

Social Representations: A Review of Theory and Research from the Structural Approach

Representaciones sociales: una revisión de la teoría y las investigaciones desde el enfoque estructural

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ABSTRACT

The present paper is a review of the theoretical advances and empirical findings related to social representations according to the structural approach, a research stream that aims at studying the influence of social factors in thinking processes through the identification and characterization of relationship structures. The presentation of the approach begins with the baseline definitions of social representations according to a structural approach, moving on to an overview on the nature of representation elements, the relationships between representations and practices, cognitive scheme dimensions, central core theory, representation transformations and interaction context effects. In addition to positioning ourselves concerning polemic topics during the review, in the final section we evaluate briefly the current state and future perspectives of structural research on social representations, mostly addressing the problem of defining consensus, the difficulty of characterizing a collective construct from individual data, and the secondary importance of content in structural laws.

Key words authors

Social Representations, Structural Approach, Central Core Theory, Basic Cognitive Schemes.

Key words plus

Social Psychology, Review, Interactions.

RESUMEN

Este artículo es una revisión de los avances teóricos y los hallazgos empíricos relacionados con las representaciones sociales de acuerdo con el enfoque estructural, una corriente de investigación que tiene como objetivo estudiar la influencia de factores sociales en los procesos de pensamiento a través de la identificación y caracterización de relaciones estructurales. La presentación del enfoque comienza con las definiciones básicas de las representaciones sociales de acuerdo con el enfoque estructural, pasando a la naturaleza de los elementos de representación, las relaciones entre las representaciones y prácticas, las dimensiones de esquemas cognitivos, la teoría del núcleo central, las transformaciones de representación y efectos de los contextos de interacción. Además de comentar algunos temas controversiales en la revisión, en la sección final se evalúa brevemente la situación actual y perspectivas de la investigación estructural de las representaciones sociales, principalmente relacionadas con el problema de definir el consenso, la dificultad de caracterizar una construcción colectiva a partir de datos individuales y la importancia secundaria del contenido en las leyes estructurales.

Palabras clave autores

Representaciones sociales, aproximación estructural, teoría de núcleo central, esquemas cognitivos básicos.

Palabras clave descriptores

Psicología social, revisión, interacciones.

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A social representation is a sociopsychological construct that performs a symbolic role, representing something –an object– to someone –a person or group. While doing so, the representation actually substitutes the object it represents, and therefore becomes the object itself, for the person or group that refers to it (Moscovici, 1961, 1976). As such, a social representation is a product that results from a process of representing, and always replaces the object that a social actor links to it. The object can only be accessed through a representation; for a given social actor, that representation “is” the object (Abric, 1994a).

After almost 50 years since the introduction of social representations in social psychology, related research has formed an impressive body of studies published worldwide, including Latin America (e.g. Parales Quenza, 2006; Magnabosco-Martins, Camargo & Biasus, 2009; Souza Filho & Durandegui, 2009). There have been various schools that have proposed different theoretical approaches and methodological strategies to deal with the phenomenon.

The present paper focuses on one of those schools, i.e., the structural approach, and aims at providing a state-of-the-art review of the current theoretical positions supported by its studies about social representations. This review also has a secondary aim of making the structural approach to social representations more available to an international English-reading audience –so far, the vast majority of studies and essays on it has been published in French only, in spite of the reasonably global diffusion of the approach.

The structural approach to social representations is a school that originated in France in the 1970s and 80s. Its perspective is marked by an experimental outlook, which deals with socially shared knowledge as structures, i.e., systems formed by interconnected units, the functioning of which is regulated by laws. In the case of social representation, the structure is formed by simple ideas, basic cognitive units of meaning that are called cognems (Codol, 1969) or elements. A social representation is a set of cognems that refer to a social object and form an integrated knowledge structure shared by a group.

The main fields of study related to the structural investigation of social representations will be presented and discussed in the text. We begin with the baseline definitions of social representations according to a structural approach, and move on to give an overview of the advances on the nature of representation elements, the relationships between social representations and social practices, the basic cognitive schemes model, central core theory, social representation transformations, and interaction effects. In addition to positioning ourselves concerning polemic topics during the review, in the final section we discuss briefly the state of structural research on social representations.

