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## **CONCEPTUAL STRUCTURES OF LANGUAGE AND CULTURE**

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### **1) General presentation**

I will not speak about semiotics in general but about a certain type of semiotics. This is also true concerning my references in "cognitive sciences" or again "pragmatics".

Let me justify a little bit my choices. As in processes of knowledge acquisition in general, also the human and social sciences proceed by a kind of categorization and sub categorization of observed or observable data which are grouped in empirical fields. Such constructed empirical fields are based on a more or less explicitly assumed phenomenology of what things look like and a more or less explicitly assumed ontology of what a thing is. As such, they give raise also to that what we call the scientifically disciplines like linguistics, psychology, sociology, history, and so on. And each of these disciplines has its own sub-disciplines: linguistics has as its head "general linguistics" subdivided in "comparative linguistics", "historical linguistics", "study of grammar", "word linguistics", "text linguistics", and so on; sociology has as its head "general sociology" subdivided in "sociology of organization", "industrial sociology", "rural sociology", "sociology of education", and so on.

All these disciplines and sub-disciplines pursue the description and explication of empirical facts or objects given a more or less explicitly assumed phenomenological and ontological standard.

Now, there have emerged, maybe already since the critical philosophy of I. Kant, or at least since the beginning of this century two attitudes that question the well-foundation, the motivations of the distinction of empirical fields and therefore, at least indirectly, the scientifically or, if you want, the epistemological status of established disciplines. The first attitude is a more or less philosophically oriented one which attacks directly the problem of an assumed phenomenology and ontology of the status of the empiricity of empirical fields. Let me quote here only Kant's critical philosophy, Husserl's phenomenology of scientifically reasoning, Cassirer's philosophy of symbolic forms, Wittgenstein's reflexions of "language games", and, more recently, the post-analytical philosophy of H. Putnam as well as P. Ricoeurs works on action, narration and time which are based not only on the phenomenological heritage of Husserl or Schütz but also, and even massively, on the outstanding ideas of G.H. von Wright concerning scientifically reasoning in his book "Explanation and Understanding".

The second attitude comes out from the several disciplines themselves, i.e. linguistics, psychologists, sociologists; and so on question either the well-foundation or the limits of theoretical constructions of their disciplines as well as the epistemological status of their empirical objects.

Let me quote here some of the internal discussions in linguistics which have led in fact sometimes to paradigmatically shifts - not in the radical sense of Kuhn's "incommensurability" which is, to my opinion, from an epistemological point of view, a little bit self-contradictory, but in the sense of theoretical refutation or again extension of a given theoretical construct by an other one.

One of the major discussions actually is the well-foundation of the distinction between "syntax", "semantics", and "pragmatics" which have been introduced by

Morris, but which has, in fact, already a long tradition going back at least to the medieval modists.

\* in opposition at least to the standard version of this tripartition should we admit that the syntax of natural languages functions in analogy or even identically to the syntax of formal languages; in other words: the syntax of natural languages does it lack any intrinsic semantic or conceptual content, could it be compared to a pure symbolic calculus ?

\* given the collectively established assumption that there exist a neat distinction between semantics and pragmatics, how is it possible to define the frontier between them and, furthermore, do there exist some valid criteria's that legitimate the distinction between linguistic semantics and general semantics?

\* if one admit, contrarily to more formal oriented language theories but in conformity, for example, with findings in comparative and historical linguistics, that there doesn't exist, for natural languages, an intrinsically justifiable distinction between syntax, semantics, and pragmatics, than, which motivated conceptual apparatus should be developed in order to describe language behaviour ?

\* A conceptual apparatus that we need in order to describe and simulate language behaviour, following which kind of methodological principles should it be defined and developed; what should be its internal form; on what kind of primitives should it be based on, how, finally, should we interpret its status - in other words: should we commit ourselves to a cognitive or pragmatic engagement or again to a logical-mathematical one or should we leave open this question?

