

# **Collective memory**

## **An investigation into its cognitive and group processes**

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*In perceiving, in imaging, in remembering proper, and in constructive work, the passing fashion of the group, the social catch-word, the prevailing approved general interest, the persistent social custom and institution set the stage and direct the action. There is no doubt whatsoever about the operation of these social influences, they have been pointed out and illustrated by many writers. But the exact ways in which they work have never, I think, been given sufficiently detailed consideration.*

—Bartlett, 1932, p. 244

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## ***ABSTRACT***

Following a reconstruction of Bartlett's theory of remembering, five experiments explored the links between cognitive and group processes involved in the production of memories about controversial issues, primarily the 1973 military coup in Chile. In Studies 1 and 2, participants judged the truth of statements, after being primed with social categories. A superordinate-category prime ('Chileans') inhibited judgements compared to intergroup primes ('Rightwingers', 'Leftwingers'), especially with regard to polemical statements. These studies suggest that social categorisation stimuli are used as cues in the construction of a commitment to a stand within an intergroup context. Conversely, Study 3 focused on the impact of salient social memories on self-categorisation. Participants were asked to form an impression of a source who expressed a memory pertaining to a controversial issue. Then response times in self-categorisation with both an intergroup and a superordinate category were assessed. Whereas polemical memories facilitated participants' intergroup identity and inhibited their superordinate identity, consensual memories—within a controversial theme—had exactly the opposite effects. Study 4 demonstrated that a non-controversial issue produced the inverse pattern of judgement latencies as found in Studies 1 and 2. A superordinate-category prime facilitated judgement compared to intergroup primes. Study 5 showed that recognition memory is affected by the intergroup distribution of memories, thus supporting the thesis that group parameters affect basic memory processes. Recognition for memories congruent with the participants' ideological position was better than for incongruent memories only when the ingroup offered a non-commonsensical account. In conclusion, memory judgements and social categorisation processes are postulated to be spontaneously and reciprocally linked by the relevance of identities to memories, and of memories to identities, whenever individuals take a position within a given social context. A model of argumentative relevance fits these results better than a model of associative feature matching.

# 1 Introduction

*One might almost as well say that because nobody who is suffering from a raging toothache could calmly recite "Oh, my love's like a red, red rose," the teeth are a repository of lyric poetry.*

—Bartlett, 1932, p. 200

In 2002, Ken Loach released a short film about September 11<sup>th</sup>. Perhaps it has been the most shocking public event for Western Civilisation in the last decade (see Huddy, Feldman, Capelos, & Provost, 2002; Deisler, 2002; Slovic, 2002). Loach's film was included in *11'' 9' 1*—an omnibus of eleven films about September 11<sup>th</sup>, all of them eleven minutes nine seconds and one frame long, by well-known directors all over the world. A French television director, Alain Brigand, had the idea the day after the attacks. To the surprise of the audience, however, the British director's film focuses on another September 11<sup>th</sup>:

the day in 1973 when the democratically elected Chilean government of Salvador Allende was bloodily overthrown with the backing of the Nixon administration. Against a backdrop of black-and-white footage of the coup and subsequent terror, Loach's character, Pablo, a Chilean living in exile in London, speaks sympathetically to the families of those who died on September 11, but points out that 30,000 people died after 'your leaders set out to destroy us': George Bush's 'enemies of freedom' also reside in America. The film ends: 'On September 11, we will remember you. We hope you will remember us'. (The Guardian, September 5, 2002)

The character constructs a narrative based upon both personal recollections and images known to every Chilean citizen. He draws upon commonplaces that connect his experience with widespread Western values. He also selects and organises the information in a way that happens to be typical of a Chilean from the left wing. For instance, the man suggests that the US Government was partially responsible for disrupting Chilean democracy and for the state crimes against many Chilean leftwingers. The man constructed the narrative in the form of a letter. While writing the letter the man

was indeed thinking of September 11<sup>th</sup>, and of the way to best express himself to possible recipients, but not planning the productions of memories itself. Available ideological positions, commonplaces, narrative styles, group memberships, and other social factors help constrain the production of memories beyond the conscious control of the rememberer.

The production of our memories is usually inaccessible to our conscious examination. We just experience them. Even if we make a conscious effort to remember something, we have no idea about the psychological processes by means of which a satisfactory memory arises. However, the production of the film is easier to examine and provides a fruitful metaphor for understanding collective memory production. The picture is, though, that of a quite chaotic process, with multiple operations taking place simultaneously, under high time pressure, and needing the co-ordination of several conflicting constraints that have to be integrated into coherent goal-oriented steps. This process, moreover, is not executed by a central single person, but by a complex team working in interaction with the film industry and with different cultural and economic aspects of society. The social dimension is a condition for and substratum of the whole process. The outcome is a collective memory film, that is, a cultural artefact that becomes implicated in the production of social memories of other people.

The film exemplifies a series of features that are the wider subject of the present dissertation and that may be specified in abstract terms as *collective memory*. In particular, this dissertation focuses on production processes involved in the collective memory about the Chilean military coup of 1973.

## **THE NOTION OF COLLECTIVE MEMORY**

Before any definition of concepts, an illustration of the type of phenomenon referred to by the notion of collective memory is in order. I take the opportunity of a coarse and panoramic illustration to indicate some of the pieces of the literature on collective memory in which the emerging ideas are further elaborated.

### **Key aspects of collective memory**

As a first approach, the notion of collective memory refers to the social, even ideological, aspects implicated in the generation and

elaboration of memories of a common past in a group or society (Billig, 1990; Irwin-Zarecka, 1994). Loach's film, for example, involves the reference to past events that have been *crucial for the identity and history of a social group*. At least as this identity and history is reconstructed in the moment of production of a given memory (Halbwachs, 1925/1992; Lowenthal, 1994; Schwartz, 1996a). Memories about September 11<sup>th</sup> are directly relevant to many people. But because they are also relevant to whole groups or societies, each time a person produces these memories, some intra-personal and inter-personal processes, not necessarily present in episodic or autobiographical memories, come into play. For the discussion of this postulate from different angles, see Larsen (1988), Pennebaker and Banasic (1997), Frijda (1997), and Engel (1999).

### ***Social frameworks of memory***

To start with, in making a memory about September 11<sup>th</sup> it does matter whether the rememberer is originally from Chile or from New York. Each time these memories are experienced by a person, they are *generated in relation to a social identity* that imposes specific constraints. In spite of the lack of detailed research on this point, broad discussions of this argument are found in Halbwachs (1925/1992), Irwin-Zarecka (1994), and Bar On, Ostrovsky, & Fromer (1998). The Chilean man in the film, for instance, generated a chain of memories less in line with his personal life than in accordance with his position towards the past, present, and future of the Chilean society. In this sense, his Chilean and left-wing social identities are integral part of the process of memory production.

Moreover, the experience of events relevant to the identity of a group is *socially mediated*. This social mediation is mainly through daily conversations that usually mould our memories, and the mass media, which often give the original information in the first place. The events are rarely directly perceived (see Lang & Lang, 1990; Cole, 1990; Bar On, Ostrovsky, & Fromer, 1998). That suggests that the *who* of the memory production is never an isolated individual mind. That is, a mind that could give to itself the input by perception and could work out the way to remember it without the collaboration of others (Edwards & Middleton, 1986; Larsen, 1988; Middleton & Edwards, 1990c). Additionally, memories regarding these types of events tend to be embodied in cultural artefacts or patterns of social practices that give them a

certain kind of stability beyond the retention and organisation capacity of individual minds (Radley, 1990; Zelizer, 1998; Goody, 1998; Noyes & Abrahams, 1999; Traister, 1999).

### ***Individual 5situational modulation of memory***

Despite these homogeneous determinations, memories are generated only within individual psychological life (Bartlett, 1932). A given New Yorker or a Chilean can accept or reject versions of September 11<sup>th</sup> as a function of his or her peculiar attitudes and knowledge about the events; of his or her peculiar political values; of the audience to which an opinion is uttered; and of the concrete social positions available regarding the events. In the film, the Chilean man gives only one chain of memories of the endless variations that he could express in different moments. As with the generative nature of grammar, memory can be regarded as the capacity to build ever-new memories as a function of the ever-changing present context (Bartlett, 1932; and see Goody, 1998 for the notion of *generative memory*). The man spoke, from his point of view, as a leftwinger in exile, and he did so to Loach's camera. At the same time, Loach was filming as a radical Englishman for an enlightened and frightened Western audience. These individual and situational factors seem to be necessary to account for the *flexible production of memories* (see also Engel, 1999 for a discussion of this idea regarding autobiographical memory).

### ***Ideological aspects of memory***

On the one hand, different forms of social power, from the symbolic power of the mass media to military power, might largely determine all these individual and situational factors. In point of fact, the very production of the film depends upon the prestige of the director, and would be impossible without economic and political support. In other words, the production of memories supposes a *social organisation of resources and goals* (MacKenzie, 1984; Cole, 1990; Zerubavel, 1994; Scott, 1996; Barthel, 1996; Lang & Lang, 1996; Schwartz, 1996b; Little, 1997).

On the other hand, those individual and situational factors seem to be implicated in the emergence of a given *pattern of memories, beliefs, and opinions across individuals*. This pattern is sometimes organised as generalised consensus on a conventional ideology and, most often, as frank opposition between competing ideologies (Billig, 1990; Gaskell & Wright, 1997).

These two are societal factors involved in collective memory. To illustrate these points: Loach's film won the critics' Fipresci award as the outstanding short film at the Venice film festival. Two days after the Loach film won the award, Mr. Alexander Walker wrote in the London Evening Standard: "I regret to say that it is Ken Loach's segment that lets the film (and Britain) down. Loach uses the contemporary event to rehash his own polemics against General Pinochet and his US 'accomplice' Henry Kissinger: it is as disreputable an act as setting up your Marxist stall on the graves of 2,800 victims. His mini-film brings shame on our country."

### ***Psychological processes as nested within social processes***

Finally, things become more complicated as soon as Loach's film, which is a memory artefact made possible by the film industry, is recognised itself as a product of memory (see Zelizer, 1998 for the case of photography). The film is a means for the representation of a past event. As a memory artefact, the film is a device that motivates the production of certain memories in the audience. As a memory product, it is itself constrained by the director's social identity, his persistent interests and beliefs, the situational contingencies regarding the available audience, and the ideological landscape in which he moves. As with the production of memories by the Chilean man, the film can be analysed in these terms. Then it becomes clear that all these factors contribute to determining the director's, or the film's, rhetorical position towards the events. The Chilean man's chain of memories is nested within another chain, namely Loach's provocative association between a recent and a remote event in the history of the US.

Loach's film is certainly not meant primarily as a documentary for Chileans about an event that happened thirty years ago, but as an argument against a given commonsensical view of the last September 11<sup>th</sup> 2001. As Loach said, the film aims "to point out the irony of the situation that on September 11 1973, the United States had inspired a terrorist attack. In fact, there is a case for saying that the major terrorists of the second half of the 20th century have been the Americans" (The Guardian, September 5, 2002). In this film, a distant social memory comes into play, in line with a particular interest, in the social discussion of a closer experience.

This approach to the film teaches something not about cultural criticism but about collective memory. Namely, it reinforces the notion that *the process of the production of memories in the*

*Chilean man's flux of experience and behaviour is determined by an intricate interplay between psychological and social forces* (for instance Namer, 1987; for reviews see Middleton & Edwards, 1990b; and Pennebaker & Banasik, 1997). This idea opposes the view of memory as a storage bin in individuals' heads. Even if heads are necessarily involved in memory production, as individuals are, it is argued that such production process also necessarily involves a number of social aspects. That is exactly what Bartlett means in the quote at the beginning of this introduction. Moreover, an examination of the interplay mentioned above suggests not only that the individual mind is not *the* locus of memory, but also that the mind's role is that of the one who receives the end product to give it the final terminations. The elaboration of this last point is the task of the whole dissertation.

This impressionist picture of the phenomenon of collective memory shows its multi-dimensionality. A discussion of these multiple aspects is, nevertheless, beyond the scope of this dissertation. Some of them are going to be developed in Chapters 3 and 6, after the focus of the investigation has been specified and some theoretical and empirical studies have been made in the selected direction.

## **Social memory, shared memory, collective memory**

The terms 'social memory' and 'shared memory' are widely, and loosely, employed in different research traditions. For example, culture-oriented researchers usually employ them to convey those memory *contents* that are socially shared and socially elaborated (for instance Fentress & Wickham, 1992). Whereas in cognition-oriented research they mean those knowledge *structures* that serve as mental means to recall or represent social objects (for instance Bower & Forgas, 2001). These two meanings of the term are hardly derived from a unique meaning. The question is, then, not about the commonalities but the range of variety of the use of the terms 'social' and 'shared' in this context.

What is social about *social memories*? In social cognition research, it is only the social nature of the object. That is to say, here memories are social if they happen to refer to persons, social groups, or events involving social interaction. In sociology, social memories are social because they are explicitly elaborated and reproduced through social practices, such as commemorations of

past events or the production of works of art referring to past events. Both these aspects—these two reasons to call a memory a ‘social memory’—may be important components of collective memory situations; but they do not imply collective memory. Collective memory, as Billig (1990) and Wertsch (1997) have argued, is a process or memory dynamic that employs such *social means* as ideological themes or cultural tools. This is postulated to be the case even if the act of memory is not explicitly referring to a specific past event. In this perspective, collective memory refers to the nature, conditions, and functions of the processes of production of memories, beliefs, and attitudes, rather than to the nature of the product. Before explicating this point, more terminological diversity is worth noting.

What is shared about *shared memories*? Tindale and Kameda (2000) have proposed an encompassing concept of sharedness regarding cognition in small, task-oriented groups, whereas Bart-Tal (2000) has conceptualised knowledge sharedness at a societal scale. In the former framework, that which is shared is *information*, whereas in the latter is *beliefs*. In some lines of research, as in the study of memory of public events, what is shared is the object (for example, the military coup of 1973). In other occasions shared memories are shared because the memory contents—the ways in which the object is referred to—are common among group members (for example, remembering certain features of the military coup and omitting other features). In still other works, the function of memory itself is socially shared. For instance, in research on joint remembering (Edwards & Middleton, 1986) and on distributed cognition (Hutchins, 1991; Wegner, 1995), the processes through which the remembering function is accomplished are performed and organised across group members. Finally, shared memories can also be those memories that happen to be put in conversation, in opposition with unexpressed memories. Again, all these aspects of shared memories can be implicated in a collective memory situation, but they do not imply it.

Indeed, Halbwachs (1925/1992) employed all these meanings of *social* and *shared* as possible components of collective memory. For this reason, it is convenient for the dissertation to establish a systematic distinction among social, shared, and collective memory. In particular, the term ‘social memories’ is going to be widely used to express the contents of experiences referring to a social and shared object. For example, the idea expressed in the

sentence “the US Government motivated the Chilean military coup” is a social memory—even if there is no “episodic memory trace” in the person who expresses this content.

The term ‘shared memories’ will be employed to convey the fact that given social memories are common within a social aggregate. For example, the idea expressed in the sentence “the US Government motivated the Chilean military coup” is a shared memory among Chilean leftwingers, but non-shared in Chilean society overall because right-wing supporters tend to reject this description.

The expression ‘collective memories’, in the plural, will not be used. Instead, I will employ terms such as ‘collective memory behaviours’ (recall, judgement) and ‘collective memory experiences’ (emotion, reminding, social identification), to convey the behavioural and experiential aspects of the production of social memories within collective memory situations. The term ‘collective memory processes’ means both the psychological and the social processes involved in the production of social memories within collective memory situations. The crucial point is then the meaning of ‘collective memory situations’.

## **Collective memory situations**

The notion of collective memory fulfils a framing role in my investigation. For this reason, rather than being defined by a specific operational criterion, it works as an ideal type, that is to say, a configuration of typical features that seems to characterise the specific type of phenomena under investigation. In the pieces of research reported afterwards, I will refer to ‘collective memory situations’ to convey the context in which theoretical statements are claimed to be valid. In particular, the technical use of the term ‘collective memory’ in this dissertation assumes the concurrence of three conditions.

### ***Community of memory***

Memories about a given event or object should be available for all members of the group or society, either in actuality or else to be acquired through standard socialisation.

That is, the memory object should be a memory object for every member of a given group. Everybody has to have a position towards the object, however this position might be defined. This condition contrasts with the materials in which research on both

autobiographical and general historical knowledge focus on. The former focuses on memories that are usually available for one person or few people. The latter focuses on social memories that can be available for some people according with their age, memory capacity, or educational level. In collective memory, group membership involves some knowledge about the memory object.

In other words, there needs to be a *community of memory* (Irwin-Zarecka, 1994). This implies that the memory object is reproduced in socially organised communication, from the basic level of implicit socialisation to the possible level of means of open discussion.

### ***Social controversy***

Community of memory, nonetheless, does not only mean consensual or shared memory. On the contrary, the memory object may well be a controversial topic within the given community of memory.

In collective memory, memories are not homogeneous and settled among people but trigger social elaboration or discussion. This condition means that collective memory is a context in which memories are, so to say, open, alive, still struggling in terms of dominance-resistance among clusters, or conventionalisation-dispute within the community.

It is true that also crystallised consensus is a tacit and invisible determinant of certain social patterns; but because as an ideal type consensus does not imply disagreement, it cannot be put forward as a condition (however, Habermas, 1984). In contrast, open collective memory does imply agreement and consensus as the necessary counter-face of controversy. Following social identity theory (Tajfel, 1974; 1981), it can be argued that, on the one hand, intergroup differences imply intragroup similarities. On the other hand, for two social groups to be in disagreement, there is a necessary implicit agreement on the dimension and terms of disagreement (see also Billig, 1996).

The controversial nature of an object can be established at an intergroup level of social differentiation, in which case collective memory is marked by disagreement within the community of memory. But it also can be established at a superordinate level, that is, based on disagreement between a given community of memory and an outgroup. In this last case consensus may characterise collective memory within a given community.

### ***Social identity relevance***

Memories involved in a collective memory situation should be an integral part of the community's self-understanding.

This condition derives from Halbwachs' conceptualisation of collective memory, according to which such memories define the identity of the social group. In the same sense that it is said, at the level of individual life, that memory is the condition of identity, it has been said that collective memory is the condition of the cultural identity of a given group or society (Halbwachs, 1925/1992; Shils, 1981; Connerton, 1989; Lowenthal, 1994). Moreover, collective memory seems also to be essential for individual identity (Neisser, 1982; Baumeister, 1986; Conway, 1997a).

Similarly, Bar-Tal (2000) has developed the concept of societal beliefs as those beliefs shared by society members and treated by them as characterising their society. This concept reminds us that it is not enough to share a memory object in order to constitute a collective memory situation. However, Bar-Tal fails to recognise that cultural identity can be based on beliefs without sharing them in the strict sense. For instance, when the memory object is controversial in a given society, a *societal theme* leaves room for conflict among beliefs and endless dispute among social groups—rather than a shared belief in itself.

These three conditions—community of memory, social controversy, and social identity relevance—define the notion of collective memory in this dissertation. The empirical investigation, however, focused on one concrete case, the Chilean military coup. The studies reported in the coming chapters make direct reference to this particular case. Thus, an overview of this historical event is necessary at the outset.

## **THE CHILEAN MILITARY COUP OF 1973**

The task of giving a brief account of this event in a dissertation about its memory is not as easy and straightforward as it may seem to be. First of all, the military coup is not yet a finished fact, whose essential features are no longer the object of live controversy. Furthermore, the importance of the topic comes from this controversy and not simply from the facts themselves.

Opinion polls have often found that this topic divides the population into two polarised clusters (Manzi & Krause, 2003). In

this context, to summarise the versions disseminated by historians is, on the one hand, unfair because most of the published works on the period are clearly biased towards a “consensual” view—if not a right-wing view. A potential solution would be to present the account of two selected historians, one representative of each cluster. But, on the other hand, the difference between memory and history (see Halbwachs, 1925/1992; Burke, 1989) cannot be overridden from the beginning. Rather than professional historians, I should reconstruct the view of ordinary people, as depicted in recent studies. I follow that strategy. Unfortunately, such a strategy has some drawbacks: Instead of being a smooth account efficiently centred on the information necessary to have an orientation in the matter, it will appear more as a patchwork of memories with no simple narrative structure.

### **People’s accounts of the events: Variations on the same theme**

In 1999, 44 people between 40 and 60 years old were interviewed with a script covering the presumed events that took place on September 11<sup>th</sup> 1973, their historical antecedents and consequences (Manzi, Krause, Ruiz, Meneces, & Haye, in press). Participants were selected in order to include people from the different positions in the political spectrum. Interviews were analysed in two ways. On the one hand, the articulation of thematic categories was reconstructed through a qualitative analysis of contents following the principles of Glaser and Strauss (1967; Strauss & Corbin, 1991). On the other hand, an analysis of modes of utterance (Searle, 1969; Sperber & Wilson, 1986; for an integrated view see Blakemore, 1992) gave hints into some rhetoric aspects of the interviews, particularly the confidence with which statements were made and the attitude of participants towards the content of their utterance. In what follows I summarise part of the mixed outcome of these analyses, selected with the aim of informing about the basic contents at play, and to illustrate the three main features of collective memory—community of memory, social controversy, and social identity relevance.

#### ***Memories of September 11<sup>th</sup>***

All participants described the events as centred on the military actions, especially the military attack on the Presidential Palace from air and land, which was remembered as traumatic

irrespective of the political orientation. The massive and visible military operations were the central theme, although with different evaluative connotations. Leftwingers talked about it with disapprobation and alarm, whereas rightwingers and participants from the political centre tended to take a neutral, objective-like stand, or even of approval.

Despite these important differences, most participants mentioned some events or episodes. Some participants remembered that, before the attack on the Presidential Palace, the armed forces asked Salvador Allende—the President until that day—to surrender, and that the latter did not. Almost all remembered military operations to control citizens, such as the declaration of a state of emergency, the imposition of a curfew, and the permanent control of the mass media. Some people reported the military assault on the private house of Allende.

However, within this broad theme of military action, some specific differences among participants are worth noting. In particular, only people identified with the left wing mentioned that during that day the military murdered many innocent people, invaded private places with great violence, including housebreaking and unlawful arrests, and moved many more to concentration sites. Many participants indicated that during the attack on the Presidential Palace, Allende gave his last address to the nation, which was remembered by left-wing supporters with great emotion, and as a very significant message. Some right-wing supporters remembered that Allende sounded as if he were completely drunk while giving his rather inconsistent speech. For many participants Allende committed suicide after his address; however, some leftwingers believe that he was most likely assassinated by the military during the attack.

In a more political theme, people reported believing that the National Congress was shut down and a new military government, with Augusto Pinochet as the head, was declared. Participants from the left wing and political centre said that it was declared as a temporary government for an emergency period only. Left-wing participants remembered that the political centre at that time gave their support to the military actions, and that rightwingers were celebrating them enthusiastically. Right-wing participants, in turn, remembered that leftwingers at that time resisted the military with arms. Left-wing participants also remember people hiding or burning partisanship credentials and politically committed literature at the rear of their houses, because of the fear of very

probable repressive actions. For some, it was the apocalyptic end of democracy; for the others, it was the messianic end of political vandalism.

### ***Beliefs about causes and consequences of September 11<sup>th</sup>***

Regarding the beliefs about the internal causes of the event, right-wing supporters remembered that the population itself pushed the armed forces, because of a widespread discontent. They believe the problem was rooted in the economic crisis, the climate of extreme ideological polarisation, and a disorganised implementation of too radical policies—all resulting in a generalised chaos characterising the time before the military intervention. On the other hand, left-wing participants believed that there was a pressure on the armed forces to perform the coup on the part of organised groups from the political right and centre. According to these participants, these groups wanted to stop the programme of the assembly of left-wing movements and parties behind Allende's Government. First, because it was undermining the economic structure of privileges in Chilean society. Second, because the idea of a "democratic way to socialism" was too dangerous an international model to be allowed to develop. Left-wing participants not only referred to rightwingers' resistance to change, but also to leftwingers' extremity as the cause of a break down of the conditions for dialogue—which, again, yielded a generalised chaos.

As an external cause, right-wing participants usually mentioned the direct influence of Cuba on the ideological trend and political strategies during Allende's Government. In turn, left-wing participants remembered the secret influence of the US Government in the motivation, planning, and preparation of the military coup.

Regarding the consequences of the event, differences among political groups are dramatic, as if the meaning of the event were determined by its effects. Participants from the right wing emphasised economic aspects that are presented as virtues: the return to routine employment patterns, the supply of commodities in the short term, and the reactivation and development of the whole economy in the long run. They also stress that the military intervention produced the re-establishment of the social order, particularly the end of political disorder and the settlement of tranquillity. In addition, right-wing participants remembered that the military action was regarded as an international example of

defeating Communism. Most right-wing supporters presented their accounts as suggesting, if not stating it explicitly in several ways, that the military intervention was a kind of solution to a previous problem. Some of these participants asserted this even if recognising without much detail that the solution was imperfect or was contaminated by anomalies and excesses.

Quite in opposition, left-wing participants remembered that the military coup marked the beginning of a long military dictatorship of seventeen years. Specifically, these participants emphasised the interdiction of political and social organisations, like political parties and labour unions; and the cancellation of several personal and political rights, and systematic Human Rights violations, including illegal arrest, assassination, and torture. As pervasive and long term consequences, these participants believed that the coup caused greater class differences, a dramatic decrease of social investment, the loss of trust in one another, international isolation, and the loss of the democratic political culture. In sum, as many left-wing participants mentioned, the military coup produced a severe division of the Chilean people.

In a follow-up study in 2000, 792 people between 18 and 60 years old answered an opinion poll about several aspects of September 11<sup>th</sup> (Manzi & Krause, 2003). This study confirmed with more detailed evidence that right- and left-wing Chileans hold opposing views of the military coup (people from the political centre tend to join the right-wing view), even though there is agreement about some basic facts. For example, more than 85% of right-wing supporters in the sample believed that Allende committed suicide, with the remaining believing that he was assassinated by the military. Left-wing respondents showed the inverse pattern: 35% and 65% of the sample, respectively. To expand further, 81% of the right-wing respondents attributed the main responsibility for the coup to Allende, whereas 88% of the left-wing supporters attributed the responsibility to Pinochet. However, the economic crisis was the main cause of the military coup for both ideological groups in the sample. Likewise, 67% of the right-wing respondents and 63% of the left-wing supporters asserted the belief that there was the population pushed the armed forces.

In fact, in Chilean society the topic of September 11<sup>th</sup> is perhaps the most reliable and salient symbolic marker of the difference between rightwingers and leftwingers. To say that the attitude towards the coup is a good predictor of Chileans' political

orientation may be a petition of principle, but it confirms that positions towards the coup give meaning to political orientations. Therefore, it can be assumed, as it is in this dissertation, that in the thematic context of September 11<sup>th</sup> 1973 'left-wing' and 'anti-coup' mean the same, as 'right-wing' and 'pro-coup' do.

## **Young people's accounts: Acquiring a vicarious but live memory**

The study previously mentioned (Manzi & Krause, 2003) included participants from a wide range of ages, from people who were eighteen years old before 1973 to those who reached this age after the formal end of the military dictatorship in 1990. The comparison between the oldest and the youngest participants is instructive in two ways.

On the one hand, statistically significant differences in beliefs about the events, causes, and consequences of September 11<sup>th</sup> were less common than expected. Even when differences were significant, these were smooth tendencies as a function of age rather than abrupt cross-generations changes. For example, 11% of the sample between 18 and 28 years old at the time of the survey thought that September 11<sup>th</sup> was in some way justified. Of the sample between 29 and 44 years old, 25% gave this opinion; and 32% of the sample between forty-five and sixty years old believed that this was the case.

On the other hand, as the previous example already suggests, there was a general tendency to express more moderate opinions as a function of age. That is, the youngest participants tended to agree more with extreme beliefs, either because of a more critical view or because of a less considered view. For example, participants were asked to judge whether torture was a common practice of security organisms of the armed forces or occasional excesses by some functionaries of these organisms. From the sample ranging between eighteen and twenty-eight years old a 61% opted for the first alternative and 38% for the second; 51% and 48% were the respective forces in the sample between forty-five and sixty years old.

In a previous study of 1997, 331 people were interviewed, from three cohorts: one around 9 years old, the next one around 12, and the other cohort around 17 (Manzi, Hays, & Castillo, 1998). The focus on the social memories that children and adolescents have regarding the Chilean military coup of 1973 is particularly

interesting because the subjects did not have direct experience of the events, and also because there is no formal socialisation about them. In fact, this period of Chilean history is excluded from the curriculum of primary school.

One of the analyses of the interviews was the coding of answers to “what happened on September 11<sup>th</sup> 1973” in terms of levels of knowledge. Results showed that the youngest respondents, on average, tended to refer to events different from the military coup. Mid-aged respondents tended to refer to the coup, but with major confusions and distortions that revealed a lack of any detailed knowledge. Finally, the oldest respondents tended to show some detailed knowledge about the military coup. That is, they tended to give a brief account made up of pieces of knowledge that were recognisably part of one or more of the known discourses about the coup available in Chilean culture. In particular, 85% of the older cohort gave answers corresponding to this level; and 12% gave answers characterised by major confusions and no clear detailed knowledge.

Specifically, 48% of the answers of these older respondents, when describing the events of September 11<sup>th</sup>, mentioned both that it was a military coup and that Allende died or was assassinated. The idea of the military coup includes the military attack on the Presidential Palace or other armed actions against Allende’s Government. The next most frequent episodes or references were: *coup d’etat*, as a political event (30%), many people died or were killed (28%), military attack on the Presidential Palace or other armed actions against Allende’s Government (13%), and people disappeared or were taken as political prisoners (10%).

An analysis of the narrative patterns used by the older participants revealed that the most frequent ANTECEDENTS–EVENTS–CONSEQUENCES accounts of the event were of the following forms:

- I. The opposition against Allende’s Government caused an uprising against Allende with the main consequence of a repressive dictatorship—exiled people, violation of Human Rights, terrorism, lack of trust and security, division of Chilean people (15% of the participants).
- II. The opposition against Allende’s Government caused violations of Human Rights—massive killing, political prisoners, disappeared people—with the main

consequence of a repressive dictatorship (15% of the participants).