A few things must be made clear: throughout the text we express our positions concerning polemic topics, at times presenting views that are not necessarily shared by other scholars. This is done mostly for reasons of disambiguation and evaluation of the field directions, and should not be taken as a consensus within the community. Moreover, the current review is restricted to the conceptual and methodological framework of the “French” structural approach itself; hence, overlaps and relationships with other developments from other social representation approaches are not addressed. One such task has already been conducted by Parales Quenza (2005), who has identified a large degree of compatibility between the structural approach and the mainstream social cognition perspective. We try to present the structural approach on social representation in its own terms. Finally, for space purposes, the text has been organized so as to point out the theoretical contributions of the works mentioned. Individual studies are not described in detail; the reader is thereby directed to the original sources in order to obtain methodological details.

Social Representation Structure: Basic Concepts

When a completely new object appears in society or when a group faces a stake due to a pre-existing object, the basic conditions for the genesis of a social representation are fulfilled (Garnier, 1999). However, not all social configurations allow for

the establishment of a social representation structure. Moscovici's work (1961, 1976) proposes that three minimum conditions have to be satisfied in a given context: a social object must be ambiguously defined, people should feel the need to infer about it, and different aspects of that object should be salient for different groups. Moliner (1993) has proposed complementary criteria: the object must be polymorph, referring to a general class; there must be an intergroup context, opposing at least two groups regarding the object; and the object must be linked to a stake for the group, threatening either their identity or social cohesion. Flament and Rouquette (2003) add that an object must have a concept function for the group, explaining a set of occurrences of subordinate phenomena; it must be a communication topic; and it must be associated with a level of social practices.

Central core theory is the most established theoretical development on social representation structure and functioning within the context of the structural approach. According to it, a representation is formed by two qualitatively different element systems: a central core and a peripheral system. In its classic formulations, the theory states that the central core includes a few key elements that generate the global meaning of the representation and organize the whole structure. The elements from the core have strong historical and ideological roots and are consensual within a group. It is the central core that defines and distinguishes representations; one can say that two representations are different when at least one element from their cores is not the same. The peripheral system is the flexible part of the structure. It is not necessarily shared within the group; it integrates particular information to the structure, connecting it to environmental practices and modulations (Abric, 1994a, 1994b). The peripheral elements function as action scripts adapting the guidelines from the central core to concrete situations and specific occurrences of the social object (Flament, 1994a; Katerelos, 1993). Due to its flexibility, one of its functions is to defend the central core contents against contradictions; if there is a situation that challenges the meaning of central elements, the peripheral system is activated

and tries to justify the contradiction in order to endure it. Those rationalization mechanisms that function as bumpers for the core are called 'strange schemes' (Flament, 1987, 1989).

The functions of social representations include providing knowledge about the object to the group, maintaining group identity, guiding action and practices regarding the object, and justifying those practices (Abric, 1994a). According to Flament (1987), a representation with a single central core is to be considered an autonomous social representation, whereas representations without an organized core find their meanings in other related representations, and are classified as non-autonomous. Milland (2001) challenges that view. According to said author, there is no representation without a core, but sometimes an object can be interpreted by two different social representations, constituting different reading grids; that would be the case for representations still being structured, without meaningful associated practices.

Representations and Practices

Social representations are usually found associated with practices employed by a group concerning the referring social object. The concept of social practices is prone to multiple interpretations; Flament and Rouquette (2003) distinguished among four of them: the performance of an act, as opposed to not doing something; the frequency or intensity of execution of a given action; the expertise regarding an action; and the different ways of executing an action. The authors also clarify that a practice is not to be understood as physical behavior only; the discourse concerning a social object is also included. The broad definition provided by Flament (2001) is a good guideline: a practice is defined as a behavioral system that is socially legitimated. Thus, a few pertinent questions impose themselves: what are the relationships between representations and practices like? Do representations determine practices?

Contrary to what intuitive thinking might suggest, the currently accepted theoretical position is that practices mediate representations and the

environment,¹ and not the other way around (Flament & Rouquette, 2003). This implies that both representations and practices are subordinate to environmental constraints; it is often difficult to separate both, as representation and practices find themselves in a correspondence relationship most of the time, except when environmental events impose changes in the latter, making them incompatible with the former (Flament, 1994b, 2001). Nevertheless, social representations predict the carrying out of social practices in at least two cases: when a social actor faces a situation involving a social object and has significant autonomy to act free from strong constraints; and when an affectively charged situation activates issues that are shared within a collectivity. In both cases, it is likely that a pertinent representation will guide practices and behavior (Abric, 1994c).

