

# Adopting a social psychological approach to geographic mental maps in foreign policy decision-making

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## Abstract

Research on geographic mental maps has relied heavily on the theoretical assumptions of cognitive psychology. This has led to an excessive focus on individual decision-makers mental maps, due to the fact that most cognitive models discard supra-individual, cultural and social dynamics in favour of the individuals' cognitive performance. However, foreign policy is very rarely the result of a single individual's decisions. Yet, collective decision-making has habitually been associated with defective or low quality policy outcomes. Recent developments in social psychology allow for a better understanding of the complex social phenomenon at work in foreign policy-making. Accordingly, in the present paper I argue that rather than focus on the individual mental maps of the persons involved in the decision-making process, we should adopt a social psychological approach and try to appreciate the geographic representations created by the decision-making group. We should try to understand in each particular instance how groups construct the political world, namely how they create places and spaces and the foreign policies they deem most appropriate for interacting with them.

## Key-words:

*Decision-making;*  
*Geographic mental maps;*  
*Problem representation;*  
*Social cognition;*  
*Social sharedness.*

## Resumo

A investigação sobre mapas mentais geográficos tem assentado excessivamente sobre os pressupostos teóricos da psicologia cognitiva. Isto levou a uma focalização excessiva sobre os mapas mentais dos decisores individuais, devido ao fato de a maioria dos modelos cognitivos descartar as dinâmicas supra-individuais, culturais e sociais, em detrimento do desempenho cognitivo dos indivíduos. Porém, a política externa é muito raramente o resultado de decisões de um único indivíduo. No entanto, a tomada de decisão coletiva tem habitualmente sido associada a resultados de políticas de baixa qualidade ou com defeito. Desenvolvimentos recentes na psicologia social permitiram uma melhor compreensão do fenómeno social complexo, no âmbito de decisões de política externa. Assim, no presente artigo argumenta-se que, em vez de nos concentrarmos nos mapas mentais individuais das pessoas envolvidas no processo de tomada de decisão, devemos adotar uma abordagem psicológica social e tentar apreciar as representações geográficas criadas pelo grupo de tomada de decisão. Devemos tentar compreender, em cada caso particular, como os grupos constroem o mundo político, ou seja, como eles criam lugares e espaços e as políticas estrangeiras que consideram mais adequadas para interagir com eles.

## Palavras-chave:

*Decisores;*  
*Mapas mentais geográficos;*  
*Representação do problema;*  
*Cognição social.*

## I. Introduction

Throughout the years, geographic mental maps have been used to identify an individual's understanding of his political environment. A geographic mental map can be defined as a "cognitive construct which encloses an individual or group's beliefs about the geographic character of a particular place or places and their relationship to other places or spatial phenomena" (Da Vinha, 2011: 137). In recent decades numerous studies have aimed to identify the geographic representations that inform decision-makers foreign policy decisions (Casey and Wright, 2008, 2011). However, over the years, the causal association between mental maps and foreign policy decision-making has eluded a satisfactory account. The influence of geographic mental maps on foreign policy decision-making has yet to be suitably demonstrated. And those few studies which have attempted to develop some sort of theoretical framework have failed to take into account the complexities involved in foreign policy decision-making. More to the point, the majority of the research on geographic mental maps has centred on individual decision-makers. As such, group dynamics have not been appropriately considered.

While acknowledging the potential limitations involved in group decision-making, I believe recent explorations in social psychology provide a more promising future for understanding how mental maps affects the decision-making process. Thus, contrary to traditional cognitive approaches, the current paper presents a more socially oriented approach to group decision-making, explicitly based on social cognition theories, arguing for its more generalised application to Foreign Policy Analysis (FPA). Accordingly, theories and empirical findings from assorted fields of research, such as behavioural geography, cultural geography, foreign policy analysis, cognitive psychology, and social psychology, are reviewed. Evidently this does not imply that current theoretical effort is the only correct approach. As with all other conceptualisations, the question is not whether the current theorising of geographic mental maps is correct, but whether it is useful. The important features of conceptualisation's usefulness are the extent to which it can further our understanding of a specific phenomenon and the distinction it allows with reference to similar concepts.

## II. Adopting a Social Psychological Approach to Geographic Mental Maps in Foreign Policy Decision-Making

While most cognitive approaches to foreign policy usually centre on individual leaders, foreign policy is very rarely the result of one individual's decisions (Hermann, 2001; Stern and Sundelius, 1997; Tetlock et al., 1992). In fact, group dynamics are at the heart of FPA. In evaluating the "hard-core"

assumptions of FPA, Ripley (1993: 406) has acknowledged that "*decision-making elites are the most important actors in international politics*". Whereas defining exactly the structure of an elite group is a trying task, George (1980: 83) recognized, in his seminal work on foreign policy

decision-making, that “most real-world decisionmaking groups tend to be quite small – between two and seven members according to one study – and their size tends to be reduced at times of crisis, or when ‘crucial choices’ have to be made”.

However, due to its over-reliance on cognitive psychology the cognitive research agenda in foreign policy has been excessively absorbed with individual decision-makers, namely with the top political leaders. This is a natural outcome given that most cognitive models discard supra-individual, cultural and social dynamics in favour of the individuals’ cognitive performance (Cooke et al., 2007; Lorenzi-Cioldi and Clémence, 2001). In fact, the social sciences in general have had difficulty in assuming that meaningful thought is possible beyond the individual. Society is void of any capacity to “think”. The dominant paradigm has regarded the human mind “as little black boxes, contained within a vast black box, which simply receives information, words and thoughts which are conditioned from the outside in order to turn them into gestures, judgements, opinions and so forth” (Moscovici, 2000: 29). Another important constraint has been many social scientists’ suspicion of the possibility of successfully measuring cognition at the group level (Mohammed et al., 2010). Given the difficulties already existing in assessing individual cognition, the extension to collective cognitive representations places an increased strain on the methodological approaches currently employed.