\* given also the fact that language is about all, functionally, the tool par excellence of communication, the principal tool of conceptualization, classification and transferring of beliefs, knowledge, and emotions, would it be even possible to analyze natural languages as closed systems in the sense of L. Hjelmslev and the Danish structuralists and to postulate them as parts of an completely independent "organ" in the sense of Chomsky or should we consider them as open systems

submitted on the one hand to general pragmatic or conventional constraints in the sense of Grice, Putnam or again Habermas, and on the other hand to exchange and adaptation dynamics with a more general cultural and cognitive environment which is relevant to their particular functioning ?

\* but if there exists some necessity to "open" the language system and to consider it in comparison to more general cognitive and pragmatic features and/or skills, than wouldn't it be also necessary to consider, at least virtually, the conceptual apparatus elaborated for the description and representation of language behaviour as a generalized or generalizable conceptual framework which is linguistically motivated but eo ipso or definition ally independent of the special field of linguistic phenomena ?

Besides such questions there also questions that are of a more methodological character as, for instance, the internal explicitness of meta-linguistically categories. Notions like "case", "aspect", "modality", and even "grammar" are often used in quite different senses what doesn't facilitate at all neither the work in comparative linguistics or in interdisciplinary work with other disciplines nor the elaboration of an at least descriptively satisfying theory. On the other hand there exist also a lot of grammatically motivated categories which are issued from our indo-European heritage but which don't apply necessarily as grammatically motivated categories to all actually known languages. Indeed, as purely conceptual categories, it is hard to imagine a natural language that doesn't represent notions like PROCES or STATE, PARTICIPANTS of a PROCES, LOCALIZATION in SPACE and TIME, LOCALIZATION relatively to the SPEAKER, and so on. But there is nothing at all those forces such or such language to give to these notions a grammaticalized status - they can also possess a lexicalized and even discursive status.

Finally, a third group of questions points to the empirical delimitation of linguistically facts. There exists a kind of doxa among many linguists that the empirical data of linguistics are the grammar and the lexicon of a language as well as the phrase as a highest organizational level in natural languages. This assumption is not at all unproblematic and belongs again on a kind of phenomenology stipulating of what

linguistically data look like and a kind of ontology of what linguistically data are. Look, for instance, at the doctrine of the "ideal speaker" introduced by Chomsky - it's only this doctrine that permits you to consider among a set of data a certain subset as linguistically relevant data. If somebody works about the utterance or again about the exchange of utterances, as conversationalists do it, the idea of what a linguistically relevant data is or is not changes. And this holds even more, if somebody works about texts or discourses.

Now, I have spoken here only of questions which have raised or arise in the discipline of linguistics. Naturally, this critical attitude exists also in other disciplines, like in sociology or psychology. I want to quote here also the case of musicology which enjoys, I think, a high prestige here in Finland. On the one hand E. Tarasti has shown in his book on "Myth and Music" that even the internal structure, the compositional, tonal and rhythmical forms are attuned to or constrained by pragmatic, or more general, cultural conditions and that in fact a musical system behaves itself like a language system considered as a communication system. On the other hand, you have the well-known work of Jackendoff and Lerdahl about tonal music which seems internally structured in a similar way to a formal grammar encompassing also natural language. Just these two approaches show you that in musicology you are confronted with quite the same problems and questions as in linguistics: "music as a closed system" opposed to "music as an open one"; "the grammar of music considered as a more formal one" as opposed to "the grammar of music as submitted to pragmatic and cultural features"; the delimitation of relevant empirical data for musicology, and so on.

Let me summarize: The two attitudes that I've quoted and that question established disciplines like linguistics, psychology, anthropology, and so on, points, to my opinion, to two central problems:

- 1) To the definition of the objectives and goals of a theory;
- 2) To the postulate that there must exist a single conceptual level which is neither linguistically nor pragmatic but which is presupposed by them as a kind of principle of intelligibility and comparability.

