.ru/look/1060557.html

My approach to semiotics as a cross-section science that elaborates on all the other sciences, makes it truly universal; in this, it overcomes all existing national borders. To be sure, semiotics includes some sign-systems that are restricted by national boundaries (like, for instance, national languages), but nearly all sciences have the same kind of restrictions. This does not make these sciences nationally-oriented. Moreover, semiotics can also provide methods for transferring data that has been collected in one field to other systems or codes so that it can be utilized by other sciences.