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Collective memory between cognitive processes and social construction. Some theoretical and methodological issues.

Collective memory, because of its own nature of a process in which individual and social dimensions are strictly interlocked, is a topic in which is more evident one of the most intriguing intellectual clash in present psychological debate: the opposition between cognitive and socio-constructionist approaches. The reasons of this opposition are known, in general terms of fundamental differences between the two approaches as well as with reference to the specific topic of human memory. The aim of the paper is by no means to resume the debate, but to hilight some of the points which may result of particular interest in the topic of collective memory. As for the overall tone of the paper, it may be situated among those supporting a less hostile relationship between the two approaches, and even some sort of integration between them; which does not mean to deny the differences and to blame any clear choosing in favour of one of them, but only to encourage a more benevolent listening to one another contribution. Special attention would also be paid, in order to support such an improving of mutual respect, to methodological issues, since the opposition is often grounded on the scientific reliability of the research results, in relation to different validation criteria.

1. The clash between cognitivism and discoursive psychology.

The distance between cognitive and socio-costructionist approaches appears very clearly in the polemics which have accompanied the recent growht of discoursive psychology (Potter & Wethrell 1987; Edwards & Potter 1992; Parker 1992; Harré & Gillet 1994). Even if with some differences among them, the authors who recognize themselves in this approach seem to agree in the refusal of cognitive processes as an autonomous dimension, distinct from discoursive processes. They tend to deny that psychological phenomena have a reality of their own, hidden in the subject, and not fully detectable by empirical investigation; on the contrary, they think that psychological processes are really activated only in conversational interaction, which therefore constitutes not a simple display of hidden psychological processes, but the very essence of these processes.

So discoursive approach regards as a major fault of classical cognitivist orientation the cartesian dualism: the distinction between a mind, which exists and which *thinks* by means of processes of its own, and a body which *acts* and interacts with others and with the world, guided and conditioned in this by the ways of working of mind processes. These processes are conceived as something fixed, with its own characteristics universally valid and independent from content and from context, which psychology has to discover by means of hypothesis testing. On the contrary, for discoursivists there is not any reality of cognitive processes independent from their concrete expressions in everyday life, and the proper place in which cognitive processes happen is communicative interactions, where every symbolic manipulation, and hence every thought, occur.

This opposition, conceived as a real "clash of paradigms", has been put in practice in full and explicit manner in the field of memory (Conway 1992), and specially of collective memory (Middleton & Edwards 1990). In the classical cognitivist position the act of expressing a recollection is treated as the external manifestation of an inner process (the memory) which in considered the real phenomenon to study, and which consists in the ability of storing and retriving correctly informations regarding the past. Conditions of coming in effect of this process are usually studied: given an event, of which real characteristics and real course are known, what is checked is the ability of individuals to reproduce them after a given time, and the factors which can affect the effectiveness of the recall. From discoursive point of view, instead, the act or remembering is in first place just *an act*, undertaken as part of a wider and complicated process of negotiation among many different possible explanation of the past, conducted within the subject or among individuals.

As a matter of fact the classical model, which finds its more tipical expression in laboratory experiments, has been criticized from within the same cognitive field, by those claiming the opportunity of studying memory in its real context (Neisser 1982; Neisser & Winograd 1988); in this perspective has been shown in how many different ways recollections may be considered in right correspondence to facts; for example by means of extracting a sort of 'gist' from a great number of heterogeneous facts, the essence of which is contained in none of them, but that 'represents' the facts as a whole in their overall meaning. Discoursive option moves forward this need of assigning value to the context, reaching the point of denying the existence of "something true" to be remembered, even though not contained in a single event but diffused in a series of events; it is stressed, in other words, that remembering should be studied not as more or less correspondent to the thruth, but in its conversational contingences and in its pragmatic functions, which express substantially a confrontation between competing points of view.

As we see, this is a set of interesting stimuli in order to consider memory as a socially and historically shaped phenomenon, and that is why the polemic rised on the specific topic of collective memory. Central question, as for our aims, is whether this useful attention to the situational contingences must necessarily grow into a denial of the reality of cognitive processes, and thus of their importance as a proper object of psychological studies. In my opinion such a denial may itself be seen as a retorical device, justified by the climate of "clash of paradigms" that the discussion has undertaken.