Let me explain these two problems by an example. Take a simple phrase like:  
*John orders Paul to open the door of the room of the room.*

This phrase vehiculates semantic information based on several criteria or features:

- A DIRECTIVE: "order(s)"
- A SOURCE of the DIRECTIVE: "John"
- An ADDRESSEE of the DIRECTIVE: "Paul"
- An OBJECT of the DIRECTIVE which is an ACT: "to open the door of the room"
- An OBJECT of the ACT: "the door of the room"
- An OBJECT to which the OBJECT of the ACT belongs: "the room".

These criteria are interconnected by several relations like:

- A relation of CAUSATION between the SOURCE and the DIRECTIVE
- A relation of AFFECTATION between the ADDRESSEE and the DIRECTIVE
- A relation of OBJECTHOLDING between the DIRECTIVE and the OBJECT
- A relation of LOCALISATION between the OBJECT "door" and the OBJECT "room"
- and so on.

Those criteria and relations form together a "semantic network" or again a "cluster of knowledge" in the terminology of cognitive oriented approaches to language.

In our phrase, the quoted semantic network is instantiated or individuated by the intrinsically given semantic content of the head-verb of the phrase, i.e. of the verb "to order".

Now, the same network can also be instantiated by a special grammatical construction:

- John says to Paul: "Open the door"

But the same network can again be instantiated by several phrases which form in this way a little narrative or discursive unit.

There is John and there is Paul.

Both are in the room.

The room has one door.

The door of the room is closed.

So, John orders Paul to open the door of the room.

Finally, the quoted semantic network can also be instantiated by non-linguistically means, for example by a gesture of John indicating Paul to open the door.

This very simple example shows you that the semantic network *eo ipso*, itself, has an autonomous status in comparison to its specific linguistically - grammatical, lexical, or discursive - as well as from its specific non-linguistically support. It can represent and be instantiated either by grammatical means or lexical and discursive ones either by non-linguistically means. In this sense, I am speaking of a semantic network or again of a cluster of knowledge as a conceptual scheme, or again a conceptual model.

There exist different tentative to reduce such a conceptual level of meaning to a linguistically, pragmatically, or again cognitive one. But such a reduction is to my opinion fallacious.

I will speak again of the relationships between conceptual meaning and a linguistically or pragmatically motivated one latter on.

Now, given on the one hand such a "semantic network" as the quoted one and on the other hand its variable supports, there may exist different objectives or goals that motivate researches related to that field:

- One can be interested in the comparison of a larger scale of verbal expressions that are related to the verbal item "to order";
- One can also be interested to compare the lexical field of "to order" in a certain language with related ones in other languages;
- One can be interested in more specialized knowledge concerning "orders" in, for instance, normative discourses;
- One can be interested in the diachronically emergency of specialized knowledge concerning "orders" out of an undifferentiated one;
- One can finally be interested on foundational problems of norms like "orders".

Each of these possible research axes taken by it needs elaborated conceptual schemes or models related to the conceptual category DIRECTIVE in order to achieve its objectives or tasks.

But at the same time it is also clear that every research axe contribute a piece to our understanding of the conceptual category DIRECTIVE: to its linguistically motivated meaning, to its culturally motivated meaning, to its historical evolution, to its specialization in, for example, juridical systems, and so on.

And in this sense conceptual schemes or models acquire a central status in the comparison and reciprocal evaluation of several types of knowledge and reasoning related to the category DIRECTIVE. A conceptual scheme functions in this sense as a kind of tertium comparationis and opens the way to a well-established interdisciplinarity or - as Greimas says - transdisciplinarity. **This is a methodological requirement why we need conceptual schemes.**

But at the same time it is also an epistemological requirement in the sense that the postulate that there exist one single conceptual level refers to the postulate of the

unicity of meaning - a very old philosophical postulate which we find not only in structural semiotics but also, actually, in cognitive science and in its technological offspring - the researches in artificial intelligence connected with problems of the comprehension and transfer of knowledge - common sense knowledge or specialized knowledge. Naturally, the necessity to work with conceptual schemes - which several people also call frame, script, or conceptual graph - holds also for the elaboration of advanced tools in order to plane and to evaluate adapted strategies for communication: not only for commercial communication but also for the communication of scientifically and technological knowledge.

