PSYCHOLOGY OF THE WORD, LOGICAL SEMANTICS AND POSSIBLE WORLDS THEORY

Aurel Pera

Assoc. Prof., PhD, University of Craiova

Abstract:We have always been concerned about the thinking oriental and especially the Indian, which is why we tried to draw attention to a deeper problem of this model namely the relationship between psychology word semantic logic and ontology of possible worlds, from a thorough analysis of two texts representative of Indian thought, Tarka-Sāmgraha and Nyāya sutras obviously compared to modern European thinking on key concepts.

From this perspective we plan to reveal the relationship between word and meaning, as interpreted Indian versus Eastern thought; Indian grammatical logic is approach (the difference between grammatical rule and rule logic); how does Indian thought from the word ontology existence and how we conceptualize; which is the psychological aspect of probabilistic structure of the message of a speech; the relevance of ontological knowledge through word; how to report the relationship between semantics and semiology, as interpreted Indian thought in Western semantics; the relevance of contemporary Indian logic semantics, compared with the conception of A. Church, Gh. Enescu, P. Guiraud, K. Oehler, Hintikka and Kripke.

Finally, how can we get from the word psychology and ontology analysis to the logic semantics, the semantics of modal systems and especially the interpretation of those systems through "theory of possible worlds" or "theory of descriptions of state".

Through such an approach we believe we can understand not only the psychological aspect but also the ontological of the word "sign" specific cultural context Indian, within the rule of grammar in the context of his thought Panini, although the concept "code" based on language was imposed along with information theory became the central concept in semiology where conventional coding is the act underlying the relationship between sign and signified.

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1. Introduction

The two texts, *Tarka-Sāmgraha* and *Nyāya-Sūtra*,particular importance for Indian thought, for which we make some clarification. On the one hand, Indian logic is accompanied by a semiology and epistemology, in its most elaborate stage develops semantic theories strictly dependent on the latter. Semiosis problems are still present at Panini[1], which has surprised a generality broader than the logicians have glimpsed a semioticians. Panini parallel with and independently of him, phoneticians gave a semiological interpreted phonological relations. So the reverse of what happened in the West, grammar preceded logic, and both operate with comprehensive sign generality[2].

Interrelationship of the three disciplines (grammar, semantics, semiotics) gives a whole unit thought Indian problems related to the relationship between thought and language, albeit in detail the various schools are opposed by criteria epistemological related to their positions metaphysical and have religious[3].By classifications reasoning semiotic, both indirectly and directly by theories logical-semantic, logical Indian Open own perspective on the relationship between word -sign artificial language- and sign natural perspective hardly acceptable to Westerners, that the unit act semiotic beyond the natural opposition - artificial. According to *Nyāya* logic, reasoning semiotic is made on the relationship between three elements: the (l*iṅga*), signified object (*liṅgin*)and substrate (*ādhāra, adhikarana, dharmin, pakşa*). The latter gives India an existential reasoning, enabling exemplifying positive or negative.

The second commentator, *Nyāya-Sūtra*,Udyoattākāra (sec. VI-VII) that introduces innovation to the primitive text, the three types of *anumāna* "by consecution and exclusion", "only consecution" and "only by exclusion". Echoing this threefold classification, Ganges adds a new criterion for differentiation at the illustration: the reasoning positive -negative

[1]Pānini's grammar, Aşţadhyāyi, *Eight books* appears as the first system of thought rennet Indian axiomatic system built and as such, the Indian counterpart of the Aristotelian.
[2]The sign, in logic, is defined as a material form endowed with meaning or significance that helps accurate. After the degree to which they own meaning, signs fall into three categories: signs with fully independent meaning in language; Signs that the full significance only in the context of other signs; auxiliary signs that do not have their own significance, but only helps to accurate meaning. See George Enescu, *Dicţionar de logică,* Editura Ştiinţifică şi Enciclopedică, Bucureşti, 1985, pp.326-327.
[3]Details on this issue can be found in the work of Sergiu Al-George, *Limbă şi gândire în cultura indiană*, pp.1-58.

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(anvayavyatireki) the examples are possible both positive and negative, in the only positive *(kevalanvayi)* - only positive, and the only negative only negative. This classification is essentially threefold classification of the sign itself (*liṅga*)as a make- *Tarka–Sāmgraha* .How appreciate Sergiu Al-George, this classification involves an analysis of semiotic significance of which was not revealed until now and that a Romanian orientalist analyzed in a chapter of his work[4]. In the classification of Ganges is surprised relationship between the three elements that make semiotic sign natural - *the sign, signifier and substrate* existential, but particularly resulting from changing these relations, allowing the Romanian author, in subsection remembered to get semiosis in this type of intimacy, intimacy by revealing its analogies with the sign language, which reveals analogies form as a link between intelligible and sensible.

On the other hand, the term *sakti* presence in Indian semantic theories can not be explained except by force ,,agreed to primitive sacred"as most commentators suggest, be they traditional or modern (Udyottākāra, Ganges, Annambhatta, Dasguta, Radhakrishnan, Sergiu George Al- etc.)[5]. Supreme divine principle, as suggested by the text-Sāmgraha Tarka, 48, is considered himself as a true semantic - Brahman - word (*sabda-brahman*) - similar Logos in Greek philosophy. Annambhatta defines force as a semantic relationship between the name and meaning, capable of evoking the memory of the object or meaning on hearing the name.

Both ,,concept of respect" and the object are undifferentiated, both of which are encompassed within the term *artha*. Force is semantic meaning that opposes direct or secondary name figuratively called *laksana.* Ha do together constitute the way ,,action" *(vrtti)* word. School support Mimāmsā eternal nature of the relationship between word and meaning, while *Navya-Nyāya* school followers argue conventional nature of this relationship. Annambhatta adopt the view of the old school Nyaya, then that relationship is a divine convention. Old school studiedNyāya testimony *(sabda-pramāna*) as its word in its proper construction of knowledge as a means fair.