Although some early work on FPA focused on small group dynamics, this scholarly impetus quickly eroded<sup>1</sup>. Gaenslen (1992) has attributed the lack of research on foreign policy-making groups to the difficulty in studying them. Some of these difficulties are due to reservations about the source of the information relevant to studying group decision-making. The reliability of archival materials detailing how groups make foreign policy decisions has been questioned on various points. First, the accuracy and veracity of the textual and verbal accounts can always be subject to image-management concerns<sup>2</sup> (Gaenslen, 1992). Second, the context in which group decision-making is made is not always clear and explicit to researchers (Stern and Sundelius, 1997). The third problem concerns the incomplete nature of archival materials. As Gaenslen (1992) has warned, not everything that happens in a meeting is registered and many times discussions relevant to the decisions are conducted in informal settings that escape any possibility of verification. I would add that another major difficulty in analysing group foreign policy decision-making is epistemological. As mentioned above, foreign policy decision-making has privileged an individual-oriented approach to its research. Cognitive psychology has been the frame of reference for most studies and consequently individual level decision-making has been favoured.

Equally determinant has been the negative connotation of group dynamics on decision-

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<sup>1</sup> Gaenslen (1992) identifies two distinct research categories. The first focused on group the decision-making structure and had as a scholarly reference the works of Snyder et al. [1962]. The second category of inquiry centred on group processes and was epitomised by Janis’s work on groupthink.

<sup>2</sup> The issue of the validity of written and spoken sources has been tackled by many cognitive oriented political scientists who have argued that “at-a-distance” assessments are reliable fonts for scholarly investigations (see Renshon, 2009 and Young and Schafer, 1998).

making. Group decision-making has habitually been associated with defective or low quality policy outcomes. Especially significant was Irving Janis' work the occurrence of the groupthink phenomenon (George, 1997; 't Hart, 1991; Turner and Pratkanis, 1998). According to Janis (1971, 1983), groupthink is a form of concurrence seeking that affects group members and leads to high levels of agreement and avoidance of intergroup conflict. As a result, due to the value placed on group cohesion, the policy choices result from a flawed process that can ultimately bring about disastrous policies. However, numerous studies have cautioned against the over generalisation of the groupthink phenomenon. In an overview of the empirical research conducted in the two and a half decades since the original presentation of the groupthink concept, Turner and Pratkanis (1998) found that there have been very few laboratory and case studies in which the full assemblage of groupthink effects were confirmed. In fact, contrary to common perception, "few experimental studies have documented the end result and the hallmark of groupthink: the low quality, defective decisions" (Turner and Pratkanis, 1998: 110). Accordingly, while the concept has significantly flourished in the field of political science, especially in International Relations, 't Hart et al. (1997: 12) argue that it has solely served to reinforce the prevalent tendencies which "cling to a negatively biased view of groups, forgoing an impressive body of evidence detailing the many positive aspects of group behaviour".

As a matter of fact, numerous studies

carried out over the last couple of decades have revealed that certain group dynamics contribute to more efficient decision-making<sup>3</sup> (Cannon-Bowers and Salas, 2001; McComb, 2007; Mohammed et al., 2010). The opportunity for group members to pool information and experience should, in theory, provide for more informed decisions. As Stasser and Titus (1985: 1467) remind us, group "discussion can perform a corrective function when members individually have incomplete and biased information". In this sense, groups possess a more extensive array of resources than individuals which should permit an enhanced exchange of information.

In contrast to the traditional cognitive approaches, with their emphasis on the internal processing structures of the brain, the latest developments in social psychology offer a more comprehensive approach, which favours the role of history, social interaction, culture, and the environment. Even established mainstream social psychology, with its attention to the mental activity of the individual in processing the social world, has acknowledged the need for further theoretical development.

According to Thompson and Fine (1999), the retreat from a cognitivist perspective has its source in the transformations that swept the field of social psychology in recent decades - i.e. regarding the purpose of the discipline, the misdirection of group research, the renewed focus on emotion and behaviour, and the prevalence of organisational behaviour research.

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<sup>3</sup> Even Janis (1971: 85) admits that a functional group is likely "of making better decisions than any individual group member working alone".

### III. Social Cognition and Information Processing

The major contribution of this change of perspective is the importance ascribed to socially shared meaning<sup>4</sup> (Cannon-Bowers et al., 1993; Echterhoff et al., 2009; Klimoski and Mohammed, 1994; Levine et al., 1993; Mohammed et al., 2010; Thompson and Fine, 1999; Tindale et al., 2001). In other words, the renewed attention given to “social cognition challenges the assumption that cognition is exclusively and individual act, distinguishable from external social processes that may influence it” (Thompson and Fine, 1999: 281). Accordingly, social cognition is the result of social interaction which allows groups of individuals to construct, share, and distribute information and knowledge. Therefore, social interactions “generate shared perceptions, behaviors, and products, including memories, norms, belief systems, and interpretations of shared events and activities” (Thompson and Fine, 1999: 281).

