

**Experiments inter-connecting the structure of social representations, cognitive dissonance, commitment and persuasion: past, present and future.**

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## **Abstract**

This article deals with the research in line with the inter-connection between the Central Core Theory, the cognitive dissonance theory, the paradigms in the field of persuasion, the commitment and the binding communication theoretical propositions. It proposes to review and report on a research agenda which falls within the framework of this work of inter-connection. In doing so, it wants to propose a reflection around the question of the relations between social representations and sociocognitive processes. Finally, it aims to show the relevance of Jean-Claude Abrie's theoretical propositions and highlight their current vivacity.

## **Introduction**

The first elements of the Central Core Theory originate in Jean-Claude Abric's State Dissertation of 1976. During this time Jean-Claude Abric was interested in experimental game situations and questioned the role of representations of self, the other and the situation while demonstrating all the value, through his experimental work initiated a decade earlier, of taking an interest in social representations.

In 1976, elements related to centrality and periphery constituted a framework for interpreting the experimental results highlighted in the work on games. The Central Core Theory, thus formulated, required empirical testing. It also suffered during this period from methodological deficiency. It was with Pascal Moliner's Ph.D dissertation (1988) that the Central Core Theory found a systematic methodological route for structural diagnosis through the creation of the Attribute-Challenge Technique (see Moliner, 2002). This methodological innovation responded to a major concern formulated by Abric (1976) in the superb discussion written in his thesis. Abric (1976) thought that the future of the theory lay in the methodological developments of Claude Flament on similarity analysis (Flament, 1981, 1986).

Methodological developments have probably been a crucial aspect of Central Core Theory, enabling it to foresee an inter-connection with other theories (Moliner & Rateau, 2009). Evidently, without the possibility of a quasi-systematic identification of representational structure in accordance with its dual system (central vs. peripheral), trying to establish any connection whatsoever doubtless seemed to be something of a compromise. And so, armed with these methodological means and the possibility of making a structural diagnosis, the Central Core Theory probably constituted the most suitable route for inter-connecting with other theories, including those rooted in the field of social cognition (see Rateau & Moliner, 2009; Rateau & Lo Monaco, 2013; Rateau, Moliner, Guimelli & Abric, 2011). This work of inter-connection was most often conducted through experimental studies, since the Central

Core Theory has willingly been referred to as an experimental approach to social representations (Abric, 1989), without being compartmentalized, and having an important anchor in the ecological reality of practices maintained by social actors in daily life (see Abric, 1994, 1996).

This article proposes to review and report on a research agenda which falls within the framework of this work of inter-connection. In doing so, it aims to show the relevance of Jean-Claude Abric's theoretical propositions and highlight their current vivacity.

### **Social representations, commitment and cognitive dissonance: an inventory**

#### *In induced compliance...*

A study carried out by Eyssartier, Joule and Guimelli (2007) has for the first time attempted to connect the structural approach of social representations and commitment theory in order to improve the effects often observed in connection with the latter. Specifically, it was to test the hypothesis that it is possible to potentiate the effects of commitment by basing it on the central core. The authors conducted a comparison of the effects of a preparatory act based on the one hand, on central elements, and on the other hand, on peripheral ones. The object studied in this experiment related to organ donation and the commitment technique echoed that of the foot-in-the-door (Freedman & Fraser, 1966).

As a reminder, the foot-in-the-door technique consists in asking little initially (i.e., preparatory act) in order to obtain more at a later stage (i.e., the final request) (see Freedman & Fraser, 1966; Joule & Beauvois, 2002, 2014).

In order to operationalize their hypothesis the authors had the idea of basing the preparatory act (i.e., a petition) on an element of the representation (several central and peripheral elements were drawn on). Central and peripheral elements were identified in a preliminary phase dedicated to preparing the material involving the basic cognitive schemes model

(Guimelli & Rouquette, 1992; Guimelli, 2003; Rouquette & Rateau, 1998). Participants could read in the header of this petition a sentence which referred either to the activation of a central element (e.g., "giving your organs is giving of yourself), or to the activation of a peripheral element (e.g., "donating your organs means saving lives"). The final request was to sign an organ donor card.