Ganges, which caused a revival of the study of logic in India around the year 1200 AD, accepted, as we have seen, this concept of old school Nyāya, then any word or phrase whose expression is preceded by a fair knowledge its significance is a verbal testimony. New school

[4]This is the work cited above, subsection *sign natural sign language and meaning,* pp.58-72.
[5]revealed while in this respect are the following works: Matila, BK, *Epistemology, Logic and Grammar in Indian Philosofical Analysis* , Mouton, The Hague, Paris, 1971; Ojihara, Y. L. Renou - *La kasike - vrtti*, Paris, 1967; Padaux, A., *Recherches sur l'énergie et symbolique them from certains textes tantriques dance passwords* , Paris, 1963; Rocher, R., *La voix du Theora of verbs dans l'école pāninéenne (s XIV 's ahnika),* Brussels 1968 .

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Navya-Nyāya supports two possible relations between word and its meaning: the first is called *sakti* (force semantic), indicating a stable Convention; the second is called*laksanā*, the implication[6]and is an indirect connection with the object signified conventional (eg speaking to a judge who sits on a chair and counties that use the word „ chair"). Indian commentators[7]believes that relations can be established by conventional means eight grammar analogy, vocabulary, word of an authority on the matter; common usage, context, paraphrase and contiguity (the quality of being united by something). Old school Nyāya, word thought to be related to the universal (*sāmānya*),with the individual *(vyakti)* and its form *(akr.ti)*, while *Navya-Nyāya*, claims that there is a relationship between word and it is the individual and inherently universal.

2. Between linguistics and semiology

According to the text Tarka - Sāmgraha, because knowledge is the meaning of the phrase expectation *(ākanksā),* compatibility *(yaigyatā)* and continuity (samnidhi). Expectation is that lack of information when it excludes the use of another word that should follow[8].Watchful waiting refers to both the probabilistic structure of the message, as found in its linear order, and the syntactic structure. After his explanation Ganges, probabilistic linear structure does not only refer to interlexicals relations, but also those infralexicals not unilateral but reciprocal name reflected the expectant face of inflectional suffix and vice versa[9].The concept "expectation" *(ākanksā)* applies not only to the surface structure of the array discursive, but also the depth. Ganges refers to the syntactic categories, the ideal predicative functions (*kāraka*)that should not be confused with the sentence parties, functions described by Panini (agent, patient, instrument, place and circumstance of the time, ablation and donation) reports that the specification of the idea. Ganges believes that between the idea verbal and predicative functions there is a relationship of mutual expectation, similar to the infralexical one.

[6]In modern logic ,,speaking of Default" in the sense of hypothesis" „premise" and the implication relations, causal inference, implication counterfactual implication formal, deductive inference, implication nomologică, strict implication etc. (Gh. Enescu, *Dicționar de logică*, pp. 145-146).

[7]Pandit Bushan and Avabinda Bhosu BV, in the chapter "The Nyaya-Vaişeşika modern" in the work coordinated by S. Radhakrishnan, *History of Philosophy Eastern and Western* , London 1952, pp. 288-289.

[8]*Tarka-Sāmgraha* **,** 49.

[9]Ganges analyzes the following example: *Devadattah gacchati grams* (Devadatta go to the village). Here *Devadattah* (nominative singular) is expectant to *grams, "sat"* (accusative), just as *Devadatta* - not reflected nominal form - it is expectant to h(singular nominative suffix). See Sergiu Al. George, *notes and comments at Tarka-Sāmgraha, op.cit* . pp.226-227.

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The compatibility (*yogiatā*)is the unconcellation of the sense[10]says Annambhatta in Tarka-Sāmgraha, 49. As the saying Ganges, compatibility refers to semantic and syntactic relationships e. In the example cited, the term ”fire” can not be argument to the instrument when specific verbal idea ,,wet”, while continuity is pronouncing words without interruption. The text says that the sentence without waiting is not an instrument of correct knowledge (*apramāna*). Thus example ,,ox, horse, man, elephant” is not correct knowledge tool because missing compatibility; Bring ox ,,if words” are not pronounced together, but at least every three hours, not a means of correct knowledge, due to the lack of continuity[11].

Tarka–Sāmgraha text end section about word *(sabda)* indicating that the phrases are of two kinds: Vedic and profane. The Vedic because it is uttered by the Divine Master, is entirely correct knowledge tool; profane instrument of knowledge is correct when uttered by a person who acquired the information directly (fit); others are correct knowledge tools [12]. Knowledge is knowledge by word phrase meaning; the sound of his instrument. Recognising this, Annambhatta conform to the traditional view that oral form given priority over other means of communication such as gesture or expression through writing. As is apparent from the Indian perspective, the semiology relations between semantics and semantics are not acceptable for the entire West. Some authors such as G. Mounin[13]which quotes and Sergiu Al.George, after saying that semiotics is not semantics[14], rises against the unity and the significance of natural sign language, challenging the unity of the two "semantics", as proposed by AJ Greimas[15].

Sergiu Al. George noted that G. Moulin has a limited view of semiosis, as instituted Fernandez de Saussure. When he first spoke of semiology signs and systems in the bosom of a society, F. de Saussure was referring to communication systems, to sign the "process" of a transmitter or artificial, thus excluding information ,,processes“ of nature, symptoms that allow a

[10]The meaning was designed by the Indians as the ancient Greeks in shape (Eidos, Morphos), a value that was lost in the Latin word "concept". Unlike Aristotle, breaking with the tradition of Plato attributed only species form - not gender - Indians attributed both (details can be found in Sergiu Al-George –*Limbă și gândire în cultura indiană,* p.68).
[11]*Tarka-Sāmgraha,* 50.
[12]*Tarka-Sāmgraha ,* 51.
[13]Mounin, G., *Clefs pour la sémantique* , Paris, 1972, pp.8-9.
[14]A language can be studied from three points of view: syntactic (logical syntax), semantic (semantic logic) and pragmatic (pragmatic logic). The term of *semantics* was introduced in logical Tarski (1936). Semantic logic is part of the logic of semiotics.
[15]Greimas, AI, *Sémantique structural,* Paris, 1966. Greimas emphasized that ,, speech act "can be considered as a place of occurrence of ways, provided that the court subject modalizator be sufficiently determined. (AI Greimas, "For a theory of modalities" in vol. *Meaning and communication in the contemporary world* , Ed Policy, Bucharest, 1985, p. 226 .