The ways social cognition influence group decision-making will be developed with greater depth and precision in subsequent sections. In the meantime, it is worth noting that, considering the role that small groups play in foreign policy decision-making, a social psychological approach seems more appropriate than theories focused on the individual (Stein, 2005; Tetlock, 1998; 't Hart et al., 1997).

Particularly relevant is social psychology's contribution in explaining how groups develop

shared representations of a particular decision problem – i.e., problem representation / definition of the situation. While traditional FPA approaches, founded on the concepts and methods of cognitive psychology, have endorsed many studies focusing on problem representations, these have traditionally involved individual decision-makers or treated political entities (such as states) as rational unitary actors. Constructivist inspired research, for its part, has drawn nearer to social psychology by subscribing to issues of shared identity. Constructivists, in accordance with Stein (2005: 303), “have expanded the repertoire of psychological explanations of international relations – that traditionally focused on beliefs, images, and judgement of leaders – to include the collective or shared beliefs that constitute a common identity, and processes of norm creation and norm observance”. Weldes (1996) exploration of the construction of US national interest attests to this view. Rather than assume the existence of some “real” and “objective” national interest like most realist theorists, Weldes's constructivist stance privileges the act of social interpretation. For that reason, she argues, a constructivist approach “allows us to examine the intersubjectively constituted identities and interests of states and the intersubjective meanings out of which they are produced” (Weldes, 1996: 280).

The significance of the social outlook for geographic mental maps in FPA should not be underestimated. Research on geographic

<sup>4</sup> There are a plethora of other terms also applied to refer to collectively created and shared meaning in the thematic literature (Thompson and Fine, 1999), e.g., socially shared cognition, sociocognition, situated cognition, shared reality, group cognition, contextualized cognition, social cognition, shared mental models, team mental models, distributed cognition, collective identity. Throughout this paper I essentially privilege the terms “social cognition” and “shared cognition” and use them interchangeably.

mental maps has centred predominantly on individual decision-makers as well. Some studies have explored the mental maps of particular policy-making groups (Mitter, 2008; Read, 2008), but any reference to the social dynamics involved in the construction of the shared geographic representations have been absent. In fact, though recognizing a person's cognitive limitations, Henrikson's (1980: 502 *emphases added*) original conceptualization reinforced the individual quality of the mental map by asserting that "No single mind – which, strictly speaking, *is the only unit of consciousness to which a mental map can attach* – can encompass all that is humanly known of the global environment".

The notion of collective mental maps is not, however, unusual. Behavioural geographers have long envisioned the existence of collective geographic representations. In their influential study on mental maps, Gould and White (1974) pointed to the need to consider how we could construct a single representative map assembled from many individual mental maps. Whilst admitting that the notion was not yet clearly defined and conceptualized, this process of "homomorphic mapping" would allow for the construction of a single mental map revealing a group's geographic preferences by combining the various individual mental maps. Nevertheless, the problem with this approach is analogous to that in much of the work conducted on the role of beliefs and ideas on group decision-making, i.e., the collective quality of beliefs or ideas is only obtained through the process of aggregation. This is in line with the conventional argument states that only an individual can construct a problem representation (Axelrod, 1976; Beasley, 1998). In fact, Axelrod (1976: 239) is categorical in asserting that

"collectivities do not think and have internal cognitive processes as individuals do". However, since there is quite likely a certain degree of correspondence in the ideas and belief systems of the different decision-makers in a group, the various individuals' problem representation affect decision-making through the process of aggregation (Beasley, 1998; Rosati, 1991). One such process consists of regarding a collectivity as "an artificial aggregate of its members, with 'beliefs' that are than simply aggregated from known beliefs of its members" (Axelrod, 1976: 239). In fact, in the past, most research centred on measuring group cognition has applied and adapted individual measurement methodologies to groups (Cooke et al., 2007).

The theoretical assumptions underlying this perspective can be traced back to the early social psychological research on group decision-making which solely emphasised the individual group members' preferences as the only reasonable contributions for aggregation. However, recent developments in several different disciplines focusing on group research have contributed to alter this perspective. As referred above, cognition is increasingly being treated as a fundamentally social activity. In fact, Levine et al. (1993: 599) have suggested the fusion of the social and the cognitive by envisioning cognition as collaboration, wherein "each person's ability to function successfully depends upon coordinated interactions with others, and the cognitive 'products' that emerge from these interactions cannot be attributed to single individuals". Accordingly, rather than focusing on the individual or simply reducing group processes to individual cognition, the group is now judged as the primary unit of analysis (Brauner and Scholl, 2000).

This line of inquiry has witnessed considerable development in relation to group information processing. Groups are currently viewed as information processors that are capable of encoding, storing and processing sizable amounts of information (Hinsz et al., 1997; Kerr and Tindale, 2004; Tindale and Kameda, 2000). More specifically, group information processing entails “the degree to which information, ideas, or cognitive processes are shared, among the group members and how this sharing of information affects both individual- and group-level outcomes” (Hinsz, et al, 1997: 43). Subsequently, as previously mentioned, “social sharedness” is the fundamental concept for understanding group information processing. At the most basic level, “the concepts ‘shared’ and/ or ‘sharing’ are what make group information processing possible, and distinguish it from individual-level information processing”<sup>5</sup> (Tindale and Kameda, 2000: 124). The quintessential belief underlying this theoretical perspective is that “things that are shared to a greater degree within groups will have greater influence on the relevant group outcomes/responses than those things shared to a lesser extent” (Tindale and Kameda, 2000: 124). In other words, by approaching information processing through the concept of social sharing we can gain a superior understanding of what separates effective from ineffective decision-making groups because it is assumed that members of an effective decision-making group possess similar or compatible knowledge that they can use to guide their actions (Cannon-Bowers and Salas, 2001; Mohammed et al., 2010).

