New Ideas in Psychology 30 (2012) 259–269

Contents lists available at SciVerse ScienceDirect

New Ideas in Psychology

journal homepage: www.elsevier.com/locate/newideapsych

Representations and social knowledge: An integrative effort through a normative structural perspective

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Keywords:
Social representations
Basic cognitive schemes
Social norms
Social identity
Social conventions

A B S T R A C T

The structural approach on social representations is known for the development of central core theory and its similarity with cognition-oriented sociopsychological perspectives, which has been a target of criticism. The approach has difficulty in dealing with the social dimension of knowledge and adopts a static notion of structure. Acknowledging those shortcomings, we present a revised structural conceptual model of social knowledge and social representations based on the consideration of normative and social identity processes, compatible with contributions of authors external to the classical structural approach, such as Wagner (holomorphy) and Lahlou (propagation model). After redefining the concepts of cognem and structure, we tackle thinking processes and the differences between personal and social representations, conceiving the latter as conventional codes linked to groups. Limitations of the perspective are discussed and research directions are indicated based on an understanding of structure that is broader than the one adopted by the classical approach.

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The aim of this contribution is to propose a model revising the structural approach on social representations, a sociopsychological perspective originated from France that conceives the knowledge shared by groups as consisting of structured organizations of elements. The structural approach has been the object of detailed analysis and criticism recently (Parales Quenza, 2005), due to a few controversies on how the approach deals with aspects such the social dimension of knowledge and the concept of structure. We present the classical structural approach and the criticisms directed to it, and then propose an alternative perspective that, aside from tackling some issues raised by Parales Quenza, redirects the focus of study to take normative and social identity processes into account. The proposed model incorporates the contributions of Lahlou (1995, 1996) and Wagner (1994, 1995a) in an attempt to provide a broader view of social knowledge processes.

1. A brief overview of the classical structural approach

Amongst the different perspectives that are directed toward the study of the social representations phenomenon, the structural approach (Abric, 1989; Flament, 1989; Flament & Rouquette, 2003) is the one that gives special attention to cognitive processes. That approach conceives representations and other symbolic formations as structures, i.e. as systems formed by more basic units that interact through rules of functioning. As such, a structural approach on the study of social representations involves tackling the phenomenon through the formulation of meaning complexes formed by elements in interaction (Rouquette, 2008).

The main theory that emerged from the structural approach is central core theory. In essence, it states that

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doi:10.1016/j.newideapsych.2011.12.001

a social representation is formed by elements of two different kinds: central and peripheral. Central elements are consensually shared within a group. They are linked to specific historic, social and ideological conditions. Social representations are considered different if they possess different representational cores (Abric, 1994a, 1994b). The remaining elements form the peripheral system. Those elements are conditional and individualized, and not always shared by the group. They are usually associated with central elements, adapting them to specific contexts or justifying them (Flament, 1989).

Central and peripheral elements do not necessarily differ due to their salience for a population at a given moment. There must be a qualitative difference between the two systems (Flament, 1989). In this sense, two structural properties are exclusive of central elements; they have a strong symbolic value with the social object, constituting an unconditional connection to provide its meaning and interpretation for the group. Additionally, they also possess strong associative power, which means that they can connect with various other representation elements, guiding the meaning of peripheral elements (Moliner, 1994).

Most of the studies aligned with the structural approach and focusing on central core theory (for a thorough description of classical studies, see Sá, 1996 and Abric, 2002; for more recent examples, see Rateau and Moliner (2009)) were based on experimental investigations conducted with the analysis of grouped individual data. The main evidence of a qualitative difference involving the symbolic value of central and peripheral elements has been provided by Moliner (1989). The author conducted a study about the social representation of undergraduates on the "ideal group" and observed that participants would only identify a group of students as being an ideal group when a few characteristics were true within that group: there was friendship among members and there was no leader. In the absence of such characteristics, participants would change their reading grid of the situation and not treat the fictitious group as an ideal group. In contrast, with equality of opinions, another representation element that was highly cited by students, the rejection of the ideal group reading grid did not take place when it was contradicted; results accounted for a qualitative difference between two types of elements. The elements "friendship" and "absence of hierarchy" were central, whereas "equality of opinions" was a peripheral element. From that point on, central elements have been identified by a tendency to consensus to reject a social representation reading grid when a certain element is removed from a scenario; that methodological principle has received the name of "questioning", from the French original *mise en cause* (calling into question).

2. Parales Quenza's critique regarding the structural perspective

Parales Quenza (2005) has provided a detailed critical analysis of the structural approach. After describing its main characteristics and concepts, the author stated that it is a social representation perspective that is no different from social cognition. The author pointed out that according to most of the theoretical models and methodological choices of the structural approach, a social representation is a concept that borrows properties from various other cognitive and social psychological notions, such as schema – organized groups of tied knowledge propositions, or scripts – and associative networks, making it look very similar to attitudinal models like the theories of reasoned action/planned behavior (Ajzen & Madden, 1986; Fishbein & Ajzen, 1975) or Fazio's (1986) processual model. Representations are treated like associations present in memory. For instance, both models conceive beliefs as hierarchies of elements. In the structural approach, the criterion that determines that hierarchy is the relative importance of an element in the network: central core elements are the most salient ones, maintaining the strongest connections in the structure; they have higher associative strength. Parales Quenza's statement finds a parallel in Moliner's (1994) identification of symbolic value and associative power as exclusive characteristics of central elements.