- III. Structural problems of the nation—political and/or economic—caused an uprising against Allende with the main consequence of a repressive dictatorship (14% of the participants).
- IV. Structural problems of the nation caused an uprising against Allende with the main consequence of economic development (13% of the participants).

Interestingly, these four dominant narrative patterns in a sample of adolescents resemble the dominant views of the military coup in the adult population, as described previously (see Manzi & Krause, 2003 for details). Patterns I and II are typically left-wing views, denouncing unjustified terror. Pattern III corresponds to a view typical from the political centre, which justifies the coup by its antecedents but criticises it by its negative outcomes. Finally, pattern IV is one of the dominant right-wing views of the coup, justifying the events by both its motives and its consequences.

## **OUTLINE OF THE ARGUMENT**

Previous research on collective memory of the Chilean military coup (see Lira, 1997) and other traumatic political events world-wide (Brown & Kulik, 1977; Tuchman, 1978; Epstein, 1979; Adams, 1989; Christianson, 1989; Glenny, 1992; Irwin-Zarecka, 1994; Koonz, 1994; Fridja, 1997; Igartua & Paez, 1997; Iñiguez, Valencia, & Vázquez, 1997; Márquez, Paez, & Serra, 1997) has focused on describing the *pattern of contents at a societal level*. This last line of research describes what is remembered or talked about and what is not in a social aggregate, stressing either its social or its psychological consequences and functions. Complementing this approach, the present research focuses on *memory processes at an individual level*, as they come into play within collective memory dynamics.

In what remains of this chapter I present an outline of the concepts and arguments about the memory processes implicated in collective memory developed in the dissertation. As a departure platform, I briefly indicate the place of this investigation within the literature on collective memory. Then I specify the focus and scope of the research. Finally, I summarise the central argument of the

dissertation and, as a guiding map for the reader, indicate the sequence of steps chapter by chapter.

## **Background: *Cognition versus culture***

Since the beginning of the mid-eighties collective memory has been investigated from a wide range of disciplines, including oral history, social theory, cultural studies, discursive psychology, activity theory, cross-generations studies, group memory research, and interpersonal relationships. The approach of such studies has been mainly elaborated within the domains of comprehensive sociology and history (for instance Schwartz, 1982 and 1996c; Connerton, 1989; Fentress & Wickham, 1992; for a review see Olick & Robbins, 1998) and culture-oriented social psychology (contributions in Middleton & Edwards, 1990a; see also Straub, 1993; Wertsch, 1997; and specifically for collective memory about political events see contribution in Pennebaker, Paez, & Rimé, 1997). A survey of this sociocultural wave of research on collective memory shows that there are three fundamental themes cutting across disciplinary traditions. The common goal of demonstrating that social memories are social constructions orients these themes.

Firstly, one group of studies stresses the institutional and historical dynamics of memories held in large groups, in particular memories referring to past events or persons that are or were important for—most often traumatic for—the shared social life of those communities (Schwartz, 1982; 1996b; Lowenthal, 1994; Belli & Shuman, 1996; Barthel, 1996; Little, 1997). A typical example is the study on memory of the Nazi-Jew Holocaust (Irwin-Zarecka, 1994; Koonz, 1994; Zelizer, 1998; see also Agamben, 1999). As an example in social psychology, Gaskell and Write (1996) used survey methodology to analyse class differences in memories about Thatcher's resignation as prime minister of the UK. This study shows that socio-economic status, meant as a proxy for political identification, was positively associated with perceived clarity, importance, and emotionality of the memory of the event. Studies of this kind offer evidence that group membership, ideological position, and social structure are important elements of collective memory, as initially suggested by Halbwachs (1925/1992). Contributions in the journal *History & Memory: Studies in Representation of the Past* are representative of this first theme.

Secondly, many studies focus on uncovering the ideological aspects involved in the social construction of memories and their

functions or effects on social life, such as legitimating the present or promoting group cohesion (Zerubabel, 1994; Cressy, 1994; Schudson, 1995; Schwartz, 1996a; Lang & Lang, 1996; Baumeister & Hastings, 1997; Noyes & Abrahams, 1999; Pearson, 1999; Baker, 1999). From this point of view, memory distortions and the predominance of ideological commonplaces are regarded as a function of a politics of memory. For example, Billig (1990) has argued that collective memory, because of its political roots, is ideologically organised in contradictory themes that reflect the historical configuration of collective memory. The author shows that when talking about a topic relevant for cultural identity, such as the Royal Family in Britain, people use common-sense themes that involve ideological dilemmas, or oppositions. Such dilemmatic themes allow for a flexible use of commonplaces within a frame that is ideologically determined.

Thirdly, an important part of the research emphasises the role of communication, from daily conversations to the mass media, in the formation and shaping of social memories (Edwards & Middleton, 1986; Kaha, 1989; Lang & Lang, 1990; Middleton & Edwards, 1990c; Schudson, 1990). For example, Hutchins' (1994) view of socially distributed cognition suggests that, in collaborative groups, 'who talks to whom about what' determines not only the resulting memories at the group level but also individual variations in memory, because memory making is a cultural process involving both intra-psychological and inter-psychological dimensions. From a different perspective but with a similar interest against the classical subordination of communication to cognition (see for instance Freyd, 1983; Krauss & Fussell, 1996), Edwards and Middleton (1986; 1987; Middleton & Edwards, 1990c) focus on joint remembering as it is done in everyday conversations. Such authors claim that memory conversations fulfil the function of constructing shared reality and shared meaning among participants (see also Clark & Brennan, 1991; and Higgins, 1992). More specifically, they mediate the recalling or forgetting a past object of conversation and, thus, the construction of a shared discourse about their own mental processes. To summarise, in this type of research operations of communication are regarded as integral parts of the process of remembering (see also Tessler & Nelson, 1994).

These three types of approaches to collective memory converge in the formation of a picture of *human memory as a cultural process rather than a cognitive one*. In fact, the opposition to the cognitivist approach—only concerned with the intra-psychological

aspects of memory as the explanatory panacea—tend to be used to set the stage, rather than obtained as a result, in sociocultural collective memory research (however, see Wertsch, 1997). Consistently, most of collective-memory research focuses on the macro-processes implicated in memory: history of memory, social practices of memory, politics of memory, or common-sense mediation of memory. Few studies, mostly pertaining to the third type of research described previously, pay attention to such micro-processes of memory as those operating in conversations or in interpersonal relations (for instance, Wegner, 1987). Moreover, even these micro-process studies are restricted to the inter-psychological domain. Thus far, sociocultural collective-memory research *has only been concerned with the inter-psychological aspects of memory as the explanatory panacea*, without even recognising the role of the individual mind in the social construction of memories. There are lines of research challenging this limitation (Wegner, 1987; 1995; Hutchins, 1991; Salomon, 1993b; Cole & Engeström, 1993; Hinz, Tindale, & Vollrath, 1997), both from within the sociocultural approach and from a view of social groups as cognitive systems. However, these exceptions have not been applicable to collective memory situations but only to collaborative, task-oriented small-group processes.

In other words, although describing and reflecting upon the crucial phenomena of collective memory as social construction, so far collective memory research has not yet elaborated a systematic link with the intra-psychological processes implicated. Bartlett's legacy, as I see it, is the double-sided view of the inter- and intra-psychological processes as interlaced in remembering. This principle of the interplay between individual psychological life and social life is shared among several authors within the social sciences, like Vygotsky (1934/1962) and Wertsch (1991; 1998) in psychology, Berger and Luckmann (1967) in phenomenological sociology, Elias (1939/1982) in historical sociology, Bakhtin (1984; 1996) in literary theory, and van Dijk (1998) in discourse theory, to name a few. To put this principle in collective memory terms, for these authors—representing what I call the *mutual mediation* perspective—neither cognition explains culture nor culture explains cognition; the key to explaining both culture and cognition is to understand their interplay.

In memory research the opposition between cognition and culture is, then, unsatisfactory from this perspective. In order to

*explain* collective memory I follow this last path, that is, the articulation of both the social and the psychological levels of description into a model of collective memory dynamics.

### **Focus and projection: *Social mediation of individual memory processes***

Specifically, I take some initial steps towards such a model of collective memory dynamics, namely the demonstration of tight relationships between the psychological processes involved in collective memory production and the social frames of these processes.

Indeed, the dynamics of collective memory also include the discussion and elaboration of collective memory judgements, the social organisation of this discussion and of the means of communication, the political strategies to intervene in such organisation, and so forth. Thus far, research on collective memory has been dealing mainly with these other dimensions, without any systematic connection with psychological processes. In my investigation the foreground is probably the most elementary and perhaps the least distinctive dimension of collective memory. However, all aspects of the phenomenon ought to be implicitly present when one comes up with a particular social memory after hearing somebody else stating something about the military coup, or perceiving a reference to the topic. I try to model this kind of situation in the present research.

To further determine the focus and scope of the investigation, it can be contrasted with two approaches that assume independence between the social and psychological dimensions of memory.

### ***Group factors of recall***

Past research on the social context of memory has shown an influence of interpersonal and group factors on recall performance (Upmeyer & Schreiber, 1972; Clark & Stephenson, 1989; Wegner, Erber, & Raymond, 1991; Anderson & Rönnerberg, 1996; Basden, Basden, Bryner, & Thomas, 1997; Loftus, 1991; Weldon & Bellinger, 1997). For example, Wegner, Erber, and Raymond (1991) had dyads with different degrees of division of cognitive labour to learn and then recall a list of sentences. They demonstrated that such division of cognitive labour among participants improved the recall accuracy of the dyad. However, this type of research does not speak about the social mediation of memory. On the one hand,

most of this line of research focuses on group-level memory performance, not on the effect of inter-psychological processes on intra-psychological processes. On the other hand, even when there is a detectable influence of social factors on individual memory processes, in most research these social factors (division of cognitive labour, collaborative and decision scheme, social interdependence pattern) are accidentally related to memory. That is to say, they are not an integral part of the process of memory production. For a detailed discussion of group memory research, see Chapter 6.

In focusing on the relationships between the psychological processes implicated in collective memory production and the social frames of these processes, the present dissertation aims at helping to remedy this assumed “independence” of intra-psychological processes of memory from social processes. Research on the social mediation of the psychological processes implicated in collective memory is reviewed in other chapters.

### ***Memory from a cognitivist viewpoint***

Nevertheless, it would not be completely sincere to restrict the argumentative background of the dissertation to the phenomenon of collective memory, or even to the memory of the military coup. Yet collective memory is a particular kind of memory, and memory is thought of as a general property underlying learning, understanding, and the formation and expression of attitudes, opinions, and beliefs—as these involve the use of prior knowledge (Shank, 1999).

For instance, research on stereotyping draws heavily upon basic memory processes that—in interaction with motivational and social conditions—explain the acquisition, activation, and application of stereotypes in understanding other people, as well as their consequences on subsequent operations (Bodenhausen & Macrae, 1998; Banaji & Bhaskar, 2000). These basic memory processes are assumed to be part of the same set as those involved in event and story comprehension, in recognition, in recall, and so forth. In the still current jargon, the set comprises such processes as the encoding of information, the search and selection of memory traces, the retrieval of traces or activation of knowledge structures, and the spread of activation through associative linkages. As a basic, all-purpose mechanism of storage and retrieval of knowledge, this set of processes can be thought of as “plain” memory.

Social cognition is the line of research exploring the way in which “plain” memory works in perception, judgement, and recall of social objects (see Fiske & Taylor, 1991 for a review). Thus, it is not investigating the way in which social processes are integrally implicated in memory processes. The social context is regarded as a source of possible moderators of “plain” memory processes. These “plain” memory processes are typically conceived of as a feature-matching mechanism, as will be discussed in detail in Chapter 3.

On the one hand, collective memory is a very specific form of memory whose nature might be regarded as a particular case in human life different from other forms of memory. But, on the other hand, it is possible to argue that collective memory occupies a more central place. In other words, the investigation into collective memory could yield a closer look at human understanding and opinion making, than the view offered by research on “plain” memory. The demonstration of this possibility is, indeed, beyond the scope of the present dissertation. However, in focusing on collective memory of a given political event, I intend to shed light on some memory processes as they work in the usual context of social controversy about a group identity theme.

In point of fact, the context of collective memory can be regarded as, so to speak, an experimental setting for the investigation of the production and reproduction of concepts, beliefs, and attitudes within a community that tries to understand itself through a controversial common-sense.

## **Main thesis and argumentative pathways**

Taking the idea of the necessary articulation of collective memory phenomena with psychological processes as an assumption, the investigation focuses on arguing that there is an intertwining of some crucial memory processes and the structure of the social milieu.

In particular, two “crucial memory processes” are investigated, namely those underlying the *readiness of the truth-judgements* involved in social memories, and *recognition* of a given social memory as being or not being part of a recent communication. By the first, I mean the extent to which a person is prepared or inclined to accept some memories as true or reject them as false, relative to other memories. The “structure of the social milieu” is investigated specifically as the way in which memories are, so to speak, *distributed within a social aggregate*—for example, among

right and left ideological wings. The importance of these elements within collective memory dynamics is grounded in a theoretical proposal about the psychological generation of social memories.

The theory proposes that in generating a memory, people do not simply experience or express a description of a past event, but essentially take a social position towards the event. Three main processes are distinguished and assumed to work as mutual constraints. First, the construction of a knowledge structure (for instance, the image or proposition of the bombarding of the Presidential Palace with Allende inside). Second, the “mapping” of the social dimension in which the memory object is relevant (relating the military attack on the Presidential Palace with present ideological differences between social groups). Third, the construction of an attitude towards the knowledge structure under construction (affective tendencies of acceptance or rejection towards both the general topic of the military coup and the specific details of the bombarding of the Presidential Palace).

Thus, attitude construction has direct implications in terms of the readiness of the truth-judgements involved in social memories. For instance, the more positive (negative) the attitude towards the knowledge structure under construction, the more likely and easily the description of the event is affirmed as true (accused as false). On the other hand, the psychological process of social “mapping” should therefore have detectable implications for social categorisation. Production of a social memory, for instance, implies placing the memory somewhere between the *pro-* and *anti-*coup poles of a psychological scale (Sherif & Hovland, 1961). Indeed, the social categorisation of an object within a social dimension is itself part of the psychological process of building a map of the distribution of relevant knowledge among social groups. Social “mapping” is assumed to imply the construction of a mental model of the social distribution of knowledge regarding the memory object. This model or “map” is further assumed to guide the position-taking process implicated in the generation of social memories. As a result, it is argued that the more relevant a position for an argumentative context, the more it will be favoured in the course of memory production. For example, a context model representing a highly polarised (convergent) distribution of positions is expected to facilitate the generation of extreme (consensual) memories.

One proposition to be tested in these terms is that social categorisation processes constrain the readiness of

truth-judgements of social memories. Among social categorisation processes, the hypothesis applies particularly to the influence of social identification (Study 1), of stereotyping (Study 2), and the use of social categorisation cues (Study 4) during the generation of a memory. Conversely, social memories expressed by another person similarly constrain social categorisation processes, particularly identification with relevant social groups (Study 3) and intergroup attitudes (Study 5).

In summary, the aim of this dissertation is to show the role that some intra- and inter-psychological processes implicated in being a member of a social group have in the psychological generation of social memories. Hence, the dissertation is meant to give neither a thorough demonstration of the whole theoretical framework, nor a complete view of collective memory dynamics. Instead, it is meant to support the thesis that intra- and inter-psychological processes involved in being a member of a social group, and in the construction of mental models about the social distribution of knowledge, are not only tightly related to each other but also with the intra-psychological processes involved in the taking of a truth-position towards memories.

## **Structure of the dissertation**

In Chapter 2, Bartlett's (1932) theory of reconstructive remembering is considered. It will function as a starting point because Bartlett offers the richest, most open to elaboration, and most influential account of memory from a *mutual mediation* perspective. The brief reconstruction and discussion of this theory will introduce a number of concepts that are further elaborated in Chapter 3 and employed throughout the dissertation. Most importantly, from the discussion of Bartlett's theory a general hypothesis is drawn. Namely that if the social frameworks of reconstructive memory work in the way Bartlett suggests, then social memory production must be, in part, taking a position within a social world.

A theoretical account of the psychological processes implicated in the generation of social memories is proposed in Chapter 3. The emphasis of this theoretical attempt is on the role of the above-mentioned position taking in the construction of memories. Firstly, I contrast the nature of social memories, as they are produced in collective memory situations, from the, so to speak, "plain" memories about which received cognitive theories of memory claim to theorise. Secondly, I formulate a coarse theory of

the psychological processes of memory generation. Thirdly, I elaborate on one implication of this theory, in particular on the relationship between social categorisation processes and the judgmental aspects of social memories. Fourthly, I propose a specific model about the way in which these two processes may be related. I contrast the proposed model—the *argumentative relevance* model—with an alternative that represents the dominant explanation in social cognition research—the *feature-matching* model. Chapters 4 and 5 report empirical studies where the argumentative relevance and the feature matching models are compared in the context of collective memory about the Chilean military coup.

The two experiments presented in Chapter 4 were conducted via the Internet, in order to recruit Chilean participants of different locations from a distance. The first of the two experiments reported in Chapter 5 was also conducted via the Internet, whereas the second was implemented in standard laboratory settings. In these two series of studies I intended to take the first steps towards demonstrating a mutual-constraint relationship between some social categorisation processes and the readiness of truth-judgement involved in taking a position towards a controversial past event.

In Chapter 6 one aspect of the results of the previous two series of studies is further analysed, namely the role of the *sharedness* of social memories among ideological groups. On this basis, I propose a conceptual elaboration of the notion of *social distribution of knowledge* as an essential group-level parameter that works as a hinge between the intra-psychological generation of memories and inter-psychological processes integral to collective memory dynamics. Literature on distributed cognition and inter-psychological co-ordination of memory processes is discussed.

Finally, Chapter 7 reports one empirical study—carried out using the Internet—meant to validate some fundamental assumptions and implications of the conceptual analysis offered in Chapter 6. In particular, a crucial aspect the social distribution of knowledge was experimentally manipulated, which yielded interesting effects on such a basic memory process as recognition.

## 2 The social underpinnings of memory within Bartlett's theory of remembering

*To articulate the past historically does not mean to recognise it "the way it really was." It means to seize hold of a memory as it flashes up in a moment of danger.<sup>1</sup>*

—Benjamin, 1950/1968, p. 257

In his *Remembering: A study in experimental and social psychology*, Frederick Bartlett reported his work on memory from 1913 to 1932. The approach used, the conclusions drawn, and the suggestions made, are still challenging memory research. Perhaps one of the main reasons for this is that Bartlett's work articulates many diverse aspects of memory into one consistent and original theory. Bartlett put forward a lucid network of concepts in order to account for a wide variety of phenomena as part of a consistent whole, from sensory memory to imaginative remembering, from cultural and inter-cultural dynamics of memory to organic evolution.

In particular, the interplay of psychological dynamics and social patterns, which is at the core of this theory, makes it a strategic starting point for approaching collective memory. In point of fact, the opposition between a cognitive and a social account of memory pervades the current intellectual context. The danger of the former is to confine the focus on mental processes and leave the social factors in the external context (for instance Baddeley, 1995; Schacter, 1996), whereas the risk of the latter is to neglect the psychological facet of remembering in favour of its communicational dimensions (for instance Middleton & Edwards, 1990c). In concert, both feed an unjustified opposition between the psychological and the social aspects of memory.

More specifically, Bartlett's theory situates memory within a conceptual framework that departs from the predominant

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<sup>1</sup> In the German edition of 1955 it reads: *Vergangenes historisch artikulieren heißt nicht, es erkennen „wie es denn eigentlich gewesen ist.“ Es heißt, sich einer Erinnerung bemächtigen, wie sie im Augenblick einer Gefahr aufblitzt.*

trace-laden, associationist, and accuracy-oriented views of memory—which are far from suitable for the understanding of young people’s social memories about the Chilean military coup. Chapter 3 is a first attempt to formulate a more adequate view of memory based upon a number of Bartlett’s chief concepts, discussed in the present chapter:

- The concept of *schema* will serve as a background for the view that memories are not stored in associative networks but produced on the spot, in line with current demands.
- The concept of *image function* will set the stage for a revision of automatic knowledge accessibility effects (for instance, priming) in the context of collective memory.
- The concept of *social frameworks of reconstruction* will be the basis for a rhetoric account of the relationships between the psychological and group processes implicated in collective memory production.

### **A methodological note**

In the reconstruction of the theory, I try a strategy different from the one employed by Bartlett to explicate it originally. Following Bartlett’s own distinction, I differentiate between a ‘general theory of remembering’—focused on the mechanisms of recall at the level of the individual adult human subject—and the ‘social psychological study’ of the ‘social mechanisms of recall’ (cf. pp. 237 and 246).<sup>2</sup> Bartlett’s exposition of the theory is in fact organised in two phases, first the general theory and then the social studies.

My perspective is that Bartlett’s strategy is adequate for the rhetorical context for which it was originally meant, that is, the classic discourse of memory as a special faculty studied by means of experimental isolation from any sociocultural ingredient. Against this discourse, Bartlett first re-defines the psychology of memory

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<sup>2</sup> Throughout this chapter I use single quotes in the text to highlight an expression when it appears, at least for the first time, in the form and sense in which it is employed by the author himself. Because the comprehension of the argument might be complicated by the technical use of expressions, Appendix A offers a reader’s guide explanation of the basic concepts. When referring to specific passages in Bartlett’s *Remembering* (1932), page numbers correspond in particular to the fifth reprint of 1950.

and then shows that social factors are not accidental to memory. After he formulated the general theory, he proposed “to consider it anew in the light of the data contributed by these social studies” (p. 246). As I see it, the implicit purpose, and outcome, of this two-step strategy is to smoothly introduce the idea that the study of the social mechanisms of recall undermines the notion of a general, purely psychological, or non-social, theory of remembering.

However, because of this strategy Bartlett fails to be explicit enough about the presence and role of sociocultural ingredients in specific points of his ‘general theory’. For this reason, I think it is fair with Bartlett’s theory to reconstruct it against the grain of this methodological distinction. This would show how the general theory would look like after the transformation demanded by the social psychological studies.

## **THE CONCEPTS OF MEMORY AND REMEMBERING**

Bartlett focuses on ‘remembering’, that is, in the most elaborated and distinctively human form of memory. Two essential aspects of this behaviour determine the way in which Bartlett thinks about the phenomenon of remembering. First, it is an experience whose psychological dimension rests upon individual human organisms in respect to which a past experience is recalled. Second, it is an action, usually a social action, always part of a wider activity, which gives the setting for recall.

As an experience, remembering necessarily entails the conscious articulation of psychological materials that are ‘treated and conceived of as part of his past life’ by the rememberer. Hence remembering has to be regarded in terms of the production of meaning rather than in terms of a reduplicative mechanism. Regarding remembering as experience Bartlett asks about the psychological processes involved in meaning making in recall.

As an action, remembering is both a reaction to a present situation and an intervention into it. As such, the meaning of an act of remembering has to be found in the particular context that frames the act. In this respect, Bartlett asks particularly about the nature of this framing role played by the contextual activity into which remembering is embedded.

## **A ‘functional’ approach to remembering**

Bartlett explicitly adopts a ‘functional’ approach to memory and remembering. By this, he means several different things. Among them, Bartlett’s functionalism refers to a theoretical framework. Or if it is preferred, a *meta-theory*, since it consists of empirical assertions not about memory in particular but about the nature of human psychological functions in general. Two postulates seem to me to be particularly important to framing Bartlett’s theory of remembering.

Firstly, that neither memory nor remembering is a ‘faculty’, different from perception, imagining, and thinking, dependent upon specific devices. These all are different types of adaptive behaviour in relation to a changing environment, using the resources of the whole organism for different specific functions.

Secondly, there is an evolutionary grounding for the previous statement, namely, that—as the last sentences of the book say —“memory, and all the life of images and words which goes with it, is one with the age-old acquisition of the distance senses, and with the development of constructive imagination and constructive thought wherein at length we find the most complete release from the narrowness of presented time and place” (p. 314). This idea of freedom sets the *telos* for Bartlett’s developmental conceptualisation of memory.

Now the general notion of remembering ought to be derived from the essential function of psychological processes. Bartlett has described the achievement of higher psychological functions as a matter of gaining freedom from the tyranny of immediate stimuli in lower organic life. From this point of view, remembering is one way of dealing with situations at a distance; more specifically and even more advanced, one of the ways of coping with absent objects (cf. pp. 224-225). The specific way of so doing in the case of remembering is to handle retrospective time differences between an organism and the determinants of its reactions. This *first re-conceptualisation of remembering* is a direct consequence of the ‘functional’ meta-theory in Bartlett’s work.

## **Memory in its most basic form**

Following Bartlett’s argument, the essential function of psychological processes is interpretable as *keeping a distance from the immediate*, from what is present (cf. pp. 217-220, 301 and 314). In other words, psychological processes mediate

experience. Memory processes, in particular, mediate experience through the influence of past experiences.

In kinaesthetic perception, itself a kind of self-perception, Bartlett finds the general model of memory, since this is one of the simplest cases of determination of present reactions by the past. Regarding this he writes:

Every day each normal individual carries out a large number of perfectly well adapted and co-ordinated movements. Whenever these are arranged in a series, each successive movement is made as if it were under the control and direction of the preceding movements in the same series. Yet, as a rule, the adaptive mechanisms of the body do not demand any definite awareness, so far as change of posture or change of movement is concerned. [...] This obvious fact has given rise to many speculations concerning the ways in which the movements which are past nevertheless retain their regulative functions. (p. 198)

Sensorimotor co-ordination is made possible by a basic memory mechanism involved in kinaesthetic perception. Bartlett explains the exact mechanism in reference to Head's notion of 'schema'. In short, Head (1920) postulated that in every given moment the organism builds up a model of its bodily positions and movements. This constantly changing, postural model represents the current positions and movements as relative to the preceding ones, which are not recorded as individual traces but in a serial pattern. These self-perceptual schemata determine next reactions and, as soon as these actually take place, they are perceived as the last element of a new, modified schema.

In reshaping and extending the concept, however, Bartlett uses the term in a way not as precise, invariant, and unambiguous as one would desire. In fact, his very attitude towards the concept seems to be full of twists and turns, as the following passage illustrates.

I strongly dislike the term 'schema'. It is at once too definite and too sketchy. [...] It suggests some persistent, but fragmentary, 'form of arrangement', and it does not indicate what is very essential to the whole notion, that the organised mass results of past changes of position and posture are actively *doing* something all the time; are, so to speak, carried along with us, complete, though developing from moment to moment. [...] It would probably be best to speak of 'active, developing patterns'; but the word 'pattern', too, [...] suggests a greater articulation of detail than is normally found. (p. 201)

## **Bartlett's concept of schema**

In the simplest sequence of operations, the operation that comes next in any given moment is rarely random but drawn from a narrow subset of all possible operations. Every present, in this sense, faces the problem of the *selective passage* from a given *last* operation to a possible *next* operation. In Bartlett's words, "every movement is carried out as if the last position reached [...] in the last preceding stage were somehow recorded and still functioning, though the particular preceding movement itself is past and over" (p. 198). How is this *passage* possible? And how is the selection done?

### ***The reconstructive nature of the schema***

The explanation preferred by Bartlett is that the last operation in any given moment automatically triggers the parallel production of a chronological 'composition' of the probable past operations that lead to this last operation. The initiation of this process is automatic in the sense that it is unconscious, unintended, and effortless (cf. pp. 198-200).

This *momentary serial composition* does not specify the exact sequence of operations that is assumed to have taken place. This is so for two reasons. On the one hand, the momentary serial composition is built retrospectively, or in backward perspective, specifying a probable or plausible sequence of operations that eventually took place. For Bartlett, to produce such a composition is

to construct or to infer from what is present the probable constituents and their order which went to build them up. It would then be the case that the organism would say, if it were able to express itself: 'This and this and this must have occurred, in order that my present state should be what it is'.  
(p. 202)

On the other hand, the momentary serial composition does not specify these eventual operations individually and then string them together, but directly as a 'mass' or, more precisely, as a coarse sketch of the global sequential pattern (cf. pp. 218-219).

### ***Fitness to a dominant feature***

Then the *next* operation in any given moment, in so far as it 'has more than a merely momentary significance', is determined by the serial composition, or active pattern, that was built in reference to

the *last* operation. The *global sequential pattern* decreases the degrees of freedom for the *next* operation in line with what is assumed to be the past history of operations. The function of the schema is, thus, to render a specific operation, co-ordinated with the preceding ones, probable (cf. p. 207).

In other words, the schema is producing an 'orientation of the organism' towards whatever it is directed to at the moment. This 'orientation' is meant in the same sense that it is said that perception involves a selective orientation determined by a dominant feature (see pp. 31 and 209). The selective orientation is produced by way of facilitating operations that 'fit' the momentary serial composition, or inhibiting those unfitted. "A given reaction having been set up by some specific stimulus, this reaction itself lowers the threshold for some subsequent reactions or series of reaction" (p. 218). Bartlett suggests that the building up of a schema at any given moment automatically modifies the likelihood of possible operations as a function of their fitness to the global sequential pattern that is sketched by the active schema. 'Fitness', regarding any possible operation, ought to be understood as the reverse face of its degrees of freedom as constrained by a background. That is, by the background function of the global sequential pattern (cf. pp. 85, 232, 237, and 290-291 for the notion of fitness).

### ***The central role of tendencies***

The most important and distinctive feature of Bartlett's theory of schematic memory attempts to answer the following questions. Firstly, from the huge number and variety of operations eventually preceding the *last* operation, which ones are going to be encapsulated, or linked, by the schema to be built? In other words, what determines the 'kind' or cluster of operations in terms of which a mass of past operations, a *last* operation, and a *next* operation are all made components of one and the same serial composition and sequence? Secondly, what does it mean, for a given operation, to have 'more than a merely momentary significance'? That which links together different operations, and what gives them more than a momentary significance, is a common 'tendency' of the organism to which certain sequences of operations are functional (cf. pp. 211, 214, 222-223, 302, and especially 231-232 and 234).