There are also undoubtedly abundant reasons for sharing information. However, Echterhoff et al. (2009) identify epistemic and relational motives as two of the most prominent dynamics driving social sharing. Epistemic motives refer to our necessity to reach a credible and coherent understanding of the world. This is particularly relevant in situations of great uncertainty or ambiguity. In such cases, we share knowledge with others in order to try to comprehend the situation and give it some form of intelligibility. Relational motives, for their part, are induced by people’s need to associate with others. There are quite a few psychological and physiological reasons underlying relational motives, such as emotional well-being, a feeling of security, and self-esteem. Both epistemic and relational motives reinforce each other by allowing “individuals to experience a more valid and reliable view of the world and to obtain or maintain a sense of connectedness and belonging” (Echterhoff et al., 2009: 500).

Surely enumerating all the things that group members can share is an impracticable feat. Nor is it central to the objective of the current paper. Accordingly, rather than providing a detailed review of all the current theoretical models, I will put forward a general account of some of the models which most contribute to understanding how social sharedness influences information processing<sup>6</sup> – i.e., shared preferences, shared information, shared identity, shared metacognition, and shared task representations.

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<sup>5</sup> For a survey of the different understandings of the concept of “shared” see Cannon-Bowers and Salas (2001) and Klimoski and Mohammed (1994).

<sup>6</sup> There has been some debate on how information processing is conducted at the group level (Cooke et al., 2007). It has commonly been assumed that groups process information in much the same way as an individual and, consequently, individual-level models have been used to analyse group-level phenomena (Hinsz et al, 1997). While there is still need for more empirical studies, research carried out by Kerr et al., (2000: 214) suggests that the “differences in the output of individual vs. group information processing need not reflect real (quantitative or qualitative) differences in individual and group information processing”.

The initial research on group decision-making focused essentially on the preferences of members. The Social Decision Scheme (SDS) model was the dominant framework for aggregating individual preferences. While SDS models have spawned a great amount of research and empirical results, the most consistent findings suggest that in group decision processes the majorities/pluralities generally triumph (Tindale et al., 2001). In particular, when groups cannot provide an “optimal” or “correct” alternative during the discussion, the “correct” alternative is defined by the group consensus which is established by the larger factions (Tindale and Kameda, 2000). SDS models have been criticised for being constrained to decision situations with discrete decision alternatives. Recently several models have been developed that consider preference aggregation for continuous responses. For example, the Social Judgment Scheme (SJS) put forward by Davis looks to determine how groups reach consensus on a continuous response scale. The SJS model is based on the discrepancies of the position – i.e., distance among preferences – along a response continuum among the group members (Kameda et al., 2003). Like the original SDS model, SJS and other recently developed models (see Kameda et al., 2003; Kerr and Tindale, 2004; Tindale and Kameda, 2000) reveal the influence of social sharedness at the preference level by demonstrating that the members which share a particular preference can impose that preference on the group.

The sharing of information among group members is also important to information processing and decision-making. Information sharing in groups should be understood by two distinct approaches – the common knowledge effect and the cognitive centrality of group members. In the first case, the work of Stasser and Titus (1985) opened up the field for appreciating how shared information affects group decision-making. Contrary to former theories which postulated that unshared or unique information was determinant to decision-making, their research confirmed that “unshared information will tend to be omitted from discussion and, therefore, will have little effect on members' preferences during group discussion”<sup>7</sup> (Stasser and Titus, 1985: 1476). In a subsequent study Stasser and Titus (1987) developed an information-sampling model that confirmed that the probability of a particular piece of information being recalled by the group during discussion is a function of the number of individuals possessing that same information. In this case, in group discussions, shared information is much more likely to be recalled and reiterated than unshared information, limiting options in the decision-making process<sup>8</sup>.

Another way in which information sharing influences decision-making is through its distribution among group members – i.e., cognitive centrality of group members. A members' status or power in the group can be determined by the amount of information shared with the other members. Due to the importance attributed to shared knowledge

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<sup>7</sup> In the thematic literature this paradigm is commonly referred to as the “hidden profile” technique and the findings are generally known as the “common knowledge effect” (Tindale and Kameda, 2000).

<sup>8</sup> In effect, some of the negative consequences of the common knowledge effect can be attenuated (Tindale et al., 2001). Research has revealed that unshared information becomes more accessible and widespread in group discussions over time. Also, the assignment of roles to group members also contributes to a greater pooling of unshared information (Tindale and Kameda, 2000).



in information-processing, it is argued that the members holding the greatest amount of pooled information will have greater influence over the group decision-making process (Tindale and Kameda, 2000). Using a network framework similar to the SJS model, Kameda et al. (1997) measured the cognitive centrality of group members to determine their position in the sociocognitive network of the group. After conducting two different experiments, the study confirmed earlier findings that attested to the importance of shared knowledge in group information processing, namely “that cognitively central members acquire pivotal power in a group and can exert not-negligible influences on group consensus” (Kameda et al., 1997: 305).