Practices and environmental constraints perform essential roles to bring about transformations in representations. However, it is necessary to address two topics before presenting the theoretical models on social representation dynamics: cognitive scheme dimensions and structural centrality.

Basic Cognitive Schemes

A key theoretical advance for the understanding of relationships between cognems consisted in the basic cognitive schemes model, abbreviated as SCB.² That model classifies the possible logical relationships between two units within a structure; it makes it possible, for example, to frame relationships between a social object and a single representation element. The two units are coded as *A* and *B* and can be linked by up to 28 connectors, which can be grouped in five basic cognitive schemes according to the logical operation domain that they refer to: lexical (3 connectors), neighborhood (3), composition (3), praxis (12) and attribution (9) (Guimelli & Rouquette, 1992).

1 Environment is understood here as the set of constraints that are external to the direct representing connection between a group and a pertinent social object.

2 From the original French expression, *schèmes cognitifs de base*.

Rateau (1995a) observed the empirical associations of connector activations with multiple social representation objects and proposed that the model be reduced to three basic meta-schemes, which he called social representation dimensions: description (the grouping of lexical, neighborhood and composition, summing up to 9 connectors), praxis (12), and evaluation (renaming the attribution scheme).

The contribution of the SCB model consists in the possibility of understanding the different logical roles that elements perform within the structure. The model makes it possible to characterize the activation of a representation or an element in a given context, going beyond the distinction between central and peripheral elements.

Based on Rateau's results, Flament (1994b) has pointed out that social representation elements could be conceived of as schemes with normative, descriptive and functional roles in the representation, admitting the possibility of mixed roles involving more than one of those dimensions as well. Likewise, Abric and Tafani (1995) later demonstrated that the elements from the central core have different functions: some of them provide norms regarding the social object, whereas others are related to practices, and a third group performs both functions.

Structure Centrality

Perhaps the most important assumption of central core theory is the existence of a qualitative difference between the central and peripheral systems. Such distinction allows for the identification of what is in fact shared within a representation and defines its organization. The first experimental evidence of the validity of the central core was provided by Moliner (1989), who verified that in the absence of certain elements on a representation specimen, research participants would consensually deny that it referred to a given social representation, whereas in the absence of other elements they would preserve the representation reading grid. The latter were peripheral elements, conditional and negotiable, while the former were part of the central core, essential elements that defined

the social representation object. That study was the first application of a double denial principle named “questioning” or “calling-into-question”, usually abbreviated as MEC.³ It asks participants if, in the absence of a characteristic, a specimen refers to a representation class. Questioning is currently the most widely accepted and employed technique to identify the central core, being employed with procedural variations (e.g. Moliner, 2001a). More recently, Lo Monaco, Lheureux and Halimi-Falkowicz (2008) have developed an alternative technique to determine the centrality of elements through the measurement of a related principle: independence from context changes.

According to Moliner (1994), central elements have two distinguishing properties. First, they possess symbolic value regarding the social object of interest; central elements are essential to keeping its identity. Techniques grounded on the MEC principle rely on the diagnosis of that property to determine the centrality of elements. A second property is related to the associative power of central elements; these can be associated with more elements on the structure, being broader, whereas peripheral elements are associated with fewer ones. Two other properties derive from the two already mentioned. High symbolic value means that the element is also salient in discourse, and high associative power implies that central elements are found connected to a higher number of elements. However, salience and connectivity, while typical of central core cognems, are not exclusive; peripheral elements can be activated by specific contexts and present those secondary properties as well (Flament, 1989; Moliner, 1989, 1994).

Rateau's (1995b, 1995c) research has led to important advances in the understanding of central core structure. His research has shown that there is a hierarchy of elements in the core: some of them, called *prioritary*, are truly unconditional and define the object, whereas a second set of elements, named *adjunct*, despite having high symbolic values, are conditional. Their goal is to evaluate or specify the

object. In MEC tasks, *prioritary* elements display patterns of absolute rejection, while *adjunct* ones usually generate more diverse responses and conditional rejection. Only *prioritary* elements are essential to maintaining the identity of the social object.