In terms of results, taken as a whole, the conditions relative to the core elements, as compared to the conditions relative to peripheral elements, revealed that a significantly higher number of participants signed a donor card.

In the context of Central Core Theory (Abric, 1994), the radical transformation of a social representation involves a change that affects the core. Among the factors that might cause this dynamic (Moliner, 2001), we find involvement in practices which are contrary to the subjects' social representations (e.g., Souchet & Tafani, 2004; Tafani & Souchet, 2001). Several experiments demonstrate the effect of commitment on representational dynamics. Thus, following Moliner, Joule, and Flament (1995) and then Moliner and Tafani (1997), Tafani and Souchet (2002) showed that writing, in an commitment context, a counter-representational essay relative to a central cognition of the social representation of studies (i.e., "graduate studies provide intellectual enrichment") leads to the adoption of a position less favourable to this cognition and a structural modification of the representation. Indeed, the central cognition called into question enters the peripheral area of the representation. In this sense, Sales-Wuillemin, Girandola, and Gosling (2011) drew on, in a context of commitment (i.e., free-choice), the affiliations of the participants during the writing of a counter-representational essay concerning either a central element (i.e., "studying is intellectual training") or a peripheral element (i.e., "having practical training"). A strong categorical anchorage supports the process of resistance to change. The results show, as a function of dissonance reduction, a strengthening or a defense of the central elements of the representation (i.e., intellectual

training, the acquisition of knowledge and thought development) as the test relates to challenging the central or peripheral element (see also Salès-Wuillemin, Gosling & Girandola, 2014).

*In double induced compliance...*

Previous experiments have studied the effects of a counter-representational essay on representational dynamics. Other experiments have tested the repetition of counter-representational acts. We know that the repetition of practices in terms of high frequency, as well as their innovative nature, is at the origin of the transformation of social representations (Flament, 1989). In the paradigm of double induced compliance, the repetition is not reproduced in terms of high frequency. Double compliance consists simply of repeating a commitment-related act once, and from this repetition to predict an in-depth transformation. Thus, Renard, Bonardi, Roussiau, and Girandola (2007) showed greater structural changes in a situation of double compliance, (i.e., first act: writing of a counter-representational essay; second act: recording of a counter-representational essay) and so commitment, in two counter-representational acts, than in a situation of single compliance (i.e., writing or recording).

In the experiment carried out by Souchet, Girandola and Tafani (2010) students were prompted, in complete freedom, to argue about sport in a way which was contradictory to their representation. They were asked to defend the idea that sport does not always require 'will' (central element) or that sport still allows people to give a 'performance' (peripheral element). They argued either in writing or orally, or both, which allowed the effects of a simple compliance to be compared with a double one. The results show that a single compliance is enough to move an element out of the core but a double compliance has significantly greater effects. In addition, these effects can still be seen after fifteen days.

Conversely, simple and double compliance also allow a peripheral element to enter the core. This effect also continues 15 days afterwards (see Bert, Souchet, & Girandola, 2011). More generally, double compliance raises the problem of long-term effects within the framework of a transformation of social representations. An understanding of the immediate effects is most often enough to answer certain questions related to social utility. But we know that the central elements are difficult to change because of their high stability (Abric, 1994). Therefore, the observed change would be, perhaps, a short-term change rather than a structural change. In future experiments, it would be necessary to ensure that the observed changes persist over time, at least beyond 15 days.

### **Considering inter-connection...**

The connection between social representations and sociocognitive processes is based on a two way process and aims at reciprocal enrichment (Rateau & Moliner, 2009; Piermattéo, 2013). This double movement refers to the possibility of studying the socio-representational regulations of sociocognitive processes, as well as studying the role of sociocognitive processes in the development of social representations.

If social representations are a 'background' (Rateau & Moliner, 2009, p.8), the question of the representation of the object on which the study of the sociocognitive processes is based ought to be asked. Indeed, work on the connection between social representations and social cognition reveals the value that lies in the fact of working on sociocognitive processes, by repositioning them relative to the objects to which they relate. Working on such a perspective allows us to study socio-representational and structural regulations and give such work a contextualized impact and utility.