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broad acceptation diagnostics, according to the etymology of the term Orma, ,,knowledge through a" mediated knowledge. Indian viewpoint is somewhat closer to the concept of Pierce's who was talking about ,,interpreter" (meaning or significance) as about the third element outside sign and signified - present in all types of signs.

Umberto Eco points out that this concept is broader than that proposed by F. de Saussure, as it included the symptom without his semiotics deconventionalize[16]. The ''interpreting''of Pierce was not ''interpreter'', the person who perceives the sign, but who guarantee the validity of the sign. For Indians, this element is ensuring the validity car was okay *(niyama)* present in any type of semiosis. According to Buddhist semantics, meaning appears to be set by a rule, the rule defines one form (*ākarā*) both positive and negative, and rule as a natural sign. Sergiu Al. George noted that the theory of meaning, as it was developed by logicians Buddhists do not make a distinction between word and sign natural (*apoha*)[17], revealing both by one and by other[18]. Romanian author believes that recognition by Buddhist logicians that the meaning is based on a similar rule, which was the major reasoning that allows us to qualify as a semantic logic semantics, the meaning of the term Indian. It differs NIS deeply what we call today "semantic logic"[19]. Indian logic semantics differs from Western assert that semantic meaning is shaped *(ākarā, akr.ti)*, for which required some clarification about the Western sense of logical semantics.

There are two views on semantics inexplicit made: on the one hand, studying the contents of a given language semantics, on the other hand, she studies interpretation syntactic system or how to express A. Church of ,,logistics system". The essential difference is that in the former case, semantics is given with the language and in the second case, the system will become just syntactic language through interpretation and, therefore, have semantics. In other words, in a case the size of semantics there, in the other case - is to *become*. One is to study the significance ofexpressions and another to turn a graphic form formal expression system by

[16]Umberto Eco, *Le shapes del contenuto* , Milano 1971, p.17. The work *in perfect language search* , Polirom, Iasi, 2000, pp.22-25, Umberto Eco makes the following statement: a natural language (and generally any semiotic system) consists of a plane of expression (a vocabulary, a phonology and syntax - in the case of natural languages) and a content plan, what is the universe that we can express concepts.

[17]*Apoha* means in Sanskrit exclusion, denial. The term is found in Buddhist theory about the meaning of words based on the principle of negation.

[18]Sergiu Al-George, *Limbă și gândire în cultura indiană*, p.68

[19]"Semantics logic" came as a reaction against antimentaliste purely formal semantics, represented by L. Bloomfield and ZS Harris, the limit values in its relations distributional word or syntax, is word combinations with the other words in the chain expression.

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adding meanings. As Gheorge Enescu said- the explanationofambiguity comes from the fact that logic ,,modern languages" were drawn largely content is reduced to *form* the housing syntactic and remaining in this way open to different content.

Logician Romanian state that, as far as semantics studying language (is a system syntactic-semantic), is more than obvious definition of semantics: it studies the relationship information between expressions and object, and the relationships between expressions based relations the object[20]. In the second case, one can speak of a possible semantic or, simply, the theory of interpretation and so studying semantics not once but a semantic conditions possible. In any kind of sense the semantic term would be broached it starts from the premise that we have language. The language is in side splits syntactic and semantic side, after the system is restored syntactic language through interpretation.

As interpreted Romanian logician, semantics is conducted in three eta on: 1) ,,logical semantics" in natural language; 2) special language semantics of logic and applied logic systems; 3) theory of interpretation. Main Category semantics is the *meaning*[21]and, primarily, the *meaning* of which implies *the meaning denotingcognitive* (or *meaning* nominative) components *denotation and* meaning. There are other related concepts, sometimes identified with the denotation and meaning, *extension* and intension. Then follows *a logical* and narrower and *truth.* In Western literature is still spoken by reference semantics and semantic relationship modal systems[22].The first evokes a method of treating semantic expressions, that is a semantic conception according to which expressions cognitive language - words or sentences - refers to a physical or abstract entity. The entity to which the expression is called denotation or referent, and how it relates is called respect. Semantics modal systems is the fact that the interpretation of these systems is done using *possible worlds* or *descriptions of state.*Hintikka and Kripke[23]develops the theory of possible worlds and show that there can be many variations of theories of possible worlds, Kripke's theory is just one of them. They interpret multiple systems

[20]Gh. Enescu, *Dicţionar de logică*, p.325.

[21]The notion ,,meaning" (*lat. Significatio*) appears in medieval logic in the theory of property "terminorum". In modern logic, the notion of ,, significance "was taken as a category of semantics and coincides with what is called ,, content expression, "that is what gives us the phrase when pronounced and heard or written and read.

[22]*It can be studied interesting work of Mircea Dumitru*, Modalitate şi incompletitudine (Logica modală ca logică de ordin superior)*, Editura Paideia, Bucureşti, 2001.*

[23]In Romanian translated one of the works of Saul Kripke-*Numire şi necesitate*,Editura ALL, Bucureşti, 2001 Mircea Dumitru translation.

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Lewis (S_2, S_3, S_4, S_5), and is interpreted as necessary *always and everywhere* really, and it can *sometimestrue in some places*[24].

It seems that today it offers two current semantics: *mentalist* and *antimentalist* as two exclusive solutions. Discussing them, a contemporary author, P. Guiraud[25], search for a third way, following a logic of words, distinct from the immanent logic of things and the system, but to its own linguistic relationship. From the perspective of the Indian, the third way (which is not logical, nor to logic) logic is the way its mark in the global[26].

Gerard Deledalle believes that any sign is triadic and, as a sign, consisting of three elements: an reprezentamen, an object and an interpreter[27].The reprezentamen replaces an object whose reading cannot be achieved only through the interpreter. As the first element, it is based on the sign without relation to its object, and vehicle sign. The sign is a reprezentant which is by definition a mental interpreter. As Pierce would say ”*thinking* is *the main if not the only mode of representation*”. But "there may be reprezentant which may not be signs”. In a letter to Lady Welby, Peirce[28]said that un „object that he uses the term” as a noun *objectum* the word was used in the early century, the thirteenth century. The object is therefore sending entity to sign the existential singularity. The third element, the interpreter is the sign or signs class that allows us to attribute signed this object it represents.