A 'tendency' is a global disposition of the organism that specifies a dynamic preference of certain operations, or liking of certain

states, rather than others in a given situation. These tendencies are of two main types, those innate—as appetite and instinct—and those corresponding to an ‘interest’, that is, any properly psychological preference, ranging from habits to attitudes and ideals (cf. pp. 213 and 255). Their influence upon the concurrent building up of schemata consists of biasing the organism towards one ‘dominant feature’ of the whole constellation of past and present operations that are given as the materials for the building process. Then a given schema is built as a *global organisation of materials along with* this ‘dominant feature’.

Remembering is regarded as a particular way of articulation of psychological material into wholes, in the *Gestalt* sense. In fact, Bartlett borrows this reasoning from theories of perception (see pp. 27, 31–33, and 192), extends it to an incipient theory of meaning (see pp. 231–235), and extracts the consequences for a theory of memory (see pp. 52 and 188–191). Only an active tendency in the present can determine the, so to speak, meaning or selective implication of the past for any given passage from a *last* operation to a *next* operation. Moreover, for Bartlett two differed operations are linked as long as a common active tendency is ‘persisting’ throughout this temporal difference (cf. pp. 192, 195, 221–223, and 307).

Finally, in any complex behaviour there is never only one sequence of operations going on, with only one operation occurring at a given moment. Usually, there are many operations working at once from lower-level processes, such as sensorimotor co-ordination, to higher-level processes, as those organised by interests rather than by innate tendencies. It seems that Bartlett assumes that each of these sequences of operations ‘of a certain kind’ is co-ordinated by an independent schema (see for example pp. 201, 212, and 302). This means that any complex behaviour is co-ordinated by a multitude of parallel schemata, all contributing to the whole orientation of the organism.

### ***Summary and links to some contemporary issues***

To sum up, a given *next* operation is ‘schematically determined by the past’ when an active tendency organises a momentary serial composition yielding a *chain continuity effect*. In other words, the *effect* is that operations are unwound in time as *continuous chains of operations*, not mere sequences of independent events but co-ordinated through the schematic influence of the past in any given moment.

Some of the arguments underlying the concept of schema are widely used in psychological theory. In particular, the notions of fitness and matching became an important part of the explanatory devices in cognitive theory after Bartlett. Fitness explains which knowledge structure is likely to be activated or retrieved given a particular context. According to the dominant theories of semantic priming during the seventies and eighties (see Neely, 1991 for a review), the activation of a concept in any given moment is assumed to spread activation automatically to other linked concepts. As a consequence, the activation likelihood for these other concepts is temporarily increased relative to non-linked concepts. Linkages' weight, or strength, represents relative semantic match among concepts. In consequence, the *next* concept to be active is the one that best matches the *last* active concept. Even those theories of priming alternative to the spread-of-activation hypothesis rely on the concept of matching (for instance, Ratcliff & McKoon, 1988).

The principle of fitness will be discussed later in Chapters 3 to 5. There, some predictions drawn from the predominant cognitive view are identified and tested in studies that employ different priming procedures to explore relationships between cognitive and group processes implicated in collective memory. For now, it is important to note the difference of the cognitive theory of fitness with Bartlett's theory of the schema. Fitness and matching, in contemporary theories of priming, are other names for the old concept of association, whereas for Bartlett they are an explanation alternative to association (cf. pp. 304-308). According to Bartlett, the goodness-of-fit of a possible *next* operation depends upon its ability to continue the eventual chain of operations that is constructed on the basis of the *last* operation. In other words, it does not depend upon any pre-existent association, linkage, or connection between the *last* and the *next* operation. Moreover, the force determining the eventual chain of operations for Bartlett is not the degree of semantic or affective matching among operations, but the active tendency. In human memory, this active tendency is usually the interest active in the particular social situation of recall.

The notion of 'dominant tendency' in Bartlett's account is somewhat epitomised by the cognitive concept of knowledge accessibility (Bruner, 1957; Tulving & Pearlstone, 1966; Higgins & King, 1981; Sanbonmatsu & Fazio, 1991). According to the latter, some knowledge structures are more likely to be retrieved from

memory than others, as a function of both permanent and temporary dispositions. The higher the accessibility of a given knowledge structure, the more likely that it will be used as a guide for recall or judgement. Elaboration on this point can be found in Chapters 3 to 5, because the 'central role of tendencies' was empirically investigated in most of the studies reported in this dissertation in terms of accessibility.

The schema is one of the simplest forms of memory, upon which more elaborated forms, eminently remembering, are developed (cf. Bartlett, 1932, pp. 201). Nevertheless, this concept is far too sketchy and mechanistic to explain several other points that Bartlett is interested in stressing. Despite its secondary place within Bartlett's theory, the concept of schema has had a huge influence in psychological theory.

## **The influence of the concept of schema**

In the mid-seventies, a number of influential cognitive theorists draw on Bartlett's elaboration of the concept of schema (Bobrow & Norman, 1975; Minsky, 1975; Rumelhart, 1975; Shank, 1975). In general, these authors were trying to establish the idea that some pieces of learned knowledge are implicit guides for the selection and organisation of information every time an object is perceived, interpreted, or remembered.

### ***Schemata in cognitive theory***

Originally, the schematic nature of cognition was emphasised to explain text comprehension. For instance, while reading or hearing a story one needs the constant construction and revision of an implicit view of the anticipated whole in order to make sense of each part—and even to perceive them as parts. In this sense, the schema is an implicit background, posited by the subject, needed in the course of comprehension. Note that here the schema does not work retrospectively, as in Bartlett's theory, but still works building a contextual setting for the to-be-comprehended stimuli. According to Spiro, the common feature among reconstructive remembering and text comprehension "is that both processes involve the combining of data [...] with contextual knowledge towards the goal of understanding" (1980, p. 259).

More generally, Rumelhart (1980) postulated that schemata were the 'building blocks of cognition'. By this, he meant that all forms of knowledge representation in perception, imagination, and

thinking, were formed on the basis of acquired tendencies to fill out patterns from the information given. The basic assumption here is, closely following Kant's use of the concept of schema, that any given knowledge representation involves an active function of organisation of information on the part of the thinking individual. Then McClelland, Rumelhart, and colleagues developed a connectionist theory of schemata according to which these are *emergent patterns* of activity of the memory system (McClelland & Rumelhart, 1981; Rumelhart, Smolesky, McClelland, & Hinton, 1986). From this last point of view, the global pattern of activation resulting from local interactions among processing units operates as the frame or perspective in line with which the object is interpreted.

At the same time, Shank and Abelson (1977; Abelson, 1981) elaborated the concept of script, referring to prototypical or abstract representations of routine episodes or activities. This effort also builds upon Bartlett's concept of schema. Bower, Black, and Turner (1979) applied the concept of script to text comprehension and memory. More closely related to the work of Bartlett, Rumelhart (1975) studied the nature of schemata in terms of the patterns used by people to organise information concerning folk narratives. In this way, the story schema was re-introduced as the paradigm of schematic representation. Others authors developed this line of research further (Spiro, 1977; 1980; Mandler & DeForest, 1979; Thorndyke, 1977; Thorndyke & Yekovich, 1980; Kintsch & Greene, 1978; Haberlandt, Berian, & Sandson, 1980).

A related concept is that of *knowledge structure*, which was originally employed as a synonymous of schema (Shank & Abelson, 1977; Abelson & Black, 1986). In explaining the notion of knowledge structure, Abelson and Black write:

A fundamental supposition of our work is that knowledge is *schematised*, that is, organised in chunks or packages so that, given a little bit of appropriate situational context, the individual has available many likely inferences on what might happen next in a given situation. (1986, p. 1)

In this sense, scripts, plans, goals, plot units (Lehnert, 1981), and thematic organisation packages (Shank, 1982), among others, are types of knowledge structures, that is to say, of schematic representations in memory. In this tradition, the concept of schema suffers a shift from a general way of organising information in the course of comprehension (see Rumelhart, 1984) to particular structures of memory representation.

Despite differences and inconsistencies in the use of the concept by an increasing number of authors during the eighties, it was common among cognitive scientists to underscore a functional aspect of schemata that is in line with Rumelhart's initial proposition. Namely, that the schema does not represent a concrete object but a type of object. In fact, the basic assumption in the cognitivist approach is that a flexible, abstract pattern of expectancies is needed to represent complex types of objects, because it leaves room for variation among particular cases. A schema is thus conceived of as a construct of the nature of expectancies, in the sense that it represents what is expected of most cases of the relevant domain at a general level and *also* what are the types of variations expected at the level of details. General knowledge stored as a schema is then employed to fill in unobserved details and guide inferences. In Alba and Hasher (1983) there is a discussion of the application of this concept, as elaborated in cognitive theory, to memory; and in D'Andrade (1995) to the anthropology of cultural representations.

### ***Schematic processing in social cognition***

Already in the late seventies, the insights derived from the cognitive exploration of the concept of schema spread to social cognition research. Markus (1977) studied the influence of self-schemata—that is, learned generalisations about the self—on the organisation, selection, and processing of self-relevant information. For example, information that is consistent with the self-schema tends to be easier (faster) to retrieve and better recalled than inconsistent information. Most important is the demonstration that processing, judgmental, behavioural, and memory indicators formed a coherent pattern only if there is a clear self-schema in the relevant dimension.

In a different domain, a series of studies suggested that the perception of trait adjectives and of behavioural information automatically triggers the retrieval of abstract trait constructs relevant to them (Higgins, Rholes, & Jones, 1977; Srull & Wyer,

1979; 1980; Bargh & Pietromonaco, 1982). Additionally, Rothbart, Evans, and Fulero (1979) argued that behavioural information that is consistent with one's expectancies—in line with the trait construct retrieved—are better remembered than information that is irrelevant to the trait construct. This suggests an implicit strive to consistency in knowledge organisation. As O'Sullivan and Durso (1984) have demonstrated, a similar phenomenon occurs with the use of established beliefs about social groups when remembering about a person that has been perceived as a group member. They showed that stereotype-consistent information is better remembered than stereotype-inconsistent information—which has often been posited as part of the explanation of stereotype and beliefs resistance to change (as argued for instance in Cantor & Mischel, 1977).

A final example of the discovery of a schematic organisation of social knowledge is research demonstrating that beliefs or expectancies tend to influence the reconstruction of information from memory (Higgins & Rholes, 1978; Wyer & Srull, 1981). In particular, Higgins and Rholes (1978) have argued that it is one's expressed judgement about a given object, and not the information originally coming from the encoding of the object itself, that is primarily used to reconstruct the knowledge of the object. The result is a memory reconstruction in tune with the judgement made after encoding even—if participants are asked to pretend an opinion different from their authentic opinion when expressing their original judgement. Notably, Bartlett reported a similar phenomenon when analysing the results of an experiment where participants had to describe some pictures half an hour after their presentation. Participants who relied on verbal cues recalled “not the presented material directly, but a judgement which they made about this material when they saw it originally” (p. 52). The same was observed in his experiments on ‘repeated reproduction’ (see p. 83) and on ‘serial reproduction’ of narrative material (see p. 176).

In all these domains—self, impression formation, stereotyping, and judgement—a common phenomenon has been highlighted, namely, that social knowledge tends to be organised according to principles that are ‘beyond the information given’ (Bruner, 1957/1973; see also Bartlett, 1932, p. 188). In cognitive theory and social cognition, schemata were understood as acquired set of expectancies that were stored in memory. In Head and Bartlett, the concept of schema was that of a retrospective construction;

the generalisation of the concept to other domains relative to the comprehension of perceptual stimuli, shifted the meaning closer to the notion of expectancy. In social cognition, the general explanation of the implicit organisation of knowledge is that an abstract summary or sketch of the type of object is automatically retrieved and used to select and relate information for the interpretation and judgement of a given object. For a critical review see Higgins and Bargh (1987).

The basic assumption of this approach is that people are 'cognitive misers' (Fiske & Taylor, 1991), that is, in constant need to reduce the uncertainty of the environment by means of economic and efficient cognitive strategies. Given the scarcity of cognitive resources to scrutinise the environment thoroughly, the economic and efficient cognitive strategies are characterised by the use of relevant organisations of general knowledge to guide behaviour to particular stimuli. Domain-specific stored expectancies acquired from experience were thus regarded as reasonably adaptive sources of information for representation and judgement. In this sense, schemata were conceived of as cognitive shortcuts to save time and effort.

A contemporary use of the concept of schema in the social cognition paradigm is represented by research on narrative representation of social situations and events (Wyer, Adaval, & Colcombe, 2002). Because of its special relevance for social memory, this line of research will be discussed in Chapter 3 when proposing a new theoretical model.

### ***The place of the concept of schema for Bartlett***

In all these waves of reactivation of Bartlett's concept, the essential idea is that experience is constructed on the basis of flexible cognitive structures representing declarative knowledge. These structures help to reduce uncertainty by providing dominant cognitive tendencies for interpretation and action. Two essential aspects of Bartlett's use of the concept have been neglected, however.

On the one hand, the schema was not meant originally as a cognitive structure stored in memory for representing declarative knowledge, but as a dynamic mechanism operating in the every present in order to make such cognitive structures possible. This interpretation draws on the notion that the conceptualisation of schemata in terms of sensorimotor co-ordination is not merely a metaphor but an indication of the basic function of the schema,

namely, the production of a continuity effect. Regarding this twist in later developments around the concept of schema along with the storage–retrieval metaphors, Bartlett seems to anticipate his own position—to be close to Rumelhart’s:

There is not the slightest reason, however, to suppose that each [...] new group of experiences persists as an isolated member of a passive patchwork. They have to be regarded as constituents of living, momentary settings belonging to the organism [...] and not as a number of individual events somehow strung together and stored within the organism.

Suppose I am making a stroke in a quick game, such as tennis or cricket. How I make the stroke depends on the relating of certain new experiences, most of them visual, to other immediately preceding visual experiences and to my posture, or balance of postures, at the moment. The latter, the balance of postures, is a result of a whole series of earlier movements, in which the last movement before the stroke is played has a predominant function. [...] The stroke is literally manufactured out of the living visual and postural ‘schemata’ of the moment and their interrelations. (pp. 201–202)

On the other hand, for Bartlett the concept of schema does not account for the most distinctively human psychological functions but only for the basis from which the latter develop. In Bartlett’s theory the place of the concept of schema is subordinated to other concepts more adequately suited to explain human remembering, thinking, and imagination. Ironically, a number of authors (Neisser, 1967; Shotton, 1990) have interpreted Bartlett’s theory of remembering of 1932 as focused on the cognitive function of the schema. As it will be argued in the next sections, the picture seems to be quite different: Bartlett asserts that remembering appears only when the social world—of conflicting interests and conventionalised cultural patterns—breaks schematic determination.

Bartlett’s experiments on ‘serial reproduction’ have been interpreted as showing that the changes suffered by memory material due to social transmission reflect the influence of the cognitive schemata shared by participants. However, Bartlett claims that these transformations reflect that social conventions, not schemata as such, are the factors determining the dominant feature or ‘rule of arrangement’ according to which the material is interpreted and recalled. Moreover, these experiments on social transmission were a means for grounding a suggestion made by

previous experiments focused on individual observers (cf. pp. 89 and 95).

Many of the transformations that took place as the repeated reproduction of prose passages were directly due to the influence of social conventions and beliefs current in the group to which the individual subject belonged. (p. 118)

Bartlett understands the notions of interest and tendency—that which determines the ‘dominant feature’ in the psychological articulation of any whole—in reference to Binet’s concept of *idée directrice*. Binet describes this concept in terms of *influence de la tradition*, as one of the important forms or expressions that it has. Accordingly, and pushing the suggestion further, in Bartlett’s view the combination of interests in human remembering is determined mainly by the complex, conflicting, and dynamic patterns of interests dominant in the rememberer’s social groups. Towards this notion, Bartlett builds a theory of remembering beyond schematic memory.

## **A THEORY OF REMEMBERING IN TWO STEPS**

Bartlett tries to account for human memory in a theory of remembering that departs from the traditional view of recall as an associative process based on the reactivation of memory traces.

If this interest is to be pursued, the main task is to determine what has to be added to the theory of basic memory contained in the concept of schema. So as to understand remembering as the highest form of memory, Bartlett’s reconstructive method compels him to build upon the schematic determination as the primitive form of memory. The transition from schematic memory to adult human remembering is marked by two breaks or revolutions in the natural history of memory.

The first revolution is [a] the overriding of the chronological serial determination of schematic memory. Remembering, in fact, seems to be relatively free from the predominance of the *last* operation. As such, remembering conquers new frontiers in the struggle to keep distance from the immediate.

The second modification is [b] the introduction of creativity in memory, which surmounts the merely automatic way to solve the problem of the *selective passage* by schematic memory. Remembering involves an argumentative and imaginative ‘effort

after meaning' (see pp. 20, 44-45, 188, and 227) that is completely beyond the scope of the work of schemata.

These are not only the two great revolutions in memory phylo-genetics but also correspond to the two fundamental ingredients of every act of remembering. Namely: [a'] the *anchoring to a remote past experience* and [b'] the *reconstruction of its details*. To connect these pair with the two revolutions mentioned above: For Bartlett the anchoring to a remote past experience implies the overriding of the chronological serial determination of schematic memory. In turn, the reconstruction of the details of a remote past experience presupposes the introduction of creativity in memory.

These two aspects of remembering can be mapped onto alternative theories. For instance, for cognitive theories of memory of the late sixties to seventies, 'generation' and 'selection' of codes are processes responsible for the production of representations and the judgement or selection of alternative representations, respectively. If terms from the late eighties are preferred, 'activation' and 'use' of knowledge structures would be the parallel concepts. In this current cognitive terminology, the anchoring to a remote past experience is explained as the excitement of memory traces beyond a given threshold. The reconstruction of the details of a past event, in turn, is regarded as the cueing or biasing role of the activated structure on subsequent activation processes. (These alternative theories, and the way to relate them with Bartlett's theory, are discussed in Chapter 3).

Bartlett understands these two ingredients, in contrast with these later theories, as [a''] the work of the 'image function' and [b''] the constructive elaboration of a position taken towards the object. The way in which these two ingredients are thought to be articulated determines the concept of remembering. To advance the general proposition, for Bartlett *a memory is a narrative or argumentative construction, anchored in a past experience by means of a socially shareable image, that justifies a current attitudinal tendency towards such image of the past.*

## **[a] The image function**

As suggested before, any schematically determined complex behaviour is co-ordinated by a multitude of schemata built in parallel, either all organised by a common tendency or each one by a partial tendency working in parallel to other harmonic tendencies. This is a feasible way as far as there is no conflict

among different active tendencies. However, complex behaviour very often involves conflicting partial tendencies where no simple solution to the predominance of one over the rest is guaranteed. This is especially so when innate tendencies are supplemented by a complex assortment of interests derived from life in social groups. The problem of complexity of tendencies, thus, is the next challenge for schema-driven behaviour.

### ***The problem: The clash of interests***

For Bartlett the complexity of tendencies is roused by the development of those that are social in origin (cf. pp. 211, 296 and 302-303). Following Bartlett's habit, I will speak of 'interests' whenever the tendencies are referred to within this socially determined context.

The exact problem is this: If only one interest is strongly dominant, the selection of a specific feature in relation to which a global sequential pattern is organised, will be done automatically. Yet, if there are several competing interests, each pushing to the selection of different features with comparable strength, then no clear orientation of the organism will arise (cf. pp. 206, 219, and 302).

In order to surmount the paralysing effect of the 'clash of interests', several mechanisms alternative to schematic determination could emerge. Bartlett hypothesised that the most important of these non-schematic mechanisms to help constantly solving the problem of the *selective passage* had to be the use of mental images. For images:

are essentially individual and concrete in their character; and, since the typical case for their occurrence is the arousal of cross-streams of interests, they often bring together psychological materials and reactions which had diverse origins. Thus they increase the possible range of diversity of responses, and they mark a further step forward in the general development of distance reactions. (p. 303)

### ***The solution: Kaleidoscopic images***

Images, then, are regarded as devices appropriate for handling crossed or conflicting interests because they are 'concrete', that is, because they are a composite of many aspects, many orientations dependent of different active interests, put together idiosyncratically. The "weighted detail tends to stand out as images" (p. 303). That is to say that an image, characterised by

the “variety and unexpectedness of its concrete imaginal constituents” (p. 222), is a kind of solution of compromise among active interests. “Material organised by one takes on a tinge of the significance commonly dealt with by another” (p. 221). An image is thus a high-dimensional representation where each active tendency or interest relates to one or some of the dimensions that are ‘accidental’ or irrelevant for the other non-overlapping active interests. This high-dimensionality, or concreteness, of images as devices for handling ‘cross-streams of interests’, gives them the quality of a kaleidoscope.

By ‘image’, however, Bartlett often means more than sensory images. Even if he centres his analysis, and indeed the naming, of the image function on sensory images, he means something more general. I would describe image-function devices as high-dimensional representations composed along with no single “logic” or interest but integrating divergent interests and meanings, irrespective of whether there is any sensorial content referred to. Although Bartlett is not explicit in this respect, this is the meaning that gives the greatest consistency to his discussion of the image function. Indeed, some times Bartlett contrasts images from words, and imaging from thinking (see pp. 222–226, and 312–313). But these differences are relevant *within* the overriding of schematic determination by means of high-dimensional representations. Words are psychological materials equally appropriate for the work of the image function, because in this context words count as keys or cues for memory rather than as means of verbal expression (see for instance pp. 111–112 and 209). Bartlett regards both sensory images and words as related to the development of long-distance senses for the orientation in space and time, respectively. In fact, Bartlett’s experimental observation reads: “in the form of a sensory image, or, just as often, isolated words, some part of the event which has to be remembered recurs” (p. 209). Words, no less than sensory images, offer multiple uses at each dimension, from the phonologic details to their ambiguity regarding meaning. That is, words also enjoy the high-dimensionality that makes them suitable for mingling cross-streams of interests and multiple roads of meaning making.

How, then, does the kaleidoscopic character of images *makes it possible to recall specific and remote past experiences for the first time*? I will explain the way the image function is hypothesised to

work, indicating the principal points of departure from schematic determination.

### ***Unpacking the schema***

The limit of the schema, as it was stated before, is the clash of interests, because the latter impedes the automatic determination of a predominant feature along with the global sequential pattern of past operations is organised. In these cases, instead of an automatic orientation, the image of a 'detail' comes up.

This 'detail' is assumed to be a 'little outstanding detail' of the past sequence of operations. It functions as the dominant feature along with a representation of this past sequence of operations is organised. Whilst in schematic determination the momentary serial composition captures the past in a nutshell, though reducing this past to a 'mass' or holistic pattern whose components are inaccessible, the effect of the image function is to break this undifferentiated whole and make one or two details of the past accessible (cf. pp. 209–211). This is what later has been called *content-addressable memory* (see Kohonen, 1980, McClelland & Rumelhart, 1985; 1986; Seifert, 1994). This concept refers to a memory device from which pieces of stored information are recalled on the basis of arithmetic functions or fragments of stored items (Kohonen, 1995).

This approach to the notions of activation and accessibility of knowledge structures offers an interesting contrast with current theories based upon associationist metaphors (for reviews, see Sanbonmatsu & Fazio, 1991; and Higgins, 1996). This view was mentioned when commenting on theories of cognitive fitness and semantic matching in priming, and it will be discussed in more detail in Chapter 3. According to most accounts of this view, the access of a given concept in semantic memory has two temporary automatic effects. First, increases the readiness of the concept for further access. Second, spreads activation to related concepts, thus also making them more accessible. For Bartlett, when conflicting interests concur, the first content to come up would not necessarily be one that ought to be "on top of the head"—to use a phrase popular in social cognition research. Rather, it would be a content addressed through an 'image'. The image comes up when conflicting interests break automaticity. Only then a 'detail' becomes accessible. This implies that content-addressable memory should not be understood purely in terms of automatic association. In the following sections, it is shown that for Bartlett

the image is, after the manner of a kaleidoscope, both polyphonic and moulded by interests. The consequences of these features for the notions of activation and accessibility of social memories, as studied in the whole series of experiments of the dissertation, are discussed in Chapter 8 in contrast with the spread-of-activation view.

### ***The representational function***

This transformation of the *dominant feature* into an *outstanding detail*, despite the fact that it does not depart from the dynamics of articulation of materials along with a dominant element, means that the memory process acquires a representational function for the first time. Strictly speaking, a schema is not a representation of the past, but a *procedural* device that generates a chain continuity effect in line with a given tendency. On the contrary, the image is a *declarative* structure: it is *about something*. For Bartlett this implies that the image function depends upon 'consciousness'. Moreover, it is subsequent to what might be called the phylo- and onto-genetic emergence of 'consciousness'.

By consciousness, Bartlett does not mean 'awareness' (cf. p. 214) but the ability to take mental operations as objects for other mental operations. In Bartlett's insistent phrase, consciousness is the capacity of an organism 'to turn round upon its own schemata'. In general, consciousness seems to be conceived of as *reflexivity*; but at this point of his theory, Bartlett understands consciousness particularly as *intentionality*. For reasons that will be established later, I propose to call this introduction of declarative or representational knowledge by the image function, the *first 'turn round upon' the schema*. It refers to the ability to take a given schema, if needed, and break it down into its details and make explicit reference to these details of the past.

### ***The adjournment of chronological determination***

For Bartlett, schematic memory is the tyranny of the last preceding operation (cf. pp. 203, 210, and 219). Again as a way to *keep distance from the immediate*, the image function is in essence the break of the undifferentiated and sequential structure of the influence of the past.

In general, images are a device for picking bits out of schemes, for increasing the chance of variability in the reconstruction of past stimuli and situations, for surmounting the chronology of presentations. By the aid of the image [...] a man can take out

of its setting something that happened years ago, [and] reinstate it with much if not all of its individuality impaired. (p. 219)

As it has been stated, the condition for the image function is the clash of interests. Images typically emerge with “the arousal of cross-streams of interests” (p. 221). In addition, the reshuffling of material that the complexity of interest demands is organised by new, high-level interests that are particularly persistent (cf. p. 211). Therefore, the ‘little outstanding detail’ that is going to play the part of the anchor is determined by the interplay of the long-lasting and conflicting interests, not by the principle of continuity with the *last* operation. The possibility of *long-distance anchoring* is then open.

The consequence of this aspect of the image function is that, by adjourning the principle of continuity, it does not destroy the current chain of operations but increases its complexity and extension. In intervening with the work of the schema, the image function creates the possibility to re-connect, resume remote chains, re-cover patterns of operations absent in the present, and to integrate them into the current chain (cf. p. 206). In point of fact, this is the double meaning of *adjournment*: to discontinue a chain in order to continue it. In the same sense, the image function overrides schematic determination but does not cancel it because the former emerges and works on top of the latter.

### ***The importance of the apparently unimportant details***

In human life, according to Bartlett, a modest or scarce overlap among concurrent interests ought to be supposed. Under these conditions, the memory process deviates from the road of schematic determination and takes the road of producing an image. The multiple parallel constraining schemata compose an *ad hoc* high-dimensional structure to ‘fit’ the different active interests.

If the concurrent interests are not extremely conflicting, the image that automatically comes up may be relatively simple and smooth, and its nuclear or integrative elements will make it recognisable and memorable. With highly conflicting interests at work, however, the image will be jerky and will present many oddities. The latter correspond to the many disparities among interests and the erratic elements that would be needed to assemble conflicting interests into one single structure. The resulting deformity of the image is like the irregularities of any polygon formed by the concurrence of many divergent dimensions.

In this case, the irregular elements give the image its distinctiveness, instead of those common to the main interests. These rare elements will not fit the main and majority of active interests, hence appearing trivial from this point of view.

### ***The polyphonic nature of images***

Images not only express the overall work of different constraints in one moment. They also stand as *meeting points* among different remembering acts of the same person, and among different people within a given social group. This is so because a given image can be the starting point of many different routes of the remembering process. Bartlett regards this polyphony of images, in line with his functional perspective, as increasing the chance of variability of operations (cf. pp. 211 and 219). In his studies on memory, Bartlett observes that each act of remembering of the same thing and by the same rememberer is somewhat different. This gives to any given act of remembering its singularity, its concrete idiosyncrasy (cf. pp. 217 and 220).

However, the other aspect of this variability, or polyphony, is that images are usually generalised or shared—otherwise they could not be described as polyphonic. Bartlett discusses this in two levels. First, images are frequently stable *within subjects*. Every time a given individual remembers an event, a similar image might anchor the remembering process (cf. p. 224), even though the route followed by this process varies from time to time. The image then serves as a meeting point of different recollections, which are experienced by the rememberer as instances of one and the same memory, but without losing the singularity of each instance (cf. p. 212).

Second, images tend to be generalised *between subjects*. Bartlett observes that images used by the rememberers are very often taken from the dominant cultural patterns of their social groups (cf. pp. 172–173 and 255). This is particularly outstanding in the case of verbal representations (cf. pp. 223 and 225–226). His point is that even though images are mostly social conventions, a given image will trigger routes of the remembering process peculiar to each individual rememberer, giving memories their ‘characteristically personal flavour’ (p. 213). In synthesis, images work as connectors or paths between the conventional and the singular.

Perhaps Bartlett offers here an implicit interpretation of G. Le Bon’s passages on the role of ideas for the ‘popular mind’ in his

*Psychologie des foules*. According to Le Bon, ideas can have an influence on crowds in so far as they assume a concrete form, that is, the form of images.

These image-like ideas are not connected by any logical bond of analogy or succession, and may take each other's place like the slides of a magic-lantern which the operator withdraws from the groove in which they were placed one above the other. This explains how it is that the most contradictory may be seen to be simultaneously current in crowds. (Le Bon, 1895/1913, p. 69)

Similarly, in Bartlett's theory the polyphonic nature of images means that they are, so to say, meeting points for multiple possible recollections. Because of this polyphony, images can be generalised means of remembering, without losing their attachment to particular experiences.