A further productive theoretical perspective concerning social representation structure has also been presented by Moliner (1995), who has proposed a two-dimensional model: social representation elements would have a double nature, including two key structural coordinates. The first dimension involves representation structure itself, in which elements can be either central or peripheral; their status is determined by the assessment of their symbolic values through MEC tasks based on unconditionality. The second dimension opposes the roles of description and evaluation performed by elements in the structure; in other words, it is a dimension opposed to low and high affective loadings of elements. Both dimensions are posited as being theoretically independent, and their crossing allows a classification of four element statuses: definitions (descriptive central elements), norms (evaluative central elements), descriptions (descriptive peripheral elements) and prescriptions (normative peripheral elements).

Nevertheless, the two-dimensional model has been challenged, due to some theoretical limitations and new empirical findings. Rizkallah (2003) has indicated a theoretical shortcoming related to the affective loading dimension: every evaluation presupposes a description, which means that the description modality is present in both poles of the dimension. Another limitation is related to results which show that the structural and descriptive-evaluative dimensions are not independent. In spite of Flament's (1994b) early position that central elements were unconditional prescriptions regarding a social object, research had already indicated that centrality was not always linked to unconditionality; at times the symbolic values of central elements relied mostly on their normative function within the structure, rather than on their unconditional nature (Moliner, 1992). Results from Gigling and Rateau (1999) in research conducted with an artificial object have also shown that the attribution

3 From the original French expression, *mise en cause*.

of value to an element might lead it to assume a central role, pointing out the importance of the normative function in defining centrality.

Nevertheless, the two-dimensional model was a major step in pushing structural theory forward. Its main contribution, with additional significant impact more recently, was perhaps the integration of affect into central core theory, thus opening doors to studies relating social representations to attitudes (e.g. Moliner & Tafani, 1997; Tafani & Souchet, 2001). In terms of central core theory, the two-dimensional model was the first theoretical effort that truly took evaluative variables into account in characterizing social representation structure.

Advancing on that topic, recent studies from Lheureux, Rateau and Guimelli (2008) have confirmed that element centrality and normativity are not independent of each other. Their results indicate that social representation elements possess a double component, associated with two roles within the structure: semantic and normative. The semantic component relates to the goal of defining the object class, whereas the normative component judges object specimens. Results obtained by these authors show that such double-dimensional nature is not only found at the core, but throughout the whole representation. The two dimensions are not independent, since normativity seems to play a key role: peripheral elements that score higher than others on normativity indexes are perceived as being less conditional, and furthermore, the symbolic values of some central elements are based on normativity rather than unconditionality, as evidenced by conditional rejection rates.

The authors' model makes it possible to explain how different sets of the structure are activated according to contextual demands: each representation consists in a categorization system, and when a social actor encounters a specimen, the first action it undertakes is to define what the object is, based on its priority elements. Once the object class is identified, adjunct elements come into play in order to evaluate the specific occurrence. Based on the resulting evaluation, conditional peripheral sets are activated to deal with it according to contextual needs. Thus, the model from Lheureux, Rateau and

Guimelli (2008) makes it possible to explain the mechanisms involving peripheral understructures identified by Katerelos (1993).

Finally, an alternative SCB-based perspective of centrality is grounded on the balanced activation of attributive and practical schemes (Rouquette & Rateau, 1998). According to that model, an element is central when the valences related to praxis and attribution schemes are both high. When both valences are low, it is the case of a 'regular' peripheral element, and when one partial valence is disproportionately high over the other, it is the case of a peripheral element activated by a contextual effect. This perspective has the advantage of identifying over-activated elements, but the inconvenience of being unable to deal with Rateau's (1995b) hierarchical core model.

Social Representation Dynamics

A transformation in a representation involves a central element becoming conditional and thus attaining peripheral status, or a peripheral element being 'promoted' to the central core. Changes in the salience or activation of peripheral elements are considered minor changes but not structural transformations, since the peripheral system is flexible by definition. So far, the only way to induce representation changes passes through the carrying out of new practices, usually brought about by environmental events. Based on research results, Flament (1994b) formulated the general model for social-representation dynamics determined by practices, introducing two key variables. The first one is the compatibility of new practices with the representation. The second is the social actors' perception of the reversibility of new practices.

