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REFERENCE TO SEMANTIC ASPECTS OF SOCIAL REPRESENTATIONS IN SOLVING PROBLEMS*

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Abstract: The semantic component of the social representation of politics has been investigated through a series of studies employing different methods. Whereas the first studies were aimed at exploring the representation field of politics and at investigating the features of the related concept, the current ones are aimed at studying how the semantic aspects of the representation may be traced in the solution process of specific political problems.

An initial study allowed us to identify the variety of meanings that spontaneously emerge in the common discourse on politics. Extending the analysis to the organisation of such meanings in more complex structures showed that some of the shared contents of the representation, such as power, may take on different meanings according to which other contents are connected to them within the discourse.

In a following study attention shifted from the way the meanings are understood and communicated to the way in which they are ordered and organised in a concept through a process of abstraction. The central and peripheral features of "politics" intended as a conceptual category were thus identified and an influence of political participation level as well as of party preference on the perception of the concept was highlighted.

The above mentioned studies provided a description of the semantic structure of the representation. At present our interest is devoted to examine whether and how the meanings that have emerged in the representation are used in dealing with specific political problems. Such a study is carried out by asking people to propose a solution to a problem and by analysing verbalizations thus obtained in order to find out which definitions of politics (e.g. action to improve society, conflict among parties, exercise of power or search of a personal profit) are implicitly or explicitly referred to during problem solving. A quantitative analysis will show whether the frequency of the various definitions of politics and the differences among groups change when shifting from a generic discourse on politics to a specific political problem. Furthermore the relationship between the representation activated during problem solving and the solution proposed will be investigated.

Proposing and justifying a solution to a political problem may be considered as one form, and a relevant one, of political action. Our present research approach is therefore discussed making reference to the more general issue of the relationships between representation and action.

I am going to present the theoretical bases and the initial results of a study aimed at tracing the semantic aspects of social representation of politics in solving a specific political problem.

Proposing and justifying a solution to a political problem may be considered as one form, and a significant one, of political action. Our present research approach therefore addresses the more general issue of the relationships between *representation and action* (see Amerio, 1987, 1991).

A commonly recognized feature of social representation is its role of *guide to action* (Moscovici, 1984). This feature is sometimes deemed as peculiar to social representations as compared to other notions developed in the field of social cognition.

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American studies on social cognition often confine themselves to cognition, leaving aside behaviour (or, better, action). However, we should not extend this to the whole of cognitive psychology. There are areas of research in which *action* takes on a central role. For example, let's consider recent studies on expertise, where attention is paid not only to 'knowing' but also to 'knowing how to'. In other words their knowledge representation models include both declarative and procedural knowledge (e.g. the ACT* model; see Anderson 1976, 1987). Early studies on problem solving already focussed on the *use of knowledge*, which in fact means acting, controlling your acting, modifying your acting on the basis of previous experience and so on (Newell & Simon, 1972; Greeno & Simon, 1988).

Another crucial issue in the theory of social representations is the relationship between *representation and interaction*. A subject who acts is also a subject who interacts with others. How this can be studied constitutes a methodological problem. The fact that representation is constructed through interaction leads some scholars to consider conversational analysis as the only possible way of studying social representations and, more generally, all cognitively based social processes (see Trognon & Rétornaz, 1989).

My position is slightly different. Although it is true that conversation may be the most spontaneous way through which one can study representation, in real life there are circumstances in which subjects are asked to communicate their representation or way of thinking without a direct interaction with others (for instance a public or official discourse). These situations are nonetheless *social* in a full way, in that the communicative intent is evident, and the interactive component as well as the negotiation of meanings are still present.

Limiting our attention to the problem solving situation we could say that the presence of others and the social dimension of problem solving increases together with the multiple solutions to the problem. Research in this area has overtly pinpointed the argumentative component of reasoning, that is choosing a solution instead of another possible one implies that you justify your choice to the community of solvers (see Voss, Tyler & Yengo, 1983; Caron-Pargue & Caron, 1989).

Our previous studies provided a description of the semantic structure of representation of politics (see Catellani & Quadrio, 1991). Just a quick reference to these studies and to what in them is connected to the issue of the structure of a social representation.

