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Cognition, Perception, and Imagination: A Semiotic Approach

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Abstract

As the name applies, cognitive semiotics is an approach that combines the best elements of both semiotics and cognitive science. Both are very interdisciplinary in nature and contain numerous more or less incoherent and incompatible elements. My 'selection' of these elements is as follows: 1. Basically a persian idea of the triadic condition of the significance function, added to a more elaborate and emphatic cognitive mental aspect in the interpreter. 2. The so-called cognitive evolutionary science or the "second generation" science, in which the emphasis is not on the a priori universal categories and structures, but on developing thought and language patterns which are intimately incorporated. 3. A vision through which perhaps the most fundamental aspect of human thought, capable of expressing the qualitative difference with respect to other animals, is the ability to produce reflexive or active semiotics, with which it is possible not only to use signs, but to create new meanings. In this area, the author sees as especially interesting, the ideas of Giambattista Vico and Marcel Danesi. The purpose of this article is to demonstrate that this type of combination is possible, and what is more, a very fruitful platform from which new studies in the attempt at understanding ourselves and our "glassy essence" as Shakespeare, Peirce and so many others have tried to do.

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Key words: Cognitive semiotics, cognition, imagination, vico, metaphor.

Cognición, percepción e imaginación: una aproximación semiótica

Resumen

Como su nombre implica, la Semiótica Cognitiva es un acercamiento que combina los mejores elementos tanto de la semiótica como de la ciencia cognitiva. Ambas son muy interdisciplinarias en su naturaleza y contienen numerosos y más o menos incoherentes e incompatibles elementos. Mi "selección" de estos elementos es como sigue: 1. Básicamente una idea perciana de la condición triádica de la función sígnica sumada a un más elaborado y enfático aspecto cognitivo mental en el interpretante. 2. La llamada ciencia cognitiva evolutiva o de "segunda generación", en la cual el énfasis no es en apriorísticas y universales categorías y estructuras, sino en patrones de pensamiento y lenguaje en desarrollo y estrechamente in-corporados. 3. Una visión según la cual quizás el más fundamental aspecto del pensamiento humano, capaz de expresar la diferencia cualitativa con otros animales, es la habilidad para una semiótica reflexiva o activa, con la cual es posible no sólo usar signos sino también crear nuevos significados. En este tema veo especialmente interesantes las ideas de Giambattista Vico así como las de Marcel Danesi. El propósito de este artículo es demostrar que este tipo de combinación es posible y, más aún, ofrece una fructífera plataforma para nuevos estudios en el intento por entendernos nosotros mismos y nuestra "esencia vidriosa", como Shakespeare, Peirce y tantos otros han tratado de hacer.

Palabras clave: Semiótica cognitiva, cognición, imaginación, vico, metáfora.

1. INTRODUCTION: COGNITIVE SEMIOTICS

The area covered by the title is very wide containing actually almost everything what it is to be a human being. Thus it would be by far over the limits of this short paper to try to give a comprehensive view of these issues, but only to suggest one possible although in some sense multidisciplinary approach to them. I call my approach cognitive semiotic because I want to emphasize that very natural and important but curiously quite neglected locus of semiotic activity, namely our cognition or mind which I take to mean practically the same. Furthermore I want to utilize the findings of another important interdisciplinary approach, namely cognitive science, which resembles in many ways semiotics and has numerous overlapping interests with it, but still seems to be quite distant from it, studied by different people and in different contexts. My claim is that these two disciplines have some very interesting insights to share with each other and although I am not proposing to amalgamate them totally I am convinced much more could be done with them that have been done this far.

There are several thinkers who have probed this kind of approach and thus actually stimulated my program. I can mention e.g. **Thomas Daddesio, Jean-Guy Meunier, Pierre Miranda** and **Marcel Danesi.** The latter one introduces also philosopher **Giambattista Vico** in this context and I find this line of thought especially interesting.

However, as far as I know, this kind of ideas form only a tiny minority of all that quite active academic works done on both disciplines. There are not too many connections between them, and I find it also interesting to ponder why.

There may be several reasons both internal and external for this lack of connections.