Moreover, considering inter-connection through the single perspective of the contribution of social representations within the context of a better understanding of sociocognitive processes

would tend to reduce the relevance of the matter and would give a very simplistic or even erroneous view of such a work. Thus, as Rateau and Moliner (2009) quite rightly pointed out, the issue is not to consider this inter-connection in a unequivocal way but precisely to search for a conceptual reciprocity obviously not involving the same issues. Then, it appears important to consider the role of sociocognitive processes in the development of social representations, but not that alone. Indeed, although certain processes play a role in the formation of representations, one can also expect that they play an important role in their transformation. It is within this framework that we can formulate hypotheses concerning the inter-connection between social representations and commitment theory, for example. It is therefore in accordance with this double movement that the prospect of such a research program should be considered.

### **Ongoing research program...**

All of the elements that we have presented have resulted in a process of reflection on a prospective research program whose main lines to be presented are current studies. This work in progress consists of setting up research into the inter-connection between social representations and several theories or certain aspects related to broader theoretical frameworks in the field of social cognition. Firstly, we will work on this inter-connection with cognitive dissonance through the induced hypocrisy and selective exposure paradigms. Inter-connection with persuasion through the issue of information processing was then reflected on, with regard to the possibility of foreseeing such a link. Finally, we will continue and extend the work started on the inter-connection with commitment theory and the binding communication paradigm.

## **Research on the inter-connection of social representations with cognitive dissonance**

### *Social representations and induced hypocrisy paradigm*

In the context of the induced hypocrisy paradigm, we first of all ask a participant to express himself positively on a socially valued subject, to declare himself to be in favor of energy saving, for example, and then we ask him to remember past transgressions, i.e., situations in which he behaved in a manner contradictory to his initial statement. This would consist for example in asking him to remember the times when he left the lights on when leaving a room. In such a situation the participant declares himself initially to be in favor of X and later recalls a behavior which goes against X, thus behaving in a non-X manner. This inconsistency between what it is declared and recalled then leads to the arousal of a state of tension, of dissonance. The arousal of this state of discomfort results in efforts to reduce this discomfort which consists in the adoption of a behavior which is proattitudinal and therefore consistent with socially valued expectations in relation to this behavior.

As can be noted, behaviors performed within this paradigm always refer to a particular object (e.g., “saving water”, Dickerson, Thibodeau, Aronson & Miller, 1992; “using a condom”, Aronson, Fried & Stone, 1991). In connection with the first work focused on the inter-connection between social representations and cognitive processes (Festinger, 1957), it appears possible to reveal a structural effect on the arousal of the state of psychological discomfort (i.e., in terms of the extent of the dissonance) and consequently on reduction efforts and therefore subsequent rationalization.

From this perspective, current studies intend to operationalize this aspect with regard to the recall phase of past transgressions. To do this, it is possible to keep the paradigm as it is practised using past transgressions as a condition of threat of the representational elements by varying them according to their structural status. Then, one can formulate the hypothesis according to which past transgressions will provoke a greater state of arousal when they

threaten a central element as compared to the condition where they threaten a peripheral element. This way of inter-connection allows us to anticipate a particularly inspiring new field of research and applications.

### *Social representations and selective exposure*

Still, in the context of the work on inter-connection with cognitive dissonance theory, it seems also possible to formulate hypotheses on the effect of the representational structure on the avoidance of dissonant information as it is observed with regard to selective exposure. Here it is important to underline the fact that the social representation theory predicts that social representations act as a filter and guide the selection of information. In other words, while receiving information, individuals would tend to favour keeping the information consistent with the representation that they share and leave out those that contradict their way of thinking about the object. In the context of selective exposure, people will tend to favour information consonant with, for example, an initial decision-making, and to avoid those that are dissonant with the latter.