To put it in more contemporary terms, an image is a *type* and the particular memories that they give rise to in any given moment and in any given person are *tokens* of this type (Rumelhart & Norman, 1983). Indeed, this is the way Conway (1997a), after Mannheim's view of generational memory, currently conceptualises the relationship between what is socially shared in autobiographical memories and the specific memories of individual rememberers: The former are types of experience and the latter are tokens of it.

Equally close to Bartlett's argument is the connection of the polyphonic nature of images to the rhetoric notion of commonplace. Commonplaces are discursive devices that enable the speaker to anchor a specific, even counterintuitive, argument to conventional themes, ideas, or images, which at the same time permit disagreement and contradiction (see Billig, 1996). For Bartlett the effort of the orator, the inventor, or the poet, is precisely to make allusion to individual experiences by means of a shared image that, because it demands interpretation, 'diverts meanings'. Socially shared images are commonplaces because of their polyphony. Bartlett writes:

It may, at first, seem that the mass of folk-proverbs which are traditionally preserved among every people contradicts the tendency towards the concrete. But the strength of the folk-proverb lies in its applicability to the individual instance. (p. 173)

The relationship of Bartlett's theory and a rhetorical approach will be revisited at the end of this chapter, and then elaborated in Chapter 3.

### ***How to explain memory persistence without the storage of traces***

Finally, as in the case of the schema, the key element of the image-function operation is the primacy of 'interests'. It explains both change and persistence.

On the one hand, both the little outstanding detail that comes to mind first and the subsequent recall change constantly. According to Bartlett this is because the image is not stored in fixed traces to be re-exited, but is contingent upon the way in which concurrent interests happen to be organised at any given moment (cf. p. 212).

On the other hand, images tend to persist, and the constant change in recall is usually confined within regularities that are typical of the particular rememberer and of his social group. The images and the psychological material that is organised in recall are stable because they are 'carried along with persistent interests' (cf. pp. 211, 223, and 302).

Persistence of tendencies, then, is the basic memory mechanism underlying remote memory. According to Bartlett, tendencies persist in two ways. Firstly, persistence is made possible by the stabilisation of a pattern of organisation of tendencies typical of any individual. This stabilisation depends upon the slow fixation and automatising of particular modes of interplay among interests (cf. pp. 212-213, 219, and 302). Secondly, persistence of tendencies is also determined by the social process of conventionalisation, that is, the stabilisation of patterns of organisation of interests typical of any social group (cf. pp. 57, 255, 263-264, 296, 303). Psychological automatisms and social conventions, then, are the *schematic* frames or settings that explain the persistence of interests.

However, for Bartlett the advantage of remembering is not identity but difference or, in Bartlett's functional words, the increased 'chance of variability'. The schema explains persistence and the image function explains change. "The former facilitates the operation of the past as it operated before, the latter facilitates the operation of the past in relation to the somewhat changed conditions of the present" (p. 219; cf. Johnson & Sherman, 1990). In summary, the little outstanding detail that anchors the remembering process persist because they are 'carried along with'

persistent interests, and changes because this persistent interest is in dynamic interplay with other tendencies.

## **[b] Attitude and memory construction**

The image function has been discussed as a break of the schematic determination. None of the aspects involved in this overriding of the schema already discussed, however, stands as the central feature of Bartlett's theory of remembering.

In remembering one not only refers to a remote past experience but also recalls some more or less specific thematic aspects of it, usually in the form of a narrative account. This is done by the 'reconstruction' of recollections on the basis of an anchoring image. The concept of *reconstruction* occupies the core position within a reconstructive theory of memory. It is the last development in the natural history of memory. Bartlett composes the prior history, from the schema to the image function, as an appropriate background for the last transformation needed to account for the most distinctively human form of memory.

The rest of this chapter centres on the nature and implications of this transformation. I will try to demonstrate that for Bartlett reconstruction ought to be conceived of in terms of its social dimensions in order to account for the specificity of remembering. Firstly, a brief discussion of the notion of reconstruction is necessary to set the stage for the investigation of what is unique in remembering. Secondly, I will show that the specificity of remembering is a two-fold, according to the already-mentioned distinction between a 'general theory of remembering' and the 'social psychological study' of the 'social mechanisms of recall'. Regarding the former, I claim that for Bartlett the specificity of reconstruction in remembering lies in its reflexive nature. Concerning the latter, I argue that for Bartlett this reflexive nature of reconstructive remembering is made possible by the mediation of social conventions—not merely influenced by them.

### ***The concept of reconstruction***

Broadly speaking, the process of reconstruction is the articulation of a whole—namely, the particular recollection—from a little outstanding detail. Completing a previous quotation:

The need to remember becomes active, an attitude is set up; in the form of a sensory image, or, just as often, isolated words, some part of the event which has to be remembered recurs,

and the event is then reconstructed on the basis of the relation of this specific bit of material to the general mass of relevant past experience or reactions, the latter functioning, after the manner of the 'schema', as an active organised setting. (p. 209)

More specifically, the image-function work triggers two related sub-processes: the formation of an 'attitude' towards the image and an effort to give meaning to this attitude. Before analysing the distinctive aspects of reconstruction in remembering, a brief specification of these sub-processes is in order.

On the one hand, *attitude* is the affective tendency displayed in reaction to the situation demanding or needing the recall of the past and especially to the image raised by the weighted interplay of multiple schemata (cf. p. 303). The image, as a high-dimensional reference to one or two details, is not saturated of meaning but usually a puzzle that elicits different sentiments. An image is something that arises *spontaneously* in the rememberer's stream of mental operations, usually in a surprising fashion (cf. pp. 209 and 217). The attitude arisen is the momentary reaction as determined by 1 tendencies and interests that are more permanent (cf. pp. 206-207).

*Construction*, on the other hand, is the 'fitting' of possible pieces of a past experience to a pattern determined by the attitude, or general impression (cf. pp. 55, 204-206 and 303). This composition is guided by the image: the little outstanding details it represents works as a cue (cf. pp. 109-112 and 209). The function of the composition is, at one and the same time, to solve the enigma posited by the ambiguous image, and to give the attitude a meaningful relationship to the to-be-recalled past.

Summing up, memory reconstruction is the affective anchoring to a polyphonic image of the past and the weaving of an argument, or narrative, around that affective-imaginal anchor.

Attitude and construction are, according to Bartlett, the two main factors implicated in both recall and recognition, namely, the set-up of a psychological orientation towards the specific task, and the organisation of psychological material in line with this orientation. These ingredients, however, are also present in recognition and perception. For Bartlett remembering is different because of a novelty involved in the way in which psychological material comes into play. This novelty is the introduction of *creative reflexivity* in memory. In Bartlett's words:

In recognising, the scheme, or pattern, or setting *uses* the organism, so to speak, to produce a differential reaction; in remembering, the subject uses the setting, or scheme, or pattern, and builds up its characteristics afresh to aid whatever purpose the needs of the moment may demand. (p. 196)

### ***Reflexivity and meaning***

Thus far, the specificity of reconstructive remembering has been isolated. As a starting point, reflexivity is described in terms of the difference between recognition and recall. "In the former there is reaction by means of organised psychological material; in the latter there is a reaction to organised psychological material" (p. 196). Furthermore, the creative reflexivity of remembering is implicitly conceived of as defining the kind of meaning specific to reconstructive memory. In this section, it is argued that this reflexivity has implication to both the concept of attitude and the concept of construction as they have been already discussed.

In opposition to the passive view of memory as the retrieval of fixed, stored traces, Bartlett argues that remembering is

an imaginative reconstruction, or construction, built out of the relation of our attitude towards a whole active mass of organised past reactions or experience, and to a little outstanding detail. (p. 213)

To start with, *attitude* acquires a specific significance in remembering. As a psychological reaction to the anchoring image that comes up, it implies a deeper degree of reflexivity. The image, formed as an integration and suspension of concurrent schemata, becomes itself the central object of psychological life. The more permanent tendencies, in conjunction with current momentary tendencies, determine what aspects of the image are attended to, and whether the affect towards each of the attended aspects is positive or negative. The attitude is the resulting overall evaluation, but also the starting point of reconstruction. The attitude makes the image an object of affect, and the rest of the remembering process will proceed only from this reflexive operation (cf. p. 303).

In addition, *construction* is not only the filling or completing of a given pattern, as it is in perception and recognition, but an account of the relationship between the image and the attitude. As such, construction in remembering is a meaning-making process, or 'effort after meaning', that leaves the image function far behind (cf. pp. 224-226). Its structure is that of a narration and an

argument, a story either fantastic or rational that is woven to create new meaning (cf. pp. 84-89, 126-127, 174-175, and 224-226). For Bartlett this is true even in the simplest case, where the construction works as a justification of the attitude towards the image, as the following passage testifies.

It looks as if what is said to be reproduced is, far more generally than is commonly admitted, really a construction, serving to justify whatever impression may have been left by the original. It is this 'impression', rarely defined with much exactitude, which most readily persists. So long as the details which can be built up around it are such that they would give it a 'reasonable' setting, most of us are fairly content, and are apt to think that what we build we have literally retained. (p. 176)

This *double* reflexivity is made possible, according to Bartlett, by consciousness. It is another expression of the capacity to 'turn round upon one's own schemata', without which remembering is asserted to be impossible (cf. pp. 206 and 214). I distinguish, however, between the 'turn round upon' the schema given by the image function, essentially linked to the emergence of the *intentionality* of psychological operations, and this *second* 'turn round upon'. The latter is the capacity to take psychological material and tendencies as objects and resources and, instead of following them automatically, use them in the service of a particular interest (cf. pp. 211 and 213). Instead of being pushed by the schematic forces, the rememberer reflexively places him or herself, so to speak, behind or before its determining forces, that is, 'turns round upon' them. The image function gave the initial conditions, indeed, for the image already neutralises the automatic determination of schemata. Nonetheless, the affective position that the rememberer takes in relation to such an image, and the thematic use of the little outstanding detail to build a justification of the attitude, define the degree of reflexivity that makes remembering possible.

The consequence of this framing of remembering is the crucial emphasis on the imaginative or constructive nature of the process. It involves, in opposition to the notion of retrieval, the intervention of creativity in meaning making.

Certainly, the schema already comports a basic creativity, which Bartlett links to the notion of adaptive variability. In schematic co-ordination of movements

I do not, as a matter of fact, produce something absolutely new, and I never merely repeat something old. [...] I may think that I reproduce exactly a series of text-book movements, but demonstrably I do not; just as, under other circumstances, I may say and think that I reproduce exactly some isolated event which I want to remember, and again demonstrably I do not. (p. 202)

The constructive nature of remembering involves a reflexive, not merely reactive, creativity (cf. pp. 235 and 237). The rememberer 'turns round upon' the very constraints that attach its behaviour to the materials employed. These constraints and materials become the themes of a construction.

### ***The mediation of social conventions***

The essential outcome of this reflexivity is the following: Whilst the schema gives behaviour an *adaptive or 'reactive signification'*, construction gives it a *socially mediated meaning*.

Bartlett conceptualises constructive memory as a particular type of 'effort after meaning' (cf. pp. 44, 227, and 237). In general, the latter is an effort to 'fit' materials to a given interest, or to compose an arrangement where a given interest 'fits', because it lacks a setting in the immediate situation. In the particular case of remembering, it is an effort to 'reconstruct' a setting for a given attitude with materials that ought to be found in a remote past. Among the different types of 'effort after meaning', the specificity of remembering is that "the setting of a particular group of stimuli is treated and described as belonging to the past life of the remembering subject" (p. 237). Thus, the very structure of memory construction has a narrative character.

Although Bartlett does not develop the notion of narrative construction in relation to discourse, he distinguishes different 'manners' or genres of memory construction (cf. pp. 264-266). In so doing, Bartlett argues that the 'effort after meaning' involved in constructive memory is mediated by social factors. I use here the notion of genre in the sense that it has in Bakhtin's dialogical theory of language. According to Bakhtin (1986), genre is the historical form of the utterance, which implicitly encompasses that of the interlocutor (see also Todorov, 1977; and Kent, 1991). For Bartlett the 'manners' or genres of memory construction depend upon the interplay between the dominant group tendencies and the rhetoric context of dialogue.

Any story, or any series of incidents, recalled in the presence, and for the hearing, of other members of the same group will tend to display certain characteristics. The comic, the pathetic, and the dramatic, for example, will tend to spring into prominence. There is social control from the auditors to the narrator. [...] The literary orator has one style for his speech, a different one for his written essay. [...]

Change the audience to an alien group, and the manner of recall again alters. Here the most important things to consider are the social position of the narrator in his own group, and his relation to the group from which his audience is drawn. If the latter group are submissive, inferior, he is confident, and his exaggerations are markedly along the lines of the preferred tendencies of his own group. If the alien audience is superior, masterly, dominating, they may force the narrator into the irrelevant, recapitulatory method until, or unless he, wittingly or unwittingly, appreciates their own preferred bias. Then he will be apt to construct in remembering, and to draw for his audience the picture which they, perhaps dimly, would make for themselves. (p. 266)

In general, the different genres of reconstructive memory go from rote recapitulation to inspired construction, as a function of the social framework of remembering and the place taken by the rememberer within a social group. When the social group of the rememberer does not provide a predominant interest to which he or she can adjust the construction, it tends to appear as a disinterested and objective-like description of details. This is the genre to which remembering is reduced in most experimentation with irrelevant material. However, when the 'need to remember' is relevant to a predominant interest provided by the social group, the imaginative nature of the construction becomes apparent. If, in addition, the social group has developed and stabilised conventional patterns of construction, the imaginative construction adopts the form of a concise and dogmatic statement. Otherwise, if the predominant tendency of the social group is somehow challenged by the immediate situation, Bartlett predicts the unfolding of a rich and exciting narrative.

To explain this, Bartlett follows Halbwachs' (1925/1992) research on the social frameworks of memory. According to the latter, the remembering patterns within a social group become constraining factors of individual remembering as long as recollections form, and relate to, a shared social identity. Really, Bartlett not only submits to this theory but also grounds it more systematically at

the psychological level. His proposition is in essence that the cultural patterns of a social group determine the materials usually employed in remembering (cf. pp. 255 and 296).

In connecting the work of Halbwachs to his theory of the schematic and reconstructive dynamics of memory, Bartlett attempts to articulate the psychological processes underlying remembering and their social determinants. Even if remembering is an action and an experience of individual rememberers, for Bartlett this action and experience cannot be accounted for only in psychological terms (cf. pp. 241 and 298). In other words, there is no remembering without a social framework that sets the materials for construction (except, possibly, in some rare cases of laboratory experiments). This is so, according to Bartlett, because the constructive character of remembering makes it an 'effort after meaning' in line with interests with a social origin.

### ***Interlacing social and psychological processes***

The organisation and conflicting dynamics of interests in the social group are 'direct determinants' of individual remembering (cf. pp. 245, 254-255, 281, and 300). The converse is also true, namely, that there is no social memory without the psychological dynamics of schemata, the image function, and reconstruction, at the individual level (cf. pp. 296 and 299).

This interplay between social and psychological factors is a chief point in Bartlett's theory. Without it, the picture of remembering would be simply the opposite of schematic memory. Indeed, the argument is that social frameworks are like social 'schemata' that enable the emergence and play of construction as the final departure from the schema at the level of the individual rememberer (cf. p. 264). The social group gives the conflictive, but stable frames and interests that govern construction according to the social position taken by the rememberer.

In remembering, then, schematic determination does not disappear but is transferred to the social conditions of possibility of reconstruction.

Every group is organised and held together by some specific psychological tendency or group of tendencies, which give the group a bias in its dealing with external circumstances. The bias constructs the special persistent features of group culture [which in turn settles] what the individual will observe in his environment, and what he will connect from his past life with this direct response. It does this markedly in two ways. First, by

providing that setting of interest [...] which favours the development of specific images, and secondly, by providing a persistent framework of institutions and customs which acts as a schematic basis for constructive memory. (p. 255)

Commonplaces and social conventions come out as anchoring images or as meaning-making patterns, that is to say, they offer the materials and resources for the two fundamental ingredients of remembering: image-function and reconstruction. Hence, the use of commonplaces and social conventions in anchoring and in construction are the main doors through which social processes participate in the psychological processes constituting remembering. And, as later authors have supported, this is true even in autobiographical memory (Conway, 1997a).

At the same time, social frames of memory are formed and developed by the self-organised co-ordination of innumerable social actions (cf. pp. 45 and 278). Concerning memory, these are *acts of remembering*, in the form of commemoration and historical or autobiographical story telling. These memory actions are doors through which psychological processes participate in the social processes of reproduction, modification, and creation of the commonplaces and social conventions later used to frame remembering. For the memory-framing function of commonplaces at a societal level, see Noyes and Abrahams (1999).

## ***The social construction of the social frames of reconstruction***

Bartlett discusses the formation and development of social convention in terms of the stabilisation of cultural patterns, or 'conventionalisation'. At first sight, Bartlett discusses the social process of conventionalisation in order to draw an analogy between the function of schemata at the individual and at the group levels. In both cases, predominant tendencies shape the reproduction of materials in a specific direction. As I see it, the argument unfolded by Bartlett is very different. In his experiments on 'serial reproduction' and in his analysis of conventionalisation, Bartlett tries to show that important determinants of memory come from group properties that cannot be reduced to the psychological life of individual rememberers. Remembering is regarded as embedded in a social process of constant formation of social conventions.

The process of conventionalisation is further explained in terms of 'social constructiveness' (cf. pp. 278–279).

We can put our finger upon this, that, or the other thing and say: 'This comes from such and such an individual source'. But when we have done all that can be done in this way, there is much left over. It is left not merely because the phenomena are too complicated, but because every constructive achievement of social organisation depends upon the form and trend of the group before the achievement is effected, as well as upon the efforts of innumerable individuals in the mass. (p. 278)

According to our author, a social group is always organised by active tendencies, each biasing social practice in a particular way, and together determining cultural patterns. With their development, specialisation, and stabilisation, such patterns acquire an objective-like character (cf. p. 247). People regard them as sources of group organisation—when 'in reality' these patterns also depend upon specific social tendencies that make it possible for people to believe, need, and love them (cf. p. 255). Only by means of this naturalisation of socially constructed patterns, can the emergent group-level properties become direct determinants of social action (cf. pp. 244, 253–255, 274–280).

To explain this naturalisation or reification, Bartlett employs an argument in line with the notion of *self-organisation* (Kohonen, 1984; Makishima, 2001; for the use of this notion in social psychology see Eiser, 1994; Harton & Latané, 1997; Eiser,

Claessen, & Loose, 1998). Self-organisation can be defined as “the process by which individual subunits achieve, through their cooperative interactions, states characterized by new, *emergent properties* transcending the properties of their constitutive parts” (Schweitzer, 1997, p. xxi). Likewise, Bartlett argues that social conventions are socially constructed by a social co-operation process that produces cultural patterns out of the interaction of individual psychological lives. To explain this process of self-organising social construction of the social frameworks of remembering, Bartlett employs a metaphor about team co-ordination in a quick match:

The members of the team go rapidly into positions which they did not foresee, plan, or even immediately envisage, any more than the bits of a glass in a kaleidoscope think out their relative positions in the pattern which they combine to make. Yet a team has its characteristic persistent ‘style’ which determines the players all the time. [...] Every now and then, in a skilful, hard game, it is possible to see a new team organisation flashing out, build upon qualities and the swift practical insight of one or two individuals, but not thought out or foreseen by anybody as regards most of its details. (pp. 277–278)

Therefore, in the concept of conventionalisation Bartlett captures the nature of the interplay between social and psychological process. Bartlett criticises other authors for drawing simple parallels or analogies between these two levels (cf. p. 293). In his theory, as I have tried to show, there is a systematic link: the process of conventionalisation represents, so to speak, a hinge between the individual and the collective. The process of conventionalisation gives to individual rememberers the social framework without which no remembering is possible, and gives to social groups their dynamic mechanisms of self-organisation without which no stable pattern of interaction is possible.

This type of interaction between the individual and the collective levels is at the core of the concept of social construction as developed later, from the standpoint of the *mutual mediation* view, within symbolic interactionism (Berger & Luckmann, 1967). Interestingly, Bartlett’s suggestion articulates this perspective with another *mutual mediation* approach that has been later disconnected from the notion social construction, namely, that of self-organisation. To rejoin these approaches, seems to be a promising way to understand the interplay between the social

processes and the psychological processes implicated in memory production. Chapter 6 offers an attempt in this direction.

### ***An undeveloped implication***

However, Bartlett did not develop another aspect of the role of social conventions in remembering. Namely, that the selection of commonplaces and social conventions that come out as anchoring images or as meaning-making patterns ought to be regarded as a rhetorical selection. Bartlett suggests that when construction is anchored by means of commonplaces, and does proceed according to social conventions, the attitude acquires a social meaning as well. Recall that construction is pursued so as to give a setting for the attitude. Because of the mediation of social frameworks, the meaning of a given construction may have social implications. A memory is then not only a construction to justify an attitude before the eyes of the rememberer but also to assert, or to defend, a position taken by the rememberer within a socially relevant dimension. This can be assumed to be the case particularly if the memory object is a theme of social controversy.

Bartlett did not develop this point further, as Halbwachs did, but is implicit in his argument about the psychological role of social frameworks. In fact, Bartlett repeatedly asserted that memory reconstruction depends upon the position taken by the rememberer within the given social framework, and the rhetorical context that sets the need to remember according to specific social relations. It might be consistent with Bartlett's whole argument to speak here of a third 'turn round upon' the schema: Rememberers may be able to 'turn round upon' their social conventions. Again as a way to *keep distance from the immediate*, this third degree of reflexivity would be the capacity to take social materials as resources. Instead of following them after the manner of a mental association, use them in the service of a particular social interest.

In Chapter 3, I will carry on with this suggestion. Then, in Chapters 4 and 5, I will show how the rhetorical nature of remembering guides social memories about the Chilean military coup even without the awareness and strategic control of rememberers.

## **FINAL REMARKS**

In reconstructing Bartlett's theory, I have not followed his own distinction between a 'general theory of remembering' and the 'social psychological study' of the 'social mechanisms of recall'. Even if Bartlett unfolded the theory in two phases, first the general theory and then the social studies, his argument turns against the very staircase that was employed to put it forward. I have tried to demonstrate that for Bartlett the study of the social mechanisms of recall undermines the notion of a general, purely psychological, or non-social, theory of remembering.

### **Structure of the present reconstruction**

I organised the reconstruction of the theory in terms of two differences. First, I stressed Bartlett's difference between schema-determined memory and remembering. This difference is reflected in the notion of a 'turn round upon' the schema: Rememberers can use their schemata to surmount the chronological determination of the present.

Second, I discussed Bartlett's difference, within remembering, between the image function and reconstruction. Bartlett also applies the notion of a 'turn round upon' regarding this second difference: Rememberers can surmount the schematic-like influence of their images by means of converting it in an object of attitude and a resource for construction. I proposed that this could be conceived of as a *second* 'turn round upon'. Finally, I added that a *third* one—not discussed by Bartlett—would be that rememberers can use schema-like and image-like social conventions. What is at issue in this last idea is the open question about place of remembering within the self-organised social construction of schemata and images.

### **Summary and projections for research**

Schematic memory was a first conquest in the struggle for *keeping a distance from the immediate*. Schemata produce the *chain continuity effect* that makes experience possible. Then the image function and the reconstructive process transformed the landscape of human memory according to the same struggle. The schematic determination of experience was then transformed into the experience of remembering, that is, the taking of a position towards the past and the narrative account of this position. The

social dimension of remembering is not only the cause of that transformation (the clash of interests) but also the *milieu* in which both the taking of a position, and the account of this positioning, occur.

Thus far, I have substantiated the statement that for Bartlett the social nature of remembering can be thought of in terms of the following postulates:

- Social groups give the persistent and conflictive frames and interests that make memory construction possible.
- Social frames are commonplaces that come out as anchoring images, and social conventions that appear as meaning-making patterns in the process of memory reconstruction.
- Memory construction flows in line with the position taken by the rememberer in relation to the given social frames, that is, by the attitude towards the image.

This social dimension of remembering, then, is limited neither to the *origin* and *sharedness* of the representational structures (as in the social representations approach) nor to the *content* of memory (as in the social cognition approach). For Bartlett every act of remembering—as experience and as action—involves an interplay between elements coming from the psychological life of the individual rememberer and elements coming from the social life of the relevant groups. Moreover, this interplay is what distinguishes reconstructive remembering.

In consequence, one of the pivotal postulates in Bartlett's theory is that there should be a systematic relationship between the psychological processes implicated, on the one hand, in taking an affective position towards the past and, on the other, in selecting or 'weighting' knowledge for the construction of judgements. The whole of this thesis is an effort to give empirical support to this postulate and to specify it more in detail. In particular, the 'weighting' of knowledge, which in Bartlett's theory is determined by the dominant active tendency, is investigated as the relative accessibility of social memories. It is hypothesised that this relative accessibility depends upon the position of the rememberer within a social dimension.

### 3 Steps towards a theoretical model of collective memory production

*It is obvious that nothing can be recognised or recalled which has not first been perceived.*

—Bartlett, 1932, p. 187

Collective memory is not the remembering of a social group as such, because social groups do not have experiences proper. Only individuals can remember, even though not in isolation. Although it can be argued that certain basic forms of memory are a property of some social groups (see Chapter 6), and also that social life is necessarily involved in the production of subjective experience, Bartlett's quotation above is correct. He stressed this kinship between memory and perception against theories of social memory stating a group-level mind—such as Le Bon's and Jung's. Bartlett was convinced that, as an argument in favour of the social dimension of remembering, the explanation of the interplay between psychological and social processes is stronger than the mere analogy or parallel among these two levels (cf. Bartlett, 1932, pp. 95, 280, 293, 298).

Apparently, then, Bartlett's theory is unsuitable for understanding collective memory. My argument, however, is the opposite: To keep in mind the differences between social and psychological processes implicated in collective memory allows us to understand the interplay between them. This, in turn, can give a view of collective memory as a dynamic and multi-dimensional phenomena. It is not uninteresting to recall that precisely the theories of both Le Bon on mass psychology and Jung on the trans-generational and collective nature of the unconscious offer extremely simplistic views.

Nevertheless, Bartlett's theory, as reconstructed in the previous chapter, is far from satisfactory. In particular, it is not elaborated, explicit, or detailed enough to account for the social dimension of remembering in collective memory situations. In spite of the importance of his notion of social conventions and cultural patterns

as schematic-like determinants of remembering, it is not clear how rememberers use them in the context of a controversial past.

Further, Bartlett's concept of reconstructive memory is limited to the rememberer's direct experience, that is, to episodic memory. In fact, Bartlett employed *recall* as the model of remembering, in the sense of referring in the present to an event experienced in the past. I think this is rhetorically justified because Bartlett was trying to argue against the traditional view of memory as the associative retrieval of stored traces. He had to convince his community that an alternative view was scientifically plausible and preferable *in the same domain*. However, that time is past and now there is no need to fight in this restricted domain, at least because the constructive view of human experience and behaviour is already a dominant trend (see contributions in Martin & Tesser, 1992; see also McClelland, 1995; Conway, 1997b; Schacter, Norman, & Koutstaal, 1998; see Kunda, 1999 for a social psychological framing or reconstructive memory).

In this chapter, I start by arguing that in collective memory situations there may be no original traces of the event stored in memory. Consequently, the cognitive theory of memory processes needs to be revised in order to account for collective memory behaviour. After setting out a framework concerning the psychological features of social memories, I speculate on the psychological processes involved in collective memory. As a whole, this discussion offers a theoretical outline, which draws upon Bartlett's main concepts and other contemporary concepts of psychological construction. Finally, some implications of the theoretical sketch are discussed and proposed as empirical hypotheses to be investigated in subsequent chapters.

## **A COLLECTIVE MEMORY APPROACH TO COGNITIVE MEMORY PROCESSES**

The nature of memories, as I understand them in the context of collective memory, contrasts in a number of important aspects with the standard cognitive concept of memory. This contrast is relevant because cognitive theory offers the most detailed accounts of the psychology of memory. The revision of the cognitive approach below is elaborated in reference to the way in which social cognition researchers receive, employ, and extend it.

## **The standard approach to memory**

The cognitive approach is based upon the assumption that memory processes are intra-psychological processes of information processing, that is, of extracting, analysing, transforming, and using distinctions offered by given material.

Some authors depart from this approach in that they preserve the notion of information processing but criticise the assumption of intra-psychological completeness (Wegner, 1987; 1995; Hutchins, 1991; Hinz, Tindale, & Vollrath, 1997). However, these critics do not challenge cognitive theory but group theory: They expand the information-processing notion to the domain of social groups. In focusing on the psychological processes implicated in collective memory, one does not necessarily commit oneself to such an assumption. Moreover, taking the cognitive approach as the starting point for a theory of the psychological processes involved in collective memory can be strategic. This is so because the resulting theory would then be able to reclaim changes in cognitive theory to accommodate what could be learned from collective memory contexts.

A standard cognitive account of memory processes would be as follows. First, memories are knowledge structures, or memory traces, that are retrieved in a present after being formed—that is, encoded—in a past (see for instance Tulving, 1976). Second, this retrieval process consists of the selection of one among multiple knowledge structures available. Knowledge structures are assumed to be available in a latent state. Note that a latent state is not necessarily a passive state; for instance, knowledge structures can have an unconscious influence on the process of trace selection without being retrieved (Kunst-Wilson & Zajonc, 1980; Fowler, Wolford, Slade, & Tassinari, 1981; Marcel, 1983; Bargh & Pietromonaco, 1982). Third, individual differences in the chronic readiness of knowledge structures, affective reactions, and social context, translated into motivational factors like activity goals, may moderate this selection process (for example Bargh, Lombardi, & Higgins, 1988; Clore, Gasper, & Galvin, 1992; Bower & Forgas, 2001). Fourth, the psychological function of this process is to adaptively—even though not accurately—attribute meaning to the complex social environment (Schacter, 1999).

