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## ***Frame Representations of Political Knowledge and Reasoning.***

***Folk representations of law and historical representations of nation.***

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### **1) Introduction**

In this paper I want to discuss some aspects concerning the representation of knowledge and reasoning in (political, ideological,) discourse processing. There are two purposes that are central for me - the first is a more methodological one, the second an operational one:

1) I want to suggest that the representation of knowledge and reasoning, especially by the means of frames and conceptual graphs, cannot be solved exclusively by the sole recourse neither to empirical criteria of classification nor to pure formal tools. There is, metaphorically spoken, a kind of intermediate level - the level of conceptual categories and models - that possess, at least hypothetically, an empirically remote canonical organization but which is nevertheless not of a purely logical nature. The construction and modellization of those conceptual categories

and models are, as I want to show it briefly one of the central tasks of such approaches like structural or systemic semiotics as well as of cognitive science.

2) In order to avoid the danger of pure conceptualism, i.e. the danger of creating purely speculative constructions, we have not only to respect the methodological criterion of internal consistency but also to look for criteria of empirical validity. In fact there is nothing that we could propose in order to explain a certain kind of behaviour, but I think that there is a possibility to suffice a less strong criterion, that is, to be descriptively adequate, i.e. to give an adequate representation of a certain kind of behaviour. Normally, the descriptive adequacy of conceptual models is argued by interpretative and statistical procedures; since some years there exists also the possibility to show the descriptive adequacy by computational procedures such as, for instance, by expert systems (1).

Furthermore, I will discuss briefly two examples in order to clarify my purposes:

1) The first one is a sample survey of some 800 young French adolescents between 16 and 18 years about their spontaneous understanding of the notion "law". This inquiry was undertaken by the C.E.V.I.P.O.F., a research centre of the C.N.R.S., under the direction of A. Percheron (2);

2) the second one is a study on conceptual schemes that orient our understanding of lexical items like "nation", "state", "people", or "race" (3). I analyzed a corpus of some 7000 occurrences of these words which has been constituted from a lexical data-base of the I.Na.L.F. of the C.N.R.S.(4). This data-base contains several

hundred millions of lexical occurrences that represent a broad variety of the French philosophical, political, and fictional literature of the last three hundred years.

## 2) Knowledge Representation and Reasoning

A simple phrase like "John proposes Bill to work in his (= John's) firm" is constituted by two kinds of "information":

- 1) A grammatically encoded one (i.e.: tense, mode, agentivity, gender,);
- 2) a semantically encoded one, i.e.:
  - a special kind of act, an offer that is represented by the verbal expression "s.o. proposes s.o. s.th.";
  - two participants represented by the nominal phrases which are instantiated by the proper names "John", the offerer, and "Bill", the offeree;
  - the object of the offer represented by the infinitive clause "to work ... in his (=John's) firm".

Let us retain here only the semantically encoded information which constitutes a "cluster of knowledge" articulated by the different parts of the phrase. The act "offer", the participants, as well as the object are also called *facts* pointing to the corresponding objects and entities of an experiential domain. The so-called facts are not independent from one another: they are organized, contrarily, by a set of *relations* in an overall systemic structure. We are able to distinguish the following relations in our cluster:

- a relation between a whole and its parts, i.e. a relation of dependency between the predicate [OFFER] and its arguments [OFFERER], [OFFEREE], and [OBJECT OF OFFER],
- a source-goal relation between the arguments [OFFERER] and [OFFEREE],
- a transfer relation determining the "itinerary" of the argument [OBJECT OF OFFER].

A cluster of knowledge is therefore composed by facts and relations that constitute a *conceptual frame* or, again, a *conceptual scheme* which orient our comprehension of a linguistic expression like the quoted one (5). Such a conceptual frame represents - as cognitive psychologists or computer scientists call it - a *declarative knowledge base* on which operate reasoning procedures like *inferential processes*. Together with the analogical processes, the conceptual inferences are one of the two central categorization procedures in human cognition and action. As semioticians like Jean Petitot and P. A. Brandt (6) as well as cognitive linguists like G. Lakoff, E. Sweetser, or M. Johnson (7) have tried to show it, analogical reasoning strategies allow a human subject to conceptualize abstract - psychological or social - situations out of concret - perceptive and dynamic - ones according to given conventional or stereotypic settings that are in fact collectively shared cultural values (8). In this sense, analogical reasoning strategies concur to the formation of the internal organization of a conceptual frame like that one I have quoted above. Inferential strategies, on their turn, allow a subject to exploit a declarative knowledge base which is organised by a conceptual frame.

Cognitive psychologists like H. Clark, J. Collins, or M. Trabasso (9), as well as pragmatics like J. Moeschler or E. Roulet (10) and semioticians like M.-J. Borel or J.-B. Grize (11) have tried to elaborate different typologies of such inferential strategies.