It is possible to consider that a decision making, an attitude, or even an opinion always refers to an object. However if the question of the object is raised, it should be considered that the way of thinking about it is indebted to a set of socially constructed and shared cognitions. According to this perspective, social representations could be considered as frameworks of thought to which individuals and groups relate when it comes to considering that the information received is consonant or dissonant.

### **Research on the inter-connection of the RS with persuasion**

At the end of the 1960s and early 1970s, research on persuasive communication was focused on the processes involved in attitude formation and change. Greenwald (1968) formulated the

theory of the cognitive response according to which persuasion depends on the nature of the thoughts generated by the individual during reading of the arguments. High quality argumentation produces positive thoughts leading to an attitude change. Low quality argumentation produces negative thoughts leading to resistance. Later, Petty and Cacioppo (1986) proposed two routes for the processing of persuasive information. If individuals are motivated and capable of processing, they take the central route leading individuals to scrutinize the arguments: the individual is able to differentiate between a good and a poor argument. If individuals are not motivated or capable of processing, they then take the peripheral route authorizing the taking into consideration of indices likely to guide the individual in the formation or change of an attitude. For example, if the source of the message is seen as credible by the individual then the latter will consider the text as credible and, beyond that, will express an attitude in line with the argument defended by the source. Zbinden (2011) demonstrated the role of central and peripheral elements in information processing both in classical persuasion and binding communication situations. In a persuasion situation, participants read a message with either 3 central elements (i.e., 'central persuasion') of the social representation of the preservation of the environment (i.e., "performance of eco-friendly actions", "preserving natural resources", "ensuring a better future for generations to come") or 3 peripheral elements (i.e., 'peripheral persuasion') of this same representation (i.e., "saving water", "limiting pollution", "quality of life"). In a binding communication situation, participants first performed a preparatory act: writing a short text based, according to the conditions, on 3 central or 3 peripheral elements of the representation. They then read a message including either the central elements (i.e., 'central binding communication') or peripheral elements (i.e., 'peripheral binding communication') of the representation. The procedure was designed to bring participants who had written a text based on central elements to read, in a second step, a message including this same type of element (the procedure was

similarly designed for peripheral elements). In all conditions, participants were asked to list their thoughts after reading the message, to express their confidence in their thoughts (metacognitions, see Petty, Fazio & Briñol, 2009), their attitude towards the protection of the environment, the certainty toward this attitude and their intention to participate in its protection. Overall, the results show that central elements led to the generation of positive thoughts. Participants placed in a 'central persuasion' situation produced significantly more positive thoughts ( $N = 57$ ) than those placed in a 'peripheral persuasion' one ( $N = 35$ ). Those placed in a situation of 'central binding communication' produced significantly more positive thoughts ( $N = 81$ ) than those placed in a 'central persuasion' situation ( $N = 57$ ). Finally, participants placed in a situation of 'peripheral binding communication' produced marginally more positive thoughts ( $N = 50$ ) than those placed in a 'peripheral persuasion' situation ( $N = 35$ ). An expression of greater confidence in these thoughts can be observed with 'central binding communication' than 'peripheral binding communication'. There is also an effect of the central elements on attitude and on behavioral intention. Indeed, these same participants expressed a significantly more favorable attitude towards the protection of the environment in a situation of 'central persuasion' than in a situation of 'peripheral persuasion'. They also demonstrated a significantly more favorable attitude and expressed more certainty about it (metacognition, see Petty et al., 2009) in a situation of 'central binding communication' than in the peripheral one. Finally, participants in a situation of 'central binding communication' reported the highest intention of participating in the protection of the environment. These preliminary results show that the central and peripheral elements of a social representation give rise to contrasting effects on persuasive information processing, and further, on metacognitions, attitude and behavioral intention. In our opinion, this is a new modality of the 'message' variable that we must take into account in future experiments. This new openness allows us, for example, to specifically examine the central route of information processing

and its consequences in terms of strong versus low attitude formation (Petty & Krosnick, 1995). We believe that a "central message", unlike a "peripheral message", is likely to initiate a strong attitude that is stable and involved in the prediction of behavior. One can also examine the nature of the processing: does a "central message" initiate objective or biased information processing? (Petty & Wegener, 1999). It is these questions which we are already addressing.