Moreover, we must consider that the confrontation has been exacerbated and reached a great visibility because of the clash between the two most extreme wings of what may be better conceived as a continuum in theoretical and methodological orientation: on one side the firmest supporters of cognitivism in its essentialist and experimentalist version, and on the other side the advocates of more radical version of discoursivism. What we may say here is that neither of them could be considered fully representative of each field, namely the study of cognitive processes and the study of social construction; and if we take a glance in depth at the general intentions and beyond the polemical stances, it is easy to find much more attention for the results and for the overall meaning of the opposite side. As an example, even though radically critic, the discoursive approach is often presented as a form on "new cognitivism", or as a "second cognitive revolution" (Harré & Gillet 1994; Harré & Stearns 1995); and the textbooks that set themselves as "manifestoes" of the new perspective tend to clearly distinguish between the opposition to the "cognitivism", in its historical forms, and the denial of cognitive processes as such; in fact, the cognitivism as a movement is reproached for having monopolized the study of cognitive processes in forms and within a theoretical model deemed not satisfying (Still & Costall 1991).

## 2. Collective memory, language and representation.

One useful way of examining the reasons of the clash between cognitive and discoursive models is than to look at them on the background of the general critics moved to the cognitivism by the socio-constructionist movement as a whole, of which discoursive approach is only a part, though important and evident. My aim is to show that in this discussion, by now well developed, little account has been made of some crucial points of a very old debate, the one on the interplay between cognitive processes and dynamics of communication. Here I shall hilight a few of these points, which in my opinion would illustrate that the interaction between cognitive and discoursive dimensions, in particular on the topic of collective memory, is deeper and more articulated than the extreme versions of the two approaches tend to present.

A central point is certanly the problem, since ever discussed, of the role of language in relation to mental processes. Obviously this is not the place for resuming the sense of a debate constantly present in the development of psychology, and also in certain ways in the whole history of human sciences. I shall simply indicate some cruxes of the matter, from which the confrontation between cognitive and socio-constructionist approach to collective memory may take advantage.

In short: a) The relationship between linguistic and non-linguistic factors in processes of comprehension, coding, storing, and retrival of informations; the importance of this topic rises in the case of collective memory, since both interaction processes and individual grounding in a set of culturally significant symbols are widely shaped by non-linguistic factors. b) The relationship among different level of text comprehension (van Dijk & Kintsch 1983), inference processes which allow us to complete informations in a coherent way, and processes of construction of meanings in long term memory. c) The specific characteristics of metaphoric language, which has such a great part in collective memory, and the role of shared knowledge in order to comprehend and to assign the proper value to metaphors. d) The narrative dimension of thought and the relationship between the "stories" by which collective memory is often contituted and other forms of schematic knowledge (Mandler 1994).

But probably the central theme, in some ways recognizable beneath most of these cruxes, is the very *concept of representation*, which may be considered the subject of more evident contrasts not only between cognitive and discoursive approaches, but also among different sub-sectors in which each of the fields seems divided. We can say that the core of the distance among different approaches is often in the different way of regarding the concept of representation and of translating it in empirical research procedures. In this case too it is not possible to resume in short the

general sense of the debate, which includes references to disciplines as psycholinguistics and phylosophy of mind (Bechtel 1988). We can limit ourselves to remember that on the sense of representations, and in particular on the possibility and utility of interpreting them as manipulation of symbols, is active in these years a very hard and thick confrontation, from which will probably depend in large amount the shape that cognitive science as a whole will assume in next future. From some elements of this discussion the clash between cognitive and discoursive approaches and the general matter of collective memory may profit significantly.

3. The challenge of connectionist approach.

A serious challenge to the classical symbolic version of cognitivism comes not only from approaches which stress in turn the importance of collective construction of meanings, but also from a much closer front, which proposes a radical alternative in the conception of mind, founded on the overcoming of symbol as the key-element in mental architecture. It is the *connectionist* perspective, a wide set of theories in rapid evolution which refer to the so-called Parallel Distributed Process (PDP) model and to the simulation of mental processes by means of Artificial Neural Networks.