When new practices are compatible with the central core, there is no challenge to the representational structure, and no transformation takes place. When, on the other hand, the practices are related to a peripheral aspect of the representation, the peripheral schemes involved increase in activation (Guimelli, 1994). If the implementation of new practices is perceived as reversible, then said activation state is temporary, and no transformation

takes place. If, in contrast, the practices are seen as permanent, then the peripheral schemes become central, and a progressive transformation occurs (Flament, 1994b; Guimelli, 1989).

But when practices oppose both central and peripheral elements, then new sets of peripheral elements called “strange schemes” are formed in order to try to accommodate the contradiction (Flament, 1989). If the situation is perceived as being reversible, then the contradiction is successfully neutralized and the representation remains unchanged; but if it is permanent, then strange schemes cannot maintain the integrity of the structure and eventually there is a transformation in the central core to adapt to the new social context (Flament, 1994b).

The understanding of social representation dynamics usually comes from results obtained in field studies. According to Flament (2001), it is not likely that a representation be truly transformed in the laboratory, because even if a person’s beliefs change due to an experimental setting, true representation-change implies opposing beliefs and practices shared by one’s group, and that is socially undesirable by definition. Nevertheless, social influence paradigms have proven very useful for understanding the interaction and communication processes involving changes and resistance of the structural status of social representation elements for situated samples, thus accounting for pertinent instances of representation transformation. Mugny, Souchet, Quiamzade and Codaccioni (2009) have provided an overview of the variables that have been studied as factors of representation transformation: majority and minority influence; the influence of epistemic authorities and asymmetry in intergroup status; and the cases in which representations regarding the influence-context situation modulate influence processes.

Presenting an important innovation, Tafani and Souchet (2001) has made use of counter-representational essays, i.e., tasks which force participants to provide opinions that contradict the shared representation. Later, Souchet and Tafani (2004) managed to reproduce Flament’s (1994b) complete dynamics model in a laboratory context, even including reversibility perception: changes last

longer when contradictory practices are perceived as irreversible. In conclusion, even if true social representation dynamics cannot take place in artificial contexts, there are promising possibilities in the laboratory of contributing to the understanding of a variety of processes in representational dynamics, to say the least.

If social representations do change, one inevitably comes to the question of how they evolve. It is essential to stress that representations do have a history, and that they adapt to the environment, even if it does take years or generations for them to change; the characterization of a representation structure is always the description of a representational state, an heir of preceding states (Rouquette & Guimelli, 1994). A social representation can be found in three chronological phases: emergence, or its birth as the social object appears in communication practices for the first time; stability, in which the representation becomes stable with a clear-cut core; and transformation, when environmental constraints bring about the already-mentioned process of change (Moliner, 2001). Stability and transformation alternate until the representation is no longer pertinent in its social context, a situation which one can arguably refer to as the ‘death’ of a representation.

Representations in Action: Interaction Context Effects

The actualization of representations in people’s everyday lives is linked to the influence of context variables. There are two basic types of context: the global social context and the immediate situational one. The global context comprises the intergroup stakes and historical heritage that activate the central core and are responsible for its formation. The situational context is related to the multiple and particular interaction conditions in which the same social object comes into play, modulating the action of the peripheral system (Abric, 1994c; Abric & Guimelli, 1998).

Global context effects have already been addressed through the mechanisms of representation-structuring processes and dynamics, but what

about interaction context effects? How do individuals employ social representation knowledge in particular situations?

There are three topics that have guided research on context effects so far. The first one is dedicated to understanding the connection of people to social objects. Rouquette (1996) has formulated three theoretically-independent dimensions that could account for the personal implication regarding an object: personal identification, or the extent to which an object is related to a specific individual and not to everyone in general; social valuation, or the stake value linked to the object; and perceived possibility of taking action concerning the object. Flament and Rouquette (2003) view those implication dimensions as intermediate factors that could account for interpersonal and situational differences within a group in terms of behavior, opinions and attitudes related to a social object; they refer to different degrees of involvement with the object. Implication is a condition for the transformation of representations and adhesion to related beliefs. Additionally, different implication levels usually mean differences in the use of social thinking processes: high and low levels implied that people employ different modes of reasoning when facing contradictions to a representational core (Guimelli, 2002), and might be associated with the activation of different basic cognitive schemes (Gruev-Vintila & Rouquette, 2007).