Parales Quenza's analysis also addresses the methodological strategies employed by structural scholars and indicates that most studies deal with an individual level of analysis. There is no social dimension in the structural approach other than a numeric consensus criterion: in practical terms, researchers collect sets of observations from individuals about representational phenomena and assume that a consensus or majority pattern in the data provides support to associate results with a group as an information processing system.

After defending that the structural approach does not add anything essentially different from standard social cognition perspectives and neither capitalizes on the shift to a more sociological level of analysis that is traditionally associated with social representations theory (Farr, 1998; Moscovici, 1961), Parales Quenza (2005) suggests that an alternative notion of structure be adopted. According to the author, in order to overcome an individualistic and associationist conception, research should focus on the sociocultural and historic aspects of human cognition, linking knowledge processes to communication, practices and the meanings taken by structural elements and their roles in the life of society; and on a dynamic view of social representation structure as a system that adapts to contexts of action and accommodates experiences. In spite of those guidelines, the author acknowledges that the relationships between individual and social levels of explanations remain a challenge.

It is also true that recent research in the structural approach is constantly refining central core theory. Rateau (1995) proposed a differentiation in the central core, distinguishing between unconditional prioritary elements that would define the social representation object and adjunct elements that would serve to evaluate it. The current position in the field is that each social representation element, central or peripheral, has those two components: a semantic and an evaluative one. A representation would thus consist in a categorization system, which would define or judge an occurrence of an object according to contextual needs (Lheureux, Rateau, & Guimelli, 2008). However, even in that case the structure is conceived as being formed by elements with fixed roles: an element is

classified as central or peripheral regardless of its relationships with others, rather based on the measurement of symbolic value and associative power properties that are usually obtained in isolation – assessments of single *mise en cause* ratings for each element, for example. It is thus assumed that context differences provoke differential activation of a fixed, crystallized network-like social representation structure.

Sure, there can be transformation in the composition of the structure – such kind of change means central elements going peripheral or vice versa (Flament, 1994) – associated with changes in practices throughout history (Rouquette & Guimelli, 1994). But this does not truly change things: the transformed structure in that model is still is a single reference reading grid that is activated differently by context.

The problem is that the conception of a network formed by nodes, each with independent properties that are tagged by contextual cues, ends up ignoring the interdependency and mutual modulation of those nodes. This is in conflict with Piaget's (1968) basic definition of a structure; the understanding of a structure as a system means that it does not suffice to take the elements of a structure and their characteristics into account; a change related to an element in the structure can bring about changes in other elements, and in the whole formed by the structure.

The identification of such a theoretical incompatibility supports Parales Quenza's call for a dynamic conception of social representation structures, i.e. the separate characterization of elements cannot capture the interactions of beliefs, norms and practices consisting in a social representation structure. Arguably, such "independence" model might be rather called an atomistic approach to social representations instead of structural. The limitations of a perspective that classifies elements independently of others might explain why the meanings and evaluations given to some central elements change when those elements are presented alone or together with others, a pattern of results found in research conducted by Moliner and Martos (2005) and Katarelos (2003) with social representations about the ideal group and higher studies.

3. A new structural model of social knowledge

Acknowledging the points made by Parales Quenza, we try here to sketch a new conceptual model to characterize social knowledge according to a structural perspective. We begin by redefining the concept of cognem, which is the basic unit of knowledge in the structural framework. We deal with the formalization of knowledge by means of the basic cognitive schemes model (Guimelli & Rouquette, 1992; Rouquette, 1994a) and move on to the qualitative differences of personal and social representations. We tackle personal representations and thinking as knowledge activation and social representations as conventional codes, based upon Gilbert's (2008) normative conception of conventions. Inspired by Wagner's (1995a) proposition of holomorphy, we assume that the relationship between the individual and personal spheres is dependent on the perceived legitimacy of the association of knowledge with a social position, and that the adoption of group beliefs or compatible behavior depends on group identification, in a way that is compatible with social identity research. The proposed model is also compatible with Lahlou's (1995, 1996, 2010) epidemiological conception of representation propagation and evolutionary view of social knowledge dynamics.

3.1. Knowledge units and relations

Codol (1969) proposed a unifying terminology to make the labels given to notions and concepts investigated by cognitive social psychology more compatible among them. According to that classification, the most basic unit is called cognem: this term then accounts for the simplest ideas, beliefs, traits, attributes or information units within a given theoretical framework. Lahlou (1996) suggests that cognems are heterogeneous; the notion might then be applied to verbal, iconic items, words, or any object that may appear in individual conscience, such as perceptions, emotions and memories.

In the case of our structural approach on thinking, it can be stated that a cognem is the most basic unit that makes it possible to establish a symbolic relationship. A symbolic relationship is understood in a broad way as a relationship between two objects. Inspired by Lahlou's (1996) open conception of the nature of cognems, those two objects included in a symbolic relationship might be considered vaguely as two "things", regardless of them being concrete or abstract: concepts, entities, qualities, and so on. What matters here is the property of such things of being able to be reified as entities in discourse or thinking and being put in relationship with others. A cognem is then treated as a minimal piece of knowledge.