Depending on the relationship with interpreting, said Klaus Oehler, a sign may be: 1) rematic, 2) dicent or 3) argument. This classification corresponds to the old divisions within, sentence and argument, but is modified so as to be applicable to general signs. A rematic sign is any sign which is neither true nor false, for example, an isolated word. A dicent is a sign that can be implemented in a statement (statement), and an argument is a sign necessarily based on reasoning. A sufficient condition for a sign to work, continue Oehler, is its inclusion in a triadic relationship, which means that the sign designates *something* and that this designation has a meaning that is understood by another *something*, namely consciousness. This possibility of

[24]Details in Gh. Enescu , *Dicționar de logică,* pp. 327-328 .
[25]P. Guiraud, *La sémantique* , Paris, 1972, pp.108-109.
[26]Sergiu Al-George, *Limbă și cultură în gândirea indiană,* pp.71-72.
[27]*Gerard Deledalle,"Teoria şi practica semnului" in vol.* Semnificaţie şi comunicare în lumea contemporană, *EdituraPolitică, Bucureşti, p. 32.*
[28]Charles Sanders Pierce is today considered the principal founder of modern semiotics. Semiotics founded by Peirce was the basis for further development of semiotics as a science of signs. Semiotics has become a fundamental science from the time it was recognized that logic and linguistics still have a foundation that is the sign of signs, without which no representation or communication is not possible.

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understanding involves agreements that are necessary and repeatability signs for teaching - learning their[29].

Sergiu Al-George, analyzing issues semiosis grammatical rule and rule in Indian ritual, said that the word that reveals a logical interpretation and normative Semiological to rule is the *laksanā* index "sign" "indicator", ,,indication". Nyāya logic term *laksanā* designate the definition criteria and, by extension, the very definition which was conceived as a logical antecedent between the sign and the signified consistent [30]. In fact, Nyāya (rule) is a discipline logical-epistemological and is one of the six *darsana*, While the rule relied on inferential reasoning (*anumāna*) will acquire personal name much later and will be called *nyama*, home run ritual adopted by grammarians, meaning ,,having restrictive rule"[31].

The rule established relationship between sign and signifier has never been considered a part *(avayava)* Autonomous among the five in which was divided *anumāna* reasoning, although it constituted an essential element of its being equivalent ,,majority"of Western logic reasoning. Among modern interpreters, who only tried to justify this qualification common grammatical rule and the definition was logical JF Stall[32]. But he limited it to explain the reasons that many of the rules are definitions of Pānini. Was the first American scientist wondered why grammatical rule was characterized by the word *sign*. Neither in the Indian cultural context grammatical rule cannot be identified with the logic because semiosis grammatical rule is designed in a much broader sense than that. Even if the rules of grammar and logic have a semiotic essence, each operating in its different modalities.

[29]Klaus Oehler, **„**Compendiu al semioticii lui Peirce", în vol. *Semnificaţie şi comunicare în lumea contemporană*, Editura Politică, Bucureşti, 1985, pp.61-63. An overview of Pierce's material is given by K. Oehler in his *A New Tool for Peirce Research* 1978.

[30]The first evidence of the equation *laksanā* , grammatical rule, we find a phonetic treaty *Rkprātisākhya,* XVIII, 31, with an uncertain timeline that does not exclude the possibility precedence or contemporary with Panini (see also Sergiu Al. George - *op. cit* .p.83).

[31]In India the rule was designed from the outset to accept more rigorous and more complex than in Greece, where grammarians in school stoic were engaged in lengthy controversy over the two theses that supported either the predominance of analogy, be the fault of language. Even Aristotle opposed the law (rule) taken in conjunction with the sign as the field of probability and not necessary.

[32]Staal, JF, "The theory of definition in Indian logic", *Journal American Oriental Society* , 1961, p.122.

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3.The theory of semantic information.

The concept of *code* language was imposed in relation to the West after F. de Saussure, with information theory, becoming a central concept in semi loggia, where conventional coding is the act underlying the relationship between sign and signified. P. Guiraud warn: codes differ in their degree of conventional thinking and, therefore, no natural language semantic theory will hardly only to the extent that will operate them with a suitable code[33].

Regarding the notion of *information,* it can be said that she was under a certain aspect of it, almost completely neglected in epistemology and philosophy. The first systematic attempt to situate the concept of information logically and philosophically took the appearance of a conscious reaction to the statistical theory of information theory neglects explicit, as distinguished epistemology Romanian Ilie Parvu, a number of outstanding features of the idea of information. To distinguish this new way of analyzing information, R. Carnap and Y. Bar - Hillel have their initial study entitled *"A Theory of semantic informationthat"*[34]. They talk about the information brought by a statement both taken separately and taken together with other statements, but no information on a broadcaster intends communicate it by sending a message, nor about the information that a receiver receives from this message.

The two authors conclude that the best approach to these explanations is the analysis of the concept of semantic information which, in addition to being an approximation of the concept thoroughly by obstruction of pragmatic information, may well be independent of valence[35]. Hintikka has shown that all types of logical arguments -demonstrations, rejection, etc. demonstration of equivalence- Can be made into a linear form by converting the beginning, those statements in their normal forms and then extending them until, at a depth once the desired logical relationships become apparent. In each case, there will be a natural measure surface information obtained in this argument[36].

Methodological and conceptual issues arising from the development of information theory were established core logic and epistemological conflict between Popper and Carnap, which lasted nearly four decades defining a conflict of schools of thought compared with

[33]Guiraud, P., *La symbologist,* Paris, 1973, p.31
[34]Ilie Parvu, *Semantica şi logica ştiinţei*, Editura Ştiinţifică, Bucureşti, 1974, p.86.. The author states that ,,a formal methodological manner, some prior ideas semantic theory of information they are outlined by K. Popper in 1934. Its basic idea was that the information is the same as removing uncertainty".
[35]Bar-Hillel, Y., *Aspects of Language,* Amsterdam, 1970, p. 223.
[36]Ilie Parvu, **„**Informaţia semantică" în vol. *Epistemologia şi analiza logică a limbajului ştiinţei*, Editura Politică, Bucureşti, 1975, p.116.