This general account of memory is an integration of concepts and principles elaborated in different theories and models within the cognitive approach. For different and recent discussions of integrated views, see for example Baddeley (1985), Conway

(1997b), and Shank (1999). Behind these integrated views, there is a genre of metaphors that have been employed to model memory processes. These metaphors seem important to account for the standard view of memory, because they are the matrix of the core concepts and terminology. I will briefly describe three types of metaphor.

### ***The cognitive metaphors of memory***

Each of the three to-be-distinguished types of metaphor contributes with distinctive concepts and terms (that I indicate with single quotes) and a particular emphasis on one or other aspect (which I formulate in terms of information-processing principles of memory).

### ***The storage metaphors of memory***

This family of metaphors implies a conceptualisation of *retrieval* as *selection* of stored memory *traces*. This latter notion implies that of *encoding*, which means here the selective transformation of the information available in a given experience into memory traces (Tulving, 1976). The paradigm of this type of metaphor is the modelling of a lexicon. The lexicon is, theoretically speaking, the memory structure storing the meaning of words (see Simpson, 1984). Regarding the question of why one item is recalled instead of another by a given individual in a given moment, it has been found that items (word meanings) differ in their relative retrievability. That is, some memory traces are more likely to be retrieved than others. A general principle emerging from this context is that *familiarity*, which is a function of recency and frequency of retrieval, is a major determinant of the relative retrievability of an item (Gernsbacher, 1984; see Monsell, 1991 for a review).

### ***The searching metaphors of retrieval***

On top of the storage metaphors of memory, the searching metaphors elaborate on the concept of retrieval, which is regarded as finding the appropriate content within a storage bin. This is achieved by following *search strategies*—either systematic or heuristic—and usually with the help of *retrieval cues*, understood as searching clues. Within this genre of metaphors, the searching bias models are the paradigm (see for instance Lockhart, Craik, & Jacoby, 1976; for recent use of the idea in social cognition research, see Ford & Thompson, 2000). As a general principle,

retrievability is thought to be determined by the degree of match between the searching path and the way in which contents of the storehouse are organised (Mandler, 1972).

### **The spread of activation metaphors**

A third family of metaphors is also built on top of the first one described. They conceptualise retrieval in terms of the excitement, or activation, of otherwise latent *knowledge structures*. The paradigm is the associative networks model (for instance Anderson & Bower, 1973; Collins & Loftus, 1975; Posner, 1978; Logan, 1980; see Chang, 1986 for a review), according to which semantic and affective relations among knowledge structures are linkages through which the activation of one structure facilitates or inhibits the activation of another structure (for affective or evaluative associations, see Fazio, Sanbonmatsu, Powell, & Kardes, 1986; Bower & Forgas, 2001 for a review). Such a paradigm is an integration abstracted from several models, most of them assuming only a part of this picture. However, they converge on important assumptions, such as the notion of excitation transmission through *linkages* between knowledge structures associated in memory. Here retrievability is understood as *accessibility*, that is, the ease of reaching a given activation threshold (Higgins, 1996). A general principle of memory emerging from this metaphor is that *temporary* accessibility reflects the facilitative and inhibitory consequences of the incidental activation of positively- and negatively-related structures (Bodenhausen & Macrae, 1998). This phenomenon is generally called *priming effect* (see Neely, 1977; Tipper, 1985)—meaning the accessibility effect of the activation (priming) of one structure on a related one.

### **Limitations of the standard approach to memory**

Limitations of the standard cognitive approach to memory can be distinguished from an external standpoint, for example from neuropsychological (for instance Rose, 1992) or sociocultural (for instance Middleton & Edwards, 1990c) accounts of memory. However, internal limitations, that is to say, those distinguished from the standpoint of cognitive theory itself, are more interesting to discuss. In this section, I only indicate some of the internal limitations of the standard cognitive approach to memory that are important to account for the collective memory processes. At the same time, I propose decisions concerning the information-processing terminology to be assumed in this

dissertation. The aim of this exercise is to delineate the basic notions of the memory process, as they seem relevant to collective memory.

### **Some metaphors are not necessary to the cognitive approach**

Despite appearances, the structure of the cognitive account of memory does not need the concepts of *store*, *search*, and other images that are used because of their intuitive properties. Rather, it can be argued that the cognitive theory of memory, as with perception, basically depends on the concept of *selection*. As in Bartlett, the concept of selection points to the fact that a possible next operation is usually not chosen at random. To put it in terms of a functional view of recall: Retrieval is selection in the sense that a given item is not recalled at random but in accord with the past history of the organism. Contemporary accounts of memory selection draw on models of inhibition among knowledge structures in associative networks (Anderson & Spellman, 1995; Macrae, Bodenhausen, & Milne, 1995), of competition among processing units in learning networks (McClelland & Rumelhart, 1981; Dell & O'Seaghdha, 1994), or of constraint satisfaction among concurrent processes (Kunda & Thagard, 1996).

In fact, a connectionist approach to memory selection processes can avoid some of the anthropomorphic metaphors used in standard cognitive modelling. For instance, replacing them by the concept of parallel constraint satisfaction among processing units arranged in generative learning networks (McClelland & Rumelhart, 1985; McClelland, 1995). Moreover, the viability of distributed models of memory show that the learning network can be thought of without the help of the notion of a storehouse of traces (see Carlston & Smith, 1996 for this connection in social cognition).

The notions of storage bin and searching process rely on a spatial metaphor whose most popular version is that of the library. Regarding findings in autobiographical memory research, Conway opposes to this metaphor a constructive view: "memories are not like objects in a store nor is there anything approximating to a simple index. Instead, memories are dynamic mental constructions created by central processes modulating the activation of knowledge in long-term memory" (1997b, p. 5). Many authors regard this modulation of knowledge activation as a selection process (Blaxton & Neely, 1983; Bjork, 1989; Anderson, Bjork, & Bjork, 1994).

## **Knowledge structures are not memory traces**

As a result of the superposition of spread of activation metaphors with storage metaphors, *memory trace* is made equivalent to *knowledge structure*. This is problematic at least in one sense. Namely, it imposes the constraint that memory traces have to be knowledge structures.

Within cognitive theory and social cognition research, knowledge structures are regarded as organised sets of information stored in long-term memory, on the basis of which new information of a given specific domain is encoded (Abelson & Black, 1986). These organised sets of information are typically modelled as associative networks of codes. The latter are units that represent knowledge of a specific kind—conceptual, episodic, visual, phonetic, and so forth. Knowledge structures are thus conceived of as psychological pathways that embody domain-specific knowledge. In other words, in this tradition the expression ‘knowledge structure regarding a given object’ is employed to mean the particular long-term memory device that represents a given object and makes possible the adaptive production of particular thoughts or utterances about a given object. However, it is hard to understand how such a complex device can be identified with a memory trace. In fact, the expressions ‘activation of a knowledge structure’ and ‘retrieval of a memory trace’ are often used interchangeably (Wyer & Srull, 1981; Greenwald & Banaji, 1995; Higgins, 1996).

From a complementary point of view, one can conceptualise *declarative* knowledge structures more broadly as symbolic means of representation of information about a given object. Knowledge structures could be either intra-psychological (the mental image or thought of something as something) or inter-psychological (the spoken or written utterance of something as something), as argued by Bar-Tal and Kruglanski (1988). Mental knowledge structures are said to be *cognitive* to the extent that they embody, in the present, a relation to an object (James, 1890; see also Graumann, 1988). It is not inconsistent to propose that associative networks in long-term memory are knowledge structures, as long as it is acknowledged that such structures ought to be mental representations, that is, fulfilling a declarative knowledge function. But if memory traces are knowledge structures then there should be memory traces consisting of “dormant” mental images and thoughts. The notion of latent, stored images and thoughts has been criticised elsewhere (cf. Bartlett, 1932, pp. 198–200; see also McClelland & Rumelhart, 1985).

I propose, on the one hand, to conceive *memory traces* as hypothetical materials from which the generation of memories may proceed. On the other hand, *knowledge structures* should be regarded as the cognitive product of the current psychological dynamic. This is in the sense that mental images or spoken descriptions of a given object can be seen as the momentary outcome of an ongoing process of generation of experience and behaviour. The picture is consistent with connectionist accounts of memory, according to which a retrieved memory is the current global pattern of activation across the processing units of a learning network (McClelland & Rumelhart, 1985; for this argument in autobiographical memory see Conway, 1996). More specifically, knowledge structures are conceived here as high-dimensional structures by means of which a representational function is fulfilled. This notion approximates to Bartlett's concept of *image*. From a subjective point of view, knowledge structures *arise* in the stream of psychological life; from a theoretical point of view, knowledge structures *are constructed* as ways to add diversity and flexibility to the chain of intra-psychological operations. By the same token, overt discourse is the production of knowledge structures that, because of their polyphony, add diversity and flexibility to the chain of both intra- and inter-psychological operations.

What differentiates traces from knowledge structures would be, for example, the transformations needed to generate a mental image of one's grandmother from sources of information among which traces of past experiences of her may be relevant. Hence, my analytical proposal is that, in the context of collective memory, social memories are—in part—declarative knowledge structures, irrespective of their intra- or inter-psychological status, but not memory traces.

### **Encoding is usually socially mediated**

According to the standard cognitive approach, memory traces are formed through the encoding of information from experience. The memory “the Presidential Palace was destroyed with Allende inside”, for example, would be possible as the activation of the corresponding memory trace only if the military attack on the Presidential Palace was place encoded in that way. However, even beyond collective memory situations, the direct encoding of the object is unnecessary and unusual; people often get in touch with

the memory object by hearsay (Larsen, 1988; Shank & Abelson, 1995; Wyer, Adaval, & Colcombe, 2002).

In collective memory situations, this is true for two reasons. Firstly, because collective memory can be extended across generations, which means that social memories can be prevalent in generations born after the memory object, as is the case for Chilean young people regarding the military coup. Secondly, because collective memory objects are complex enough to be impossible for an individual to encode them through perception. For example, the Chilean military coup did not occur in a specific place and did not unfold itself as such before the perceptive scope and span of individual minds, even in the case of the most implicated people.

Larsen (1988) distinguished between *experienced* and *reported* events and their relation to memory. Information about the former pertains to the domain of episodic, autobiographical memory, whereas information about events that we acquired through an account given by another person or the mass media pertains to the domain of most of our knowledge about the past. Larsen argues that memory of experienced events does not differ from memory of reported events because one is “real” memory and the other is mere belief, but because of the distinctive information offered by these types of events. For instance, reported events are known from information in symbolic rather than perceptual form, and with a narrative rather than an event structure.

However, a mixture of experienced and reported events is also possible. Another point in which Larsen’s distinction seems to be less applicable to collective memory is that indirect, second-hand memories do not come necessarily from reports or explicit accounts, but also or even primarily from implicit aspects of socialisation (Paez, Basabe, & Gonzalez, 1997). Indeed, people can encode information from the social practices and discourses concerning the object and then build a representation of it on the basis of this second-hand information.

One consequence of this reasoning is that, at least in the context of collective memory, episodic memory traces of the object are irrelevant. Instead of traces, the analysis of the psychological processes involved in collective memory can assume that people have more or less learned sequences of operations involved in remembering a given object. That is, involved in the construction of a given knowledge structure.

## **Recollections are similar to beliefs**

It could be argued that, if episodic memory traces are irrelevant in collective memory, then it is better to speak of *beliefs* instead of *social memories*. However, there is considerable evidence that the distinction between beliefs about a past event and “real” memories of the event is not clear enough.

Research on memory suggestibility has shown that post-event misleading information easily distort people’s recollections (Loftus, Miller, & Burns, 1978; Loftus, 1991). Misleading-information effects seem to be due to source misattribution, that is, confusing whether something has been directly perceived or suggested by other people (Lindsay, 1990; Zaragoza & Lane, 1994). Moreover, Johnson and colleagues have argued that the difference between “memories” originating in perception and those originating in imagination or thinking is only a matter of degree. The former are richer in contextual, sensory, and semantic detail, whereas the latter are richer in information about psychological operations involved in the generation of these memories (Johnson & Raye, 1981). According to the Source Monitoring Framework (Johnson, Hashtroudi, & Lindsay, 1993) the difference between an internal (thought or imagination) and an external (perceptual) source of a given past experience is not encoded with such experience. Rather, it has to be inferred from the phenomenal characteristics of the current experience. Consequently, the difference disappears if the distinctive informational features are not sharp enough (for a review, see Johnson, Hashtroudi, & Lindsay, 1993; also Conway, Collins, Gathercole, & Anderson, 1996; Johnson & Raye, 2000).

Exploring the neurobiological basis of misattribution, researchers have not find differences between true and false recognition with neuroimaging techniques (Johnson, Nolde, Mather, Kounios, & Schacter, 1997). For the psychological similarities between beliefs and memories, see contributions in Schacter and Scarry (1999).

## ***A reconstructive view of cognitive memory processes***

In sum, the whole proposition that *‘the retrieval of knowledge is the associative re-excitement of stored episodic traces’* has been discussed from the point of view of some of its internal limitations. In order to accommodate these limitations, a translation of this crucial proposition of the standard cognitive approach to memory can be suggested. From the point of view of a reconstructive, or schematic-constructive approach (Bartlett, 1932), such a translation could read as follows: *‘the generation of memories is*

*the constraint-satisfaction selection of paths of construction of knowledge structures that may proceed from learned sequences of operation'.*

Such a reconstructive view of retrieval as constructive generation highlights the role of the current condition of construction over pre-existent structures. In this sense, the notion of psychological *readiness* (Bruner, 1957) acquires a central position. The importance of this notion is that it relates to why one social memory is generated instead of another by a given individual at a given moment. Although the concept of knowledge accessibility has been monopolised by the cognitivist view of memory as associative retrieval of stored traces, it might be wise not to throw out the baby with the bath water. Indeed, the concept of knowledge accessibility (see Bruner, 1957; Tulving & Pearlstone, 1966; Higgins, 1996) is understood in line with Bartlett's notions of 'dominant tendency' and 'dominant feature'. The common idea is that current dispositions determine the extent to which a given operation is *prepared* to be enacted. Thus, the phrase '*relative accessibility of a given knowledge structure*' can still be conceived of as '*relative ease of the construction of a given knowledge structure*'. The important shift is that the word 'accessible' becomes a predicate of a constructive process, instead of a stored knowledge structure.

In line with this attempt at conceptualisation, the outline of the theoretical framework concerning memory production is proposed later in this chapter. First, however, a discussion about the status of memories in the context of collective memory is necessary in order to postulate that social memories are related to, but not identical with, knowledge structures.

## **WHAT MEMORIES ARE IN COLLECTIVE MEMORY SITUATIONS**

On the basis of the previous revision of the standard cognitive theory of memory, I propose that in collective memory contexts *social memories are truth-judgements about the controversial past, functioning as argumentative stands, generated on the spot, and involving inter-psychological processes in their production.* This characterisation, which I discuss below in terms of four outstanding features, determines the way in which the psychological processes of collective memory production are investigated in this dissertation.

## Memories as truth-claims

Social memories, as cognitions, are pieces of *declarative knowledge*. In other words, they say something *about* something. Moreover, in a given social memory different kinds of declarative knowledge can be involved. Social memories can be recollections, opinions, beliefs, and so forth: any kind of claim about a common past. Current developments in memory research agree with this similarity between memories and beliefs (Schacter & Scarry, 2001). What makes a declarative piece of knowledge a social memory is more its function than its nature. These structures and the commitment attached to them are formed in the psychological present, and directed to the social present, as a stand concerning the controversial past. In general, *collective memory judgements* are truth-judgements about a common past.

From this perspective, a social memory is a commitment to the truth-value of knowledge structures that count as intended descriptions of a socially controversial past. However, social memories are more than their declarative meaning, are more than saying something *about* a common past. They also are composed of an especial commitment to the truth-claim they involve.

For example, the polyphonic structure ‘there were casualties on both sides’ may have a conventional denotative or declarative meaning, as long as it is a description of a state of affairs. However, the propositional content is only part of the *act of memory*. The act of memory is not “complete” without the explicit or implicit affirmation or negation of the propositional content. To commit oneself to the truthfulness or to the falseness of ‘there were casualties on both sides’ are, in fact, very different memories.

The analogy with the concept of *speech acts* is useful (see Searle, 1969). An act of memory would encompass several components. To start with, a memory act ought to have a symbolic means of representation and declarative meaning, in the same way as the speech act needs a *locutionary* act—that is, the production of an utterance—and the ensuing propositional content. In the same sense that the *illocutionary* act is a component more important to determine an act of speech, I argue that the truth-judgement concerning a common past is an essential component of memory acts. By the same token, other components of memory acts can be distinguished, and will be distinguished below, but a difference between acts of memory and speech acts must be indicated at the outset. The difference is straightforward: memory acts are not necessarily speech acts. For a memory act to

be “complete,” it does not need to be spelt out in overt social interaction. A social memory might be “complete” as an intra-psychological action. Further, a speech act consisting of a social memory needs a memory act as an essential component. Only when the memory act is inter-psychological, as it is in most cases, does it become coextensive with a speech act. However, I suggest that the analogy may be useful in analysing a social memory even if it is never communicated.

## **Memories as argumentative stands**

The representational or declarative aspect of memories is crucial from the point of view of humans as cognitive organisms who need to adapt to a complex world of objects. However, in collective memory the most important action probably is not to adaptively represent the past but to take a position within a social world in the present. Empirical discussions among archaeologists researching primitive hominids are usually not, for example, collective memory. Put simply, truth-judgements involved in collective memory have implications for present and future life in a given community of memory.

Another analytical component of memory acts can be put forward, namely, their *rhetorical meaning*. With this feature, I try to capture the notion that the meaning of a given social memory is undetermined without taking into account its place and its effect within a social dialogue. The composite *knowledge structure + representational meaning + truth-judgement about a common past*, is not enough. Put in overt interaction or kept in the rememberer’s flux of experience, this composite is not “spiritually” in social isolation but encompasses acts of memory by others. To put it in terms of Bakhtin (1981), in each act of memory the rememberer gets implicated in multiple argumentative encounters with the voices of others, ideological stands, memory genres, perceived or imagined memory acts, and also some of the rememberer’s past memory acts. A given act of memory is a response to and an intervention into a dialogue.

In other words, in collective memory behaviour one’s memories about an object are necessarily making oneself participate in a dialogue with others—present or absent. This dialogue is not only about a past event but also about one’s present relationships with others. From this point of view, I emphasise that memories have an argumentative or dialogical function, for which the representational one serves as a means. This function is, rather

than to make sense of the environment, to take part in a social struggle among ideological forces. The question is never whether collective memories adaptively represent a given past event, but *from which position* and *before whom* (present or absent), and eventually *against what discourse*, they are formed.

## **Memories as constructed on the fly**

The retrieval of social memories, as it is theorised later in this chapter, consists of a multitude of micro-processes performing the selection of cognitive, effective, and social information. In a collective memory context, these informational rudiments are usually a pool of commonplaces and common-sense arguments derived from currently available or internalised social discourses. Selection processes convert the infinite possibilities of memory formation into one that makes a specific point about an object from the past, carrying a particular reference to social values, and marking a definite position among others.

In contradistinction with a linguistic theory of speech acts, a social psychological theory of memory acts needs to be more than merely analytical. In addition to the distinction and classification of the components of acts of memory, it ought to advance an explanation of their genesis. Although in this dissertation there is no attempt to develop such a theory of memory acts systematically, some assumptions concerning the psychological genesis of memories were essential for the design and interpretation of the studies on the memory of September 11<sup>th</sup> 1973. As elaborated in later sections of this chapter, it is postulated that social memories are psychologically built up again every time it is said that they are “retrieved.” Following Bartlett’s schematic-constructive view, I assume that memories are not *possessed* by the rememberer but are produced, in any given moment, as the latest link of a temporal chain of experiences, disappearing as such in the next moment. This view also concords with James’ (1890) notion of experience as a temporal flow, although it is closer to Posner’s (1978) and McClelland’s (1979) views of psychological processes as embedded in time. Whilst James’ notion focuses on conscious experience, the latter approaches point to the operations that underlie experience. To be sure, the rememberer’s conscious experience of a memory is that of “possessing” it—as well as to “search” for it and “retrieve” it—but from the point of view of the processes yielding a memory, it can be thought of as produced on the spot.

This conception of knowledge structures as constructed on the fly is particularly close to Kahneman and Miller's (1986) theory of norms. Norms are mental representations of knowledge of categories and events, formed as temporary assemblages of retrieved and/or constructed exemplars. In its general aspects, I follow a similar analysis regarding social memories. A knowledge structure to be generated, for instance, an utterance or its propositional content, or a mental image, does not need to be already available as such. Research into cognitive processes underlying episodic recall and attitude formation show that, at least in some cases, knowledge structures are formed on the spot, built from rudiments that can be articulated in very different ways according to the current demands. The way I understand this is assuming that selection operates over the micro-processes of assembling and chunking, which form this or that knowledge structure at any given time. The question of retrieval then is not about storage and organisation of stored information, but about the rudiments and constructive routes for building memories at the time when they are needed.

## **Memories as supra-cognitive products**

Finally, I propose that these psychological selection processes are mediated by social conditions; in particular, the availability of the so-called rudiments is determined by the salience of different social stands and inter-discourse tensions in society. The specific way in which this social mediation takes place is the subject matter of the empirical studies in this dissertation. The general hypothesis is that, in memory production, the selection micro-processes are based upon the inter-psychological pattern of distribution of recognisable beliefs, values, and stands.

For instance, knowledge regarding a given object could be strongly polarised in terms of pro- versus anti-coup groups. In such a case the selection processes in memory production may reject all knowledge that is not favourable to the individual's social position or that is not prototypical of the social category with which the individual identifies. On the contrary, if the social distribution of knowledge describes a consensual pattern, the same pieces of knowledge that were rejected in the polarised case could be favoured in the selection processes, while inhibiting polemical positions. The outcome of the memory production process will be different even if the rudiments of knowledge about the object for a given individual are the same.

Theoretically, this social mediation of the psychological process is, at the same time but from a different level of description, a psychological mediation of social process of production and reproduction of collective memories and discourses (Salomon, 1993b). However, the focus here is on the first of these two sides of the coin.

The role played by the social milieu in the standard cognitive approach to memory is that of a contextual factor. That is, it is represented as a group of variables that are accidental to the memory process (may or may not be relevant), that are external (do not count as part of the memory process itself), and that at best can moderate a psychological process. Following developments in cultural psychology based on the legacy of Lev Vygotsky, it is reasonable to argue that in all superior psychological processes—including semantic and episodic memory—the role of the social is more than that of a context. One of the essential ideas to be defended in this dissertation as a whole is that collective memory processes implicate both psychological and social processes. More specifically, it is argued that the social operations needed for a basic collective memory dynamic are the only bases of its emergent properties compared to individual memory. This argument is elaborated in Chapter 6; for now, only a general idea is necessary.

At the individual level memories are thought of, in cognitive theory, as the product of a psychological “machine” called the cognitive system. By the same token, at the collective level the postulated “machine” is supra-cognitive in the sense that it should involve both cognitive “sub-machines” and certain social operations. The research question is what are these social operations and their relationships with the psychological ones—the subject of the rest of this chapter.

Some terminological conventions are worth making at this point. I use the expression ‘memory production’ to convey the whole assortment of processes, both intra- and inter-psychological, involved in the selection of information underlying any given social memory. To continue with the metaphor of the last paragraph, it refers to the supra-cognitive “machine” that fabricates memories. Within memory production, I distinguish the *generation* of memories. In contrast to the general notion of *production*, the more specific notion of generation refers to the intra-psychological processes of selection underlying any social memory. The generation of memories is a low-scale process, taking place at the

level of the individual flux of experience and behaviour. Memory production encompasses the latter and articulates it with higher-scale processes at the level of the collective flow of life (for the articulation of these scales, see Sorokin & Merton, 1937; Lewis & Weigard, 1981; Caporael, 1997; Baron & Misovich, 1999; Lemke, 2000). This dissertation focuses on some aspects of memory generation as embedded in a social process of memory production.

## **HOW MEMORIES ARE GENERATED IN COLLECTIVE MEMORY SITUATIONS**

In collective memory situations, such as in the controversy regarding September 11<sup>th</sup> 1973, the psychological generation of social memories cannot be accounted for without the intervention of the way in which attitudes, beliefs, and social values are distributed within the relevant community of memory. In contrast with accounts of memory as confined to intra-psychological processes, I propose that the social distribution of knowledge is a dynamic force even at the psychological level of memory generation.

The importance of the social distribution of knowledge in memory formation is that it mirrors, so to say, a “geopolitical map” of the social world relevant to a given object of collective memory. This geopolitical metaphor highlights the idea that memories represent positions in an ideological dimension of society. As soon as a memory is generated, it takes part in this “geopolitical arena.” This is because the job of a memory does not stop with the articulation of a representation of the object, but continues as a social stance towards the object, that is, as a particular way of relating to others. As soon as one takes a position, the others tend to respond supporting or opposing, or even changing their previous position towards or against the reference stance. These polarisation and social influence phenomena illustrate that with the generation of a memory on the basis of the social distribution of knowledge, the very social pattern of knowledge distribution will tend to change. In other words: Not only does any memory act depend upon the social distribution of knowledge, but also the latter emerges from, and is reproduced by, the mass of memory acts in a community.

Doubtless, in our societies the influence of memory generation— at the individual level—on the pattern of knowledge distribution—

at the collective level—is mediated by institutional systems that go beyond simple group processes. *Upward* effects, then, are socially mediated—especially by the mass media and the cultural industry. It should be noted at the outset that these institutional systems also filter the perception of the social distribution of knowledge. That is, they also mediate in *downward* effects. These institutional systems are not reducible to group processes, but emergent from them. However, the intertwining of memory processes and group processes is, in theory, the kernel of collective memory dynamics. In other words, the function of memories is the motion of this social dialogue, by means of which the generation of memories in individual psychological lives change the social conditions of memory production themselves.

Hence, the understanding of the self-organised social construction of the social frameworks of memory needs the specification of how memories are psychologically generated. In what follows I offer a theoretical proposal about this in two steps. First, I outline a schematic-constructive framework concerning the generation of social memories. In general, this theoretical account is formulated in bold assertions, but it should be read as an organised set of conjectures. Second, I focus on one implication of this framework, and develop more specific and manageable hypotheses.

### **A three-fold theory of memory generation**

The discussion of the standard approach to memory opening this chapter may give the impression that the replacement of ‘retrieval of memory traces’ with ‘construction of knowledge structures’ would solve the problem of collective memory. Then, the preceding discussion of the status of memories as stands within a social context suggested, from an analytical point of view, that knowledge structures are only a part of memories. On the same lines, from the point of view of the production processes, the generation of memories does not end in the construction of a knowledge structure. In particular, I argue that knowledge structures are only, so to say, one third of memory generation.

To put my argument in words more common to the cognitive accounts of memory, an analogy can be made with the traditional “two phase” models of recall (James, 1890; Hollingworth, 1913; Kintsch, 1970; Anderson & Bower, 1972). These are also known as generation-discrimination, retrieval-decision, search-judgement, or simply two-step theories of recall and recognition. According to

these theories, there are two processes underlying recall, and only one of them involved in recognition. In recall, candidates must first be *generated*, that is, searched for, or retrieved. Only then generated items can be the subjects of a discrimination *judgement*, supposedly consisting of a familiarity judgement, in order to decide whether the item is appropriate. Two assumptions govern recall. First, the more frequent or familiar an item is, the easier it is to generate it. Second, the larger the set of generated items, the harder to select an appropriate one. The difference between recall and recognition is that in the latter the generation process is skipped: The presentation of items to recognise makes it unnecessary to generate them. They are, so to say, already generated by the environment. Bartlett's distinction between recall and recognition is not far from this approach. As it was mentioned in the previous chapter, for Bartlett the difference is that in recall the rememberer has to construct both the psychological materials and an organised setting for them in line with a dominant tendency. In recognition, according to Bartlett more similar to perception, the psychological materials are given and the rememberer has to discover the rule of its arrangement.

Without going into details and problems of the "two phase" theories, what is particularly appealing is the hypothetical distinction between the building up of knowledge structures and the judgement to which they are submitted. Moreover, it is this judgmental process, and not the knowledge structure construction, that is shared between recall and recognition. Again, a tint of this distinction can be traced back to Bartlett, in his theory of the attitude as a reaction towards the image arisen. This is what I have called the *second* 'turn round upon'. According to this view, reconstructive memory needs more than the capacity to construct a knowledge structure (an image); it needs the capacity of the organism to react upon it, and take a position towards the knowledge structure arisen. Only then, memory has the basic conditions to unfold itself as remembering.

Both Bartlett and Kintsch would argue that memory cannot be accounted for without this judgmental or attitudinal component. Following this idea, I propose that the generation of social memories involves not only the construction of knowledge structures but also, and necessarily, the taking of a position towards such structures. As Conway has put it: "once a memory has been constructed it exists, albeit for a short period of time, as a mental state or mental object. A rememberer can make

judgements of this object, have attitudes and feeling towards it, in short the rememberer can relate to the memory” (1997b, p. 5). I would dispute, however, that the difference between knowledge construction and position taking could be mapped onto fixed phases or temporal steps. More recent theories of interactive activation and parallel processing suggest that a mutual constraint-satisfaction process is more plausible (Rumelhart, Smolensky, McClelland, & Hinton, 1986; Dell & O’Seaghdha, 1994).

More importantly, the nature of this capacity of the rememberer to relate to the memory at the moment of its construction needs elaboration. Regarding collective memory contexts, I propose that the position-taking process consists of two interactive sub-processes. On the one hand, there is the construction of an attitude towards the knowledge structure under formation. On the other, there is the construction of a mental model of the social distribution of knowledge within which both the knowledge structure and the attitude are contextualised.

In summary, a three-fold theory of the generation of memories is suggested. The three aspects involved are all constructive processes. One is the construction of a knowledge structure—an image, a world, or an utterance—concerning the object. The second is the construction of an attitude towards the representation of the object, from its higher thematic levels to its lower episodic levels. The third is the construction of a mental “map” of the social dimension within which the knowledge structure and the attitude under construction are assumed to constitute a “position.” In theory, these three constructive processes are, moreover, interactive parts, constraining each other, of a single memory-generation process. The generation process is said to reach a satisfactory end only when the three parts are co-ordinated so as to give the rememberer a commitment with a certain position towards a certain piece of knowledge in a certain social landscape. I turn now to a brief discussion of each of these sub-processes.