It is also important to recall that there are different types of knowledge. Declarative knowledge involves knowing "that", *i.e.* knowledge that is represented in the form of subject-and-predicate propositions. On the other hand, procedural knowledge is related to knowing "how" to do something, and is represented in the form of productions or actions. Another key difference is that declarative knowledge can be verbally communicated – due to its directly symbolic nature – whereas procedural knowledge cannot (Anderson, 1976).

A conceptual framework based on cognem structures has already been proposed by Rouquette (1994a), who limited its validity to declarative knowledge. We shall follow the same road, leaving procedural knowledge aside from our considerations. As a consequence, we will only deal with knowledge structures in this text as systems of declarative knowledge. In spite of the multiple possibilities of cognems, we will focus on one specific kind: verbal signs. Our considerations should possibly be generalized to other kinds of symbols, but verbal signs are our choice to simplify formalization efforts and therefore make the explanation of our model easier.

For Rouquette (1994a) any system that is capable of cognitive operations is a knowing system. His model is independent of any specific characteristics of such knowing systems. However, a model about representational structures is not. A representation is a concept that links sets of symbols to a subject: it represents something – an object –

to someone, whether person, group or other specific knowledge system.

If we base ourselves on Rouquette's (1994a) work, it can be inferred that a minimal symbolic relation involves the relationship that verbal signs maintain with what they mean to someone. As an example, we can refer to the word "house" and the approximate meaning it conveys: a closed environment limited by walls and a roof, with doors and windows. Therefore, those verbal signs are the most basic units on Rouquette's cognitive model, and are thus called cognems by him. Two cognems connected by an operator that specifies a relation between them constitute a triplet, which can be formalized as follows:

A c B;

where *A* and *B* are different signs and *c* is a relation operator.

In that triplet, the *B* term is referred to as an aspect of the *A* term. The interpretation of how that aspect is linked to *A* is given by the nature of the operator in the triplet (*c*).

Rouquette's (1994a) perspective states that the number of operators (also called connectors) belonging to a knowledge model is finite; this implies that cognems may be related to each other in a limited number of ways. Knowledge of this kind can be formalized. Guimelli and Rouquette (1992) identified 28 possible relationships between cognems, and the resulting set is appropriately called basic cognitive schemes model (or SCB, from the French original *schèmes cognitifs de base*). According to similarities in the logical nature of those relationships, the relationships were grouped into five basic cognitive schemes: lexicon (lexicographic connectors, such as definitions and synonyms, e.g. *A* can be defined as *B*, *A* means the same thing, has the same meaning as *B*), neighborhood (connectors related to inclusion or co-inclusion relationships, common categories, similarities, e.g. *A* is a part of, is included in, is an example of *B*), composition (connectors linking parts to the whole, e.g. *B* is a component of *A*), praxis (connectors related to the description of actions, actors, tools, e.g. *A* is an action that is applied over *B, A* does *B*) and attribution (connectors that link qualities, causes, effects and attributes to the first cognem, e.g. *B* evaluates *A*, *A* causes *B*; *B* is an effect of *A*). The SCB model is only one possibility of formalization of connectors, presented here as an example. It must be clear that any other classification of relations could be employed, constituting other formalization models.

At this point we need to differentiate our position from Rouquette's. The author considers that the relation of a verbal sign to what it means to someone is the most basic cognitive relationship, while we call cognems the relationships that are immediately above it, that is, the relationships involving two verbal signs and a connector. In other words, what Rouquette would call a "relationship between cognems" is exactly what we will call cognem. All the characteristics described in the literature about the SCB model still apply, but we propose this change because it makes it explicit that a minimal unit of knowledge involves a symbolic relationship, and it allows us to establish a relationship of equivalence between a triplet and that minimal unit of knowledge. By dealing with cognems merely as verbal signs, the fact that there must be some kind of symbolic relationship in knowledge is somewhat hidden; in contrast, by stating that the verbal signs only mean something when they are part of symbolic relationships, connectors become an essential aspect in knowledge. Signs cannot mean something while isolated, as their meaning is neither independent nor fixed in advance; the meaning of things is relational and found in specific relationship configurations with other signs. Similarly, elements only make sense in a structure when considered in the ensemble of that structure; it does not make sense to characterize their properties separately.

Our understanding of cognems is not far from Lahlou's (1996). For the author, cognems are signs linking an object to what they actually represent for someone. Therefore, the distinction between the sign and the object is blurred to the subject knowledge, i.e. "a representation is what it represents" (Lahlou, 1995, p. 13).

3.2. Personal representations and their propagation

After having dealt with cognems and their relations, we can proceed with the description of our structural model of social knowledge. The whole set of cognems that are held by a person forms what Codol (1969) called cognitive universe. When cognems have an *A* term in common, it can be said that they are ideas, beliefs, or opinions that refer to the same object. An object could be virtually anything that comes across the life of a person; a topic, an event, a physical object, other people, and so on. In Codol's terms, a structured set of cognems involving the same object is a representation, which we will refer to as a personal representation.