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epistemological conflict of Bohr-Einstein philosophy of quantum physics. Ilie Parvu believes that the inverse relationship between probability and empirical content (information) was the cornerstone of Popper's methodology, his insight on the fundamental nature of the scientific method and knowledge daughters. Permanent dispute with inductive logic and inductivism generally Popper criticized all methods of verification or confirmation probabilistic scientific hypotheses[37]. And inductive logic Carnap school tried to combine the two requirements of knowledge, information and probability, a synthetic theory. Information goals high and high probability of knowledge is not mutually exclusive. To find the appropriate information measures in principle, more interesting cases than those investigated by Carnap and Bar - Hillel J. Hintikka studied languages monadic first order, with the following means of expression:

1) a number of monadic predicate $P_1(x)$, $P_2(x)$, ..., $P_k(x)$;
2) meni single name or other third free: $_{1,2,}$ ....., $_{b1,b2,}$ .....
3) Online: ,& ,∨ ,⊃~ etc.
4) Quantifiers ∃□ x) and (x).

by which statements can form atomic and molecular generalizations, propositional combinations, etc.

Hintikka theory concludes that the relationship with semantic information communication theory cannot be strictly based on the meanings of probability. Semantic information theory and probability and will aim to develop methods essential for discussing the probabilities and informational contents of generalizations (closed utterances)"[38].

General semantic methods enables an objective measurement for logical inferences us - trivial. On this basis, Hintikka reworded in a manner entirely new issue of logical inference, wondering whether or not the outcome is a tautology, with the effort of thinking and ingenuity involved.

Commenting on the issue, Ilie Parvu points out that when the truths of logic and mathematics, products of logical inference, are tautologies, it is considered an important fact, namely that, in a sense, a logical inference does not offer new information about the kind of reality that speak about her premises, but does not answer another question, what other kind of information we give is logical-mathematical demonstration however. There is a deduction

[37] *Ibid* , pp. 106-107.
[38] Hintikka, J., "On Semantic Information" in Hintikka, J., P. Suppes (ed.) *Information and Inference* , D.Reidel, Dordrecht, Holland, 1970, p.24, cited. Ilie Parvu, *op.cit* ., pp.111-112.

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scandal, "a paradox of inference scandal comparable induction "added deductive reasoning why and how our knowledge? In most works of epistemology continues by Romanian novelty deduction is attributed a meaning us - objective information or concealed logical problem in a form epistemological: novelty comes from outside, from introducing new content in the same connections formal analytical.

The problem of logical deduction must be made and maintained in logic, for which new conceptual tools to be invented, able to highlight the novelty and measure the value of deductive inference, and to solve the ”paradox of deduction“. One such tool is the concept of information surface.[39] Hintikka believes that the concept of surface information "gives us a measure of information that can grow through logical and mathematical reasoning. Hintikka sense that it gives the idea of information ,,is explicitly invoked impossible for some logical positivists"[40].

Hintikka's conclusion refutes a number of logical-epistemological theses supported by Wittgenstein or Carnap. Wittgenstein said that “a sentence states each Propose situation derived from it”, or: „If we are given a sentence, then with it, we are given and the results of all operations that are based on truth[41]. These theses are developed more fully by stating that Carnap logical deduction can never lead to new information on the world. Through a purely logical process cannot win never content. Even if logic can lead to something that is new in the logical sense, however it can lead to something that is new in the psychological sense. Following the psychological limit of human capabilities, finding a relationship of logical implication or logical sentences - a true knowledge is often important. But it is not a factual knowledge, information on the world, but a clarification on the relationship between concepts, are the relations between meanings[42].

Important implications for the idea of information are generated by the relationship with the values of probability. If we ask who is assigned probability values, the answer would depend naturally on the type of information that we have in mind. Ilie Parvu believes that if this is the information on a kind of reality independent of concepts and constructs of our conceptual, "then we assign values zero constituents us - trivial inconsistent because they do not describe a real alternative on the world as it is it independent of our concepts ... concept of information resulting

[39]Ilie Parvu, *op.cit.*, p.117.
[40]Hintikka, J., *op cit* ., p. 289.
[41]Wittgenstein, *Tractatus* , V 1.2.4 V 4.4.2
[42]See Ilie Parvu, „Informaţia semantică", in *op.cit* ., pp.117-118.

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from the award of zero values of all constituents will be called inconsistent depth information and corresponding probability, probability or post-inductive logic[43].

Ilie Parvu warn that the actual procedures inductive deductive and we do not operate with this information referred Hintikka. To be able to talk in terms informational what really do the logical and empirical sciences, not just the past achievements of these concerns, we must have available measures of information where unable to decide which statements are consistent is considered. Measures of this kind will be measures of *information surface*[44].

And logic Nyāya[45], as in the Sāmkhya philosophy, the question of how to obtain information or inconsistent with the subject line with reality. Considerations modern on this issue shows that if we focus on how to obtain information surface, we see that by enhancing it we get an acquaintance in a conceptual sense, even linguistic, referring to how our language is reality. It is not related to empirical observations or receiving messages factual. The only thing made t, is to delve deeper our language.

Hintikka surprised that illustrate the inseparable duality information area real conceptual information[46]. The information surface is synthetic because it is about reality and *a priori* because it is conceptual. Knowledge and the stem us mediate conceptual ,,close" to reality. The more we know better how the system works conceptually, the more efficiently we can use it to describe reality. In this regard, the information surface is simultaneously and effectively about the world and our concepts[47]. In this regard, Hintikka notice that our system works as a conceptual tool that connects our knowledge very complex reality which is this knowledge[48].

Conceptualization work has a creative role in knowledge, but it is not sufficient to demonstrate if they neglect the reality contribution. Therefore, perhaps, India has insisted so much on *art lite ers.* In Sanskrit, *vyākārana* means ,,analysis" and *sabdāmsāsana,"*instructions to the word." Not incidentally Pat year Jali paraphrase the term thus: *sabdāmsāsana* should know what it is decided by*sāstra* or " through code". Codes differ in their degree of conventional thinking. Semiology and modern semanticiens resort to language codes formalized, although

[43]Hintikka, J., ,,Information, a priori deduction and the " *new* , IV, No. 2, May, 1970.
[44]Ilie Parvu , *op.cit* ., 114.
[45]*Nyaya Sutras* , 53
[46]Hintikka, J.**,** *op. cit.*
[47]Ilie Parvu, ,,Informaţia semantică", p.121 .
[48]Hintikka, J., ,, has Truths mathematical synthetic a priori? "In *Journal of Philosophy* , no.65, 1958, p.640.