One of the latter could be the fact that both are relatively young as independent disciplines and thus eager to reach a status of a respectable science and competing against each other in fame and resources (like e.g. at the University of Helsinki). Although both are very interdisciplinary in nature they seem to attract interest from somewhat different sources, semiotics being perhaps a bit more inclined to humanistic and cultural studies whereas cognitive science is as its very name implies usually regarded of being more rigorous and empirical real science. On the other hand both share a strong interest and links to linguistics, and some semi-

otic approaches like medical and zoological ones and **Charles Morris'** behavioristic orientation have been at least from their own point of view very "scientific".

2. SEMIOTIC INSIGHTS

Besides the major division line between the **Peircean** and **Saussurean-Greimasian** traditions there is a wide array of more or less differing semiotic approaches especially according to which particular discipline or tradition each thinker approaches semiotics from. Regardless of this multiplicity there seems to be a rather strong antimentalistic stance prevailing in many of these variations especially when trying to articulate their theoretical formulations. By antimentalistic I mean here that these theories either leave mental aspects aside completely or explain them away with some other notions, linguistic, social etc.

Especially among the traditional or classic structuralism there was a strong belief in the existence of some primordial or aprioristic universal structures behind all our mental, verbal and behavioral action. Although Peirce gives a bit more role to a cognitive agent in the interpretant corner of his famous triangle, he is also quite antimentalistic in tone, because eventually for him it is the sign process itself which defines the outcome or meaning of it by its own power. In his pursuit of making semiotics a serious science Morris wanted to exclude all reference to mental terms, because they could not be studied in a rigorous scientific way and they would not tell anything more than what could be detected from the bevaviour of an organism. To put it short, a quite large part of the semiotic endeavours has been a search of those hidden or deep level structures of our thought and language.

3. TWO TYPES OF COGNITIVE SCIENCE

The very notion "deep level" brings us back to cognitive science and its perhaps most famous and influental proponent **Noam Chomsky**, who introduced this notion and used it in the 1950's to downplay in those days prevalent behavioristic stances in linguistics. There seem to be at least two major currents among cognitive science. The first one and I suppose still usually percieved as the prevailing one can perhaps be called computationistic according to Danesi. As its name imply it has

close links to computers using them as a serious metaphor. By serious I mean that it is often thought that the mind not only functions like a computer but that in fact it is a computer with its hardware (brain and neurons) and software (thoughts). Actually this idea is very close to the traditional Cartesian bifurcation between body and mind, but is of course much more plausible, because the rapidly developing computers really seem to "think" and "know" things in some ways even seemingly better than humans by winning them in chess and so. Also the huge practical and commercial prospects connected to computers and artificial Intelligence (AI) ensure that computationistic programs seem very attractive and sexy indeed.

But there are some problems with this approach too. One of them is that the very continuing of the Cartesian dualistic heritage makes it difficult to grasp where in the case of humans and animals that "software" comes from. Who has installed it in? Secondly, it seems that even if some advanced programs seem to simulate such mental states as emotions, beliefs, and intentions quite well they are still what they are, simulations. Before we get that rebellious computer HAL from the visionary science fiction film "2001: A Space Odyssey" we can not really say that computers either think or feel. Also **John Searle's** criticism and his wellknown "Chinese room argument" are directed against the computationistic paradigm in cognitive science.

All that criticism has given some ground for a so called "second generation" cognitive science, which seems to be gaining more interest and academic hold in the 80´s and 90´s. Perhaps the most well-known advocators of it are **George Lakoff** and his associates at the University of Berkeley: **Mark Johnson, Mark Turner, Eva Sweetser** ea., **Ronald Langacker, Eleanor Rosch** and **Gilles Fauconnier.** They are linguists, philosophers and psychologists and their approaches also vary somewhat both in their content and in terminology. However there are some clearly conforming basic views shared by them and which form the thrust of this paradigm. Some of the basic views could perhaps be formulated as follows:

1. Cognition and mental phenomena are closely connected to our bodies and our physical interaction with our environment. Here it is interesting to notice the links with **Maurice Merleau-Ponty** and many other phenomenologists. The regularities and patterns in our thinking are also more derivative from that interaction than vice versa.