One of the reasons for the bias attributed to shared information in group decision-making may be the tendency for members to positively evaluate one another when mentioning shared information. Shared information can be validated socially, contrary to unshared information. In a series of trials, Wittenbaum et al. (1999) demonstrated that shared information is granted greater importance than unshared information because its exchange during discussion serves to validate members' task knowledge. This process of “mutual enhancement” facilitates collective interaction by helping members relate to one another. More precisely, individuals who communicate shared information obtain more affirmative evaluations from other members for doing so. For their part, recipients of shared information feel better about their own knowledge when another group member reiterates their information. In sum “members who are positively reinforced (verbally or nonverbally) for communicating shared information may continue to do so because

they enjoy the validation and encouragement from others” (Wittenbaum et al., 1999: 977).

In a more recent study Wittenbaum and Bowman (2004) conducted a pair of experiments to determine if the need for social validation drives mutual enhancement and concluded that while social validation is important for information sharing other processes may also operate in conjunction with it – e.g., group composition and social ties. In addition, their results suggest that the mutual enhancement effect is due not so much to the discussion of shared information, but rather to the discussion of unshared information. This is particularly relevant to the discussion of partially shared information. Wittenbaum and Bowman's experiments revealed that if at least one member of the group can validate partially shared information than that information and its communicator can be evaluated in a more positive fashion than if no one can corroborate the information. The implications for the decision-making process are remarkable considering that, according to the experiments, “the most effective way to persuade a group to consider new information may be to make sure that at least one member knows and can validate it for the others” (Wittenbaum and Bowman, 2004: 182).

Social identity theory has also become a major focus in small group research. Its basic assumption is that individuals in a group identify themselves in a similar manner and share a definition of who they are, what attributes they have, and how they relate to and contrast with out-groups, namely by defining the features and boundaries of the group (Hogg et al., 2004; Potsmes et al., 2005). The notion of social categorization is essential to understanding social identity, for

people tend to categorize the social world into in-groups and out-groups which are cognitively represented as prototypes:

These are fuzzy sets, not checklists, of attributes (e.g., attitudes and behaviors) that define one group and distinguish it from other groups. These category representations capture similarities among people within the same group and differences between groups. In other words, they accentuate intragroup similarities (assimilation) and intergroup differences (contrast) and thus transform a bewilderingly diverse social stimulus domain into a smaller set of distinct and clearly circumscribed categories. (Hogg and Reid, 2006: 10)

In a certain sense, a prototype may be understood as a cognitive representation of a group norm (Hogg et al., 2004; Hogg and Reid, 2006). Norms are embodied by group membership and define member behaviour. In this sense, norms exhibit a prescriptive character and are therefore a source of social influence in groups (Hogg et al., 2004). Accordingly, by categorizing oneself as a member of a group, an individual implicitly accepts sharing a set of characteristics and behaviours that define the group (Bar-Tal, 1998).

An additional way in which social sharedness affects the information process is through the knowledge group members have of the degree of sharedness – i.e., metacognition. Most research on social sharedness has centred on the degree to which group members share certain knowledge or information. However, some scholarly endeavours have also investigated members' knowledge of

what other members know and how the awareness of information distribution affects decision-making (Tindale and Kameda, 2000; Van Ginkel and Van Knippenberg, 2008). Particularly relevant in this field of inquiry is the concept of transactive memory. By adopting an individual-level cognitive template, Wegner (1987) argues that groups encode, store, and retrieve information in a manner quite similar to a single individual. According to Wegner, the possibility of group members acting as external storage locations produces a knowledge-holding system that surpasses the individual capacities of the sum of the individual group members. This allows for groups to remember much more than individuals. However, a transactive memory system requires that members know who has what information in order to access it. In other words, “a transactive system begins when individuals learn something about each others' domains of expertise” (Wegner, 1987: 191).

Especially important for the argument of the current paper is the concept of shared task representations. Much of the research mentioned above is devoted to analysing specific pieces or types of information and knowledge that group members can share. However, scholarly inquiries have also confirmed that group members can share a “conceptual system of ideas that allows them to realize when a proposed solution is correct within that system” (Kerr and Tindale, 2004: 638). These shared conceptual systems – i.e., shared task representations – help researchers explain deviations from majority/plurality and other faction-size related models. While majority/plurality models had demonstrated robust results in most experiments, numerous studies revealed asymmetric deviations from

majority-type processes. Laughlin justified these variations by asserting that in group problem-solving tasks small factions can influence larger factions by advocating the existence of “demonstrably correct solutions”, thus supporting “truth-wins” or “truth-supported-wins” decision schemes (Tindale et al., 2001).

Tindale et al. (1996: 84) expanded on this work and corroborated that the existence of a shared task representation in a group allows for alternatives consistent with that representation to be more easily defended and consequently more prone to prevail as the groups’ ultimate collective choice. The authors (Tindale et al., 1996: 84) defined shared representation as “any task/situation relevant concept, norm, perspective or cognitive process that is shared by most or all of the group members”. By attributing task relevancy to the shared representation it is inferred that it will “have some implication for the choice alternatives involved” (Tindale et al., 1996: 84). In other words, the shared task representations can influence the decision-making process as well as the final outcome. It is generally assumed that the sharing of task representations generates beneficial effects on the group decision-making process (Klimoski and Mohammed, 1994; Van Ginkel et al., 2009; Van Ginkel and Van Knippenberg, 2008). Particularly, by involving group

members in a discussion of the group’s tasks and goals – i.e. “reflexivity – it is expected that individual members will become mindful of the eventual differences between their own and others’ representations. Once these differences are recognized and acknowledged group members can try to reconcile them and develop more shared and task appropriate representations (Van Ginkel et al., 2009). As a result, “if all the members of a group share a knowledge or belief system that lends credence to a particular alternative, that alternative becomes easier to defend in a group discussion” (Tindale et al., 1996: 86).