The interdependence and organization rules of a set of cognems related to a same object receive the name of representation structure. Each cognem within a representation is called representation element. The characterization of representational structures is one of the goals of a structural study of knowledge, and it involves assessing if some elements are more important than others, the specific contexts in which some elements are activated and others are not, the specific aspects of the object that are covered by each element, how each element is related to each other, how thinking processes affect the configuration of the structure, and so on. It must be clear after we presented our agreement with Parales Quenza's (2005) call for a dynamic understanding of structure that the fore mentioned tasks cannot be reduced to a mere listing of pieces of knowledge. The structural study of representations does have to consider interactions between cognems and contextual situations in order to grasp evidences of the processes involved. The study of a structure is then understood as the study of activation and association rules in context, and not a description of isolated properties.

Within that perspective, thinking is understood as the activation of cognems, or the condition in which a cognem is true. Saying that a cognem is true does not mean that it is true as in "correct", in formal logic terms or in what concerns the correspondence of a cognem with empirical reality. When we say that a cognem is true, we mean that it

is valid in some way: a given person might believe in the content of the expressed cognem, or alternatively refer to knowledge from that cognem in a given situation, or even just bring that cognem into the space of conscience. By saying that a cognem is true, we mean that a unit of knowledge, a relationship between two signs, is valid for that person in a specific situation. In this sense, thinking is the activation of knowledge. This broad understanding encompasses both the production of cognems as in learning through experience – so that new relationships between verbal signs are created, whether from data from the senses or from active construction of knowledge, and the activation of cognems that had already been produced in the past, by means of memory retrieval.

Cognems are activated in learning or remembering throughout a person's life by means of perception processes and communication with others. It is communication with other people that provides the possibility of social knowledge, as it enables people to share knowledge about their world. Lahlou (1996) has provided a model to account for the propagation of representations by assuming that knowledge can be approximately replicated from person to person: being exposed to cognems in discourse or other communication resources is enough for a person to be able to appropriate another's knowledge, if some conditions are met, e.g. if they share the same language and the communication act is well understood. The "spontaneous" emergence of representations can also be explained by that model: Lahlou says that attention and memory can reorganize a person's cognems and actualize knowledge in one's conscience; this accounts also for the interaction of a subject of knowledge with the world – so cognems are organized through perception processes – and for the relationships of cognems within one's cognitive universe, complementing what we understand as "thinking" as stated above.

Lahlou's (1996) model also assumes that knowledge (and by extension, cognems and representations) is somewhat contagious, resembling the mechanism of a replicating virus. The author mentions that his model is in a way a generalization of Sperber's (1989) epidemiological approach. Our model of social knowledge and Lahlou's propagation model are, in our view, complementary. We shall rely on the author's contribution to develop our own.

The replication-based propagation model proposed by Lahlou (1996) is the condition of possibility for the existence of socially shared knowledge. People can communicate their representations and cognems to others, and diffuse their knowledge; it is evident, though, that the mere existence of that replication property does not guarantee that people will adhere to each and every belief or idea; that is where influence processes come into play. Nevertheless, let us assume that the general guidelines of the propagation model apply to those cases, although socio-psychological modulations have to be taken into account.

Lahlou (1995, 2010) also advances an evolutionary perspective to account for social representations. According to him, a social representation can be considered a population of all personal representations of a group about an object. Since new representations can emerge from personal experiences and can be modified when replicated, some of them eventually allow people to tackle the problems of their everyday lives more efficiently. We do not mean that there is a "better" way to do or think about something, but rather that some representations might serve individual or group goals better at a given moment. A selection process analogous to natural selection then might favor the diffusion of those more suitable representations in the population, thus expanding what was possibly private at first to public reach, enabling collective knowledge, which Lahlou referred to as social representations.

3.3. Social knowledge: social representations as conventional codes

Lahlou's views do explain how knowledge can be diffused and selected in a group, providing the framework for conceiving social knowledge. However, our position is that there is a qualitative difference between social and personal knowledge that explains the relationships of people with knowledge from the social groups that they belong to. Group phenomena emerge from the interaction of people creating a common bond in its members by means of social identity processes; in order to explain the relationship of people with social knowledge, the identification of people with the group that is associated with a specific representation must be taken into account. That is what our model of social knowledge is based on.

To begin with, when we speak of social representations or more generally of social knowledge, there is a change in the nature of the knowledge system; it is no longer a person, but a collective entity, the group. There are many definitions for groups in social psychology, but for our purposes we will adopt Wagner's (1994) understanding of what they are, following his distinction between nominal and reflexive groups. A reflexive group is a set of people that conceive themselves as being a meaningful unit and possess the criteria to differentiate group members from non-members. It is substantially different from aggregates of people that are placed together according to some external criterion of which group 'members' are unaware. The latter form what Wagner calls a nominal group. Our model makes the restriction that a group must be a reflexive group in order to be considered as a knowledge system; nominal groups are not truly groups from a sociopsychological point of view, and therefore belonging to one such group is not likely to affect the knowledge of its members.

A further restriction is that one must not fall into the trap of transferring the understanding of cognitive processes that take place within the individual to explain a collective reality. Durkheim (1894) had already identified that problem when he stated that social facts had a different nature from that of psychological ones, and were regulated by different processes.

Even if we consider that a group is a knowledge system for our model's sake, there is a challenge: there are no ways of directly assessing what groups 'think'. Empirically, it is people who believe in things, who hold opinions, interpret things from the environment, or take decisions. If data about a person's representations are obtained, then they are validated from the start: they are true and legitimate for that individual. But how to do a similar thing with a group?