2. Regardless of that complex input through social and cultural interaction the basic developmental direction of the mental structures is from concrete to abstract, from specific to general and from simple to complex. Thus also categories and categorizations are abstracted on experiental (hence the notion of experientalism by Lakoff) and generalized input, they are not anything profound or aprioristic.
3. Processes with which cognition and language which follows it closely develop and expand to cover new areas are largely associative or metaphoric in nature. Metaphoric or tropic means here figures of speech in general. The history of rhetoric is full of different typologies of these quite flexibile types: metaphor, metonymy, synechdoche etc. seemingly without any final concensus. Usually metaphor in cognitive contexts is taken as a wide cocept covering all types of cases where there are shifts between meanings from one area to another whether they initially overlap or not.
4. Thus the basic units of cognitive and linguistic phenomena are not categories and some fixed set of distinctive features which define whether some entity belongs to a certain category or not, but some typical or prototypical (hence the notion of prototype theory by Rosch) entities which features are radially generalized to cover larger and larger compounds of entities. The title of the Lakoff's major book: "Women, Fire, and Dangerous Things" displays that historical and by no means universal or uniform way how categories are created quite nicely. That for sure purposefully amusing and provocative title comes from the Australian Aboriginals who indeed have such a category or a notion covering all those things and some others as well.

4. AN EXCURSUS TO POPPER

My cognitivistic approach follows mostly this latter type of cognitive science. Its basic rationale or motivation is that I am also convinced that cognition, i.e. everything that happens in our brains and bodies and which is not describeable in mere physiological terms, is the most crucial locus which one to study to understand our behaviour and interaction. Perhaps the clearest description of this basic view is the well-known Three World Model presented by the late **Sir Karl Popper**. It contains Worlds 1, 2, and 3, where the World 1 is the physical or natural reality, i.e. the "real" world, World 2 contains all individual human (and perhaps animal, it is a

bit debatable) mental activity, and World 3 contains all the rest, i.e. all social and cultural concepts, language, institu-tions, habits, art etc.

The point presented by Popper is that although many World 3 artefacts are embodied, i.e. that they are connected to the World 1 phenomena they are not World 3 pheno-mena except only through World 2, i.e. human (or animal) cognition. There has been some discussion about the validity of this view. Against it has been presented examples like a case when the whole World 2 vanishes in a global catastrophe, but some World 3 artefacts (e.g. the painting called "Mona Lisa") survive. Are they then still World 3 objects or not? There are some further more or less hypothetical examples according to different answers to this and following questions which all are directed against the idea of clear definable borders between these three worlds. I agree that it is not so much a question of clear categories but a group of aspects which are in most cases embedded in same objects or events, but which all, nevertheless, have their distinctive spheres and which help us to grasp our environment better.

I want to emphasize here the crucial status of World 2, i.e. cognition, in a kind of nexus through which all reference between Worlds 1 and 3 goes. It is like a shape of an hourglass in which a narrow middle connects two wider areas. It is also distinctively individual and subjective, i.e. strictly speaking, all of us have our own individual world, but because we can reformulate and rearrange it all the time in interaction with others and with more or less similar senses, brains, and other physiological skills we do not need to sink that desperate solipsism which bothered Descartes so much. Unlike him I do not think we need to make our ideas necessarily clear before trusting that the world exists more or less like we perceive it. People had done that thousands of years before him and can quite safely do it in the future too.

A relaxed view to this two-step reference, i.e. from a physical object to a linguistic sign or vice versa through cognitive concepts (steps World 1-2-3 or 3-2-1), clears away much of that philosophical problematics about reference, correspondence, truth values, the conditions of knowledge etc. In principle all knowledge is subjective and relative, but because we are social beings with various means to interact we can found relatively stable and coherent world views in most cases. Besides some issues like so called "laws" of nature or mathematical "truths" just simply seem to be more pertinent than others.