There are at least three major groups that we have to distinguish (12). The first one allows the identification and description of a conceptual item. Imagine that you have a quite complete conceptual frame representing the act "offer". If there is now the following phrase: » There is a work that is offered to Bill", then it is possible with the help of identifying inferential strategies to make explicit implicitly given information as, for instance, *who* has offered a work to Bill, *when* the offer has been made, *what's about* the nature of the work offered to Bill, will *be there* formal proves establishing a reciprocal engagement between Bill and the offerer, and so on.

The second group consists of inferential strategies that exploit the syntagmatic ordering, the plans that underlie not only discourse activities but also actions and interactions. One of the most prominent members of this group are the so-called bridging- and projection inferences, inferences that create a relation between two or more frames and which can be modified by argumentative strategies, i.e.: *Finland is on the periphery of Western Europe. - but it has, in fact, an impressive philosophical and political culture.*

The third group of conceptual inferences distinguishes finally between those which are based on given knowledge and those which are based on meta-knowledge. This distinction permits to take into consideration not only reasoning procedures referring to already established and framed knowledge-structures but also those that refer to the framing and its modalities itself as well as to the possibilities of a subject to change following his personal objectives, preferences or again cognitive abilities partially or totally a conceptual frame, i.e.:

- X: Let us speak about your parents!
- Y: Well, I prefer ham and eggs.

Coming back to the question of the theoretical elaboration of conceptual frames, I would emphasize that there are at least two analytically distinguishable possibilities to proceed. The first one is to investigate in researches leading to a conceptually sophisticated theory of an act-type like "offer"; the other one is to investigate in comparative studies of empirical (linguistic, social, or cultural) data which are considered to be of interest in the elaboration of conceptual frames representing the same act-type. But, in fact, these two strategies should be handled together if one wants to obtain good and at least descriptively adequate insights of an empirically given diversity which is organised conceptually in a comparable manner. That's not only one of the methodological postulates of the so-called prototype-semantics of L. Coleman and P. Kay(14), E.Sweetser (15), E. Rosch(16), or again G.Lakoff(17), but also of structural semiotics as A.J. Greimas and E. Landowski(18) have shown it in their analysis of scientific discourses in social sciences. Finally, there has been done in the last years systematic researches in the field of juridical and legal discourses, notably by D. Bourcier(19), B.Jackson(20), and M.S. Ball (21), who have

shown that purely conceptually established systems fail because they do not take into account neither the fuzziness or the general and historical, say: stereotypical setting of basic juridical notions and procedures. Therefore, the methodological postulate that I have quoted above, turns out to be a theoretical one stating that an established conceptual framework, even if it seems to possess a very technical and specialized form, cannot be thought nor treated disjunctively to common sense reasoning, social stereotypes, or again prevailing folk-theories(22).

### **3) Some remarks on the spontaneous understanding of the notion "law" among French adolescents**

I want to come now to the already quoted sample survey concerning the representation of the notion "law" among French adolescents between 16 and 18 years.

The responses given by them can be considered as public statements that render partially or totally accessible their "mental models" - in the sense of P. Johnson-Laird (23) - they have of this notion. In comparing the different responses, we are able to distinguish several empirical categories. These categories give us already a first possibility to classify a certain quantity of responses that fit quite explicitly with one of them. Other responses, contrarily, seem to cover two or even more categories. Before going on, let me quote the several empirical categories:

- a) "Law" has a [SOURCE],
- b) "Law" has a [GOAL],

b.1) the [GOAL] of the "law" is to determine a certain behaviour of the [ADDRESSEE],

b.2) the [GOAL] of the "law" is to determine a certain [STATE OF\_ REALITY],

c) The "law" is an object of a certain [TYPE], d) the existence of the "law" has a certain [REASON], e) the existence of the "law" is the [MEANS] in view to fulfil a more general [GOAL],

d) The "law" is an object of [EVALUATION].

Let us take the first category: "law" is a special activity of a [SOURCE]. Following the different responses we have classified under this label, we can observe:

1) The [SOURCE] can be handled as a generic and non-specified entity as well as a specified one ("senate", "government", "court»,.). If there is a specification in this category, i.e. an explicit inferential process of identification, then it follows very often some quite collectively shared criteria belonging to a certain cultural and juridical culture. Naturally, this is an empirical observation which should be statistically evaluated. But there is also the fact that the specified [SOURCES] represented by "senate", "government", "court", etc, play different roles in the political and juridical system of a state like France. In order to understand whether the young people distinguish between these different roles and possess therefore already more specialized and elaborated mental models of a notion like "law", there must be introduced more specific questions in the sample survey.