In a more wide-ranging perspective, shared task representations can be understood in much the same way as Moscovici’s (1988; 2000) social representations. In fact, Tindale et al. (1996: 84) consider their concept of shared representations as a “subset of Moscovici’s social representations, delimited by the relevance of the representations to a specific group task”. For Moscovici (1988: 214) social representations are associated with “the contents of everyday thinking and the stock of ideas that gives coherence to our religious beliefs, political ideas and the connections we create as spontaneously as we breathe”. In this sense, the creation of social representations serves both to conventionalise objects and prescribe human actions.

#### **IV. The Convergence Process: From Individual Mental Maps to Group Mental Maps**

The correspondence of the concept of “shared task representation” to the concept of “problem representation” (or definition of the situation) is considerable. And it is precisely in the definition of the problem

representation that geographic mental maps contribute to foreign policy decision-making, for it has been accepted that “the initial problem representation strongly constrains subsequent behavior” (Taber, 1998: 26).

The underlying logic is that the problem representation shapes the decision-making because “the kinds of alternative solutions that are developed for a problem and the ways in which those solutions are evaluated and implemented depend on how the problem is diagnosed by group members” (Moreland and Levine, 1992: 21).

More precisely, when a problematic state of affairs arises in international politics, decision-makers develop a problem representation in congruence with their knowledge and beliefs (Beasley, 1998; Voss, 1998). This representation is an essential part of the information processing stage of foreign policy decision-making. Its significance derives from the fact that it helps recognize and concentrate on incoming information, evaluate its relevance to the problem under consideration, and integrate it into the existing knowledge structures (Vertzberger, 2002). Accordingly, when an individual has to make a spatial decision, his mental map is “triggered”, allowing him to make sense of the diversity and complexities of his environment by cognitively categorizing, associating and ordering disparate geographic information (Golledge, 2002; Henrikson, 1980; Mark et al., 1999). In other words, the complexity resulting from the various geographic factors present in a specific place or places is abridged in order to be manageable and intelligible to individual decision-makers. In this sense they help mediate our geographic beliefs about the world.

However, rather than framing the problem in an individual account like most cognitive research theories, we should try to understand the social dynamics involved. Instead of trying to understand the problem representation

of a decision-making group merely as an aggregation of individual cognitive experiences, a social cognition approach, namely through shared representations, looks much more promising. Traditional aggregation techniques focused on assessing individual group member knowledge and averaging the results across the group (Cooke et al., 2007). However, as numerous researchers have pointed out, aggregation not only approaches the group as a homogenous entity, but, more importantly, fails to highlight the importance of social interaction and communication between group members (Cooke et al., 2007; Klimoski and Mohammed, 1994; Mohammed et al., 2010). Aggregating presumes that the individual members are independent of each other and that the relations between group members are irrelevant to the final result. However, I argue that the relations established between the different members of the group are determinant to the result. Rather than the sum of the parts, we need to appreciate how the interactions between group participants create new and different knowledge and representations.

In this sense, we need to understand how individual's mental maps converge through interaction between group members and become shared. While it is acknowledged that there is a great deal of research necessary to assess the developmental processes by shared cognition evolves over time, some conceptualising efforts have been made (Mohammed et al., 2010). Of particular significance, McComb (2007) has developed a three-phase framework for understanding the convergence process for mental models and which we can adapt to geographic mental maps - 1) orientation; 2) differentiation; and 3) integration. More precisely, her framework

allows us to comprehend how individuals focused on their own goals and objectives can work together as a team and create mental representations that contribute to their activities by orienting themselves to the group, differentiating the different perspectives of the group members, and integrating these views into a collective perspective.

The convergence process should be understood as a bottom-up procedure. More exactly, shared cognition always derives from individual cognition, where each individual has a unique, independent perspective. Only through interaction between the individuals can cognition converge within the group (Klimoski and Mohammed, 1994; McComb, 2007; Mohammed et al., 2010). This implies that at the initial stage individuals only bring their own singular cognitive representations to the group. It is exactly the conversion process that allows for a shift to occur to the group level.

Regardless of the time and speed that characterises different groups' interactions, McComb (2007) argues that the conversion process always follows the same three-phase process. Accordingly the first phase is orientation stage in which group members assemble new information and gather unshared information about the group through observation, experimentation, and inquiry. This interaction allows individual members to accumulate group-relevant information and knowledge which was previously undisclosed. As a result, group members exchange information with one another in a manner quite similar to individual information retrieval from memory. Thus, the initial orientation process can be best understood as "a collective induction process, in which information – in

the form of ideas, knowledge, and strategy – is disseminated among all members" (McComb, 2007: 105).

There are various different modes through which information can be exchanged by members. The most elementary is through verbal articulation which allows the group members to pool unshared information. Yet, as mentioned above when discussing the common knowledge effect, individuals have a tendency to discuss information which is most common between the group members. Therefore, in addition to verbal articulation, individuals acquire information through observation, experimentation, and inquiry. Irrespective of the method used for acquiring information, individual members must also gain knowledge of the differences amongst each other. This implies that group members must achieve an understanding of how the other members of the group interpret the information exchanged and what significance they attribute to the differences of interpretation. As a result, the orientation phase allows for a comprehensive understanding of the group situation and "represents the foundation upon which the remaining convergence process rests and facilitates the emergence of the most complete mental models possible" (McComb, 2007: 106).