5. ENTER VICO

As I mentioned earlier I find Marcel Danesi's ideas to connect Giambattista Vico to this contemporary discussion very interesting and fruitful. Vico was a 17th and 18th century philosopher living and working all his life in Naples, Italy, relatively aside from the philophical mainstream of those days, especially Paris and **Descartes**. There have been periods when he has been almost completely forgotten and then some periods of renaissance when he has been refound. One of the renaissances was largely initiated by **Benedetto Croce** in the beginning of this century in Italy and the second one started about 30 years ago in Italy and the United States in the time of the Tercentenary of Vico's birth in 1968 by many scholars like **Max Fisch, Ernesto Grassi, Leon Pompa, Hayden White, Donald Verene and Giorgio Tagliacozzo.**

Vico is mostly known because of his magnum opus "Nuova Scienza" ("New Science") which he actually wrote and published in three largely different editions. His approach was as the very name implies a bold and comprehensive one trying to understand what it means to be a human. Thus his new science is a science of humans and actually he can be regarded as a more or less direct forefather to most of those disciplines called humanistic today. Perhaps the most well known and influental of his ideas are the following three:

1. A so called *verum/factum* (or *verum/certum*) -principle which means that we can have sure knowledge of only that we have created by ourselves, not otherwise.
   Although it has been influental in giving credit to the "humanistic side" of the world's history and development (especially in Germany where the notion "Geistes-wissenschaften" or literally "sciences of spirit" was coined) in contrast to the natural sciences I think it has been in some extent exaggerated. For Vico it has a special role in his model of the mind.
2. The cyclicity of history, which means that cultures and the whole mankind develop through certain stages like any living being ending up to a disolution and then to a new cycle again like the annual seasons. Also this notion was especially taken in Germany in the 18th and 19th century and was connected to historicism and romanticism. For instance **Hegel's** allembracing major system was very Vichian in spirit although it contained many other ingredients as well. Espe-

cially those philosophers of history who have been worried and convinced of the degeneration of their own time have been happy to use Vico's notions, **Spengler, Toynbee** ea.

3. The aspect I'm mostly interested here, namely Vico's theory of mind which I find very interesting and relevant even today.

6. THE POWER OF IMAGINATION

The central notion of mind for Vico is *imagination* (fantasia) with which he means a feature distinctive for a human mind (or cognition) which enables to form images out of sensed experiences, disconnect them from the context, store them, combine them in a new way and use to grasp new situations in new contexts. He divides this faculty to three major stages, the imagination proper or *fantasia*, memory or *memoria* and ingenuity or *ingegno*. The first one is the disconnecting stage where images are created or born from the sense data, memory naturally stores them and ingegno or creativity is that humanly unique feature which enables us to reuse, reformulate and recombine those images and which in Vico's mind is the real birth of consciousness and humanity.

He acknowledges that animals too have memories which help them to survive in various situations and that they have probably a kind of images with which they store their experiences as well, but he denies that they would have that ingegno enabling them to use those images in a new creative way. Personally I am inclined to think more of changes in grades than of clear borders, but if we need to locate the major difference between animals and humans I would put it here too.

The level of sense data and fantasia is factual in a sense that it is based on those "facts" we perceive from our environment. In this sense Vico is a kind of realist or empiricist.

But he claims also that we can not really know clearly and surely what we have not created by ourselves and thus all that knowledge is mediated before it reaches consciousness. This mediation happens through memoria and ingegno which build up the second "artefactual" level of cognition on which we according to Vico's verum/factum -principle have a certain knowledge because it is something we have created by ourselves. Thus our perception is actually a two-level system as the rest of our cognition too. We do perceive on that deep or basic level, but right

away when we start to contemplate the perception, compare it with others, and relocate it in to our "imagebank" it reaches the upper level.

From the semiotic point of view this level division is very interesting, because according to Vico's presentation it is clear he perceives the images clearly iconic in nature, whereas when they are disconnected and relocated they become clearly symbolic in nature. Thus this division of signs familiar from Peirce is actually an indication of process of symbolization where signs stay more or less as they are but through the change in interpretant or perhaps better in a inventive reinterpretative process the object changes. This change according to Vico is strongly metaphoric in nature. The object or signified in Saussure's terms is metaphorized, literally "carried over" from one meaning to another.