2) Besides responses based on explicit inferential processes of identification, there are also such ones that are based on bridging inferences, Le. responses that establish with the help of a given semantically or conceptual value of the notion

"law" a *link* between the first category and other ones. There is, for instance, a link between the first category and the second one: "law" as a special activity of the [SOURCE] pursues a [GOAL] which should determine certain behaviour of the [ADDRESSEE] or a certain [STATE OF REALITY]. The link between these two categories is a kind of *result-relation* establishing the assumption that there is under the label "law" a certain causal relationship between a specified or unspecified source and the behaviour of a specified or unspecified addressee or the quality of a state of reality, i.e.:

- faire régner certaines choses dans la vie ([SOURCE] ---> [STATE])
- faire respecter les articles ([SOURCE] ---> [ADDRESSEE])
- Imposer, commander, enjoindre ([SOURCE] ---> [ADDRESSEE])

Another link exists between the first category and the sixth one: the [SOURCE] of the "law" is an object of [EVALUATION]. This link establishes a relationship of *conformity* between presupposed conventional values or standards and individual ones as well as between a presupposed subjective standard and a given one. The distinction between the two types of conformity-relationship is an important one because it points to the fact that in an evaluative process the subject can follow a certain collectively shared value-system even it is in complete contradiction with it, but this must not be the case as different forms of more or less idiosyncratic judgements show it very well.

The two quoted inferential processes - the process of identification and description and the process of linkage - determine in fact form and function of all categories of the frame of "law": there are, for instance, inferences of identification inside the

category [ADDRESSEE] or inside the category (the "law" is an object of a certain) [TYPE] showing which distinctive criteria and which descriptive depth the subject employs in order to externalize its understanding of the notion "law"; there are also processes of linkage between categories like [ADDRESSEE] and [ÉVALUATION], between [TYPE], [GOAL], and [ÉVALUATION], between [MEANS], [GOAL], and [ÉVALUATION], etc - processes that permit us to grasp particular aspects of more complex stereotypic reasoning models of the adolescent's understanding of "law".

I cannot discuss here in detail the several categories neither the different links that join them together.

But nevertheless, I want to list up some consequences that such an investigation may have:

1) The several empirical categories as well as their combinations permit us to establish different social or cultural stereotypes as a sort of "public representations" of the mental imageries that French adolescents have of a notion like "law".

2) The several inferential processes of identification, sub categorization, and category-linking permit us to take into account not only the *comprehension* that the young people have of a notion like "law" but also the more or less great *importance* that a certain criterion possesses for them as well as, finally, their *adhesion* to some collectively shared standards.

3) From an empirical point of view, it is also important to note that such an approach allows us to refine the questionnaires of sample surveys in order to obtain more precise insights of the mental models that orient the comprehension and evaluation of a notion like "law" by young people.

4) There are sometimes in each sample survey responses that seem to indicate that the subject doesn't take seriously into account a question: there are jokes or ironical answers, there are answers that seem to refer to a totally different question, there are answers of a quite idiosyncratic nature, and so. Given now the fact that a subject can build up its reasoning on inferences based on meta-knowledge, we can rather plausibly postulate that this kind of answers constitute not at all a worthless material but public tentative of the subject to *negotiate* or even to *refuse* in a more or less *valued manner* either the given pragmatic situation or the postulated relevancy of the questioned problem.

5) Finally, with the help of statistical methods of evaluation, it is possible to judge the importance of the correlation on the one hand between such an such category or again between a certain type of inferential processes of identification and of category-linking and on the other hand of a given mental model of a notion like "law" and selected socio-economical criteria.

There still remain, in my opinion, two interesting problems that I will discuss in the last chapter of my paper.

#### **4) On the conceptual values of the historical understanding of the of notion *nation***

In a comparative study of the lexical item "nation", I tried to look for semantic or conceptual criteria that allow categorizing at least a certain variety of meaning forms represented by several thousand occurrences of the quoted lexical item in the French political and philosophical literature of the last three hundred years. I pursued the following objectives:

- 1) The elaboration of different thematic configurations those are relevant for the understanding of the different occurrences of the lexical item "nation";
- 2) The comparison of these thematic configurations with descriptive criteria that prevail in political and historical theories concerning the phenomenon "nation".

In summarizing the results of my investigation, I want to insist on the following three points:

- 1) There are at least two, if not three different conceptual levels that organize the understanding of the lexical item "nation". These two or three levels correspond with a more or less abstract conceptualization of that notion. The first, more concrete level, associates the typical criteria for the understanding of the lexical item "nation" with the human body and with biological substances and functions or with an imaginary geography based on a kind of concrete logic of the space and the perceptive orientation. The second, more abstract level, contrarily, is constituted by typical criteria that point to functional, systemic, and set-like entities. Between these

two levels there exists again a kind of intermediate stage that takes criteria from the first as well as from the second level.