In short syntesis (see Quinlan 1991; Horgan & Tienson 1991 for introductions) the matter is this. The classical model imagines the mind as a network of symbols and the thought as manipulation of such symbols, in accordance with rules which define a specific representation of external events. In this view symbols constitute the minimal units of mental representations, and the elaboration of symbols take place in sequential manner within short term memory, thus being largely conditioned by its characteristics and limits. In PDP model, on the contrary, representations occur not at symbolic level, but at the level of elementary components of the brain, that is to say at a sub-symbolic level, and consists in a configuration of associative links (positive or negative, excitatory or inhibitory) among these elementary units (Rumelhart & McClelland 1986; Churchland 1989). According to this approach, a concept corresponds to a specific pattern of connections, which are activated in a distributed and simultaneous manner, involving at a given time, by means of a sort of cascade mechanism, a lot of elementary units. Thus what define a specific pattern of activation are not the 'rules' as in the symbolic system, but the 'strenghts' by which units are mutually interconnected, and the whole interconnection structure of the system. This is the reason why the operative model mostly used for purposes of both theoretical description and empirical research is the Artificial Neural Network: a system of knots linked by fluid and ever changing interconnections, which is able to realize in such evolution a sort of 'learning', intended as modifications of global arrangement of strenghts in interaction with the environment.

Obviously we cannot put forward here the analysis of this approach, and of the harsh debate that has been generated by its growth and that, as often happens with important ideas, created a sharp division between enthusiast supporters, who consider it a valid solution for many old problems of psychology, and as much resolute opponents, who see nothing more than a return to ancient forms of elementism, associationism, behaviorism, fisicalism, and the like. Yet, to give an idea of the complexity of the topic, we could indicate the presence, among supporters, of a certainly not behaviorist social psychologist like R.Eiser, who recently found in

connectionist models useful means to handle in innovative way classical themes of the discipline such as the self and the attitudes (Eiser 1994).

What we can do, instead, is to show some possible convergences between the socio-constructionist and the connectionist critics to the classical cognitivist model, and then to point out the contributions that from these perspectives (more or less joined) may come to the topic of collective memory.

As for the first point, it must be observed that the two approaches only at a first glance seem very distant from each other, the one being fully located within social dimensions, with systematic exclusion of mental phenomena, and the other on the contrary addressing inner mental processes even in more depth than cognitivism did. Elements of convergence are instead quite a lot, as shown, moreover, by the firm commitment to the connectionist view of one of the leading advocates of radical socioconstructionism, R.Harré (cfr. Harré & Gillet 1994). Among these elements of convergence we can list: a) a common anti-dualist and anti-essentialist orientation, since either approaches tend to deny the reality of mental processes as autonomous entities, separated from their concrete operative manifestations; b) a strong stress on external causation, from social environment, and not on internal one, deriving from the nature of processes or from various personal dispositions; c) the fluid and non-linear nature of causal links, which nourish the perpetual changing of the systems; d) the possibility of using the model to explain not only the individual but also the social functioning, since interaction may be imagined like a net-of-nets, thus enhancing the complexity of the whole.

From this, important consequences derive in order to assert the social nature of psychological phenomena, which is the focus of convergence between the two lines of critics to classical cognitivism, and which is the reason why they together are significant for us in this occasion. If symbols do not reside in the mind, their origin cannot be but social; and memory, which is in large amount manipulation of symbols, becomes even more social in its foundation.

As for the specific topic of collective memory, the connectionist approach offer interesting perspectives not yet fully developed. The main point of the model is that information is not stored in the system in some unitary location, like something global that may be retrived only after a specific route and only if the storing rules are known; on the contrary, information is stored as a configuration of connections, so that from each portion of the information it is possible to go up to the whole configuration. This model may be very useful in explaing the tipical collective remembering situation, in which each participant holds a specific portion of global experience, and by means of it is able to activate a specific pattern of connections.