7. THE TROPES OF MIND AND SPEECH

Metaphor is only one of tropes or figures of speech in rhetorics, but quite often it is also regarded as a generic term for all tropes. The long history of rhetorics is full of more or less successful tries to systematisize these quite stubborn notions. Vico inherited the Italian humanistic view of the four major tropes: metonymy, synecdoche, metaphor and irony. Some people have maintained that even now, e.g. Hayden White uses these four tropes to distinguish four different ways to write philosophy and history, but more often synecdoche is seen as a subspecies of metonymy and irony is sometimes seen as a totally different type of phenomena. I would like to see them in Peircean terms so that metonymy and synecdoche which both indicate an essential connection between the replacer and replaced are clearly indexical in nature, metaphor which indicates a type or degree of similarity iconical and irony which requires a conceptual skill to understand oppositions symbolic.

However, I think that an even better way to see these tropes is to see them as transfers from one sign category to another one. Metonymic (including synecdoche) transfer is a process where initial indexicality is turned out to symbolicity through conventions of social inter-subjective interactions (I come to these soon). Correspondingly metaphoric transfer is a process where iconicity turns to symbolicity through similar conventions. Irony represents a stage of pure symbolicity and is thus impossible before a relatively late stage of the development of consciousness where that symbolic upper or surface level has already enough "mate-

rial" to use and compare with each other. Thus irony is often seen as a sign of a mature and perhaps already declining culture as it can not be directed to anything new anymore but to recycle the old material. Postmodern period is quite obviously often linked closely to irony.

So these "tropical" (i.e. about tropes) phenomena are according to Vico already in thinking, not only in language as often thought. This very insight is very close to the modern second generation cognitive science I referred earlier. Especially Lakoff and Johnson have emphasized the importance of metaphor (and metonymy in somewhat lesser degree) in creating and expanding our conceptual domains. Language is however very closely linked with cognition. In principle cognition can perhaps be seen as a bit more profound one of the two, because clearly a meaningful communication through a symbolic language requires skills to interpret it, i.e. cognition, but this same symbolization requires conventions and conventions require social interaction i.e. Communication. As **Wittgenstein** argued there can be no private language. Thus both cognition and language come in practice together hand in hand.

Language can be seen as an intersubjective extension of cognition and major means to create that intersubjective World 3 in Popper's terms. Thus it is no wonder that its pat-terns follow closely the cognitive ones, but as indicated above the flow of influence goes both ways. Again initially the cognition can be seen more prime in using metony-mic and metaphoric transfers to create symbolic level patterns and structures. They have their origins in a perceived world or Lebenswelt in **von Uexküll's** terms, but grow gradually further and further from them and in the same time become more abs-tract and elaborate. But when these patterns and structures expand through and by language their relative expansion and elaboration exceed the capacities of a private cognition. Secondly because that exchange enables transgenerational storage of pat-terns, structures, categories etc. nobody of us starts from zero, but on the contrary we are highly immersed in and by the culture around us which preceeds and quite likely also overcomes us. Because all that is so "ready" and highly structured already before us it is no wonder that we take a very much of it for granted as universal and necessary. Thus I do not wonder why such universalistic and/or aprioristic approaches like the ones by **Plato, Kant**, Chomsky ea. have been so popular.

8. CONSCIOUS SEMIOTICS AND UNCONSCIOUS AESTHETICS?

As I have tried to argue above, I think that perception is an essential and inseparable part of cognition. It feeds all that raw stuff for our imagination to turn it to our conceptual thinking, and it is also the delivery point of all signs we receive. I have sometimes thought of a division between the aesthetic and semiotic in a way that the semiotic is that part or component of a sign which is interpreted and the aesthetic that part which is not, thus a kind of surplus. An interesting point is that if the aesthetic part neither signifies anything nor is signified by anything how can we know anything about it or even have a feeling of it. My feeling (sic!) is that it is precisely that element of fantasia which has not been "elevated" by ingegno to the syntactically structured discoursive mind.