It is now quite surprising to state that the sole conceptual domain where the lexical item "nation" seems to possess a distinguishable status is that of the intermediate level. In fact, the understanding of "nation" on the first level is very similar to that of "race", "tribe", "clan", "caste", "dynasty", "family", "community", "heredity", "tradition", and so on. The understanding of "nation" on the second level overlaps with the understanding of not only such notions like "conventionality", "representativity", "social or economical interests", etc, but also with more generic notions like "international equilibrium", "military bloc", "industrial world", and so on.

In order to understand the specificity of the conceptual domain which is peculiar to the lexical item "nation", I come now to the second result of my previously quoted study.

2) The lexical item "nation" points invariably to the category called in structural semiotics *collective actant*, i.e. a system of reciprocal or hierarchical relationships between two or more roles which can be fulfilled by an individual or a group.

There are furthermore some typical criteria that help to distinguish between several culturally or socially determined types of collective actants. The first one is that of *conventional constraints, values, or standards those insure* or legitimate a given equilibrium between the different action-roles of a collective actant. Conventional

constraints can be negotiated or not: this distinction refers to the classical opposition between "community" and "society", given transcendent or immanent values and deliberatively chosen values, etc. The second criterion concerns the *experiential differentiation and internal autonomisation* of the different action-roles of a collective actant that require the passage from a given and pre-determined distribution of roles to a negotiated and contractually fixed one. The third criterion concerns the choice of a relevant *temporal and spatial localisation* of the collective actant, i.e. of its history and geopolitical radiation.

These criteria permit to interpret and categorize the occurrences of the lexical item "nation" and to elaborate, as I have already stated, different cultural stereotypes of it. The procedures of the elaboration of such stereotypes are the same that I have employed in order to classify the responses of the French adolescents in the already discussed sample survey.

If you consider the criterion of conventional constraints, you can, for instance, distinguish between such stereotypes that represent the "nation" by an act of "auto-foundation" and "auto-determination" and those ones that view the "nation" again in the perspective of a "hetero-foundation" and a hetero-determination".

The criterion of the experiential differentiation and internal autonomisation of those action-roles that constitute the collective actant introduces stereotypes that identify the "nation" either as a hierarchical body where every member has a fixed status

and identity or as structured and functional collection of specialized and evolutive roles.

The criterion of the relevant temporal localisation permits to identify stereotypes related to the historical vision of a "nation" (i.e. its origins, its evolutive character, its future ...).

The structure of these stereotypes bases essentially on inferential procedures that rely on the one hand *processes of identification and sub categorization* and on the other hand *processes of evaluation*, i.e. processes that establish a relationship of conformity between presupposed cultural or historical values and given individual or collectively shared values.

3) If you compare now the different levels of conceptualization with the usage of the quoted criteria, you are able to state a very systematic correlation ship between them: in fact, the first, concrete level of conceptualization always appears with stereotypes such as "hetero-foundation and "hetero-determination of the nation", "predetermined and fixed places for the members of the nation", "stationary, state-like, or cyclical history of the nation", etc; the second, abstract level of conceptualization, contrarily, appears with stereotypes like, for instance, "auto-foundation and auto-determination of the nation", conventionally fixed and negotiable places of specialized groups and individuals possessing their own interests and purposeful behaviours", "qualitative different forms of history and evolution depending on practical relevancies and objectives".

But besides the stereotypes that emerge from this systematic correlation ship between a special level of conceptualization and a special type of identification, description, evaluation and linkage of conceptual criteria, there are also stereotypes that manifest a significative disturbance in the quoted correlation ship. You have, for instance, stereotypes that are composed by criteria like "auto-foundation of the nation" and "global and unspecified determination of the internal organization of the nation" or again "auto-foundation of the nation" and "global, unspecified evolution of the nation's entre body", etc. This kind of stereotypes represents the already quoted intermediate level of conceptualization: on the one hand they take criteria definitions belonging to the second, abstract level of conceptualization (as, for instance, the criterion of "auto-foundation"), on the other hand they take criteria definitions belonging to the first, concrete level of conceptualization ( as, for instance, "the internal organization of the nation corresponds to the structure of the human body or, more generally, to the structure of the physical universe")

I think that there are a lot of consequences for a cognitive anthropology or a semiotics of culture as A.J. Greimas, Y. Lotman and B. Uspenski have already shown it. It's impossible for me to develop here these consequences. Nevertheless, I want to emphasize that stereotypes which are based on this intermediate level of conceptualization are very typical exemplars of the historicism in the philosophical and political reasoning during - especially - the nineteenth century.