### ***Construction of knowledge structures***

The building up of a knowledge structure can be thought of as a goal-dependent integration of multiple concurrent schemata into acts of meaning. Its schematic grounding gives the process the degree of automaticity that usually keeps all of it except the final product at a pre-conscious level. The result of the process is the act of meaning, which often arises in a surprising and even

puzzling way for the rememberers themselves, according to Bartlett.

Instead of detailing the specific mechanisms involved in knowledge construction, the point relevant to my argument is the concept of knowledge construction itself. I propose to describe the construction of knowledge structures as the momentary organisation of information *about* a given object. The process involves integrating declarative information from different sources, such as perception, phenomenal experiences, feelings, and learned patterns of relation among representational features. This process of organisation is inferential in nature, because current information is articulated as a whole after the manner of a storyteller who fills gaps in his memory of an old tale. Although the articulation may be highly crafted, this is usually done on the bases of well-learned chains of operations, and the milliseconds it takes is below the threshold of conscious attention.

### **Schematic nature of knowledge structure construction**

The very point of departure of a given construction of knowledge structures is also a knowledge structure constructed a moment before or perceived by another rememberer. For example, a specific memory about the military coup is usually constructed as a reaction to, or as a continuation of, the comprehension of an utterance made by others. This preceding knowledge structure can be a specific memory about the military coup itself, or a mere reference to the topic of September 11<sup>th</sup>, or a knowledge structure whose labyrinth of meanings happen to remind one of the coup. It can also be a direct or indirect question about one's own position within a social dimension explicitly or implicitly related to the military coup. In all these cases, the knowledge construction process starts from, and as, a comprehension process. This is hypothesised to be true also when the source of the last preceding knowledge structure is oneself. In this last case, the relation that the next knowledge structure is constrained to establish with the last one is usually a relation of coherence. On the contrary, if the source of the last preceding knowledge structure is categorised as pertaining to the competing ideological group, then it is likely that a next knowledge structure is constrained to oppose the last one.

One implication of this line of reasoning is that an account of knowledge structure construction may concentrate on perception and comprehension processes. The means of social comprehension is, in fact, the construction of a knowledge structure. Most of the

cognitive research on language processing (Rumelhart, 1975; Shank & Abelson, 1977), comprehension of social situations (Wyer & Radvansky, 1999), and understanding in general (Shank & Abelson, 1995; Kintsch, 1998), has been based upon the concept of schema. This paradigm seems appropriate to account for some aspects of knowledge structure construction in the context of collective memory. Here I summarise one piece of research in order to illustrate how knowledge structure construction is hypothesised to work.

### **Narrative understanding**

A relevant example of contemporary treatment of the concept of schema within the field of social cognition is the research about the way people use *generalised narrative-based representations* to understand and to remember specific social events (see Wyer, Adaval, & Colcombe, 2002 for a review). This generalised narrative representation or event schema is basically conceptualised as an abstract prototype of a given familiar type of event—thus not specific as regard to time. Such a cognitive structure is constructed as a generalisation from past experience and stored in memory independently of representations of specific exemplars. Because the use of this kind of pre-formed memory structure enables people to understand a sequence of events without paying much attention to specific details, it worsens the recall of theme-related and typical details included in the particular sequence on focus (Graesser, Gordon, & Sawyer, 1979). Nevertheless, a prototypical narrative representation can be used to organise—that is, to locate in time—theme-unrelated details or events included in the concrete sequence. In this case, the use of generalised narrative representations improves the recall of related and typical details (Trafimow & Wyer, 1993).

In addition, it has been suggested that generalised, prototypical narrative representations are used only to interpret events where unfamiliar people are involved. On the contrary, when familiar people or the self are involved, specific exemplars—that is, accessible memories of concrete past experiences—are more likely to be used (Wyer, Adaval, & Colcombe, 2002). Self-relevant narrative information, then, would not be interpreted schematically. This last is certainly an interesting proposition, in conflict with Markus' (1977) research on self-schemata.

Knowledge structures representing a given specific situation are mental models either retrieved from long-term memory or

constructed (Radvansky & Zacks, 1997). This later possibility is the case when representing novel situations—which is always the case initially. Moreover, Payne's (1993) episodic-construction-trace hypothesis disputes that mental models of this kind could be stored and then retrieved from long-term memory, and convincingly argues that they are constructed on the fly on the bases of procedural knowledge. According to Radvansky and Zacks (1997), the construction of situation models is not automatic, but dependent on the goal of understanding a situation. During construction, general knowledge of common situations is expected to exert an important influence.

Research on situation or event models has emphasised the role of images in social memory (Wyer & Radvansky, 1999). For instance, Wyer, Adaval, & Colcombe (2002) give an account of an investigation into the structure and function of narrative-based mental representations. They describe evidence showing that narrative representations of events that have a specific situational and temporal context are necessarily composed by mental images. The use of specific exemplars of the situational and temporal context is based on the use of images, whereas the use of schematic, prototypical narrative representations depends upon the use of verbal cues for encoding. Interestingly, Bartlett arrived at a comparable conclusion in his experiment on picture description and picture writing (cf. pp. 59 and 109–112). In addition, Wyer and colleagues explore how and under what conditions mental images interact with verbal components of the narrative representation. Likewise, Bartlett speculated about the relationships between mental images and words in remembering (for this contrast, see pp. 216–217, 223–226, and 304). Though the focal point of Bartlett's discussion is on the similar effect that images and words have on subsequent memory processes, and not on the differences as devices for representing knowledge—as in current research on narrative understanding (see Shank & Abelson, 1995).

### **Knowledge structures and attitudes**

From a more general perspective, the schematic nature of knowledge structure construction is given in part by the guiding role of an attitude. This has been studied mainly in terms of the so-called Levine-Murphy hypothesis of selective recall, according to which information supporting one's attitude is recalled better than counter-attitudinal information. Not without important

inconsistencies across studies, it has been found that one's attitude towards an object has a modest effect on recall and on recognition of object-related information (for instance, Eiser & Monk, 1978; for meta-analytic reviews, see Roberts, 1985; and Eagly, Chen, Chaiken, & Shaw-Barnes, 1999). However, other aspects of the attitude-memory relationship are more important for the present argument.

In particular, attitudes and affective states play a crucial role in the construction of knowledge structures representing social groups—that is to say, in the use of stereotypes. See contributions in Mackie and Hamilton (1993) for this connection. In this line of research, it has been suggested that, in the activation of a stereotype, affective and cognitive information interact as parallel-constraint-satisfaction networks (Stephan & Stephan, 1993).

In yet a third, most relevant approach to the attitude-memory relationship, Bower and associates (Bower, Monteiro, & Gilligan, 1978; Bower & Forgas, 2001) have argued that affective states serve as a context and as a cue for retrieval or construction of a situation model. As a consequence, people tend to construct representations that are congruent with current emotions. For instance, people induced to a happy mood tend to recall more happy childhood episodes than people induced to a sad mood, and vice versa. Moreover, they argue that affect-congruent information is not only more accessible, but also subject to deeper processing. These authors conceptualise this in terms of the guiding role played by the affective reaction towards an attitude object in the retrieval of information about the object.

### ***Construction of attitudes***

Regarding the generation of social memories, attitudes are overall evaluations of a given knowledge structure. Specifically, they are evaluations in terms of affective commitment with a truth-value for a given knowledge structure under concurrent construction. Note that the notion of attitude is not applied to an evaluative disposition towards the general topic of September 11<sup>th</sup>. Instead, and in line with Bartlett's use, by attitude I mean the reaction towards a detail pertaining to September 11<sup>th</sup> as it is mentally represented. Thus, the attitude object is the declarative meaning of a mental representation, always singular.

## **Attitude and commitment**

In general, attitudes vary in their stability over time. In the present context, however, I am not assuming that attitudes expressing an affective commitment with a collective memory judgement necessarily reflect a stable predisposition. The more permanent dispositions, or 'persistent tendencies' in Bartlett's sense, are only one of the sources of affective information from which a temporary evaluation of a knowledge structure is built up. Other sources of information are current feelings and emotions, all sorts of knowledge structures currently present, the ensuing phenomenal experiences, and the very knowledge structure under evaluation. Irrespective of the type of source, the kind of information integrated in an attitude is affective in the sense of emotionally-laden acceptance or rejection of the attitude object. From this perspective, then, the construction of an attitude is the organisation of affective information available at the time of memory generation; the organisation of this information into a committed truth-claim.

For example, consider the declarative piece 'there were casualties on both sides'. Suppose a Chilean woman is reminded about this idea by her last preceding thought concerning September 11<sup>th</sup> 1973. Suppose, in addition, that she is a left-wing supporter, with a strong anti-coup opinion. She may acknowledge the likelihood of the truth of this idea from general assumptions, but as a leftwinger, she would probably feel that there is something wrong about it. She may even identify this idea with a particular ideological position and, in that case, she would probably not only experience no identification but also opposition to an already categorised and stereotyped social group. Additionally, if everything goes in this direction, she would feel identification with a particular social group, whose ideology highlights the crimes of the military. On the basis of these feelings, she would end up committing herself to a negation of the given piece. Even in the negative form of an overall rejection, she has constructed an attitude towards a knowledge structure, and the result is still a social memory. What the negative form of her memory underscores is the difference between the declarative meaning of a knowledge structure and the attitudinal truth-judgement.

According to the notion of *act of memory*, the knowledge structure and the attitude are related but distinct constituents of a social memory. The function of the former is to represent a state of affairs in the past. The function of the latter is to commit the

rememberer to an affirmation or a negation of the representation. In other words, I propose that in the generation of social memories, attitudes fulfil a truth-judgement function. However, truth-judgements in social memories are not conceived of as logical or empirical evaluation of the denotative meaning of a given knowledge structure. Rather, truth-judgements are thought of as ideological evaluations. In other words, a rememberer *commits* him or herself to affirm or to negate a given piece of knowledge that is ideologically relevant. Such commitment is primarily attitudinal, because in collective memory situations there is not too much room for accuracy motivation.

### **Sources of attitude**

Despite the specific use of the concept of attitude here, it is in line with an approach that has been growing in popularity among social psychologists. Namely, the notion that attitudes are temporary constructions (Tesser, 1978; Wilson & Hodges, 1992). For instance, Wilson and Hodges (1992) argue that attitude construction is the inference of one's own evaluation of a given object on the basis of a large database. This database includes one's behaviour, mood, and multiple beliefs about the attitude object. However, people usually draw on a restricted subset or sample of this database. These researchers add that the social context has an influence on the selection of data people use. This last proposition helps explain why attitudes vary with the context of their expression.

A related approach to attitude and judgement states that mood and emotions have an informative function (Schwarz & Clore, 1983; 1988; 1996; Clore, Gasper, & Garin, 2001). Affective states can influence evaluative judgements by serving as a source of information in judgement. Clore, Gasper, and Garin propose that the core of the affect-as-information approach can be summarised in terms of the following principle: "When one is object focused, affective reactions may be experienced as liking or disliking, leading to higher or lower evaluation of that object of judgment" (2001, p. 129). Research in this line is particularly relevant to the notion that, in the context of collective memory, to take a position towards a given piece of knowledge is, as suggested here, a truth-judgement based on affective information. However, the affect-as-information view emphasises only one of the ways in which affective information can influence judgement, namely, by means of attributing the positive or negative affect to the very object under judgement (Schwarz, 1990). When participants are

primed with a given affective state so as to avoid their awareness of the source of such state, they are assumed to misattribute their feelings to target stimuli, thus producing an affective priming effect. Winkielman, Zajonc, and Schwarz (1997) have shown that the affective priming effect is produced even if participants are told about the subliminal primes, thus suggesting that the influence of affective information may be independent of the attributional process. Such a direct influence has been described, for instance, by Zajonc (1968), who has shown that—other things being equal—the more familiar an object, the more positive the attitude toward it.

Indeed, the information that is integrated into an attitudinal commitment with a truth-judgement can also be derived from the very knowledge structure under evaluation. For instance, according to the expectancy-value model of attitude formation (see Feather, 1982; Fishbein, 1963; Fishbein & Ajzen, 1975), the evaluative meaning of a given object arises spontaneously from beliefs about the object (see Ajzen & Fishbein, 2000). According to this framework, an individual's overall attitude toward an object is determined by the subjective values of the object's attributes associated with the object, in interaction with the strength of these associations. Therefore, the knowledge structure under construction may participate in the construction of the attitude, no less than vice versa—as suggested previously.

The overall evaluation of a piece of knowledge, and the commitment to a truth-claim, draws on social information as well. In particular, information coming from the construction of a model of the social context of the act of memory is necessary for attitude construction. For instance, information about the appropriate social norm may be important in the construction of an attitude. This is so not only because, in general, a context is necessary. More specifically, because the attitude involved in a social memory can also be conceived of as the affective outcome of the co-ordination between the construction of the knowledge structure and of its context. The way in which these two processes co-ordinate yields, so to say, a positive or a negative outcome. The valence of the outcome depends on whether the self and the meaning of the knowledge structure are categorised as belonging to the same ideological group or to different groups.

### ***Construction of context models***

Both the knowledge structure and the attitude towards it have to be constructed as within an organised setting or background according to which they acquire meaning. In other words, what is necessary for a mental model of the common context for the knowledge structure, the attitude, and of the relation between them, is to be constructed in parallel.

The construction of a knowledge structure and the construction of a mental model of a context are similar processes. However, there are also important differences. First, the knowledge structure component of a given social memory is the foreground, whereas its contextual component is in the background. As a consequence, the contextual model does not appear in the rememberer's consciousness in a surprising and puzzling fashion, but it is usually involved in an implicit way. Second, the knowledge-structure component of a given social memory represents a memory object, whereas its contextual component represents the social dimensions of the current remembering situation. These dimensions are used to frame the memory in terms that are co-ordinated with other potential or actual rememberers.

Specifically, the construction of context models in collective memory are hypothesised to be the building up of a "map" of the way knowledge is distributed within a given community of memory. This is what may be called *social mapping*.

### **Social mapping as social categorisation**

To build a social "map" of the distribution of attitudes and beliefs regarding a given object involves a number of aspects, some of them in parallel. First, one has to select the dimension of social comparison to which the object is relevant. Second, one has to furnish the selected social dimension with the social groups that are relevant at the time of judgement, estimating their relationships in terms of horizontal distance and vertical sub-grouping. It is important to know not only that there are "sides", but also *who the "sides" are*—to use an expression of Price (1989). These group relationships are probably modelled in line with the selected dimension, and not based on a thorough and accurate description of one's own society. For this reason, the "map" of social groups might be distorted or simplified. Third, one has to discriminate the position of the object within the model. Fourth, one has to locate one's own position within the model, especially in relation to both the position of the object and the

horizontal disposition of groups. Fifth, one would probably feel a bond with one group and commitment with its position within the model. Now one is in a condition to judge the object.

The construction of a model of the social context for a memory, therefore, consists of several operations of selection and classification, that is, the distinction of social categories and the categorisation of the object and of oneself. In other words, social mapping consists of social categorisation processes. Some writers use the concept of social categorisation only to mean the representation of an object as belonging to a category, and in terms of the use of knowledge associated with the category (for instance, Brewer, 1988; Fiske & Neuberg, 1990). Here I use it with a more general meaning, including processes that supposedly precede and others that follow the application of a categorical representation to an object. On the one hand, the selection of a given dimension of comparison and the selection of initial points of differentiation within this dimension, are antecedents of the application of categories. On the other hand, stereotyping and social identification are, in theory, consequent to the application of categories. All of them, in varying proportions and with different consequences, are expected to take place in social mapping.

In short, the mere reference to a collective memory theme, by one's own last thought or by other's behaviour, triggers a number of social categorisation processes. The construction of a context model for a generated or perceived memory is, thus, the organisation of these social categorisation processes, co-ordinating information about relevant social groups, about the object, and about oneself. One's own last thought or by other's behaviour function as social categorisation cues. For example, suppose somebody says 'there were casualties on both sides' within a conversation about September 11<sup>th</sup>. The Chilean hearer would be compelled to generate a memory as well. She would start by comprehending the ideological meaning of the last memory by discriminating the social group of which this memory is typical. Then she would compare herself with the social category of the source. If she realises that she herself and the source come from opposing groups, she may use her ingroup's ideology to generate her memory. While generating her memory, she will not be focused on September 11<sup>th</sup>, though. She will be focused on a simplified model of the social landscape as it is at the time of judgement. In particular, the context of the articulation of her memory will be the

relation of the last memory with her “map” of the present distribution of beliefs and attitudes within her society.

### **The social distribution of knowledge as a source of information**

The concept of social distribution of knowledge is meant to capture the interwoven relationship between memory and group formation processes. It maps knowledge about a social object onto a configuration of social groups. In other words, it co-ordinates the attitudinal judgement of the knowledge structure under construction with the social categorisation processes concerning the context within which a social memory is made. These social categorisation processes are intertwined with the selection of pieces of knowledge to build up a definite knowledge structure.

One way to think of this role of social mapping in judgmental selection processes is in terms of social norms. In their classical *Social judgment*, Sherif and Hovland wrote:

individuals with established and definite stands *on a controversial social issue* become ego-involved when they face the task of placing items relevant to that stand, and that this ego-involvement would affect their placements... The rationale for this prediction [...] is simple and familiar. *When an individual adopts a stand on a controversial issue, he is mindful of the prevailing opinions in the groups of which he is a member or to which he aspires.* Attitudes related to reference group values are affect-laden, and are functionally equivalent to that more general class of variables called ‘social motives’. *These attitudes establish a psychological relationship between the individual and his social milieu, defining his position and stand on many issues in social life [...]* *This is one reason why changing such attitudes is no small task and why a shift of reference groups is such an effective way of accomplishing attitude change.* (1961, p. 125. My italics)

And then:

Attitude change is inextricably tied with motivational factors and the formation of judgement scales on the one hand, and with the developing conceptions of reference groups and social norms on the other. [...] *Reference groups [...] constitute the principal sources from which his ‘own stand’ on social issues are derived.* The norms or values of his reference groups on a given issue may be represented as psychological scales with modal segments of approval and disapproval. Since the individual actively seeks acceptance and approval by his

reference group, the psychological scale of the reference group become the individual's judgement scales. (pp. 205-207. My italics)

As with Sherif and Hovland's social norms, ego-involvement and social identification are proposed here as crucial elements of social mapping. The point to be highlighted here is that a "geopolitical" map guides the memory-generation process. In generating a social memory, the rememberer "is mindful of the prevailing opinions" of his or her reference group. He or she can be mindful to the extent that he or she can construct a mental model of his or her group's opinions. I would add that rememberers construct such models including the most relevant groups and opinions for a given context, especially those outgroups that help define the ingroups, as well as those contrary opinions that help define one's opinions. So, in addition to the informational role of social norms underscored by Sherif and Hovland, the intergroup context offers judgmental and rhetorical constraints to the generation of memories. By the judgmental constraint I mean the tendency to look for distinctiveness in social categorisation, as explained by Tajfel (1969; see also 1981) and Turner (1985), and by Eiser (1971; see also Eiser & Stroebe, 1972) regarding judgement of attitude statements. By the rhetorical constraint, I mean the situational conditions to use *identification* versus *contradiction* strategies, in the sense of Billig (1996). Because the mental model of one's ingroup would usually be embedded in the mental model of the intergroup pattern of knowledge distribution, the particular configuration of the latter is expected to modulate the inference of one's "own stand" from the stereotype of the ingroup. Price (1989) has investigated this hypothesis regarding the role of social categorisation and identification in public opinion about issues of conflict.

A simplified account of social mapping is to think of it as the co-ordination of two judgement scales, one for placing different possible stands in terms of approval and disapproval, and the other scale for differentiating social categories. Selection processes involved in deciding a personal stand towards an object within an attitudinal scale are co-ordinated, crossed, and mixed with selection processes involved in discriminating social categories within an attribute scale. In this simplified account, social mapping collapses these two psychological scales into one that refers at the same time to the way in which opinions are distributed among

groups, and to the way in which social groups are distributed in a dimension of opinion.

In summary, the place of the concept of knowledge distribution in collective memory dynamics, is twofold. On the one hand, the social distribution of knowledge is the collective frame that mediates the memory generation process in each individual. In selecting knowledge for building a memory, the individual uses the perceived intergroup configuration as a guide. On the other hand, the pattern of knowledge distribution in society is the main source of the psychological group formation process, that is to say, perception of intergroup configurations mirror inter-discursive configurations. As such, the social distribution of knowledge is the dynamic interface between memory and group processes.

### ***Synthesis: Generation as inference***

To generate a social memory is to assert a stand or posture towards a representation of a memory object. If one always knew already one's own stand towards whatever specific object is on focus, there would be no secret in the generation of social memories. It would be enough to recall it. However, a memory object is most often is a unique event—a specific knowledge structure about September 11<sup>th</sup> and not the abstract topic—or a specific composite of generalised structures. In such cases, the notion of knowledge as represented in compact units in semantic memory is not useful (as argued for instance by Kahneman & Miller, 1986). My assumption is that one usually does not already know one's own posture towards specific objects. So one has to infer it. The generation of memories is an inferential process. What is inferred is the position one takes towards a concurrent knowledge structure, and within the social dimension to which such a knowledge structure is perceived as relevant. Again following Kahneman and Miller, “each brings its own frame of reference into being” (1986, p. 136).

The co-ordination of a knowledge structure, an affective reaction, and a mental model of the relevant social dimension of comparison and of action, determines the stand. Each of these factors offers a different type of information. One can describe these types as cognitive, affective, and social. The point is, more than the name and the classification, that these three constructive processes constrain each other to achieve a single amalgam of cognitive, affective, and social information.

The construction of a knowledge structure concerning September 11<sup>th</sup> is the organisation of descriptive information into imaginal and/or verbal relations. The construction of an attitude towards September 11<sup>th</sup> is the organisation of information concerning emotions, feeling, and interests, into a commitment with a truth-claim. The construction of a context model for a representation of September 11<sup>th</sup> is the organisation of information concerning the way in which beliefs, attitudes, and interests are ideologically distributed. The generation of a memory of September 11<sup>th</sup> out of these constructive processes is the articulation of these three organised sets of information. Its by-product, so to say, is a conclusion about one's own momentary posture regarding a specific detail pertaining to September 11<sup>th</sup>.

The final product of the generation process, that is, the social memory or informational amalgam, is sometimes not as coherent as one would desire. Sometimes it is not in accord with one's desired self-presentational motives, or contradicts one of one's social values. On other occasions, it may involve ambivalence. At yet another moment, it may lack clarity of detail and representational certainty. Research on memory distortions in healthy humans and memory pathologies highlights how weak and fragile our memories are (see Schacter, 1999 for a review). This relative incoherence and fragility, however, seem to me less a sign of cognitive failure than a sign of the diversity of informational sources underlying a single memory. Put it differently, the relative incoherence and fragility of memories says that they are an amalgamation of tendencies coming from different origins and sometimes pushing towards conflicting ends.

## **THE ROLE OF SOCIAL CATEGORISATION PROCESSES IN COLLECTIVE MEMORY**

No attempt is made in the present dissertation to test empirically this entire conceptual framework. Rather, a specific aspect is taken as a critical point to be explored, namely, the role of social categorisation processes on the generation of memories. From the perspective outlined above, there are the processes of selecting a dimension of comparison, of discriminating "positions" along this dimension, of stereotyping these "positions", and of identifying oneself with one of them. Moreover, these processes ought to have a perceptible impact on the relative readiness of social memories.

From the point of view of the research traditions of social identity and social cognition, there are three main psychological processes implicated in being part of a social group: identification, stereotyping, and social categorisation. Turner, Hogg, Oakes, Reicher, and Wetherell (1987) have articulated these three concepts into a theory of self-categorisation.

Categorisation is a cognitive process that creates categorical distinctions within a continuous dimension, even breaking this continuum into discrete clusters. Social categorisation is the creation of categories of people. The outcome of the process of categorisation tends to maximise the perceived inter-category differences and minimise the intra-category differences. Differences refer to a dimension of comparison that happens to be dominant in any given situation as a function of its perceived salience and fit to the perceived arrangement of relevant objects. Self-categorisation is the perception of the self as determined by categorical distinctions. The theory of self-categorisation distinguishes three levels of self-categorisation, namely, a *personal*, an *intergroup*, and a *superordinate* level, as dependent upon the social inclusiveness of the dimension of comparison at which the categorisation is made. *Social* identity is then understood as the global effect of self-categorisation at any of the last two levels.

In addition, stereotyping is an immediate cognitive consequence of categorisation. The relationship between stereotyping and identification, finally, is posited in terms of self-stereotyping as an essential cognitive component of any given social identity.

More recently, Bodenhausen and Macrae (1998) proposed a model that breaks the simplicity of the link between categorisation and stereotyping so far suggested. Their essential point is that whenever there is more than one possible way of categorising an object, the competing categories inhibit each other in an automatic, pre-perceptual fashion, until a dominant category emerges. Importantly, the authors have demonstrated that implicit social categorisation cues may lead the discrimination process, causing shifts in category selection according to the semantic similarity between the meaning of the cue and the stereotype associated with a given category. It is argued that this multiple categorisation problem is not an exception but the rule in social perception. This means that the relationship between categorisation and stereotyping is mediated by a cognitive

mechanism of the type of a parallel-constraint-satisfaction network.

In general, the psychological processes involved in being part of a social group have been understood mainly as a basic cognitive process, specifically in terms of associative memory. Either a spread-of-activation model or a connectionist model of memory underwrites the cognitive explanation. For instance, Bodenhausen and Macrae (1998), Dijksterhuis and van Knippenberg (1996), and Stangor, Thompson, and Ford (1998), have elaborated upon the cognitive mechanisms of stereotyping. They suggest that the activation in memory of a social category label has a facilitation effect on the accessibility of traits relevant and consistent with the stereotype, and inhibits traits relevant but inconsistent with the stereotype. Stereotyping is regarded basically as an associative process among memory contents.

Strangely enough, the possible links between these processes and memory about a socially relevant object have been largely neglected in the literature concerning memory, social identity, and social cognition. One proposition to be tested is that *social categorisation processes operating in the course of memory generation constrain the readiness of truth-judgements of social memories*. The prediction that social identification or stereotyping should have an important facilitation/inhibition effect on memories about a relevant past event is the general hypothesis guiding the two studies reported in Chapter 4. In addition, the first study reported in Chapter 5 explores the inverse relationship. Specifically, it tests the hypothesis that *the relative salience of social memories has a facilitation/inhibition effect on the social identification process*. The next section closes this chapter with an elaboration of the general rationale guiding these hypotheses.

## **Two models of memory accessibility effects**

In general, it is postulated that the two-way relationship mentioned above follows the principle of *argumentative relevance*. According to this principle, the identification with a social group (for instance, Leftwingers versus Chileans) facilitates those social memories that are relevant for an argumentation at the level of social categorisation defined by the group (intergroup versus superordinate levels, respectively). Likewise, it is postulated that the expression of a social memory (say, consensual versus polemical) by someone facilitates the identification with the

argumentatively relevant social group (Chileans versus Leftwingers, respectively).

These rather general predictions contrast with those typically drawn in social cognition research from *feature-matching* models of priming. This approach was briefly described in Chapter 2, regarding Bartlett's notion of 'fitness of psychological materials to psychological function'. Feature matching has been demonstrated to account for the results of priming manipulations (see Neely, 1991). Although feature-matching models of priming do not exhaust the explanations for accessibility effects, they are the most popular within social cognition research, are the ones that seem to account for a widest range of observations, and represent some of the predominant cognitive assumptions of the last two decades. This compelled me to compare the argumentative relevance model with that of feature matching. Furthermore, predictions based upon the principle of argumentative relevance were operationalised in terms familiar to social cognition, specifically as response times in truth-judgement of statements about the military coup and in self-categorisation. The four studies included in Chapter 4 and 5 were meant to compare these approaches using priming manipulations. Now I give a general idea of each of these models and their predictions concerning accessibility effects in collective memory situations.

### ***The model of feature matching***

In standard cognitive theory and social cognition research, it is assumed that accessibility effects are due to the semantic or affective overlap between the prime and the target (see Higgins, 1996 for a review). This distinction between prime and target can be mapped onto the difference between the last preceding psychological event and the current event on focus, within the temporal chain of experience. Accessibility effects are conceived of as systematic changes in the ease with which a target (or target-relevant) concept is activated, or retrieved. For example, if an object may be categorised in more than one way, from the alternative applicable categories the more accessible concept would be activated. If the activated concept is applicable for interpreting the object, then its semantic or affective properties would tend to be applied to the object. Moreover, the applicability of a given concept is also seen as determined by the degree of match.

One kind of prediction drawn from this notion is a semantic assimilation effect. Features of the target are interpreted as matching the features of the prime. Semantic *assimilation* would be the accommodation of the features of the target to the semantic implications of the prime. For instance, it would be predicted that if the concept 'Right wing' ('Left wing') is experimentally primed, an ambiguous statement about September 11<sup>th</sup> 1973 should be judged more in line with the prevalent beliefs of the right wing (left wing). *Contrast* effects are expected if the semantic or affective features of the prime are inconsistent with those of the target.

In addition to semantic or affective *assimilation/contrast*, also *facilitation/inhibition* is predicted as a result of priming. This kind of prediction does not concern the outcome of judgement, but the time taken by the production of a given judgement. For example, it would be predicted that if the concept 'Right wing' ('Left wing') is experimentally primed, statements about September 11<sup>th</sup> 1973 more in line with the prevalent beliefs of the right wing (left wing) are going to be more accessible from memory. As a consequence, it is expected that people judge the truth of a given right-wing (left-wing) statement faster than that of a left-wing (right-wing) statement. Inhibition effects are expected if the semantic features of the primed social category are inconsistent with those of the target statement.