### **Research on the inter-connection between the social representations theory, the commitment theory and the binding communication paradigm**

Several studies have shown that the activation of elements central to a representation in one (Eyssartier et al., 2007) or several (Souchet & Girandola, 2013) commitment-related acts leads to greater attitude and behavioral change than the activation of peripheral elements. Souchet and Girandola (2013) showed that individuals are more likely to save energy at home when they performed preparatory acts (i.e., complete a questionnaire and write arguments) related to central (vs. peripheral) elements of the social representation of energy savings. So, placing commitment in the context of social representations provides "an expanded sociocognitive framework in which the commitment process benefits both from greater social significance and a greater closeness to daily reality" (Eyssartier, Guimelli & Joule, 2009). In this context, Zbinden, Souchet, Girandola & Bourg (2011) compared the efficiency of various communication strategies in inter-connecting the binding communication paradigm (Girandola & Joule, 2012) and the social representations theory. In binding communication situations, one can precede (sometimes follow) the reception of a persuasive message by the performance of one (or several) preparatory or commitment-related acts (e.g., Michelik, Girandola, Joule, Zbinden & Souchet, 2012). Half of the participants read a message in favor of the protection of the environment (i.e., classical persuasive communication), the other half

read this message and then signed a commitment charter for recycling (i.e., a binding communication). Messages for the protection of the environment included either central elements or peripheral elements of the same representation. On the one hand, the results showed that participants placed in a binding communication situation expressed the strongest intention to participate in recycling, on the other hand that the activation in the message of central elements led to the expression of a stronger intention. Overall, reinforcing binding communication by activating central elements rather than peripheral ones seems to offer promising prospects for research both at theoretical and applied levels.

In the pursuit of research conducted on the links between social representations and commitment, very recently (Piermattéo, Lo Monaco & Girandola, in press), a study was conducted on the Low Ball technique. The Low Ball technique consists in bringing a participant to make an initial decision on the basis of a fictitious benefit or a hidden disadvantage. Once this decision is made, the experimenter reveals to the participant that the advantage is no longer available or even that he has forgotten to let him know about a disadvantage. Overall, due to the commitment in their initial decision, participants tend to maintain it at a later stage, despite the revelation of the fictitious advantage or the hidden disadvantage. From such a perspective, Piermattéo et al. (in press) considered the question of referring to this hidden disadvantage or this fictitious benefit. In the context of questioning the possible relationship between social representations and commitment, the authors, in reference to the early work of Eyssartier et al. (2007) and that of Souchet and Girandola (2013), hypothesized that if a hidden disadvantage was centered on a central element of the representation, it should result in a greater withdrawal from the initial decision as compared to a peripheral or a control condition. The experiment concerned the social representation of waste-sorting practices and was operationalized through a cover story on a new experimental program launched by the Provence-Alpes-Côte-d'Azur region (PACA, South of France).

Among the items identified in a preliminary study, the 'recycling' element was identified as being central, while the element 'saving money' was identified as being peripheral. The results supported the hypothesis made by the authors. Concretely, when the hidden disadvantage involved the question of recycling (i.e., absence of possibility to recycle within the framework of the experimental program), the participants who had agreed to participate in the program were more likely to withdraw from it than in the condition where the hidden disadvantage focused on saving money (i.e., impossibility of saving money within the framework of the experimental program).

These results once more confirm the value of taking into account social representations in commitment procedures.

As we mentioned at the beginning of this contribution, the first experimental work on the link between the structure of social representations and the commitment theory produced different results depending on whether the central vs. peripheral elements were activated in the context of the preparatory act. As a reminder, the activation of the central elements gives rise to a larger acceptance percentage of the final request than the activation of peripheral elements (Eyssartier et al., 2007; Souchet & Girandola, 2013). Two issues may arise from this work, two questions which are particularly important with regard to the structural approach of social representations. The first relates to the question of the simple activation of a central versus peripheral cognition, the second refers to the deepening of the structural status of the cognitions involved through the notion of within-core hierarchy (Rateau, 1995; Lheureux & Lo Monaco, 2011).