The operational "leap" from a personal to a group level in research is not an easy and single one. There must be an agreement in terms of a criterion or a set of criteria that justify the passage. The most recurrent trend is the simple numeric consensus criterion: in practical terms, researchers collect sets of observations from individuals, related to representational phenomena and assume that a consensus or majority pattern in the data provides support to associate results with a group as an information processing system. However, if we examine more closely the notion of consensus, different patterns can be found; a manifest consensus, when people agree about something and also believe that there is general agreement about it; a latent consensus, when people agree but do not believe that other group members share their opinions; and a fake consensus, when people think that other group members share their opinions, but the actual level of disagreement is high (Moliner, 2001a). There is also another risk associated with adopting a numeric criterion: the assumption that group functioning is an "average" of individual properties. This would mean that the characteristics of a group and their behavior would be equivalent to those of a prototypical member, when actually the group refers to a different level of evaluation that cannot be reduced to an aggregate of psychological characteristics (Wagner, 1995b).

Aware of this problem, Wagner (1995a) presents a position, supported by empirical results, suggesting that a social representation is a representation that is consciously associated by a person as being attributable to a group, a property that he called holomorphy. That clearly goes in a different direction, which indicates that the assessment of numerical consensus is not the only possibility to decide whether a representation can be associated with a group or not; rather, functional consensus seems to be more suitable.

Our own position is that the group 'thinks' in the sense that belonging to a group gives someone access to group-specific knowledge and influences that person to adopt those representations, since one's own group is a legitimate source of knowledge for the group member. Also, beliefs and ideas that might emerge from isolated people or subgroups and that are discussed and re-elaborated by their community might potentially become supported by the whole group, thus exerting a more general influence on group members. Dynamics of this kind trespass the borders of personal psychological processes and acquire the status of a collective phenomenon supported by the group. All in all, Flament and Rouquette's (2003) definition of social representation seems compatible with those considerations: it is a set of cognitive elements linked by relations, and both the relations and the elements are legitimated within a group.

This definition bears much similarity to Eco's (1975) basic definition of what a code is in the domain of semiotics. In the presence of two structured systems of meaning units (systems *a* and *b*, called *s-codes*), a code is the set of rules and constraints that provides the correspondence relationships between both systems. In this context, what is a social representation if not a code maintained and legitimated by group convention, actualizing the substitution of phenomenal aspects of social reality – social objects: themes, topics, events that are relevant to a group – by an interpretive grid aimed at explaining those aspects and guiding action relative to them?

Conceiving social representation as a conventional code helps to distinguish them from personal representations. While both can be formalized in a similar way in terms of cognems, their material support is different. A personal representation is found within a person and the register of pertinent information is assured due to physiological capabilities; in contrast, a social representation transcends individuals and exists only through the recognition that it pertains to a collective level that individuals cannot interfere with alone. It is a phenomenon situated at the sphere of group culture, and maintained by the collective by means of a convention with historic roots, a convention that leads to recognition and provides legitimacy.

What do we mean when we speak of social conventions? We refer to Gilbert's (2008) concept of social convention as being a jointly accepted fiat that has a normative nature. In other words, a social convention is an agreement of how to do something that is established, respected and enforced by a social group; breaking the convention – going against what group members think that is appropriate – is followed by sanctions of other group members. That normative property is justified by the understanding that a convention is associated with group culture and therefore implies respect to that culture by its members; failure to conform to it is met by negative reactions. Gilbert does not mention social identity in her paper, but it is one way of seeing the same thing; disrespecting group conventions might be understood by other group members as a threat to their social identity and therefore the contradiction of group views is frowned upon. It is also important to make it clear that we refer to conventions in a general way, encompassing guides of action but also beliefs or views about social reality – as in "members of group *g* think *t* about object *o*" -; and this notion can therefore be applied to declarative knowledge and the whole of our model.

At this point we have the necessary parts to refine the differences of the concepts of social knowledge and social representation in our model. If, quite generally, social knowledge can be defined as knowledge that has a collective entity as its subject, then it becomes clear that it is an encompassing class that allows for various possibilities of collective entities and structural patterns. Regarding the types of collective entities, they could go from dyads to groups and societies. In terms of structural aspects, we might consider the organization of knowledge, ranging from single cognems to structured sets of cognems; or the structure of sociopsychological connections of individual people and the collective entity.

Social representations can be defined, then, as a specific kind of social knowledge. It is a structured set of social conventions about a social object that is associated with a social group. The social representation functions as a practical code for group members to deal with the object in question. Finally, the representation does have a social identity marker that makes of it normative knowledge in the sense that it is enforced by group members so as to preserve group culture.

Social identity (cf.; Deschamps & Moliner, 2008; Hogg, 2006) then provides the key to understand the specificity

of social representations as an important form of social knowledge, and its relationships with personal representations and behavior. While cognems and representations can be replicated and shared – following propagation and evolutionary perspectives -, and even be associated with specific categories or groups – respecting the holomorphy principle – there is a necessity for a person who belongs to a certain group to first conceive him/herself as a group member; then secondly acknowledge that such group has some kind of social convention or set of conventions that is directed toward a given social object associated with that social position; and then adhere or not to the group view. Probably in most cases that process is not conscious. For example, a person might face conflict when two group affiliations that are similarly important or salient for that person maintain contrasting cultures regarding something, but when identification with a single group is very strong or there are no alternative group views in sight, there is little or nothing to think about. In that second possibility, following the group convention might be perceived as "the only way" to think or do something and contrasting views might be perceived as being wrong or absurd.