Also affective accessibility effects are understood in terms of feature matching. It is predicted that if a positive (negative) concept is experimentally primed—activated—an ambiguous target should be judged as more positive (negative). By the same token, judgements are faster when the valence of the target matches the valence of the prime.

It must be acknowledged that the theory of feature matching has neither been designed for, nor applied to, collective memory situations, but this is less a matter of the theory itself than of the research agenda in social cognition.

### ***The model of argumentative relevance***

For the purposes of the dissertation, the focus of the discussion is on the semantic facilitation/inhibition effect. Regarding this, the guiding concept of the feature-matching model, however, is problematic. It is the concept of semantic similarity (for a discussion in the context of social cognition, see Martin & Achee, 1992). The notion that social memories can be *semantically more*

*similar* to a primed social category than another, seems difficult to understand. In what sense is 'right wing' similar to 'Allende committed suicide'?

One way to surmount this problem is to say that these pieces are relevant to each other. However, this remains too vague. My proposal is that a given social memory is relevant to a given social category if the former represents a distinctive position of the social group referred by the latter, within a given knowledge-distribution pattern. Conversely, a given social category is relevant to a given social memory if the former helps modelling a social distribution of knowledge in which the memory plays a distinctiveness function. This principle can be referred to as *argumentative relevance*—following the concept of relevance as it is applied to meaning in conversation (Grice, 1975; Sperber & Wilson, 1986; Asher, Busquest, & Le Draoulec, 2001). It can be thought of as an especial case of Grice's (1975; 1989) maxim of co-operation for situations in which the end is not simply understanding, but the elaboration of a controversy. A *maxim of controversy* would read as follows: *Choose your act of memory so as to make the inter-ideological differences between whichever is your ingroup and your outgroup as sharper as possible, and the differences within your ingroup as mild as possible.* As it might be noticed, this maxim is analogous to the *principle of meta-contrast*, as advanced by Turner and colleagues (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). This principle can also be thought of as a development of Billig's (1996) notion of the *spirit of contradiction*.

The principle of argumentative relevance predicts priming effects in a way different from the feature-matching model. For example, it would be predicted that priming the concept 'Right wing' or 'Left wing' would have a similar effect on the accessibility of statements about September 11<sup>th</sup> 1973. The effect would be that *polemical* statements would show more accessibility than *consensual* statements. Suppose now that the concept 'Chilean' is experimentally primed; then *consensual* statements would show more accessibility than *polemical* statements. Note that the level of social comparison at which the social distribution of knowledge is "mapped" determines the argumentative relevance of a social category or a social memory. In fact, the polemical versus the consensual nature of a given memory describes the way in which it is distributed socially. A polemical memory highlights differences at an intergroup level of comparison; a consensual memory would be distinctive of a superordinate level of comparison.

The next two chapters explore the differences among the feature-matching and the argumentative relevance model in greater detail. Specifically, the role of the consensual versus the polemical nature of a piece of knowledge, within a pattern of knowledge distribution, is used to test specific hypotheses in order to contrast these models empirically.

## 4 Accessibility of social categories and the generation of collective memory judgements

*There is no doubt that much human remembering is influenced directly and strongly by factors which are social in origin. The influence of these factors may be obscured by the ordinary laboratory methods of the study of memory, because of the exceedingly artificial character of the material which is used. But it seems possible that suitably devised experiments could help.*

—Bartlett, 1932, p. 95

According to our theoretical approach, memories of controversial past events are psychologically produced in a dynamic interaction between the processes involved in the construction of knowledge judgements and those involved in being a member of a social group. Taken as a whole, the studies reported in this chapter are meant to take some steps towards demonstrating this interaction. In particular, the experiments reported here concentrate on the interaction between the social context of a given social memory and the ideological position of the individual rememberer.

In Chapter 3, I proposed a hypothesis about the relationships between social categorisation processes and collective memory judgements. In a nutshell, the hypothesis states that the processes of memory judgement and of social categorisation influence each other in terms of *argumentative relevance* and not in terms of *feature matching*. That is to say, social categorisation at a relevant intergroup level is expected to facilitate the generation of memories that are not shared among groups, and to inhibit shared memories. Conversely, social categorisation at a relevant superordinate level is expected to facilitate the generation of shared memories among groups, and to inhibit non-shared memories. Importantly, this facilitation and inhibition is expected to be independent of the social group to which the individual

belongs. Memories, or memory judgements, are expected to be facilitated or inhibited because of the pragmatic function they may fulfil in a given social categorisation context. Further, memories, or memory judgements, are not expected to be facilitated because of the semantic similarity with the active social category or stereotype.

## **MATERIALS FOR STUDIES 1 TO 3**

The investigation of the relationships of social categorisation processes on memory ought to start by defining the relevant psychological materials suitable for manipulation and assessment. In this set of studies, materials consisted mainly of selected statements about the military coup. These were used as stimuli representing knowledge that could be recognised, or remembered, or judged as true or false by a Chilean person.

In most of the experiments included in this dissertation, a common set of statements was employed. For this reason, the account of the study on the basis of which the statements were selected will precede the report of more substantial studies. The aim of this pilot study was to describe the truth-value of a number of statements about the military coup for different ideological samples of young Chileans.

Following the principles of *fuzzy logic* (see Baldwin, 1996), the truth-value of any given statement is understood here in terms of likelihood, that is, as a continuum from completely true to completely false. The average truth-value of each statement for each political group is then used as the primary ground to estimate its position within the intergroup distribution of knowledge. The basic input for such estimation was the truth-value given by Chilean young people to a series of statements about September 11<sup>th</sup>. These data were obtained through a questionnaire set up on the Internet.

## **Participants**

The pool of participants used consisted of Chileans aged 17 to 32 years. The reason for this was to exclude people who are likely to have episodic memories of experienced events of September 11<sup>th</sup> 1973. People of 32 years old at the date of the present study were 4 at the moment of the military coup. These and younger people can be assumed to construct their memories on a basis different from episodic, personal, or autobiographical memory. In this way, the age criterion helps underscoring collective memory dynamics.

Participants were contacted by e-mail and asked to access a web site in order to complete an on-line questionnaire. The invitational e-mail was sent to more than 1,000 students of four different Chilean universities, mainly via departmental e-mail lists. The

university departments contacted were Medicine, Biology, Law, Education, Engineering, and Psychology.

A total of 245 people completed the questionnaire. The observed age average was 25.90. No gender information was collected.

## **Materials**

Statements about the military coup were constructed on the basis of a previous study of interviews to 46 Chilean adults and the qualitative analysis of their content (Manzi, Krause, Ruiz, Meneces, & Hays, in press). Consistent with the criterion used to select the respondents, half of the participants in that research described themselves as closer to the political right wing and the other half as closer to the left wing. The most frequent excerpts describing the coup were taken from the transcriptions of the interviews, covering all recurring themes.

The ideological inclination of excerpts was counterbalanced: About half of the excerpts were clearly favourable to a pro-coup account of the coup, and the other half were clearly favourable to an anti-coup view. In an initial phase, more than 60 excerpts were examined by the research team, and those whose ideological implications are not clear were excluded.

Then these excerpts were edited and simplified in their formulation. A total of 41 statements were constructed in this way, 22 with an implied pro-coup inclination and 19 suggesting an anti-coup attitude. Table 1. displays these statements in their original Spanish version and a translation of them into English. The content of these statements is important as a background not only for the present study but also for most of the experiments reported later. However, the classification of these statements is not the focus at the moment.

**TABLE 1. STATEMENTS ABOUT SEPTEMBER 11<sup>TH</sup> IN SPANISH AND ENGLISH VERSIONS**

N.	<i>Spanish version (original)</i>	<i>English translation</i>
1	Allende estaba borracho cuando emitió su discurso	Allende was drunk when he gave his last speech
2	Allende se suicidó	Allende committed suicide
3	La resistencia armada de izquierda estuvo muy bien organizada	The armed resistance of the leftwing was well organised
4	Había ramas armadas en movimientos políticos de izquierda	The left wing had armed groups
5	Durante la UP hubo una gran rigidez ideológica	During the UP period there was a pervasive ideological inflexibility <sup>a</sup>
6	Allende llamó a la resistencia armada para defender al gobierno	Allende asked people to resist the military with arms to defend the government
7	Intervención militar: ejemplo mundial de detención del comunismo	Military intervention: international lesson of defeating Communism
8	Durante la UP hubo mucha influencia de Cuba	Cuba had a great influence during the UP administration <sup>a</sup>
9	Hubo perdidas humanas por ambos lados	There were casualties on both sides
10	UP: implementación demasiado brusca de políticas sociales	UP: too abrupt implementation of its social policies <sup>a</sup>
11	UP: graves problemas de escasez	UP: severe problems of scarcity <sup>a</sup>
12	El gobierno de la UP era antidemocrático	The UP government was anti-democratic <sup>a</sup>
13	Intervención militar: alguna justificación en el primer momento, pero que después se volvió represivo	Military intervention: some justification at the beginning but later it became repressive
14	Hubo una presión popular a las FFAA para que intervinieran	There was a popular pressure on armed forces to intervene
15	Allende fue asesinado a sangre fría	Allende was assassinated in cold blood
16	La intervención militar produjo conflictos entre familiares y amigos	The military intervention generated conflicts among relatives and friends
17	Las radios fueron cortadas para interrumpir el discurso de Allende	Radio stations were silenced to interrupt Allende's last speech
18	Derechistas: resistencia a reformas sociales de la UP	Rightwingers: resistance to social reforms of the UP <sup>a</sup>
19	Fuerzas Armadas: graves violaciones a los derechos humanos en forma sistemática	The military: serious and systematic human rights violations
20	Había ramas armadas en movimientos políticos de derecha	The right wing groups had armed groups
21	Las malas condiciones del país motivaron la intervención militar, pero no justificaron las violaciones a los DDHH	The bad situation of the country motivated the military intervention, but they did not justified human rights violations

<sup>a</sup> UP = "Unidad Popular", Popular Union, the name of the political coalition supporting Allende's government.

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22	UP: holgazanería de trabajadores y paralización productiva	UP: idleness of working people and freezing of production <sup>a</sup>
23	Durante la UP había un malestar social generalizado	There was a generalised discontent during the UP period <sup>a</sup>
24	El gobierno de la UP fue poco eficiente	The UP government was inefficient <sup>a</sup>
25	Intervención militar: restablecimiento del orden y la tranquilidad	Military intervention: reestablishment of order and tranquillity
26	Gobierno militar: reactivación productiva	Military government: economic reactivation
27	Gobierno militar: dirigió al país por la senda del desarrollo	Military government: development of the nation
28	Las FFAA se vieron forzadas a intervenir por la crisis política y económica que vivía el país	The armed forces were pushed to intervene because of the political and economic crisis in the country
29	Fue una intervención necesaria y dolorosa al mismo tiempo	It was a necessary but painful intervention
30	Allende trató de dialogar pacíficamente con los militares	Allende tried to peacefully dialogue with the armed forces
31	Muchas personas fueron trasladadas a campos de tortura	Many people were moved to concentration camps
32	Gobierno militar: desarticulación de organizaciones y movimientos sociales	Military government: disintegrated social organisations and movements
33	El discurso de Allende fue muy coherente	Allende's last speech was very coherent
34	Gobierno militar: disminución de la inversión social en sectores pobres	Military government: decrease of social investment in the poor
35	UP: ejemplo mundial de socialismo democrático	UP: international lesson of democratic Socialism <sup>a</sup>
36	Hubo una conspiración entre el gobierno de USA y la derecha chilena contra el gobierno de la UP	The US Government and the Chilean rightwing conspired against the UP government <sup>a</sup>
37	USA y la CIA influyeron para que las FFAA intervinieran	US and the CIA encouraged the armed forces to intervene
38	Gobierno militar: aumento de las diferencias socioeconómicas	Military government: increase of the socio-economic gap
39	Derechistas: acaparamiento de mercaderías	Rightwingers: hoarded goods
40	La intervención militar fue brutal con personas inocentes	The military intervention was brutal with innocent people
41	El golpe fue un atentado cruel y sanguinario contra el proceso de cambio social	The coup was a harsh and bloodthirsty attempt on the process of social change

Note. Statements 1 to 14 and 22 to 29 are inclined towards a pro-coup view, whereas statements 15 to 21 and 30 to 41 are favourable to an anti-coup discourse.

<sup>a</sup> UP = "Unidad Popular", Popular Union, the name of the political coalition supporting Allende's government.

## Procedure

The invitational e-mail asked participants to express their opinion about a number of statements referring to the September 11<sup>th</sup> 1973. In the initial web page, the study was framed as part of a research project into the way people think about different historical events, particularly the military coup. Participants were asked to judge the 41 statements, presented in a random sequence, in terms of how likely they believed they were true. It was stressed at the beginning that answers would be taken as expressions of authentic beliefs rather than objective knowledge. Possible answers to the question of *how true* was each statement [¿Cuán verdadera consideras esta frase?], were either *not at all* [nada], *a bit* [un poco], *a lot* [bastante], or *absolutely* [totalmente]. Finally, participants rated their global opinion about the military coup in two separate 9-point scales asking them to rate the positive and negative aspects of September 11<sup>th</sup> [¿Cuán positiva/negativa es tu opinión del 11 de septiembre?]. The anchors of the former scale were *not at all positive* [nada de positiva] to *very positive* [muy positiva], whereas the anchors of the latter were *not at all negative* [nada de negativa] to *very negative* [muy negativa]. The positive evaluation scale was presented always first, and only after answering this, was the negative one presented.

The use of this bivariate approach to assessing the global attitude draws on previous claims that positive and negative scales, instead of reflecting one another, may refer to different evaluative dimensions (Nowlis, 1965; Cacioppo & Berntson, 1994). However, more recently, Russell and Carroll (1999) have argued that the separability of positive and negative dimension may be due to methodological artefacts.

At the end of the questionnaire, participants were thanked and asked to disclose their e-mail address if they wanted to receive a report of the results of the study, or to participate in subsequent studies within the same research programme. Finally, participants had the opportunity to include the e-mail address of friends whom they thought might also be interested in participating.

## Results and discussion

Because this study was conducted through the Internet, a device to detect random answering was implemented. Two pairs of contradictory statements were used for this. One pair consisted of

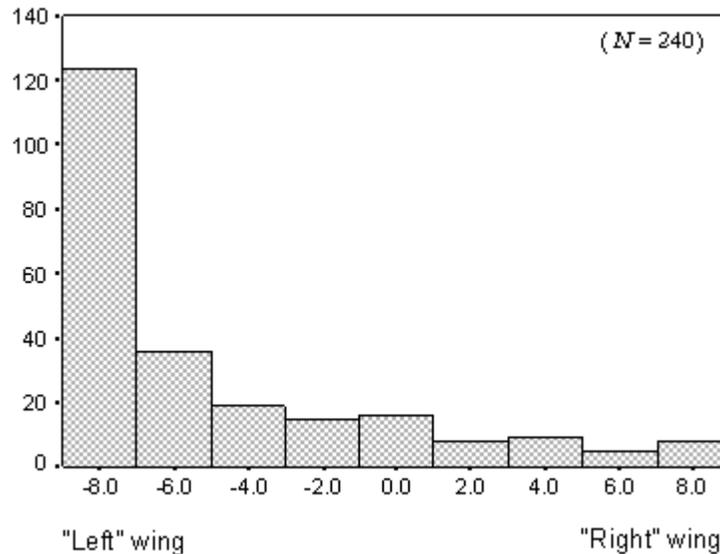
statements 2 and 15 (as numbered in Table 1.), that is: “Allende committed suicide” and “Allende was assassinated in cold blood.” The other pair included statements 12 and 41: “The UP government was anti-democratic” and “The coup was a harsh and bloodthirsty attempt on the process of social change.”

From the 245 participants, 5 were eliminated from the database because critical inconsistencies in their responses left no room for the assumption that they were answering on the basis of their own reactions towards the given statements. In particular, two situations were critical. In one, participants assigned the same truth-value to statements 2 and 15. In a second situation, participants assigned the same truth-value to statements 12 and 41. There were 240 remaining participants.

### ***Selection of groups***

Research concerning the bi-dimensional nature of attitudes suggests that the positive and the negative scales may assess relatively independent aspects of the evaluation. However, in the present study the positive and negative scales were almost perfectly inversely correlated ( $r = -.98$ ). This supports the position of Russell and Carroll (1999) rather than that of Cacioppo and Berntson (1994) in this instance. Consequently, an estimation of the ideological position towards September 11<sup>th</sup> was computed by subtracting the rating of the negative aspects of the events from the rating of the positive ones. The positive attitude scale ranged from a “not positive” (0) to a very positive pole (8). The negative attitude scale ranged from a “not negative” (0) to a very negative pole (-8). Consequently, the compound score ranged from -8 (absolutely negative attitude) to 8 (absolutely positive attitude). As Figure 1. shows, the sample as a whole was strongly skewed towards the negative pole ( $M = -5.10$ ,  $SD = 4.31$ ), so that 50% of the participants reported a maximally negative attitude.

Figure 1. Histogram of the compound score of global attitudinal position towards the coup in the whole sample.



The objective of the study was to describe the truth-value of the statements for a pro-coup and an anti-coup group. In order to select those participants with a relatively positive and a relatively negative attitude towards the coup based on this skewed distribution, the following criterion was applied.

Participants placing their position at the extreme poles of 'not at all positive' and 'very negative' (a score of -8 in the compound attitude scale) were categorised as belonging to the *Left-wing* group. These were 124 participants, 51.7% of the whole sample. Participants classified as part of the *Right-wing* group were those who rated their position within the last six points of the positive scale and within the first two points of the negative scale. In other words, right-wing participants are defined as those with scores equal to or greater than -3 in the compound attitude scale. The mean compound score for this group was 2.27, with a mean of 5.13 ( $SD = 1.71$ ) on the positive scale and of 2.85 ( $SD = 1.81$ ) on the negative scale. These were 48 participants, representing 20% of the sample.

Participants with a compound score greater than -8 and less than -3 were omitted from further analyses, because they self-rated their global attitude towards the coup in a relatively moderate way. These consisted of 68 (28.3%) participants, who could not be meaningfully categorised within either of the political groups. In

summary, the functional sample was reduced to 172 participants (71.7% of the original sample).

### ***Description of statements' truth-value***

For any given statement, two truth-values were computed, one for each group. This computation draws on the raw judgements given by participants. Because the four possible values of the truth-judgements were categorically labelled, individual differences in the meaning attributed to these labels are expected. This makes it difficult to rely simply on raw judgements. To deal with this problem, a standardised truth-value was computed across all responses for each participant. In other words, for each participant the average of his or her truth-judgements was used to base the score. Standardised or adjusted truth-values thus represent the number of standard deviations a given judgement is, relative to the specific bias of the participant.

In Table 2., a summary of the most important properties of each statement is reported. These properties include the ideological inclination of the statements, as it has been defined *a priori* (column labelled 'Inclination'). It also includes the mean standardised truth-value for the right-wing group (data column labelled 'Right wing'), and the mean standardised truth-value for the left-wing group (data column labelled 'Left wing'). For any given statement, the mean standardised truth-value represents the bias towards accepting or rejecting it as true within a group. Finally, in the last column to the right (column labelled 'Difference'), effect sizes of the test of difference between the right- and the left-wing means are specified for each statement. More statistical details of each statement can be found in Appendix B (page 286).

### **Agreement and disagreement among political groups**

The importance of the difference between the Pro- and the Anti-coup groups in truth-values is that it accounts for the degree of agreement/disagreement between groups. In the dissertation this notion is referred to as the *social sharedness* of a given statement, that is, whether the knowledge represented by the statement is relatively consensual or polemical with a social aggregate. *Consensual* statements are those where the difference between the right- and the left-wing groups is comparatively small. *Polemical* statements are those where the difference between the right- and the left-wing groups is comparatively large. It is

important to note that this scoring and classification does not represent the level of agreement between ideological positions as it is perceived by participants, but the actual difference between clusters of participants.

A one-way analysis of variance was carried out for each statement in order to test the difference between groups. Apart from statements 1 and 2, there was a reliable difference between the right- and the left-wing groups, at the level of .05. Effect sizes (column labelled 'Difference' in Table 2.) were taken as indicators of the difference between the standardised truth-value of each group. This measure is better than the simple difference between the sub-sample means for each statement, because effect sizes take into account the distribution of truth-values within sub-samples. (As a guideline, consider that according to Cohen, 1977, for "small" effect sizes,  $\eta^2 < .05$ ; for "medium" effect sizes,  $.05 < \eta^2 < .14$ ; and for "large" effect sizes,  $\eta^2 > .14$ ).

The order and numbering of the statements is primarily determined by the size of the difference between the two means. In other words, the earlier statements are the most consensual and the later statements are the most polemical—relative to each other. Within each half, statements are sorted by ideological inclination, so that statements favourable to the pro-coup discourse appear first. That is, the first half of statements—including those relatively more consensual—is subdivided into a first cluster of *consensual + pro-coup statements* (1 to 14) and a second cluster of *consensual + anti-coup statements* (15 to 21). Then there is a third cluster of *polemical + pro-coup statements* (22 to 29) and a fourth cluster of *polemical + anti-coup statements* (30 to 41).

Some statements tended to be accepted or rejected by both groups, whereas other statements tended to be accepted by one group and rejected by the other. Figure 2. plots the standardised truth-value of each statement for one group against the other.

**TABLE 2. MEAN OF ADJUSTED TRUTH-VALUES OF STATEMENTS FOR EACH GROUP, INDEX OF AGREEMENT BETWEEN GROUPS (EFFECT SIZES), AND IDEOLOGICAL INCLINATION**

<i>N.</i>	<i>Statement</i>	Inclination	Right wing (M)	Left wing (M)	Difference ( $\eta^2$ )
1	Allende was drunk when he gave his last speech	PRO	-1.24	-1.27	0.00
2	Allende committed suicide	PRO	0.73	0.45	0.02
3	The armed resistance of the leftwing was well organised	PRO	-0.69	-0.96	0.04
4	The left wing had armed groups	PRO	0.35	-0.07	0.06
5	During the UP period there was a pervasive ideological inflexibility	PRO	-0.05	-0.63	0.09
6	Allende asked people to resist the military with arms to defend the government	PRO	-0.16	-0.73	0.10
7	Military intervention: international lesson of defeating Communism	PRO	0.24	-0.48	0.10
8	Cuba had a great influence during the UP administration	PRO	0.37	-0.21	0.15
9	There were casualties on both sides	PRO	0.62	-0.21	0.19
10	UP: too abrupt implementation of its social policies	PRO	0.35	-0.38	0.20
11	UP: severe problems of scarcity	PRO	0.73	-0.02	0.20
12	The UP government was anti-democratic	PRO	-0.29	-1.11	0.21
13	Military intervention: some justification at the beginning but later it became repressive	PRO	0.18	-0.73	0.22
14	There was a popular pressure on armed forces to intervene	PRO	0.18	-0.63	0.24
15	Allende was assassinated in cold blood	ANTI	-1.42	-0.64	0.14
16	The military intervention generated conflicts among relatives and friends	ANTI	0.06	0.67	0.15
17	Radio stations were silenced to interrupt Allende's last speech	ANTI	-0.14	0.67	0.19
18	Rightwingers: resistance to social reforms of the UP	ANTI	0.30	0.90	0.19
19	The military: serious and systematic human rights violations	ANTI	0.20	0.99	0.22
20	The right wing had armed groups	ANTI	0.03	0.78	0.22
21	The bad situation of the country motivated the military intervention, but they did not justified human rights violations	ANTI	0.80	-0.35	0.28

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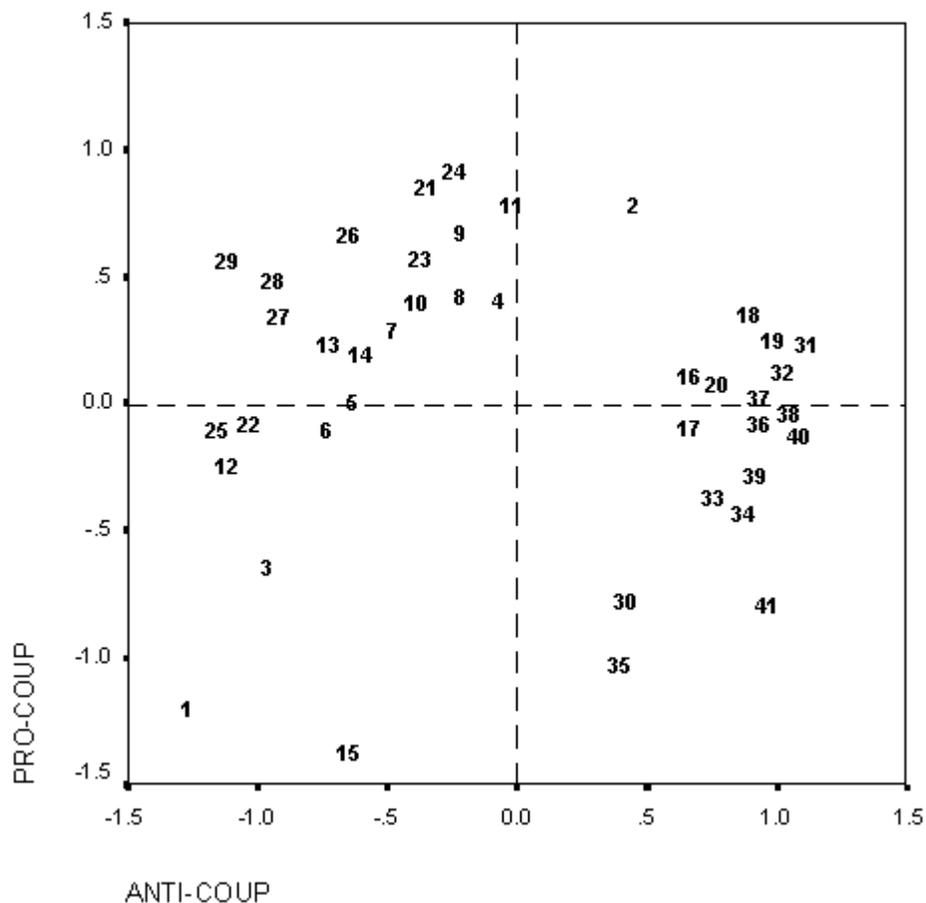
<i>N.</i>	<i>Statement</i>	<i>Inclination</i>	<i>Right wing</i> ( <i>M</i> )	<i>Left wing</i> ( <i>M</i> )	<i>Difference</i> ( $\eta^2$ )
22	UP: idleness of working people and freezing of production	PRO	-0.15	-1.06	0.33
23	There was a generalised discontent during the UP period	PRO	0.52	-0.37	0.36
24	The UP government was inefficient	PRO	0.87	-0.24	0.40
25	Military intervention: reestablishment of order and tranquillity	PRO	-0.15	-1.15	0.44
26	Military government: economic reactivation	PRO	0.61	-0.64	0.46
27	Military government: development of the nation	PRO	0.29	-0.92	0.51
28	The armed forces were pushed to intervene because of the political and economic crisis in the country	PRO	0.44	-0.94	0.54
29	It was a necessary but painful intervention	PRO	0.51	-1.11	0.67
30	Allende tried to peacefully dialogue with the armed forces	ANTI	-0.83	0.42	0.37
31	Many people were moved to concentration camps	ANTI	0.19	1.07	0.41
32	Military government: disintegrated social organisations and movements	ANTI	0.02	1.00	0.41
33	Allende's last speech was very coherent	ANTI	-0.42	0.75	0.42
34	Military government: decrease of social investment in the poor	ANTI	-0.48	0.82	0.42
35	UP: international lesson of democratic Socialism	ANTI	-1.07	0.39	0.43
36	The US Government and the Chilean rightwing conspired against the UP government	ANTI	-0.12	0.97	0.44
37	US and the CIA encouraged the armed forces to intervene	ANTI	-0.03	0.98	0.44
38	Military government: increase of the socio-economic gap	ANTI	-0.09	1.04	0.47
39	Rightwingers: hoarded goods	ANTI	-0.34	0.91	0.50
40	The military intervention was brutal with innocent people	ANTI	-0.11	1.09	0.55
41	The coup was a harsh and bloodthirsty attempt on the process of social change	ANTI	-0.83	0.96	0.65

Note. Listing order depends on the size of the difference between the two means, that is, first statements are the most consensual and last statements are the most polemical. Within each half—the half relatively more consensual first and then the half relatively more polemical—statements are sorted by ideological inclination, so that statements favourable to the pro-coup discourse appear first.

## Acceptance and rejection as a function of political group

Another way of presenting these data is the following. The graph allows us to distinguish four types of statements about September 11<sup>th</sup>. In the bottom-left quadrant of this graph are those statements that tend to be rejected by people from both samples, such as statements 1, 15, and 3. In the bottom-right quadrant are those which are rejected by the Pro-coup and accepted by the Anti-coup people. Statements 35, 41, 30, 33, and 34 exemplify this set. In the top-right quadrant there are statements accepted by people from both groups, such as statements 2 and 18. Finally, the top-left quadrant congregates statements typically accepted by Pro-coup people and rejected by Anti-coup people. Statements 29, 28, 27, 26, 24, 23, 21, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 15, and 3 exemplify this type.

Figure 2. Plot of statements according to their truth-values for the two groups against each other.



### ***Ideological inclination of statements***

In addition to the clustering of statements in polemical versus consensual ones, they were organised in terms of *ideological inclination*, defined in terms of the attitude towards September 11<sup>th</sup> implied by the statement. Because this feature was defined *a priori*, it is important to test its validity for participants' responses.

One approach was to check whether the political position reported by participants at the beginning of the session was meaningfully predictive of the truth-value they assigned to supposedly pro- and supposedly anti-coup statements. Recall that the composite index of political position of participants ranged from -8 (left-wing pole) to 8 (right-wing pole). The correlation between this index and the average among judgements of supposedly pro-coup statements was  $r = .92, p < .001$ . The correlation between the index of political position and the average among judgements of supposedly anti-coup statements was similar,  $r = -.91, p < .001$ .