This within-core hierarchy provides a distinction in terms of qualitative centrality (Moliner, 1994) between the priority elements (or unconditional elements, see Rateau, 1995; Lheureux & Lo Monaco, 2011; Lheureux, Rateau & Guimelli, 2008) and auxiliary elements (or normative elements). In concrete terms, taking this clarification on structural diagnosis into

account may allow us to make further progress with the hypotheses that could be made about the effect of the structure of social representations in commitment procedures. In this perspective, as priority elements are defined as unconditional and express the object as it is, the activation of such elements would lead, in theory, and according to the first results observed by Eyssartier et al. (2007) to greater acceptance of the final request.

### **Structure of social representations and action identification levels**

Talking about the connection between action and its identification is to do so in the sense established by Vallacher and Wegner (1985), at the origin of the theory of action identification. According to this theory, action can be identified primarily in two ways. On the one hand, low-level identities specify the way in which the action is carried out or 'how?'; it refers to a concrete identification. On the other hand, high level identities, which include the understanding of the action and its implications, specify 'why?' or 'with what effect?' the action is executed. According to Girandola and Roussiau (2003), actions identified at a high level make the commitment of the individual more possible. For example, Beauvois (2001) was able to show that internalization – resulting from commitment in an act - is even easier if accompanied by a high level of identification of the initial act (i.e., a socially acceptable action). Actions are also thought to enable self-definition. Thus, the "identities of a high-level act (i.e., meaningful) have a greater potential for self-definition than the identities of a low-level act (i.e., meaningless)" (Girandola & Roussiau, 2003). For example, playing a musical instrument would progress to "expressing oneself" and then to 'being a musician'. According to Wegner and Vallacher (1985), high level identities provide a clearer understanding of the action and are more abstract than low-level. At the same time, according to the social representations theory, items belonging to the central system are more abstract than those belonging to the peripheral system (Abric, 1994; Flament, 1989). However, as shown by

Eyssartier (2005, p. 177) "(...) a high level of action identification corresponds exactly to a high level of abstraction". Everything leads us to believe therefore that elements of the central system correspond to elements identified at a high level whereas the elements of the peripheral system are identified at a low level. A mediating role of action identification between social representations (activation of a central vs. peripheral element) and practices could also be considered. This theoretical hypothesis requires experimental verification.

## **Conclusion**

All the reported elements demonstrate the interest aroused by these theoretical connections and show the work that still remains to be carried out. However, beyond the identification of the effect of social representations and their structure in the context of the understanding of sociocognitive processes, it should be stressed that all the interest now lies in investing in two complementary research areas. Firstly, it is important to carry out research which attempts to generalize this effect to other commitment techniques or other sociocognitive processes, as has already been emphasised by Moliner and Rateau (2009), whether in relation to causal attributions, social comparison or social identity levels, etc. On the other hand, a second perspective need not be limited to showing the role of representations but should try to identify the processes activated at socio-representational level in order to explain the results and answer the nagging question of 'Why?'. Leads have already been raised concerning change of attitude and, under certain conditions, concern the greater resistance to change of the core as compared to the peripheral system. With regard to the inter-connection between the structure of social representations and compliance or double-compliance procedures, it is more a question of the difference in the perceived importance of the act that was called upon when the effects have to be interpreted. The activation of central cognitions may lead to a greater perceived importance of the act than the activation of peripheral cognitions

(Eyssartier, 2005; Eyssartier et al, 2007; Souchet & Girandola, 2013). However, this importance has not been measured and remains more an interpretation than an empirical demonstration. Future work should test this hypothesis. This aspect seems to be non-negotiable to us for explaining the results, on the one hand, and for acquiring more arguments to make predictions about the effects of social representations in this specific context, on the other hand.

Finally, all the work and prospects for research presented in this contribution related to the theorizing work of Jean-Claude Abric must be understood as a tribute to this exceptional researcher.

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