More recently, Guimelli and Abric (2007) have suggested that knowledge of the social object could be a fourth implication dimension. Nevertheless, such a dimension is questionable, as it overlaps with definitions of social practices: since the discourse concerning an object is considered one kind of practice (Flament & Rouquette, 2003), different levels of knowledge could then be related to different levels of practices. As an example, research by Salesses (2005) evaluates the role of knowledge of an object in a way that is at the very least close to the understanding of social practices. A further innovation of Guimelli and Abric (2007) has been a differentiation between the collective and personal possibility of action. That distinction has proven useful in a study about social implication and collective risk (Ernst-Vintila, 2009).

Another topic that has deserved significant attention is the influence of normative pressure on the expression of social representation contents, especially when research participants complete questionnaires. The existence of normative pressures caused by characteristics of the experimenter, or involvement of the participants and their groups in task instructions, can lead people to respond in a way that is socially desirable, so as to provide a good image of themselves to the experimenter or in comparison with their group members (Chokier & Moliner, 2006; Chokier & Rateau, 2009; Flament, Guimelli & Abric, 2006; Guimelli, 2009; Guimelli & Deschamps, 2000).

Social representations also perform an important role concerning social identity, as they are the final product of the action of identity processes involving the interaction of self, intergroup and collective representation with categorization, comparison and attribution processes (Deschamps & Moliner, 2008). Therefore, a third topic on interaction-context effects derives from a basic characteristic of social identity, and this presents a problem: since individuals belong to multiple social groups (Tajfel, 1973), how does the knowledge of social representation come into play in a specific situation? Are there contextual cues that activate single representations, or is there an interaction between different social representations shared by a single individual (Breakwell, 1993)? Such problems have not been the explicit object of structural studies, but results from Wachelke and Camargo (2008) point out that when group membership is salient, the expression of elements related to group practices is favored.

Final Remarks: General Challenges and Future Possibilities

Keeping in mind that the organization of this text, including the emphasis on and interpretation of some previous efforts, in an attempt to make sense of relationships between different studies inevitably reveals some of our positions regarding the field, we would like to close this review by addressing some general topics that pervade the study of social

representations from a structural perspective as a whole. Perhaps the first thing that can be concluded from an analysis of the literature related to the structural approach is that the research phase responsible for significant baseline discoveries and formulations, such as classic central-core theory, relationships between representations and practices and formulation of a basic cognitive-schemes model has come to an end. The basic models and conceptions regarding social representation structures have already been proposed, developed and established; as happens with any science, new data evidence theoretical contradictions and shortcomings calling for smaller scale-model adjustments and refinement; a new phase marked mostly by more specialized research problems is underway. In any case, this comment obviously refers to a case that does not rely on radical change brought about by groundbreaking research; and yet, once in a while, such cornerstone studies do come about and have very strong implications for the whole field, provoking dramatic turns in research direction.

Another key point refers to differentiation of the social representation construct from other more classic socio-psychological notions such as attitudes, stereotypes, prototypes, beliefs, and so on. The specificity of the concept of social representation lies supposedly in the fact that it is a symbolic structure shared by a collective and actively negotiated through inter- and within-group communication. Moreover, the representation regards an object that refers to a class of events and has a certain relevance for the group. While this makes sense and is theoretically sound, it does entail a few difficulties in terms of empirical operationalization, and consequently, of verification. How is it possible to be sure that a social representation is actually shared by a group? A tendency towards consensus among the participants of a group is usually taken as a measurement, as for example in MEC tasks. But the other classic symbolic constructs we have just mentioned are also numerically shared (Jahoda, 1988), which makes the distinction somewhat unclear. To complicate things even more, research evidence indicates that an awareness of group consensus among group members is associated with

different properties of representational elements (Moliner, 2001b).