We first explored the *representation field of politics* (Quadrio, Catellani & Sala, 1988): that is, the different meanings that spontaneously emerge in common discourse on politics. Through this study we tried to identify both the elements of the representation and how these elements were organized into more complex structures. We investigated this in different groups of subjects, according to the level of political participation. What may be interesting in a discussion on the structure of the representation is that some of the most interesting differences regarded not so much the frequency of the single elements, but the way the single elements were connected in a complex structure. Some of the shared contents of the representation, *such as power*, may take on different meanings according to which other contents are connected to them within the discourse. While politicians connected the power category to categories like administration and decision, the interested subjects connected it to categories like personal gain or sense of service. It therefore seems that this latter group failed to see power as functional to achieving collective political ends and saw it only as a tool for the personal gain of politicians.

In a subsequent study we investigated the central and peripheral features of *politics*, intended as a conceptual category (Catellani, 1990). This implied a shift in analysis from the way the meanings are understood and communicated to the way in which they are ordered and organised in a concept through a process of abstraction. The method employed changed accordingly and subjects were asked to evaluate on a Likert-type scale a series of definitions of 'politics', chosen among those which had emerged in the spontaneous discourse of the previous research. The theory of social representations has highlighted the importance of socio-cultural background to how social concepts are perceived. In this perspective concepts are not considered as isolated cognitive phenomena, but as elements within the broader framework of the representation of reality (Moscovici, 1984; Salmaso & Pombeni, 1986; Bellelli, 1987). In fact our study showed that the perception of the concept of politics was influenced both by the political participation level and by party preference, that is by socio-cultural variables. Once again we can say that the differences among groups regarded not so much the graded structure, and thus the single elements, of the category, but their organization at a more complex level.

Aims

At present our interest is aimed at examining *whether and how the meanings that have emerged in the representation of politics are used in dealing with specific political problems*. We ask people to propose a solution to a problem and analyse verbalizations thus obtained in order to find out which definitions of politics (for instance action to improve society, conflict among parties, exercise of power or search of a personal profit) are implicitly or explicitly referred to during problem solving.

Method

Subjects

The sample was formed of 25 subjects actively involved in politics and 25 subjects not actively involved, though still interested, in politics. The activists were members of the Democrat Party of the Left (PDS) and took part in some party activity at least once every two months. Subjects of both groups were male, well educated and voted PDS. The two groups were matched as to age (range 19-28 years) and type of education (arts or sciences).

Procedure

Subjects were told that they would be given a card in which a social problem would be presented. Subjects had to carefully read the text of the problem and afterwards think aloud while solving the problem.

The text written on the card read:

"The problem of urban pollution, at present so much felt and debated, is certainly complex and may be dealt with in several ways. In your opinion, how could it be dealt with and solved?"

Subjects were given no other clue and the experimenter simply listened to what the subject said, without intervening anymore.

Verbal reports were recorded and afterwards transcribed verbatim.

Table 1
Coding of *knowledge type*

Code	Name	Description
TECHN	TECHNICAL	reference to physical, chemical, technological and scientific knowledge
SOC	SOCIAL	reference to social knowledge (persons' attitudes, beliefs and behaviours)
POL	POLITICAL	reference to political knowledge (local or national decisions and norms, politicians' attitudes, beliefs and behaviours)
ECO	ECONOMIC	reference to economic knowledge

Subsequently subjects were asked to build a discourse to persuade other people of the validity of the solution proposed. They were told that the recorded discourse would be proposed to a group of subjects.

The data presented here regard this second part of the research.

Coding

A problem like that of urban pollution may be assigned to the category of ill-defined problems, in that it requires reference to different sources of knowledge to be solved (technical, social, political, economic).

The coding related to knowledge type is presented in Table 1. The coding unit was any utterance including a predicate. Each of these categories included subcategories.

I shall now consider only the political component, since our *specific aim* was to find out which definitions of politics are referred to during problem solving.

To do this, first of all we selected only political coding units.

These units were further coded in a coding grid. We took the main factors which had emerged in a previous study of ours on the concept of politics. These factors had been identified through two separate analyses on militants and non militants.

In Table 2 the factors, together with the definitions of politics which saturated each factor most, are reported.

In addition to these categories there was a residual category of non codifiable units, which was however very small (2.5%). Two independent judges coded each unit blindly. The percentage of agreement between judges was 92%.