Differences in social representations across groups are usually present in intergroup conflicts, as evidenced by Wagner's (1995b) analysis of Di Giacomo's (1980) study of a student protest: non negotiable differences in the views of subgroups of students led to communication problems and the failure of the movement. The logics expressed by the representations of communists and the catholic church presented in Moscovici's (1961) classical research about the representations on psychoanalysis in the French press are also clear examples of conflicting conventions and meaning systems.

When it comes to personal action or personal representations and the relationship with social representations, Wagner (1995b) cited Devereaux to affirm that "social facts need to be translated into intra-individual mental entities before they can be used to explain or to be articulated with individual behavior" (p. 8). In our terms, we could say that social knowledge has to be converted into personal knowledge in order to account for beliefs or behavior. If a given person is aware of a social convention or representation associated with the group that the person belongs to, the strength of group identification should play an important role in the process of agreeing or not with group guidelines. Outside the social representations framework, such pattern has been identified by social identity researchers. Terry and Hogg (1996) showed that social identification with groups of students moderated the intention to follow group norms related to exercising and sun protection behavior; high identifiers' intentions conformed to group norms, while low identifiers' did not. In addition, only reference group norms predicted behavior; non-reference groups were not important. In the same vein, Jetten and Spears (1997) obtained results that evidenced that undergraduate students highly identified with their university group act more in accordance with an intergroup discrimination norm than low identifiers.

We borrow from social norms research linked to social identity processes because our understanding of social representations as structured social conventions gives them a normative nature since the disrespect of the convention is a potential threat to social identity. This also serves to point out that a structural approach on social knowledge and social representations must not only concern the structure formed by relations among cognems and their combinations with activation contexts. Maybe even more important are the structures formed by the relationships between collective subjects of knowledge – the groups – and between groups and individual group members. Intergroup relations define the configurations of the former while social identity processes modulate the latter. So there is plenty to be done in order to characterize social knowledge structures thoroughly.

Fig. 1 summarizes and illustrates our model, integrating our positions with Wagner's and Lahlou's contributions. Inspired by Lahlou's (1996) model, we define Ego as a reference individual and Alter as another person that

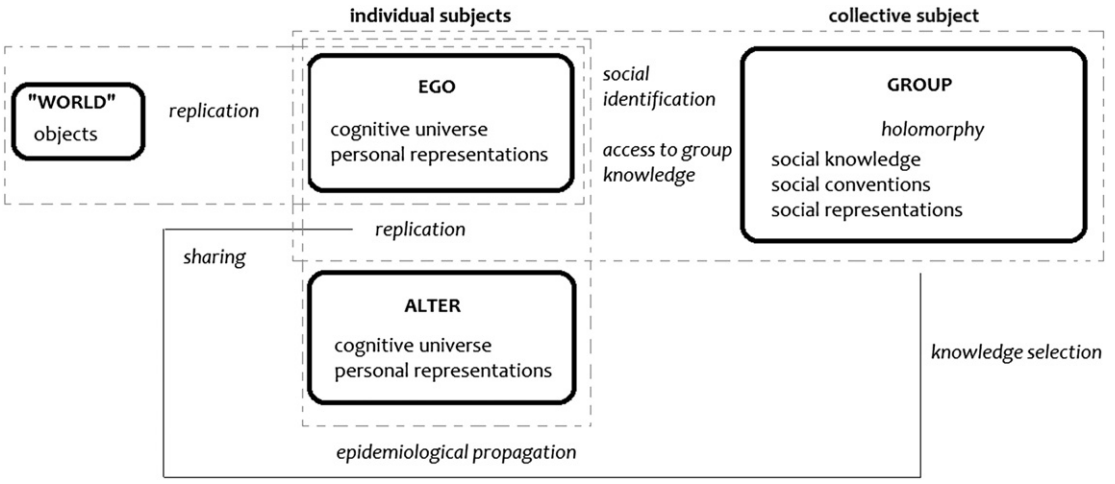

Fig. 1. Diagram illustrating the normative structural conceptual model.

interacts with Ego. Lahlou (1996) explains how Ego constructs representations that correspond to the world he/she lives in; those representations end up as analogous of the objects in the material world, as Ego faces situations that involve experiences with objects in everyday life. There is also the possibility that Ego might create objects based on representations existing in the cognitive universe, which Lahlou (1995) calls reification, but this will be not a focus of our attention. Knowledge is diffused by means of communication in a way that is similar to the replication of an organism; as Alter and Ego have a common frame of reference in terms of their cognitive universes and representations, they can communicate knowledge to one another, which ensures the diffusion of knowledge and provides the mechanisms for the existence of social knowledge through sharing. A generalization of those interpersonal mechanisms of knowledge propagation between individual subjects to a larger scale means that knowledge propagates in an epidemiological pattern, and the representations that allow for more adaptive or socially functional behavior are selected in the repertoire of the population. This is a (very) brief presentation of Lahlou's propagation model.