Outside the structural approach, Wagner (1994) had already criticized the numerical consensus criterion for identifying social representations and sustained that it is functional consensus that is to be looked for; social representation must play a role for reflexive, self-conscious groups; group members must acknowledge that a common social representation underlies group practices linked to a given object. This implies a group signature in social representation that the author calls holomorphy. Said considerations definitely provide an alternative view of consensus in comparison to what has usually been done in structural research, but so far they have not been incorporated into structural-approach studies. They may help to provide greater precision and sophistication to social representation models and would merit at least an effort of integration so as to outline better what is meant by consensus, an essential coordinate of the phenomenon of interest.

Another limitation that is more difficult to overcome refers to the fact that, even if it is theoretically stated that social representations are constructs of a collective level of analysis, most empirical research of a structural nature relies on data from individuals, and infers social effects through an aggregation of data. If on the one hand, this way of conducting research has the benefits of making it possible to achieve precision and compatibility with standard experimental practice from social psychology; on the other hand, all that can be assessed are the effects of field and laboratory manipulations regarding the cognitive and affective processes of group members. Thus, the social representation itself, as a collective construct, remains inaccessible. This is undoubtedly related to Flament's (2001) comment on the impossibility of transforming social representations experimentally. Nevertheless, although he focused on social desirability, we would consider another aspect of the problem: if a social representation is by definition a historical construct, then only grand-magnitude events affecting the collectivity which maintains a social representation can bring about transformation of the construct. Laboratory

settings only make it possible to achieve change that is restricted to the participants involved, a characteristic that is unlikely to change unless radically new paradigms are introduced. In spite of this peculiarity, research on social representation dynamics is stimulating in suggesting the steps that social representational change might take, starting from individual change and then proceeding to collective legitimation.

In terms of future trends in the structural research investigation of social representations, we would like to stress a few promising possibilities, in both an internal sense (theoretical development about representational structure itself) and an external one (theory related to the processes connecting social representations with other social thinking constructs). Internally, perhaps the main debate concerns the key topic of structural centrality of representations: there is a competition between concurring theories that are at times incompatible; such as the case concerning Moliner's (1995) two-dimensional model and Lheureux et al.'s (2008) double-component approach. A refinement in centrality models is of capital importance in redefining the conceptions of social representation structure as a whole. In addition, there is still much room for developing research involving the basic cognitive schemes model (Guimelli & Rouquette, 1992), which has all the characteristics of a conceptual framework into which the various advances that have been achieved by the structural approach can be integrated. Research has also advanced considerably in tackling the various ways through which social representation content is expressed according to context modulation (Chokier & Rateau, 2009; Guimelli, 2009) and the relationships between social representations and social implication.

Externally, the studies continue to extend the "frontiers" of knowledge regarding social representations. If it is understood that social representations constitute a symbolic structure among others from the viewpoint of a social-thinking architecture, such as ideologies and opinions (Rouquette, 1996), then there is a need for characterizing the similarities, differences and links among those formations. In the same vein, another fruitful trend

involves studying the relationships between social representations and processes studied through mainstream social cognition, such as stereotypes, causal attribution, in-group bias, commitment and others (Rateau & Moliner, 2009).

A final comment to be made relates to the specificity of the structural approach among the academic schools dedicated to the study of social representations. The structural approach aims at identifying structural processes and properties typical of social representations, regardless of representational content. If the explanation of a process is determined by or related to differences in content linked to different representations, then that process bears little structural interest;⁴ the goal, rather, is to achieve formulations that enable a generalization to object classes, rather than limited to the understanding of single objects. According to this view, content is considered a secondary quality rather than the focus of analysis (Rouquette & Rateau, 1998). This contrasts with the other social representation schools, which tend to give special attention to the processes and configurations linked to specific objects.

A consequence of giving privilege to structural processes and trying to put contents aside is that in order to achieve the formulation of laws related to social-representation functioning mechanisms and identification of effects linked to associated variables, one must conduct research on a variety of objects and grasp common processes that can be generalized to a common representing activity that commands the formation and operation of potentially all social representations, or of specific and identifiable varieties of representations. This is the ideal procedure that guides and evaluates the basic research in social-representation theory according to a structural perspective, and that has made it possible to construct a solid, verifiable and evolving body of knowledge, of which we have tried to provide a comprehensive summary through this review.

4 Let it be clear, though, that if some regularity in contents or configuration in a content taxonomy accounts for identifiable and replicable patterns in representation processes, it is nothing other than a structural manifestation of some sort, and not an isolated case.

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