An other important point are the processes which may direct the system toward a particular configuration. Of special interest is the analysis of the so-called "attractors": particular areas of the net which are relative stable, as "valleys" in the imaginary "landscape" of the net, according to the effective metaphor of Eiser (1994), and which draw in their direction the state of the net. In this perspective collective memory may be conceived as a way, socially qualified and socially negotiated, of shaping the "landscape" of the net, and more generally like a continuos negotiation of the strenghts to be assigned to the connections. Such an analysis seems very important in order to mitigate the impression of fragmentation, provisional character, and in some extent arbitrariness that often derive from radical constuctionist and discoursivist approaches, and that may be enhanced when these two are joined with connectionist options. In fact, since a system of connections is in perennial modification in force of non-linear dynamics, and since configurations are not stored in permanent way, but are re-created each time in communicative practice, the risk is the complete denial of memory as traces of past events, and its resolution as a set of socially qualified practices, only understandable in relation to the present state of the system. We can on the contrary imagine that, though in an overall fuidity of the system, different elements there exist which in various ways support forms of stability, by limiting the possible range of variation. To remain in Eiser's metaphor, collective memory may be imagined as "valleys" playing the role of "attractors" in the net-of-nets of social relations.

4. The importance of method.

As we said at the beginning, the clash between cognitive and socio-costructionist approaches, in general and on the specific topic of collective memory, lies not only on epistemological premises but often on methodological issues; and this kind of opposition seems very difficult to overcome, since it puts into discussion not a single point, but the overall meaning of the scientific enterprise, so that any type of integration, though minimal, becomes impossible.

The reciprocal objections are well known. The cognitivists, specially those in the so-called "mainstream" who base their work mainly on experimental researches, think that the results of socio-constructionists are not "scientific" according to the classical criteria, referring to problems like validity and reliability, possibility of repetition, lack of homogeneity in procedures, and, above all, lack of control of interaction among variables made by means of numerical analysis. Socio-constructionists, by their side, believe the highly formalized and standardized procedures of the classical model very distant from the essence of real life, and thus they consider the results of the mainstream as useless in understanding human psychological phenomena. As it is easy to see, beneth this opposition lie important epistemological topics, which recall on one side the rich debate between quantitative and qualitative research and on the other side the great question, in a broader history of science perspective, about the sense of positivist option. At a first glance it seems possible to find a correspondence between the two dichotomies, quantity-quality and positivism-antipositivism; but observing more in depth both the historical development of social sciences and the very cores of different positions, we can discover that this is not the case, and that between the two dimensions a more complex interplay does exist.

What we can do here, again, is to hilight that on these topics a wide discussion is still in progress mainly in sociological and anthropological fields, of which present debate in psychology could easily profit in more sistematic way. The field of "qualitative research" is nowadays a fully accepted scientific endeavour (Denzin & Lincoln 1994), even in psychological context (Banister et al. 1994; Smith et al. 1995); in this debate all crucial methodological questions are addressed, beginning with fundamental problems of validity and reliability; and it is clear, looking at the whole enterprise, that discoursive perspective, though very notable, is but one out of the many theoretical and methodological approaches that address the understanding of social construction of psychological phenomena by means of qualititative research.

One of the crux of the debate that could be more directly useful to our purposes is the possibility of using some level of quantification within qualitative research. On this point radical socio-constructionist are quite firm, believing that every quantification, since realizing a variability reduction, is in itself an intolerable corruption of the meanings of qualitative data. The methodological debate shows that this is not true in any case, and that it is possible to achieve both the goals of numerical analysis and of respect for data richness; in this the recent development of computer assisted qualitative data analysis may be of significant support. If we accept this possibility, some very interesting characteristics of collective memory could be investigated in a more scientific fashion, and some of the exciting ideas of socio-constructionist approach could be supported (and thus more universally accepted) or rejected. For example, in the field of qualitative research a great work has been done on narrative structure and on metaphors (Coffey & Atkinson 1996), even with good levels of quantification; and we saw before to which extent these are important features in discoursive approach to collective memory. A deeper glance at the results of methodological discussions on this topic may thus be very useful in improving both reciprocal attention between opposed research fields and a better understanding of the matter as a whole.

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