At this point it is necessary to note that knowledge can also be associated with specific affiliations in social reality, and thus be more or less consciously linked to collective entities; this means that social conventions and structured sets of social conventions acquire a social position signature – in accordance with Wagner's (1995a) contribution with the holomorphic property of social representations. The link between a person and a group takes place through social identity processes: an Ego that belongs to a social group has access to group-specific holomorphic knowledge – social conventions and representations – and that person is likely to adopt group views when highly identified. The conceptual precisions that we have defined for the notions of cognem, representation and convention apply to the processes and stances involved in the model.

4. Conclusions: evaluation of the model and compatible research strategies

Parales Quenza (2005) pointed out that, while the structural approach is a perspective to that tries to study social representations the phenomenon more objectively and innovates in methodological strategies to characterize social representations, it actually resembles standard social cognition, adding little to the understanding of social knowledge that is already not present in more individualistic cognitive approaches. There are also some problems in the conception of social representation structures, from the understanding of what consensus is, to a slightly naïve associative network approach to the notion of representation that is unable of reflecting the dynamic actualization of representation and element roles.

We have tried to reformulate the main concepts of the structural perspective to reflect a less crystallized and more dynamic view of structures and knowledge. We have also sketched a conceptual model that is compatible with theoretical developments of authors that are outside the French school, but who have provided important insights in terms of knowledge propagation, sharing and selection (Lahlou, 1995, 1996) and the non dissociable link of group knowledge with social positions (Wagner, 1995a). Moreover, we have assumed that social knowledge in the case of social representations has the nature of a convention and therefore a normative character that involves social identity. Therefore, social knowledge of this kind is a code associated with a collective entity – usually the group -, and the relationship of group members with social knowledge is modulated by social identity processes such as social identification.

4.1. Representations, norms and identity

One benefit of the integrative model that we have proposed is a more harmonious conciliation of individual and collective stances of knowledge. We do not speak of gathering individual data to derive or infer a collective structure, or of sociological determination of individual representations. Through questionnaires and other kinds of similar individual tasks it is possible to collect data related to individual knowledge, and Lahlou's propagation model exposes possible mechanisms to share that knowledge, but the understanding of a social representation as a code kind of breaks down the illusion of being able to objectively "describe", "characterize" or "map" a social representation. Knowledge can be formalized in terms of cognems and their relationships – and as mentioned, Guimelli and Rouquette's (1992) SCB model is a suitable framework to do it – but the use of individual data can only give a rough approximation of the knowledge of a social group, and with the limitation of not having been produced by the pertinent knowledge subject itself! A formalization with the same SCB connectors based on careful examination of group-representative documents or qualitative exploration interviews with group members might be an equally good – or even better – choice to unveil the underlying logic of a social representation code, the socially coherent patterns that emerge from collective phenomena, i.e., what Rouquette (1996) called "social thinking".

In contrast, research on the connection between individual cognitive processes and social knowledge – understood here as representations and conventions – is more compatible with experimental and quantitative designs. This is where most of the traditional research of the structural approach is situated, and not surprisingly there is significant overlap with the interests and methods of the social cognition field, as well as efforts to establish a dialogue between the two perspectives (e.g. Rateau & Moliner, 2009). What is still not there, though, is a more important consideration of social identity processes, and that is why we have tried to establish an explicit link between the individual and the group through social identification, and to direct the understanding of the individual-group connection as a normative, conventional relationship that implies social identity. Other than adopting Wagner's (1994, 1995a) notions of holomorphy and functional consensus, which already indicate the need of always taking the triad involving individual, group and knowledge into account, this shift tries to bring together social representations and knowledge and social norms, a classical

sociopsychological field that has been a topic of interest for social identity and intergroup relations scholars (e.g. Terry & Hogg, 1996), but much less for social representation researchers.

In the structural approach, norms are usually considered as specific cognem connectors (Guimelli & Rouquette, 1992) as roles of social representation elements (Abric & Tafani, 1995; Lheureux, Rateau & Guimelli, 2008), or as factors explaining the expression or not of polemic social representation contents (the masking effect) (Flament, Guimelli, & Abric, 2006). They are not conceived as an essential characteristic of the connection between individuals and the relationship with group knowledge. But there are exceptions: some social representations studies aligned with the structural approach predicted the beliefs of subjects concerning social objects from their perceptions of the normative systems of some reference groups (Milland, 2001).

One might question if it is not too restrictive to adopt the assumption that social representation knowledge is normative in the perspective that we detailed. It is important to remember, though, that it is well documented in the literature that interpersonal interaction often results in group norms that acquire some sort of "life of their own", becoming independent from isolated individuals and transcending the subjects of knowledge that gave rise to them. In social psychology, since Sherif's (1936) classic autokinetic effect study there is laboratory evidence showing that individual opinions tend to interact and form norms that are transmitted and become frames of reference when there are no clear-cut objective indications around. Pepitone (1976) later tried to direct social psychology to the study of norms and their effects in knowledge and behavior, stating that most of the sociopsychological phenomena are at least partially normative. Also in the sociology of knowledge, the very influential work of Berger and Luckmann (1966) about the social construction of reality dedicates much attention to the idea that social interaction between people results in the institutionalization of knowledge that is legitimated and enforced by means of normative influence. So the idea of focusing on the normative dimension of social knowledge and social representations is not deprived of sense.