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cross - linguistic, are too rigorous in their conventionality to capture in language that is alive, although the rules of these codes are logical rules.

Perhaps not coincidentally Panini made Sanskrit language encoding model ritual action codes where the encoding is less rigorous than logical and epistemological codes. Each culture develops codes in relation to how segments statements human experiences, but this segmentation keep that culture morphology. In ancient cultures, the codes are less differentiated than in Western culture, and their study enables semiosis surprise in a state of total undifferentiated. Semiology previously developed Western deontic logic, invoke the idea of code, without a deeper on the time. Deontic logic is one that has deepened the concept of time, independent of semiological concerns, although included in his concept of rule under investigation, which establishes the significant relationship[49].

4. GH von Wright and theory set anankastic

How good grasp Sergiu Al-George, action codes can not be analyzed only by recourse to regulatory logic. GH von Wright, who said that, unlike judgments are true or false by definition, rules ... have not really worth[50] distinguishes three types of rules: rules, requirements or regulations and directives. In turn, the requirements are divided into: *orders, permissions and prohibitions* . The rule has its prototype in the rule of the game that determines the correct movements, what is permissible, but becomes mandatory when put into practice. This category includes grammar (morphology and syntax) of natural language, and the rules of logic or mathematical calculation[51].

Prescriptions continues von Wright, characterized in that it emanates from, or have their source in the will of regulatory authorities. They are given or issued by anybody. Issuing rule will express authority to make the subject behave in a certain way. Referring to the subdivision regulations, von Wright points out the ambiguity and even their controversial. He says prohibition and command inter - define each command may comment through prohibition and

[49]The word is taken from the Greek word deontic to Deon, **„** as it should be ",, debt", and names the new logical discipline dealing with normative expressions, must, can not be . Deontic logic is closely related to logic and imperatives it is adding to modal logic, considering that its normative notions have a striking analogy with the modal necessity, possibility and impossibility analogy that had been observed in the past by O. Jespersen in his *The Philosophy of Gramar* , London, 1925, p.325. So it was possible approach to logical expressions imperative that Western logic, starting with Aristotle, among them excluded from logical expressions, as neither true nor false.

[50]GH von Wright, *Normă şi acţiune,* Editura Ştiinţifică şi Enciclopedică, Bucureşti, 1982, p.8.

[51]*Ibid* , pp.23-24.

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vice versa. It is controversial and permissions status in relation to command and prohibition. They can be considered either as an absence of prohibition, be prohibited, that prohibition to interfere in freedom under a certain aspect agent. The third category, directives or technical regulations, stipulating certain means aimed against certain purposes. The standard formulation of the technical rules takes a conditional form in which the antecedent stated purpose to be attained, and consistent - what should or should not do[52].

In the author's conception, a statement which says that something is or is not, appointed *statement anankastic.* For example, the sentence "if you want to do barracks habitable, have to warm" is supposed logic of the sentence "if the shed is not heated, it will not be habitable. " Both formulations are normally used to make a statement about the living conditions of the people. Such a statement is *anankastic,* and a sentence that is normally used to formulate *utterances anankastice,* is called *a anankastică sentence.* The sentence is used to formulate a statement *anankastic,* express a *anankastic*[53].

Sergiu Al-George, going through the inventory of generic terms, designating the rule or ritual or grammar in Indian culture oldest discovered in etymologies traced in their semantics archaic, as each term contributes the perspective of its own to define multiple way which was conceived rule: terms pertaining to the semantics ,, thread"(*sūtra, tantra*) suggested setting process dependencies modeled and cosmocratic cosmogonic act, resumed within *yoga* ,the term*lakšanā*, ,,sign" reveals semiotic nature and normative rule and*sāstra*and *vidhi* ultimately reimburse explicitly normative character agrees to rigorous[54]. A characteristically Indian culture in relation to the existence of multiple Sinon Western is high, which was called ,,B. Heimann expression of thought dynamic India". The predilection for synonyms continues Heimann, es 're based on preference India ,,to paraphrase instead of appointing net and one-sided. Meaning sought is collected from various approximations, from all possible aspects"[55].

The famous Patāñjali distinguish it two broad categories of rules: a rule (*utsarga*), litt. emission and ,,particular rule" (*apavāda*), litt. ,,Expression that prevents the application of the general rule." The two rules (*utsarga* and *apavāda*) qualified as *vidhi* , ,,rules injunctive". Injunctive rules were considered to be overwordly expressions and, unlike the worldly, they n u

[52]GH von Wright, *op.cit* ., pp.26-27.
[53]*Ibid* , p. 27.
[54]Sergiu Al-George, *Limbă şi gândire în cultura indiană*, p. 90.
[55]Heimann, B., *The Significance of Philosophical Terminology Prefixes in Sanskrit* , Hertford, 1951 p.91.

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could never be wrong: ,,they are not overturned any man ever, under any circumstances, in any place", says Sabara **,** commentator at*Mimāmsā – Sūtra,* I, 1.2. Truths supra - worldly expressed by *vidhi* as valid criteria in order practice; by stipulating what they have done (*kārya*) to acquire good.

For exegetes Mimāmsā , it was obvious that the Vedic texts are not exclusively made of expressions injunctive verb optative or imperative and that together they are presented and other expressions, such as hymns invocation (*mantra*) or glossele explanatory (*arthavāda*). Although some were considered ancillary injunctive most were considered directly related explanatory glosses (*arthavāda*) containing reason injunctive rule **.** Vatsyayana, commenting, *Nyāya – Sūtra* II, 1.65, stressed the point expressions plus the imperative not only in the language of the sacred texts, but also in the profane execution of a command must be supported by reasons which contribute to the belief that you're going to meet in carrying consent.