Subsequently, the differentiation phase sorts, consolidates, organises, and stores the information previously collected, creating a transactive memory system that can be accessed when necessary. While the information organised is about the team, McComb (2007: 107) recalls that "the focal level remains the individual because the content is the team members' perspectives, which may or may not be shared across team

members at this point in the convergence process". This stage is critical in the sense that it is essential for each individual member to recognize the different perspectives about the information collected held by each other member. This process is thus analogous to the creation of a transactive memory system. As described above, individual members hold their own individual knowledge about a situation as well as a directory of the information held by the other group members. Accordingly, a meta-knowledge system is created through the sharing of storage responsibilities amongst members.

The last stage of the convergence process involves integration. This entails the reconciliation of the differences between individual perspectives and the shifting of the focal point to the group as a whole. More than just group members thinking similarly, it is essential for integration that the individuals are cognisant of this convergence (Van Ginkel and Van Knippenberg, 2008). The process is somewhat complex, but according to McComb it is essential to the definition of the group *per se*:

As part of this reconciliation process, the focal unit of interest shifts from the individual level to the team level. To accomplish this shift in focal unit, team members interact and negotiate with one another about the differences in their mental model content that were identified during the differentiation phase of mental model convergence. Thus, integration is a transformational process through which individuals modify their own mental models. As the mental model content converges across team members, the information contained in the mental models becomes

shared and shared mental models emerge. In sum, the result of integration is a reconciliation of the various team members' individual mental models into shared mental models that will allow team members to collaborate effectively as they complete their assignment. (McComb, 2007: 108)

The final stage of this process is completed when the group has achieved a degree of integration which allows it to conduct its task successfully. Naturally the degree of integration affects the performance of the group. For example, when integration is not sufficiently achieved the group may not perform up to their optimal capacity due to the lack of information and knowledge between members. On the contrary, too much integration may hinder decision-making, facilitating group think. However, as McComb (2007: 112) has suggested, the "precise degree of integration may depend on the scope and nature of the team's assignment, the team's unique cognitive style, and the content of its mental model".

The conversion process as a whole is essential to determining the power that shared representations have in influencing the decision-making process. More precisely, the process is fundamental to the creation of the group's "reality" and it is in accordance with this constructed "reality" that they will decide. Central to this convergence process is the role of language as a means of communication and interaction. Language is a major determinant in the construction of our representations. According to Sylvan and Thorson (1992: 715), it is through language "which politics is constituted, modified, and played out". The authors' claim

intends to deny the idea that objects can be understood detached from their structures of representation and interpretation. On the contrary, any knowledge structure results from the interaction and communication established between individuals.

There are several ways in which language creates meaning. Moscovici (1988; 2000) highlights two distinct but complementary processes: anchoring and objectifying. Anchoring allows us to integrate an unknown object or event into our system of categorization and give it meaning. In this sense, it creates a representation by naming something and transforming it into a familiar entity or event. Objectifying, for its part, transforms the unknown into a tangible reality. It is the materialization of an abstraction accomplished through symbolic reproduction. This embodiment of abstract concepts results from human interaction, in which individuals communicate with each other and create meaning:

A tremendous stock of words is in circulation in every society referring to specific objects, and we are under constant compulsion to provide their equivalent concrete meanings. Since we assume that words do not speak about “nothing”, we are compelled to link them to something, to find non-verbal equivalents for them. (..) Yet not all words that constitute this stock can be linked to images, either because there are not enough images readily available, or because those they call to mind are taboo. Those which, owing to their ability to be represented, have been selected, merge with, or rather are integrated into, what I have called a pattern of *figurative nucleus*, a complex of

images that visibly reproduces a complex of ideas. (...) Once a society has adopted such a paradigm or figurative nucleus it finds it easier to talk about whatever the paradigm stands for, and because of this facility the words referring to it are used more often. (Moscovici, 2000: 49)

Weldes (1996) has presented similar claims. While not addressing social representations per se, she has identified similar mechanisms for the construction of problem representations – i.e., articulation and interpellation. Articulation corresponds to the production of meaning through the use of existing cultural and linguistic resources. While always culturally contextualised, articulation allows for the formation of “chains of connotation”, in which different terms and ideas are linked together. This process facilitates the association of certain phenomena to particular meanings and representations that guide action. Although the nature of the associated meaning can be contested and rearticulated, the essential claim stands: “Objects, actions, events and relations, that is, do not simply present themselves to us in an unmediated or self-evident fashion” (Weldes, 1996: 286). Rather, meaning is created through human interaction which articulates different linguistic elements to create particular problem representations.

Interpellation, for its part, entails an individual's incorporation into a particular subject-position or identity. In other words, according to Weldes, social relations create specific identities which comprehend different understandings of the world, power relations and interests and, subsequently, allow individuals to naturally identify and relate with those same relations and interests. Ultimately, it is through

interpellation that “representations appear to be common sense, to reflect ‘the way the world really is’” (Weldes, 1996: 287). Thus, just as in Moscovici’s social representation concept, Weldes illustrates how representations are created through social interaction and consequently circumscribe human interaction.

Thus, by applying a social psychological approach to the analysis of decision-maker’s geographic mental maps we can better

understand the complex social phenomenon at work in foreign policy-making. Rather than focusing on the individual mental maps of those involved in the decision-making process we should look to the geographic representations created by the group. We should try to understand in each particular instance how the group constructs the political world, namely how it creates places and spaces and the foreign policies it deems most appropriate for interacting with them.