We have therefore under the label "conceptual level of meaning" a convergence of different preoccupations which can be identified by the overall problem of the representation and transfer of knowledge.

In summing up my preliminary remarks, I only want to precise, once more again, that I will content myself to the discussion of the conceptual framework of structural semiotics as it has been developed principally by A.J. Greimas. But one has not to consider this conceptual framework as disconnected from a philosophical and epistemological background nor from several main currents in human or social sciences that have tried to think and to modellize empirical phenomena in a rather comparable manner.

## **2) Topics discussed during the research seminar**

In order to give a maximally explicit and comprehensible presentation of structural semiotics, I will try to proceed in the following way:

### *1) The notions "frame" in cognitive science and "semem" in structural semiotics*

#### 1.1) Definitions and usages in artificial intelligence and computational linguistics

##### 1.1.1) frames, scripts, templates, ATNs, conceptual graphs

#### 1.2) Definitions and Usages in Cognitive Science (especially in cognitive linguistics, anthropology and psychology)

- 1.2.1) propositional networks, image schemes, idealized cognitive models
- 1.3) Structural semiotics as a frame-oriented approach
  - 1.3.1) from componential semantics to narratology
  - 1.3.2) Sememes as conceptual graphs
  - 1.3.3) Narrative programs and their canonical basis
  - 1.3.4) the discursive level as the instantiation of conceptual graphs
  
- 2) The notions "plan" or "scenario" in cognitive science and "narrative path" and "isotopy" in structural semiotics
  - 2.1) Definitions and usages in artificial intelligence
  - 2.2) Definitions and usages in cognitive science (especially in cognitive linguistics, anthropology, and psychology)
  - 2.3) Definitions and usages in pragmatics
  - 2.4) Definitions and usages in linguistically semantics: the works of the group of Berlin
  - 2.5) the syntagmatical dimension in structural semiotics
    - 2.5.1) On Propp's syntagmatical analysis of the Russian fairy-tales
    - 2.5.2) the "narrative path" as a "plan" or "scenario"
    - 2.5.3) Narrative paths and their canonical basis
    - 2.5.4) the notion of "isotopy"
    - 2.5.5) the discursive level as the instantiation of plans or scenarios
  
- 3) *On constraints and meta-rules*
  - 3.1) on rules and "selection constraints"
  - 3.2) on laws, rules, standards, and stereotypes in the philosophy of language
  - 3.2) on "assumed" and "background"-knowledge in cognitive science
  - 3.3) on the principles of Grice and Sperber/Wilson
  - 3.4) Constraints in structural semiotics
    - 3.4.1) Selection Constraints in the canonical basis
    - 3.4.2) Conventional Constraints on the discursive level
    - 3.4.3) How to reduce conventional constraints?
  
- 4) *The notions of "framing" and "uttering"*

- 4.1) "Uttering" in pragma-linguistics
- 4.2) "Uttering" in structural semiotics
- 4.3) on meta-knowledge

5) *Categorization and conceptualization*

- 5.1) the logical point of view
- 5.2) the genetic point of view
- 5.3) categorization and conceptualization in cognitive science
- 5.4) categorization and conceptualization in structural semiotics
- 5.5) back to Piaget ?

6) The model of the "generative unfolding" in structural semiotics revisited

7) On the notion of "discourse" as a problem-solving activity

8) On the notion of "language"

9) On Knowledge - Technology

- 9.1) Knowledge bases for T.A.O., E.I.A.O., Expert Systems, and so on
- 9.2) Text-understanding and -comprehension
- 9.3) Communication and information
- 9.4) Knowledge transfert