Table 2
Definitions of politics

POLITICS IS...	
SOCIAL ACTION	acting to improve society, fulfilling citizens' needs, committing oneself for the community, putting oneself at the service of the others
POWER	exercise of power, gaining power, a field of interest confined to a few people, a compromise at all levels, an activity exercised by individuals grouped in parties
POWER ABUSE	gaining power, carving-up of profits and posts among parties, a compromise at all levels, exercise of power, search for personal profit, an activity exercised by individuals grouped in parties, a context of interest confined to a few people
CONFRONTATION	confrontation among parties, search for agreement among different positions, safeguarding the rules of living in society
DELEGATION/ CONFRONTATION	expression of a delegation from the citizens, confrontation among parties, expression of ideas, search for agreement among different positions
ADMINISTRATION	administration of the public sphere, making laws

Results

Since the global number of political units in the two groups was different (i.e. higher in militants), for each subject percentage was reckoned out of the global number of units coded as "political".

Two definitions of politics were more often referred to by militants, namely *social action* and *confrontation* (Table 3). It is possible to trace the first one in all references to change, to different and future possible scenarios, which include for example a different town, more within the measure of man. An excerpt of a protocol coded within this category follows here.

... to change, decide to change (ACT), try and see if the quality of life, within our towns, cannot be improved (ACT). The course we have chosen must be inverted (ACT). ... Somehow it must be inverted... giving priority... giving priority to the interest of us all, as a community (ACT). (militant n°6)

The second definition appears especially when the subject makes reference to the conflict or the opportunity to reconcile different interests, for example moral or ecological and economic ones. See the following example.

The problem is to... recompose this, let's say, moral aspect of living with the economic and productive aspect (CON)... (militant n°7).

Table 3
Definitions of politics: means of percentage values

Categories	Militants	Non militants	t	p
SOCIAL ACTION	31.14	19.41	2.04	<.05
POWER	16.56	14.31	.52	n.s.
POWER ABUSE	4.55	10.66	-2.07	<.05
CONFRONTATION	15.28	7.63	2.05	<.05
DELEGAT./CONFR.	3.76	10.09	-2.21	<.05
ADMINISTRATION	27.77	30.74	-.40	n.s.

Note: For each S percentage is based on the total number of units coded as "political".

Two other definitions, *power abuse* and *delegation/confrontation* were more frequent among non militants (Table 3). As to *power abuse* subjects make reference to politicians governing the town and using their power to promote their own interests.

That is, people who have the opportunity... because in the political field, in the town-council rather than... in short, politicians are probably... have a lot of other interests (ABU), there are a lot of... problems... of persons who are possibly not so clean (ABU). (non militant n°27)

As to *delegation/confrontation* reference is made to an inadequate relationship between elector and elected and therefore to the difficulty of representing the problems of town and citizens at government level.

A second aspect is obviously legislative activity... er the relationship between the citizens and the Member of Parliament (DEL). Er... a different way of managing what is a political mandate (DEL), a mandate which must... which must... it's not a job (DEL), it's not a profession (DEL), the term mandate means something which is precisely delegated by a group of persons with the aim of having certain issues represented (DEL). Until a different kind of... namely... relationship between electors and elected exists, especially in large towns (DEL), this... this problem won't ever be brought... with necessary attention, to... a legislative level. (non militant n°41)

No difference between the groups was found for the other two definitions. Examples of *power* and of *administration* categories follow here.

... but afterwards a precise position must be present and no derogation (POW)... therefore once a decision has been made (POW), try to...keep it (POW). (militant n°9)

... to limit traffic in the City... (ADM), possibly to close parking areas all around (ADM)... to create areas with limited traffic... as much as possible without traffic (ADM), so that a large part of the town will really be closed (ADM). (militant n°21)

Conclusions

We may therefore state that the semantic features of a representation may indeed be traced, whether referred to implicitly or explicitly, within the problem solving process of a specific problem.

Given the groups chosen and the kind of problem proposed, the specific knowledge of the problem was not a discriminating factor. Nor militants neither non militants were *experts* in the ecological domain. This should make it easier to see whether and how a different representation of politics may lead to different problem solving processes and to different solutions.

It emerges that the two groups differed not only as to the number of references to politics during problem solving, but also as to definitions of politics underlying those references.

Militants made more frequent reference to politics as social action: to see the possibility of change, to look at the future and to design different political scenarios made it easier for them to find a political solution to the pollution problem.

The issues of abuse of power and of representativeness of political class became of central importance among non militants and led to underestimating the possibility of a concrete political solution to the problem.

Further analysis will assess the relationship between the representation activated during problem solving and the solution proposed to the pollution problem. This will be done including references not only to political but also to the other contents (technical, social, economic): it might be, for instance, that non militants propose solutions more at a social than at a political level.

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