I know that the very metaphor up and down contains strong evaluative aspects and thus I want to emphasize just the heuristic function of this model. I do not want to claim that this "upper" level would in any relevant sense "better" than the other. This view is of course nothing new. There are many philosophers, artists etc. who think that art and other aesthetic objects contain some non-discursive and not easily explainable attributes still affecting us in many meaningful ways. My point is that besides the "primordial" aesthetic element in each case of perception we need the semiotic one as well in order to grasp it and to locate in our specific mental structure. Because of our species-specific psychophysiological structure and heavy culturation our structures are amazingly similar, but of course there are some differencies too and ultimately all this happens in our individual bodies.

Although this emphasis on two levels of cognition might sound again a kind of strong dualism splitting the hard discursive rationality from the soft associative emotionality I want to downplay or relativize this split quite a lot. Even if it is true that the discursive structured rationality seems to be a further step in development and a newer player in the game it does not displace or supercede the other, but mixes with it in our mental and linguistic action. Although we are perhaps not so often thinking of the deep level and if, as Vico maintains, we can not even grasp it without using the surface level concepts, it is still as much present in our cognition forming the basis on which it is constructed. As far as I know this is very close to **Freud's** subconsciousness and **Kristeva's** semiotic

chora before and below the symbolic linguistic culture. Unlike Freud I would not like to postulate any more departments or faculties in mind than necessary. I think we do not need a notion of superego mediating between the consciousness and the subconsciousness unless we give that status to imagination which bridges these spheres in Vico. Still I would not like to call it a specific faculty, but rather a skill or a habit.

9. CONCLUSION: SIGNIFICATION, IMAGINATION, AND COGNITION

So where does this very special and important skill come from? Why do we have it? Why does it work like it does? Very elegantly Vico retreats into his verum/factum -principle saying that because it is something not made by us but with something we are born with we can not know. I guess that for most of us it does not sound very satisfying, but a bit too easy for an answer! My insight is that it is more like one of those skills emerging during the various stages of evolution which are called adaptations and exaptations. Adaptation is a process where an organism follows the pattern and changes of the environment and tries to adapt with that by changing itself. It can also be called osmosis, and interestingly Marcel Danesi compares that with a mental phenomena of mimesis. Both osmosis and mimesis are reactionary in a sense they are actions but not on their own but ignited by some outer stimuli. Exaptation is a kind of opposite where the skill, faculty or organ is already there because of some earlier development, but when the environment changes it is not the form of it changing but the way it functions. For instance many of our bodily organs are thought to have developed in this way, like e.g. our speech organs.

I would call exaptation as a kind of pre-imagination, because there we have something like a mental image connected with the original sensory input. When the situation changes and that input is not valid anymore or it has changed a lot we still have traces of that image stored in some fairly vague connectionistic way in our neurons (and quite likely in other cells of our body too containing that nowadays quite fashionable tacit knowledge), but without the original context. Perhaps by accident, perhaps by some causal links the first new connection occurred, then the next one etc. and there it began. I have a kind of sympathy towards ideas of a highly contingent nature of the processes and events in the world.

Our life here in this particular little planet, at least before we have much more empirical evidence of the possibilities of life in other places, seems to be more or less contingent or accidental. Thus I guess much the same applies to our species and our cognition too. I mean that we can trace the causal logical chain backwards more or less easily. We are what we are because our ancestors were like this and that, their ancestors in a same way all the way to the very first little cell and even beyond. But to the other direction it is much more complicated. In every single change of event there are other possibilities too and where it could have lead if even one of those had happened in some other way. If the dinosauruses would not have died and let ecological niches for those first little mammals, if the Neanderthal man would have been the one to get the upper hand in a fight between different species of hominids etc.

Even though there are branches of semiotics which see semiotic processes in animals, plants, genes and even in inanimate nature I would like to follow **John Deely's** formulations when he maintains the difference between a potential non- or pre-cognitive semiotics and an actual cognitive semiotics. I think these notions are very closely inter-twined with each other. Without cognition we can not read signs and without signs we would not have cognition. I see that the exaptative process of imagination described above is precisely the birth of signification, both the separation and the trace of connection. Then through indexation, iconization and finally symbolization this significative distance gradually expands. And as I said earlier it is also the birth of cognition. Thus we have a triad of signification, imagination, and cognition which I claim are inseparable and necessary for all our meaning and meaningful life. I hope my paper has given some meaning to that claim.

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