Unlike India, Western thinking, the law expressing the need phenomenal relations, having thus an ontological reference, opposes the rule prescribes what should be. GH von Wright, analyzing the meanings of the term law precludes the laws of nature, which are descriptive, social laws that are prescriptive. In India, the law (*dharma*) includes both the cosmic and the social solidarity that needs, in both cases with a prescriptive law. For us as Westerners laws are descriptive.

Dharma is established through sacrifice and the first formulation to this effect exists even in Rigveda[56]. Vedas as audible manifestation of cosmic and social laws, are considered as the essence of Mimāmsā priori imperative. But this imperative translated into *vidhi,* although a priori and transcendental, has a Kantian categorical character. Rules injunctive indicating transcendental law and are formulated like priori imperative hypothetical: ,, the sky wishing to sacrifice" (*svargakāmo yājeta)*. Law appears on the human plane as a rule priori transcendental becomes empirical and practical. As Kant see empirical thought the idea of Indian brand option[57]. The modern concept in logical imperatives, that of "satisfying" mandatory sentences, output, we find prefigured in Mimāmsā called *arthibhāvanā*, "momentum toward achieving the object", unlike *vidhi* which was *sabdabhāvanā* "minutes realization impulse."

[56]*Rgveda* , I, 164.50: Through sacrifice, the gods sacrificed sacrifice - these were the first statutes (*dharmin*).
[57]Sergiu Al-George, *op.cit.*, p. 94.

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In von Wright's logic, which would return the status of *vidhi* as the ,,directive", but by expressions that are issued by the authority and addressed Island as commands, options (*vikalpa*) or prohibitions (*pratisedha*, *nisedha*) can be treated at the same time ,,prescriptions". The majority of the grammar rules remain the expression of a relationship of antecedent (area of validity) to consistently (corresponding linguistic entity). In its grammatical form, the relationship of antecedent to consequent relationship is stipulated as an application. All verbs in their ritual rules are equivalent injunctive verb *to apply,* whose presence is suggested by the terms *prasanga* and *praskta* . First, the sense of *application,* designating the general rule is met in ritualistic manual*,Āśvālayanaśrauta –Sūtra*I, 1.22. The concept of *applicability* in formulating grammar has a profound significance logic. Applicability as Petre Botezatu said, is essential operation which put in correspondence with elements of a crowd of other elements crowds and noted the possibility of a fall in the logic of relations as ireflexive asymmetric transient and selective[58].

Terms of *prasanga* and *prasākta* not appear on Panini but we find in his commentators. Rated terms are derived verb *pra-Sanj* (to apply) and designate the application (antecedent, the validity) and *prasākta* designate "the applicable" that consistently valid linguistic entity. The majority of system rules fall into two categories: First comes the rules that expresses a relationship between two entities (such as the one between an entity semantics and one morphological), while the second category includes rules that expresses an operation of substitution.

For the first group of rules, the antecedent is represented by a single name in the case of housing and, in this case, that rule becomes the value of a subordination type Conditional the *protasis* (name to Housing) expresses the scope (*prasanga*) and *apodoza* indication applicability linguistic entity (*prasakta*). All these meanings play semantics[59]dynamic concept ,,applicability" in the terms *visaya* that Panini uses it to express the scope of a word[60]. Regarding the second category of rules, which prescribe surgery substitution expression antecedent in a form more complex in the sense that, in these rules, there is a name in the genitive marking entity substituted accompanied by a second name that can be housing or ablative[61]. Like surgery, substitution takes place in at least

[58]Petre Botezatu, *Semiotică şi negaţie. Orientare critică în logica modernă*, Iaşi, 1973, pp.22-23.
[59]aspects of language as a system issue, skepticism semantic foundations subjective signification, as language semantic organization of collective experience etc. They can be found Tullio de Mauro, Introducere în Semantică*, Editura Ştiinţifică şi Enciclopedică, Bucureşti, 1978*, trans. Anca Giurescu.
[60]Pānini (IV, 1.63; IV, 1.66; IV, 2215; V, 3106).
[61]Details in Sergiu Al-George, *Limbă și gândire în cultura idniană*, pp.98-100.

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three stages: application virtual entity representing the general shape (*sthānin*); replacing the general shape indicated by substitute (*ādessa*) and substituting descriptive signs accompanying the meta substitute, according to Rule I, 3.9.

As outlined by von Wright and normative character of propositions is independent of their grammatical structure, meaning that statements or deontic imperative as the only type used to formulate grammatical rules. Use of indicative expressions to formulate a rule is found in the very structure of rules injunctive Vedic fact noted by JF Staal, which it describes as paradoxical and explains the philosophy towards language independence[62]*. The only one who accepted normative character of Pānini's treatise was P. Thiem 's rules which qualify as "grammatical injunctions" and admitted that both Kātyāyana ,,and Patāñjali saw in Pānini's grammar laws formation containing a code word correctly"*[63]*. But P. Thieme, seeking to establish an analogy with other codes instead refer to the ritual, it relies on the language, perhaps because in India, civil law merges with the largely religious, first legislative code (Dharmasāstra) integral with the ritualistic (*Srauta-sūtra and Grihya- sūtra*) in* Kalpa-Sūtra.

5.Conclusions

Indian philosophy concerned itself closely to what you called modern semiotics ,,enter a name", ie those rules codification (*samjňā Sutras*) that prescribe the use of technical terms (*samjnā*). These rules involve current issues such as the distinction between natural language and linguistic metalanguage, and between name and definition. Incidentally, one of the chief contributions assigned to Western semiology is differentiating levels of language, the distinction between the language we speak and the language we speak as highlight and Petre Botezatu[64]. This distinction, as apprehend and Sergiu Al-George, we find anticipated to Panini form that makes the distinction between the function of words and technical terms mentioned . Here's what I usually 1.68: ,,in *Sastra* only entity linguistic form itself is to be perceived, conceived and inferred, and not external purposes except technical terms"[65].

These brief considerations should not lead us to the conclusion erroneous to assimilate the Indian grammarians metalanguage languages of what is understood today by meta-logic, as

[62]JF Staal, *op.cit* ., p. 62.
[63]P.Thieme, "Pānini and the Pāniniyas", *Journal American Oriental Society* , 1976 pp.1-23 .
[64]Petre Botezatu, *op.cit.*, p.103.
[65]*Kāsikāvr.tti* , I 1.68.