Still concerning the fact that dealing with a normative perspective is restrictive, one might also think that the proposed model might ignore important processes that are also pertinent to social knowledge. But it is not our intention to embrace the whole of the phenomenon. Our perspective is not exhaustive; it covers only one possible understanding and way of dealing with the phenomenon of representations. Other perspectives focused on dialogicality (Markova, 2003) or social anchoring (Doise, Clemence, & Lorenzi-Cioldi, 1992) tackle the problem in completely different ways. While they all assume to be linked fundamentally to the same phenomenon identified by Moscovici (1961), they are clearly based upon different epistemological positions, theoretical conceptions and methodological strategies. This paper has been restricted to one point of view: it is a model based upon the French structural school but that relies on the contributions that are external to it in order to solve some issues that were pointed out by Parales Quenza (2005) concerning the incorporation of a social dimension and some communication principles.

4.2. The integration of affect

We feel that we also have to say something about affect, as emotions and affective experiences are an essential part of human lives, and our model deals with humans as knowledge systems. So, a model of that sort would be incomplete if at least it did not provide some tentative insertion points for affective components to interact with the knowledge structure – or to be a part of it. The results of research about representations of affect-charged objects suggest that in affective contexts – whether caused by an environmental constraint or by the characteristics of an object – people tend to resort to simpler reasoning structures and direct actions and beliefs according to a very restricted number of cognems (cf. Guimelli & Rimé, 2009; Wolter, 2009).

According to this perspective, an affective context is likely to be associated with a change in the operation and organization of the structure; in other words, it is as if a representation structure, if sensitive to affective loadings, might assume various configurations and be subjected to different operation rules, depending on the intensity of affect. This is compatible with the conception of structure in our model, more flexible to contextual peculiarities. In order to assess the role of affect in the structure of social knowledge, we would better examine the relationships implied by the situation involving the subject of knowledge, the object of the representation and the collective stake involved by that object in a specific context. If an object can be some kind of threat to a group, it is likely that group members highly identified with that group will activate strongly affective knowledge on the object. So to understand the affective nature of social knowledge, the structure of intergroup relations and its historical relationships with the stake associated with an object is probably the structure of interest to explain a given consideration. This way of looking at it contrasts with the examination of activation patterns of associative networks of cognems isolated from social context.

4.3. Future directions

So where to go from here? What kind of guidelines for research can we derive from this normative structural perspective? Roughly speaking, the study of any relationships included in the field pictured by Fig. 1 is legitimate. To identify regularity patterns that may be generalized to classes of social representation objects rather than particular occurrences is the main aim of a structural approach on social representations. That is why Rouquette and Rateau (1998) state that content is a secondary quality, according to a structural perspective; the main focus is to identify structural invariance processes and configurations. In general terms, the same principle applies to a normative structural position, but grounded on adjusted conceptions concerning what to consider as structure, the normative

link of a person and the reference group, the nature of cognems, and the dynamic understanding of structure.

We also suggest that the notion of structure in research takes a broader direction. Rather than keeping focus only on the structure of interconnections of representation elements, one could look into the structural aspects of the relations of groups with specific social objects, characterizing the development of that relationship in an intergroup and cultural context. An aspect of the structural approach that was criticized by Parales Quenza (2005) was its static conception of structure as a set of a-historic schemes. The consideration of the transformation of structural relationships and the explanation of those changes through an examination of the history of involved groups and objects, by means of document analysis or longitudinal research is a possible way to address that criticism. Although studies with that kind of focus are scarce from a structural perspective, there have been some efforts to address the connections of social representation dynamics with history in the form of theoretical essays (Moliner, 2001b; Rouquette, 1994b; Rouquette & Guimelli, 1994).

If we concentrate on more individualistic levels of analysis – such as individual and interpersonal processes – then another structural dimension to take into account involves the relationships of individuals with the groups that they belong to or interact with. This is where the conventional view of knowledge linked to social position becomes relevant as well as the structural connections involving knowledge and social identity processes.

A last possibility to mark the specificity of a structural approach on social knowledge involves the investigation of the empirical bases of another strong assumption linked to social representations: the collective negotiation of meaning through a structural analysis of communication processes. Again, there are existing theoretical models in the field to tackle communication networks and social communication (Abric, 1999; Rouquette, 1996), but a still restricted body of research. Nevertheless, the studies conducted so far already indicate various possibilities. A few lines of research worth mentioning focus on discourse schemes employed to deal with inconsistencies with social representation knowledge (Guimelli & Rouquette, 1993), on the communication paradigms of social influence and their relationships with social representation knowledge (Mugny, Souchet, Quiamzade, & Codaccioni, 2009) and on the study of the underlying social message of rumors (Renard, 2009). Moscovici's (1961) classical study also relies on an analysis of the structural characteristics of communication systems.

A final limitation that we would like to point out is that the normative structural perspective that we have presented here is still a theoretical model only, even if we have based ourselves on research results whenever possible to support our views and back our positions. The studies and contributions that we cited were of course compatible with our views, but they were developed having other goals in mind and did not aim at submitting this specific proposal to test. We hope that this contribution can inspire research to verify the plausibility of the model and refine it, and then help to open new theoretical and methodological possibilities for the sociopsychological study of social knowledge.

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