## V. Conclusion

Geographic mental maps have intermittently appeared on the academic landscape for the last three decades. We can locate their conceptual underpinnings in much earlier work – e.g., in behavioural geography and FPA. However, a thorough effort to develop geographic mental maps as an analytical concept for FPA has eluded us for most of this time. Framing mental maps within the cognitive research program in International Relations certainly allows for a clearer understanding of their theoretical assumptions, namely on how they influence foreign policy-decision-making. However, the over-reliance on cognitive psychology, especially in International Relations, augments the risk of missing-out on understanding important dynamics in foreign policy decision-making. Above all, important group dynamics are ignored when we confine ourselves to a cognitive psychology approach. This is especially compelling when FPA has long acknowledged the importance of small groups in the decision-making process. Holsti has warned that a focus on collective approaches could minimize individual differences and thus diminish the

accurate expression of individual group member’s beliefs (Ripley, 1993). However, this observation overlooks an essential point. Most studies on group foreign policy decision-making have concentrated on the aggregation of the individual beliefs of group members (Axelrod, 1976; Beasley, 1998). Social psychology’s approach to cognition as a fundamentally social activity defies traditional perspectives and sheds new insight on many social processes, namely in information processing.

Therefore, it is argued that the adoption of a social cognition approach opens up new avenues of investigation which can greatly expand our understanding of how geographic mental maps influence foreign policy decision-making, namely by exposing the social dynamics involved in the group decision-making process:

“The information processing approach to groups embraces social cognition as a product of communication and interaction, and focuses directly on how the content of individual cognition is shared with



other people. The information processing approach applied to groups combines individual cognitive processes with social processes of communication, thereby offering a richer framework for future research” (Brauner and Scholl, 2000: 118)

This does not imply that we should discard individual cognition; quite the contrary. Individual cognition is at the base of social cognition. It is the mind that organises reality, but reality is always conditioned through the social context (Laffey and Weldes, 1997; Zerubavel, 1996). The individual is after all a social being. For that reason, rather than treating individual and shared cognition as two distinct phenomenon, we should adopt an integrated perspective in which we can understand that

...group life depends on individual participation and individual life depends on the impact of the groups. Social psychology is collective and communal as well as personal and particular. The understanding of individual cognition and affect must be analyzed in relation to relationships with others. (Thompson and Fine, 1999: 297)

Nevertheless, the study of geographic mental maps in foreign policy still raises many caveats. The first has to do with the application of social psychological theories. Most of the research findings enumerated resulted from laboratory-type experiments. As 't Hart et al. (1997) elucidate, these experiments generally require a controlled and parsimonious research design and environment which severely curtail the capacity to consider the “real-world” complexities actually involved in foreign policy decision-making.

Another problem is identifying the relationship of geographic mental maps to the other variables influencing the decision-making process. Whereas it has been acknowledged that geography is never the only factor influencing foreign policy (Henrikson, 1980), we must understand how it interacts with other factors - namely of a cognitive nature - in shaping policy decisions.

Equally challenging is the lack of comprehension of the effects of changes in mental maps on foreign policy. While cognitive theories contribute by allowing researchers to appreciate the “extent to which policymaker’s beliefs are likely to change over time” (Rosati, 2005: 63), the study of stability and modification in policy-maker’s beliefs is still wanting. Albeit avowing that “the mental-map approach to the study of international affairs is well suited to this increasingly fluid context” (Henrikson, 1980: 505) it has seldom been empirically applied in order to grasp the shifting character of the environments within which foreign policy is made.

However, the most daunting challenge is methodological. How we can measure and evaluate geographic knowledge has challenged geographers for decades. Behavioural geographers have dealt with it in various ways (see Golledge and Stimson, 1997; Kitchin and Blades, 2002). Still, most studies focus on the individual acquisition of geographic knowledge (da Vinha, 2010). How we can determine group mental maps needs to be developed in greater depth. Certainly constructivist research in International Relations and critical geopolitics have both dealt with collective representations (e.g., Laffey and Weldes, 1997; Ó Tuathail, 2002). Yet few, if any, have focused on the decision-making

process of the “authoritative” group (Hermann, 2001) and how social cognition constructs the problem representation that informs policy. In other words, while there are a considerable number of studies identifying decision-making groups’ geographic representations, research demonstrating the mechanisms that produce these collective mental maps is still lacking. One interesting approach to this challenge might be to devote more time to analysing the interactions among decision-makers. Focusing on the communicative interaction would be especially relevant for it is through communication between group members that geographic mental maps are created. Analysing communication would permit us to identify the complex and dynamic interactions between group members embodied in the verbal and non-verbal practices which bring mental maps into being through the production, dissemination, and consumption of texts (Grant et al, 2004; Hardy et al., 2005). This would evidently be complicated by the

need to consult fonts which are usually difficult to access, but I believe the results will definitely contribute to a clearer understanding of how group mental maps are constructed.

Nevertheless, despite these many uncertainties, we should agree that “the field of international relations is fortunate to have more than one active, coherent research program given the urgency of the problem it endeavors to solve” (Ripley, 1993: 414). The mental map research program supports this idea. Employing geographic mental maps to FPA is another contribution to understanding the complex structures and processes involved in foreign policy decision-making. While not exhausting all the possible ways in which individuals share a common understanding of the situation, analysing mental maps certainly allows for a better understanding of how groups develop a core set of shared geographic beliefs that contribute to the decision-making process.

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