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the term suggests Western levels of language and that of levels of thinking. Most times *samjňā-sūtra*translated by ,,*sūtra* definitional" ,,definition". BK Matila propose a nominal definitions or syntactic assimilation of mathematical logic[66]and B. Shefts considers *samjňā-sūtra*as ,,the definition of a technical term denoting a"[67]and can not be treated as a syntactic definition of mathematical logic it involves exceptions to the form in which they were listed first.

Technical development is linked to the code and rule type *paribhāsā* not mentioned in the text of Panini. The etymology of this term refers us to acceptation Matemale logical that axiom by value ,,Convention", "consensus" in *Kāsikāvr.tti* (III, 3.8) term *paribhāsāna* is put into the equation with *upasamvāda* , ,,mutual agreement" ,,convention" and the verb *paribhas* has the meaning set a condition,, ",,speaking conditionally". As with*samjňā-sūtra,* that is *paribhāsā-sūtra*considered ,,injunctions"(*vidhi*), it acquires additional note to deontics. *Paribhāsā* is an old axiom that corresponds both intuitive concepts and old conceptions of contemporary ,,what is partially amended becomes something else". This axiom is assimilated by Nāgojibhatta with maximum popular "dog if the dog is still cut tail", and reminds us of some discussion on the concepts of logical probability and incompatibility.

The concept of probability is inextricably linked to inductive reasoning and assumption. Indeed, induction of thinking is an approach to empirical knowledge, the facts (in premises), the general knowledge concepts (the conclusion). Unlike inference necessarily arises where the conclusion from the premises because it is a movement of thinking exclusively in terms of concepts, universality, the induction premises require general conclusion just as likely[68]. Indian conception, is not opposed conventionality intuitive evidence, the latter being considered only as a subspecies of the former. It seems that *paribhāsā* closer axiom of contemporary acceptation of separating several criteria, the first being to be added to the conventional in additional note in *paribhās.* G. Frey assumes that this notice is present in nature deontic "ethical axioms"[69].

The relationship between logical principle and axiom that limitation was taken into consideration even by Gottlob Frege, who identified numbers (arithmetic specific entities) with

[66]BK Matila, "The Character of Laksana intentionally Navya-Nyaya and Sankara in" *Indo-Iranian Journal* 1968, pp.58-95.
[67]B. Schefts, *grammatically Method in Panin* , New Haven, 1961, p. 11.
[68]*Details relating to these issues are in Petre Bieltz, ,,Probabilitate şi polivalenţă", în* Epistemologia şi analiza logică a limbajului Ştiinţei*, Editura Politică, Bucureşti, 1975. pp.73-96, precum şi în* ***„****Logici polivalente****",*** *în* Direcţii în logica contemporană*, Editura Ştiinţifică, Bucureşti, 1974, pp.97-139.*
[69]G. Frey, ,,Calcule imperative", în *Logica Ştiinţei,* Bucureşti, 1970, p. 583.

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extensions of concepts. Defining the cardinality of the natural numbers notions, he believed reduced to arithmetic logic. But the discovery by Bertrand Russell contradiction in logic built by Frege meant for this revelation comparable only with intellectual anxiety group to Gőtingen. (D. Hilbert and P. Bernays and associations) when in 1931 Gödel and K. he communicated incompleteness theorem[70]. Frege's concept is known as logicism although there are several shades of it: logicism in the sense of G. Frege and B. Russell, L. Wittgenstein's logicism meaning, in the sense of R. Carnap logicism. Characterization and references are displayed on logicism A. Church[71]and HB Curry[72]although logistics systems built and WVO Quine[73], reviving the doctrine by suppressing propositional functions that have "obscured" the fundamentals *Principles Mathemathica* and building virtual theory of classes and relations.

Under the Treaty of Pānini, *paribhāsā* may be regarded as axiomatic as compatibility establish a system of statements, with the difference that, in a system of grammar, not the compatibility of such statements in logistic systems, but to perform the requirements contained therein. In other words, the property is not incompatible statements as expressions, but their application. Therefore, the axiomatisation in action codes aims to regulate prevalence application to exclude incompatibilities that may arise in space-time updating of virtual prescriptions in their very essence[74]. Analyzing the content of the first *paribhāsā* still texts ritual L. Renou ,,remarked that the scheme is dominant which puts into relief prevalence"[75].

That a *paribhāsā* does not have yet the universal validity of an axiom logistics, but it remains a statement virtual which has value only in the circumstantialities as part of the nature of the rules governing them, reminds us somewhat problematic ontology analytical, evidenced by polemic Quine-Carnap. It is facing in the design of the nature and role of *metaphysics* in the reconstruction philosophical, epistemological foundations of ontology itself. Carnap proposes a structural theory of categories, rehiring an ontological category theory. Modern logic itself is converted by Quine a tool of theory formation in the very core ontology categorical. I order logic

[70]Marin Turlea ,,Logic şi epistemologic – aspecte relevate în programele fundaţioniste ale matematicii", în *Epistemologia şi analiza logică a limbajului ştiinţei*, Editura Politică, Bucureşti, 1975, pp.38-56. Details related to the axiomatic foundations of mathematics and its construction can be found in the work of the same author:*Filosofia şi fundamentele matematicii*, Editura Academiei, Bucureşti, 1982, şi *Construcţia axiomatică a matematicii*, Editura Academiei Române, Bucureşti, 1998.
[71]see Sergiu Al-George, *op.cit.*, pp.112-113.
[72]L. Renou, ,, Les Connexions entre rituel them to grammaire et en sanskrit "**,** *Journal Asiatique* , 1960, p.121.
[73]Details on this in Ilie Pîrvu, *Arhitectura existenţei*, Paideia, Bucureşti, 2000, pp.115-154.
[74]Sergiu Al-George, *op.cit.*, pp.112-113.
[75]L. Renou, *Journal Asiatique*, 1960, p.121.

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becomes modern form of category theory in an ontological sense. Quine reinvested ontologically as category theory tories turning it from ''a constitutional instrument" into a ''constitutional tool" in a way to present itself '' the logical structure of the world"[76].

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[76]Ilie Pîrvu, *Arhtectura existenței,* p. 115-154.

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