A second approach was to evaluate whether the distinction between right- and left-wing groups was reflected on judgements towards both supposedly pro- and supposedly anti-coup items. The basic pattern of means is depicted in Table 3., which also includes the sharedness of statements as factor.

TABLE 3. MEAN OF ADJUSTED TRUTH-VALUES OF STATEMENTS FOR EACH GROUP AS A FUNCTION OF SHAREDNESS AND IDEOLOGICAL INCLINATION OF THE STATEMENT

Sharedness	Inclination of statement	Group	
		Right wing	Left wing
Consensual	PRO	0.10 (0.31)	-0.50 (0.16)
	CON	-0.02 (0.41)	0.43 (0.25)
Polemical	PRO	0.37 (0.51)	-0.81 (0.17)
	CON	-0.34 (0.46)	0.87 (0.18)
Overall	PRO	0.19 (0.35)	-0.61 (0.12)
	CON	-0.23 (0.40)	0.71 (0.14)

As expected, the pattern of means seems concordant with the classification of statements in terms of their ideological inclination. To start with, the last two rows show that right-wing participants tended to accept pro-coup statements and reject anti-coup statements. The reverse is observed for the left-wing group. To test this, a 2 (sharedness: consensual/polemical)  $\times$  2 (inclination: pro-/anti-coup)  $\times$  2 (group: right-/left-wing) analysis of variance with repeated measures on the first two factors was carried out. In order to have comparable cell size, I included for analysis a random sample of 48 out of 124 left-wing participants. Results indicate a main effect of the ideological inclination:  $F(1,94) = 57.86, p < .001, \eta^2 = .38$ . This reflects the tendency of pro-coup statements to be judged more as false ( $M = -.42$ ) than anti-coup statements ( $M = .48$ ). However, consistently with previous observations, the interaction between this factor and political group was stronger:  $F(1,94) = 215.81, p < .001, \eta^2 = .70$ . That is, pro-coup statements were indeed judged more as true by right-wing participants and more as false by left-wing participants. The inverse was the case for anti-coup statements.

Additionally, there was a main effect of the between-subject factor: Right-wing participants tended to be slightly biased towards the 'false' pole overall ( $M = -.03$ ) compared to left-wing participants, who were biased towards the 'true' pole ( $M = .10$ );  $F(1,94) = 9.77, p < .005, \eta^2 = .09$ . This difference might be a simple reflection of the contents of the sample of statements, despite the fact that there was a slightly greater number of statements inclined towards a pro-coup than an anti-coup view.

Although the effect of sharedness did not approach significance— $F(1,94) = 2.47, ns$ —the interaction of this factor with the political group was  $F(1,94) = 7.15, p < .01, \eta^2 = .07$ . The interaction of sharedness with ideological inclination of the statements was not significant either;  $F < 1$ . However, the three-way interaction was strong:  $F(1,94) = 145.99, p < .001, \eta^2 = .61$ . This effect can be described as follows. Both the right- and the left-wing groups polarised their judgements of pro- and anti-coup statements—in line with their ideological inclination—more in the case of polemical than consensual statements; but overall the left-wing group provided more polarised judgements than the right-wing group.

This analysis supported the distinction between statements implying a pro-coup attitude and those implying an anti-coup attitude. However, the data depicted in Figure 2. offer the possibility of a more detailed examination of each statement. In particular, there might be statements falling in a quadrant that contradicts the expected pattern of judgements. For example, if a pro-coup statement falls in the bottom-right quadrant, then it cannot be used as a pro-coup statement without ambiguity. Conversely, if an anti-coup statement falls in the top-left quadrant, then its inclination towards the anti-coup view is ambiguous. There is one statement with this problem. Statement 21, whose content is clearly ambiguous and ambivalent, was initially classified as an anti-coup statement but falls in the top-left quadrant (see p. 118). That is to say, it is accepted by right-wing group and rejected by the left-wing group. For this reason, statement 21 was not used in other studies.

Nothing can be clearly objected to statements falling on the bottom-left or the top-right quadrants. This is because the ideological inclination of the statement means that the idea is favourable to a given position, but not all of those who support that position must accept it. For example, the statement “Allende was assassinated in cold blood” is clearly favourable to an anti-coup view, but in the sample of the present study it attracted more ‘false’ than ‘true’ responses among left-wing participants. People may reject a statement favourable to their ingroup view, for example, because they can think that other possibilities are more reasonable or closer to additional evidence.

### ***Congruity of statements with participants’ position***

The previous analyses validate the distinction between statements attitudinally inclined towards a pro-coup view and those inclined towards an anti-coup view. Moreover, the strong interaction between the ideological inclination of the statement and the political orientation of participants justify their combination into a new variable, namely, the *congruity* of a given statement with the position of a given participant. A *congruent* statement is favourable to the ingroup’s global view of September 11<sup>th</sup>, whereas an *incongruent* statement is favourable to the global view of the outgroup. The ingroup and the outgroup, in this context, are assumed to refer to the main ideological groups in society. Thus, for a right-wing participant, for example, a pro-coup statement is

said to be congruent and an anti-coup statement is said to be incongruent.

This parameter resembles the initial design of the set of statements, wherein half were selected as implying a pro-coup attitude and the other half an anti-coup attitude. However, the difference between the ideological inclination and the congruity of statements is that the latter incorporates the political orientation of participants. For example, a pro-coup statement is incongruent with the ideological position of an left-wing participant. In this way, two factors—the ideological inclination of statements and the political orientation of participants—are collapsed into one that gives a meaningful description.

In summary, the selection of statements in each study draws upon the crossover of the *sharedness* and the *congruity* of the statement—both reflecting a different dimension of the social distribution of knowledge. This yields 4 types of statements. For each of the studies to be reported later, some statements were selected according to the political orientation of participants and the amount of statements needed. In each case, the best exemplars of every type were selected. The “best exemplar” implies that the selected statement is the one that best fits a given type, according to the statistics presented in Table 2. (see p. 116). For instance, for a polemical statement congruent with a left-wing participant, one should look to the fourth quarter of the list of statements (from 30 to 31) and pick up (paying attention to the column labelled ‘Left wing’) one that is highly accepted in comparison with the rest. The best fitting statements for this type would be statements 31, 32, 38, and 40. In Table 4., one of the best exemplars of each of the four types of statements determined by this crossover is shown.

TABLE 4. EXAMPLES OF STATEMENTS ABOUT SEPTEMBER 11<sup>TH</sup> AS A FUNCTION OF THEIR SHAREDNESS AND THEIR CONGRUITY, FOR EACH GROUP

Group	Congruity	Sharedness	
		Consensual	Polemical
Right	Congruent	2- Allende committed suicide	24- The UP government was inefficient
	Incongruent	15- Allende was assassinated in cold blood	35- UP: international lesson of democratic Socialism
Left	Congruent	19- The military: serious and systematic human rights violations	40- The military intervention was brutal with innocent people
	Incongruent	5- During the UP period there was a pervasive ideological inflexibility	25- Military intervention: reestablishment of order and tranquillity

“Good exemplars” of each type may be different for the two groups. The comparison between statements 15 and 19 would be illustrative of the point. Statement 15 is a particularly good example of a consensual statement incongruent with a right-wing participant, because it is the most rejected by rightwingers within the *consensual + anti-coup* set. Statement 19 is a particularly good example of a consensual statement congruent with the left-wing position. This is because statement 19 is, for left-wing participants, the most accepted of the same *consensual + anti-coup* set. Now, the converse is not necessarily true: Left-wing participants may not especially accept statement 15, whilst right-wing participants may not reject statement 19 more than other comparable items. In fact, as Table 2. (p. 116) demonstrates, left-wing participants also tend to reject statement 15, despite the fact that it is favourable to their opinion about the coup. Moreover, right-wing participants tend to accept statement 19 even if it is incongruent with their own opinion about the coup.

On other occasions there is a greater coincidence between the congruity of the statement and the truth-judgement. For instance, statement 35 is a particularly good example of a polemical statement incongruent with a right-wing participant, because is the most rejected of the *polemical + anti-coup* set. Similarly, statement 40 is a particularly good example of a polemical statement congruent with a left-wing participant, because it is the most accepted of the same *polemical + anti-coup* set. At the same

time, left-wing participants tend to accept statement 35, but not as much as other statements from the same set (eminently, statement 40). Likewise, right-wing participants tend to reject statement 40, but not more than others from the same set (particularly statement 35).

This differential, or non-symmetrical, function of the statements for different participants implies that, for experimental purposes, right- and left-wing participants need a separate selection of statements.

### ***Final observations***

The terms *polemical* and *consensual* deserve a brief comment. Note that they are applied to statements about September 11<sup>th</sup>, which is in its own right a topic of controversy among Chilean people. The sharedness of a specific memory of the event is different from the controversial nature of the topic. In fact, there are consensual pieces of knowledge within controversial topics. Conversely, the consensual nature of a given piece of knowledge does not imply that it has no ideological inclination. As described previously, selected excerpts included only statements with a supposedly clear ideological inclination, that is, whose implied attitude was definitely pro- or anti-coup. However, among these statements there were some that entailed more polarisation of opinion than others. For example, statement 25 is highly consensual but ideologically inclined towards a pro-coup view—even if both samples tended to judge it as moderately true.

## **RESEARCH QUESTIONS AND GENERAL HYPOTHESES**

The focus in most of the studies presented in this dissertation is on the ease with which people judge the truth of statements about September 11<sup>th</sup>. Ease or accessibility of judgement is assumed to be a proxy of the readiness of the selection and inferential processes underlying the generation of a given memory. This judgmental process is presumed to be essential to the generation of social memories, particularly to taking a position towards a controversial past event. For any given memory, the relative accessibility of this judgmental process is assumed to be a major determinant of the likelihood of being dominant in memory generation. These assumptions were discussed in the previous chapter.

In a first step, the accessibility of truth-judgements is studied as a function of social categorisation processes. Study 1 concentrates on the influence of social identification, and Study 2 on the influence of stereotyping, both on judgement accessibility. A second step in this line is to explore the inverse phenomenon, that is to say, whether the differential salience of knowledge structures affects the ease of self-categorisation. This is the step addressed in Study 3. The line of reasoning underlying this strategy is straightforward. If the link between memory truth-judgements and social categorisation processes is shown to take place in both directions, there is stronger support for the idea that in collective memory the generation of memories is interlaced with social processes.

However, there is another question behind these general hypotheses. According to the argumentative relevance model, social identification ought to be a critical factor in the position-taking process. However, the concept of social identification remains ambiguous in the literature (see Jackson & Smith, 1999 for a recent review). In self-categorisation theory, identification with a given group is basically conceived of as the readiness of a given self-categorisation (Turner, 1999). However, this basic process is sometimes theoretically accompanied by a cognitive explanation (for instance Turner, 1984; and Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) and at other times by a motivational and affective explanation (for instance Ellemers, Kortekaas, & Ouwerkerk, 1999; and Ellemers, Spears, & Doosje, 2002). In Study 1 identification was induced through a category-commitment manipulation, thus in line with the motivational view of identification. In Study 2, on the contrary, the manipulation involved the induction of self-stereotyping, as well as stereotyping of others, in line with Turner's (1984) cognitive, self-stereotyping view of identification. These two experiments were conducted at the same time and with the same procedures, in order to be able to make comparisons between manipulations.

## **Identification**

Do people remember the same things about the coup if they, at the time of memory judgement, identify themselves with one of the political wings compared to the case in which they are identified as Chileans? Current theories following the ingroup favouritism principle suggest that people tend to remember things

that are favourable to the ingroup, or to distort memories in order to flatter themselves (Baumeister & Hastings, 1997).

Alternatively, it could be hypothesised that people tend to remember things that are relevant for the argumentative context. That is, the identification with an identity at the intergroup level (either the pro-coup people or the anti-coup people) is hypothesised to favour polemical, conflicting memories. By the same token, consensual memories are going to be favoured by identification at the superordinate level of Chileans, because such an identity is assumed to be justified by means of widely accepted arguments rather than controversial arguments. Study 1 tested this hypothesis.

A similar hypothesis can be put forward regarding the ease of identification as a function of the social presence of a given memory. Identification with an identity at the intergroup level (either the pro-coup people or the anti-coup people) is hypothesised to be favoured by polemical memories, whereas consensual memories are expected to favour identification at the superordinate level of Chileans. Study 3 contrasted this hypothesis.

## **Stereotyping and categorisation**

Is the generation likelihood of memories about September 11<sup>th</sup> influenced by the stereotype that people have in mind at the time of judgement? Past research suggests that the activation of a stereotype will make knowledge structures in memory more or less accessible depending on the valence and strength of the semantic or affective association (Dijksterhuis & van Knippenberg, 1996). For instance, a positive stereotype will facilitate the recall of positive memories. More importantly, knowledge structures semantically associated with the prototype of a social group are more likely to be retrieved if the stereotype of this group is activated or primed in memory, compared to knowledge structures semantically unrelated to the group. This is the feature-matching hypothesis, which was tested in Study 2.

## **Social categorisation processes**

Identification, stereotyping, and categorisation refer to different aspects of the psychological phenomenon of behaving as a group member. These can be regarded as processes that work at different processing layers or stages, organised hierarchically (Bodenhausen & Macrae, 1998). At least in theory, identification

needs stereotyping, and these two need self-categorisation. Identity is regarded mainly as a global motivational effect based on the cognitive mechanisms of category selection and associative representation of the selected category. Stereotyping, in turn, presupposes the category selection process. If there is a link between these processes and memory of the military coup, is the link the same for these three different levels? In other words, are they, for instance, convergent, complementary, or competing in their relationship with memory of the military coup? If they are not equally linked with memory, which one among them is the critical group formation process regarding memory of the military coup? The two experiments reported in this chapter were designed as a first approach to these questions.

## **THE EXPERIMENTAL STRATEGY OF STUDIES 1 AND 2**

The two experiments employed a priming approach to knowledge accessibility with the aim of testing the hypotheses. In this section, the experimental approach and the theoretical analysis of the basic tasks involved are discussed.

### **Priming**

The notion of priming has been applied to three related but distinct things. First, to an effect experimentally observed. In particular, this effect is the increase of the temporary accessibility of a given concept as a consequence of the incidental activation of related concepts, relative to the activation of unrelated concepts (see Neely, 1977; Tipper, 1985). Following Higgins (1996), this is called *accessibility effect* in this dissertation.

Second, the notion of priming has been applied to the processes that are assumed to underlie accessibility effects. According to the predominant approach, the activation of a concept in any given moment is assumed to spread activation automatically to other linked concepts. As a consequence, the activation likelihood for these other concepts is temporarily increased relative to non-linked concepts. However, not all theories of semantic priming draw upon a spread-of-activation metaphor (for instance, Ratcliff & McKoon, 1988; see Neely, 1991 for a review). The notion of a priming process refers to the hypothetical pre-activation of a concept stored in memory due to the activation of an associated

concept; or the presumed activation of the pathway or linkage connecting the two concepts.

Again following Higgins (1996), the notion of priming is used to refer to a third thing: a particular kind of experimental manipulation. Thus, priming is the experimental activation of a presumed psychological process by means a cueing stimulus (the *prime*), with the expectation of observing accessibility effects on a second process—which is supposed to be used in understanding, or reacting to, a given kind or array of information (the *target*). Accessibility effects of priming are conceived of as systematic changes in the ease with which a target (or target-relevant) knowledge structure is activated, or retrieved. For the explanation I have focused on conceptual or semantic priming, in the particular case when the primed and the target concepts are not identical, although the analysis can be applied more generally to many kinds of knowledge structure and information-processing systems (see Posner, 1978).

In the present research, the idea was to explore the influence of priming social categorisation processes on the accessibility of social memories. In these studies, the *prime* was a social categorisation process and the *target* of judgement was a social memory. In all cases, the accessibility of the judgement was assessed using response times.

In none of these experiments were the processes of generation directly studied, because social memories were already generated—as a target of truth-judgement. In other words, participants in these studies are asked, not to generate a memory, but to judge the truth of a statement that is given. According to the reasoning in Chapter 3, however, this is justified because the readiness of a truth-judgement concerning a given social memory is conceptually a proxy of the readiness of generating this memory. However, a few observations to adapt the proposed framework to the kind of task employed in these experiments are necessary.

An important difference with standard priming research is that in the present research the targets are not single words referring to a single category, but a complete sentence. People rarely experience isolated words in their daily life. Rather, they produce and they receive utterances with a propositional meaning as well as a pragmatic implicature. In using complex statements about September 11<sup>th</sup> as targets, the present research continues, in a related but different domain, Bartlett's critique of the method developed by Ebbinghaus to study memory.

## Generation of truth judgements

At the risk of repeating some of the elements in Chapter 3, I summarise the framework concerning memory generation in terms of the priming procedures employed in this chapter. In general, the participants were asked to judge the truth of a series of statements about September 11<sup>th</sup> 1973. According to the framework advanced in the previous chapter, there are three parallel sub-processes constraining each other at the core of the global process of judging social memories. Firstly, the *comprehension* of the given statement is the most basic requirement. Participants may construct an event model (Wyer & Radvansky, 1999) of the situation described in a given statement.

Secondly, *attitude construction*. That is, the production of attitudes towards the content of the statements as a whole and towards specific objects the statement is referring to. The construction of attitudes helps further comprehension processing regarding deeper levels of meaning. At the same time, as in a continuous feedback loop, new associations and beliefs produced in the comprehension process give rise to new affective reactions.

Thirdly, the *social mapping* of the statement and the self, in other words, the reconstruction of the intergroup and ideological location of the self regarding the given statement. This third process, lacking an explicit elaboration in Bartlett's theory, is the psychological presupposition of the ideological dimension of remembering. The process entails the reconstruction of the social categorisations according to the argumentative relevance of the statement, the categorisation of the content of the statement in terms of the social or ideological positions, and the identification of the self with one of the social categories available. As with attitude generation, the social mapping of the statement helps deeper comprehension of it, especially its ideological meaning. The final product of this three-fold process is a judgement about the truth of the given statement that integrates a representation of the past event and a personal position towards this representation.

Attitude construction and social mapping are the two processes in which the act of taking a position towards a representation of the object is assumed to rest. In this model, *the act of taking a position is regarded as inferring one's own position towards an object on the basis of two sources of information, namely, on one's own affective reactions and on the beliefs of one's group*. These sources of information can be used in a more automatic mode, functioning as anchors in the judgement process, or in a more

elaborated mode, each being evaluated in terms of appropriateness. The inference of one's position on the basis of one's affective reactions is simpler but usually insufficient. Even if it is more complex because of the number of operations and uncertainty involved, the inference of one's position on the basis of one's ingroup beliefs is hypothesised to be spontaneously triggered.

The studies reported here explored several aspects of this model. Specifically, these studies involved the experimental manipulation of some expected determinants of memory generation, especially regarding social mapping. The determinant manipulated in Study 1 was the level of inclusion of participants' active social identity. The determinant of attitude generation and social mapping in Study 2 was the level of inclusion of a stereotype made especially accessible for participants.

## **STUDY 1. SOCIAL IDENTIFICATION AND MEMORY**

The general hypothesis of this study was that a dominant identity at any given moment makes more accessible those memories about the coup that are expected to be relevant for the social comparison dimension at which the identity is defined. For example, if a left-wing (right-wing) participant has his left-wing (right-wing) identity especially salient, the prediction is that memories about the coup will be more accessible than if his Chilean identity is especially salient. Moreover, it is predicted that this occurs irrespective of the ideological congruity of memories. In other words, memories biased towards the left wing (right wing) should be as accessible as those biased towards the right wing (left wing). Finally, the notion guiding this general hypothesis has a more specific implication, namely, that the predicted accessibility effect should be particularly, if not only, true in the case of polemical memories. This is because polemical pieces of knowledge are assumed to be the most relevant for the social comparison dimension on which the left-wing (right-wing) identity is defined.

### **Participants**

Eighty-four Chilean people between 17 and 32 years old successfully completed the session through the Internet. No gender information was collected.

## **Materials**

Twelve statements were selected for each ideological group, including the three best-fitting statements of each of the four types. The whole set included statements ranging from 4 to 18 words (with a mean of 8 words and a standard deviation of 3 words).

## **Rationale and design**

The experimental manipulation involved priming participants with one of their hypothesised social identities in order to enhance it. This primed identity was either an intergroup identity (right wing or left wing, depending on the participant's orientation), an identity defined at a superordinate social level (Chileans), or a personal identity (one's own social distinctiveness). The theoretical importance of these three levels of identification is that they involve different social categorisation and social comparison strategies (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). The main interest of the study was on the possible impact on memory accessibility of the differential categorisation process between, particularly, an intergroup and a superordinate level of identification. Identification at a personal level is less relevant for collective memory contexts, and its consequences on memory accessibility are less clear to infer from the theory. However, the inclusion of this level in the study aimed at approximating a "default" condition.

The study followed the "two experiment" paradigms (for instance, Higgins, Rholes, & Jones, 1977) in order to manipulate priming in a subtle way. So then, in an allegedly different study, participants were presented with a random sequence of statements about the Chilean military coup, judging each of them in terms of true or false using two different keys of their keyboard. For each participant, six of these target statements were consensual among the principal competing ideological positions towards the military coup and the remaining six were polemical. This is the critical factor to test the predictions of the argumentative relevance model in this study. Orthogonally, six statements were defined as typical of the ideology of the participant's political ingroup, and the other six as typical of the ideology of the participant's political outgroup. This means that even if there were right-wing and left-wing participants, their political position was not included as a factor in the study.

This yields a 2 (*sharedness of target*) 5 2 (*congruity of target*) 5 4 (*type of prime*) factorial design—the two first factors manipulated within-subjects and the last factor manipulated between-subjects. The type of prime includes more than the three conditions derived from the previous rationale, because a control condition with no priming manipulation was implemented.

### ***Independent variables***

- The *sharedness of the target* refers to the agreement/disagreement among pro- and anti-coup samples regarding any given statement about the military coup. The statements and the estimation of the degree of agreement/disagreement among pro- and anti-coup young Chileans were based on a pilot study as reported above. This factor was manipulated within subjects, with two levels: POLEMICAL statements (accepted by anti-coup and rejected by pro-coup participants, or vice versa) and CONSENSUAL statements (accepted or rejected by both pro- and anti-coup participants).
- The *congruity of the target* is the place of a given statement within the ideological division among a right-wing and a left-wing view of the coup. A given statement is either CONGRUENT or INCONGRUENT with the participant's ideology (depending on the relation between the truth-value of the statement and the participant's political orientation).
- The *type of prime* refers to the category to be primed, manipulated between subjects, with three levels: a PERSONAL identity ('Yourself' as a distinct person), a SUPERORDINATE identity, comprising subordinate intergroup differences ('Chileans' as a whole), and an INGROUP identity ('Leftwingers' or 'Rightwingers', depending upon participant's political orientation). In addition, there was a CONTROL condition with no priming manipulation.

### ***Dependent variable***

The dependent variable was judgement *latencies*, that is, response times in a task where participants had to express true/false judgements about a number of statements referring to the military coup.

## Procedure

Participants were contacted by e-mail, and asked to open a web page to answer a questionnaire about historical memory. E-mail addresses were taken mainly from the people who confirmed their will to participate in further studies at the end of the pilot study described in the Materials section.

Participants accessed a web page following a link. The web pages of this and other Internet studies reported in the dissertation were placed in a web server of the University of Sheffield. The main web pages of the study were programmed in client-side JavaScript, implying that its behaviour was independent of Internet traffic or connection, but dependent on the platform and browser used by participants, and resources locally available. Participants received only one file, which was programmed to display a sequence of pages interactively, that is, as a function of the participant's responses. Since response times measurement was a critical issue in this experiment, only participants using an Internet Explorer (versions 3 or newer) browser on a Windows system were included in order to control for platform and application differences. A demonstration version of the study can be observed at the following URL:

<http://www.shef.ac.uk/~hrp/demo/study1/>

### ***Step 1: Discrimination of participants' position***

After a brief introduction indicating the academic purposes of the study, participants read a first interaction, whose translation into English would be:

This study is divided in two parts. In the first you will have to answer some questions that aim at collecting information for a future study, while the questionnaire that constitutes the second and main part is being reset in the server. Although this is necessary because the questionnaire takes time to load, try to answer the first part as seriously as possible. The two parts are really two independent studies, so that the second might appear to you disconnected from the first. The introduction of the second part comes later.

Then participants were asked to express their agreement with each of a series of nine statements, by clicking with their mouse one of three possible alternatives: agree, neutral, or disagree. The

statements, presented in a random order, were related to political and ideological issues. The series included, for example:

1. 'Despite all the inconvenience and severe costs, the military intervention of 1973 was good for the country.'
2. 'Human Rights violations during the military government are unjustifiable, and all responsible people have to be brought to trial.'
3. 'My ideas are close to the Right wing.'
4. 'My ideas are close to the Left wing.'

This task was designed to identify participants' underlying ideological preferences before the manipulation phase, because the unfolding of the latter was dependent on the former. The experimental manipulation was intended to enhance one of the participant's social identities by priming a particular category and group perspective. The initial series of nine statements included statements that might prime an ingroup identity; however, it also included statements counterbalancing this possible effect by doing the same with a personal and superordinate identity. (A complete list of these statements, in English, can be found in Appendix C, page 288.)

Participants were randomly allocated to the experimental conditions. However, the randomisation function was not straightforward. This was because the identity to be induced or activated had to be one of the hypothetical identities of a given participant. A left-wing participant could not be made to identify with the right wing. For this reason, an ingroup identity could be enhanced only to participants who agreed with the 3<sup>rd</sup> or else the 4<sup>th</sup> statement listed previously. In other words, the randomisation function had to be constrained by the social identities available for each participant.

### ***Step 2: Manipulation***

Participants were first told that since one's opinion could be expressed from many different perspectives, they were asked to take a specific perspective. In particular, they were asked to take the perspective of either "those beliefs and values that you share with some and that are opposed to those of others" (INGROUP condition), "those beliefs that are shared in your society and give it a common ground" (SUPERORDINATE condition), or "your distinctiveness as a unique person" (PERSONAL condition). Moreover, for participants in the INGROUP condition there was a further

specification: “in particular, as somebody linked in some way and in some degree to the right-wing position”, or “to the left-wing position”—depending on their previous answers.

Then participants were re-presented with five of the nine statements they have encountered at the beginning of the session. This set of five captured the statements referring to ideological issues, that is, excluding those relative to the participant’s perspective. Participants had to click on one of them, on the one they felt as the most representative of their opinion “as a right/leftwinger”, as a “Chilean”, or “as a unique person.” Next, the same set of statements was presented and participants had to select that which is the least representative of “a right/leftwinger”, of “the Chileans as a whole”, or of “your unique perspective.” In the following page, the two selected statements (the most and the least representative) were placed one after the other. Participants had to judge their agreement using an 11-point scale for each statement. Finally, participants were asked to generate their own statements: “in the two fields below, write the first beliefs or values coming to your mind about issues of social relevance, not necessarily touched upon in this study, that you feel yourself prepared to support and to reject, respectively.” Participants were encouraged to generate statements “that are typical of the right/left wing with which you agree, and of the left/right wing with which you disagree”, “among those representative of the Chileans as a whole, and among those determined only by particular interest or contrary to the general interest”, or finally “among those representative of your unique perspective, and among those that make you homogeneous with the rest.”

Each time participants were reminded about the particular category whose perspective ought to be taken. The idea of this manipulation was to make a particular identity more salient by way of using it to express identity-relevant opinions several times in increasingly differentiating formats.

### ***Step 3: Judgement of statements***

After this manipulation phase, participants were told that the main questionnaire was now ready, and the second part was presented. Participants had to judge a series of statements in terms of true and false, using two specified keys of the keyboard. Right and left assignment of keys was counterbalanced across participants. Before starting with the experimental set, there were 11 practice statements related to an historical event different from the military

coup, which they could repeat until they felt confident with the response format. Then came a sequence of 34 statements referring to the military coup, from which the first 10 were fillers and the remaining 24 were randomly displayed. From this last set, half of the statements were of experimental interest for each participant, depending upon self-classification in terms of ideological position.

At the end of the session, participants had to indicate their position towards “the events of September 11<sup>th</sup> 1973” choosing one of five possible answers: ‘totally in favour’, ‘in favour, but with nuances’, ‘neutral’, ‘against but recognising some points’, and ‘absolutely against’. Finally, participants were thanked and asked to disclose their e-mail address if they wanted be contacted again to receive a report of the results of the study (which were actually provided about one month later).

## **Results**

### ***Note about the analyses***

In this and in all the studies included in Chapters 4, 5 and, 7, I follow a similar strategy for the analyses and the exposition of results. First I present some data relevant as a context for the main analyses, and then I focus on the data directly relevant to the hypotheses. For example, most of the experiments are focused on response times in truth-judgements, but the exposition of the truth-value of judgements is a necessary background for the analysis of latencies.

In addition, the presentation of results proceeds first by showing the basic pattern of means according to the experimental design. Then, by commenting on this pattern in order to give an impressionist description of selected results. Finally, I present the results of inferential tests relating to the observation of the basic pattern of means.

### ***Preliminary analyses***

From the initial set of participants, 16 were unclassifiable as either right- or left-wing supporters on the basis of their responses to the preliminary questions.

Appendix C shows data of agreement with each of the initial nine ideological statements according to the political self-categorisation of participants—plus the “unclassified” participants. It includes the

reported position towards September 11<sup>th</sup> as well—where it is interesting to note the intermediate position of these “unclassified” participants ( $M = 3.50$ ) between leftwingers ( $M = 4.54$ ) and rightwingers ( $M = 2.38$ ). Post-hoc comparisons within an analysis of variance and with Bonferroni adjustments confirmed that this group’s mean is reliably different from that of both the rightwingers and the leftwingers at the level of  $p < .001$ .

As Table 5. shows, 52 participants agreed with being close to the left-wing position, and 16 to the right-wing position. Unfortunately, the small sample size of rightwingers made impossible to compare them with leftwingers in terms of the four experimental conditions. “Unclassified” participants were excluded from further analyses on judgements and judgement latencies.

**TABLE 5. DISTRIBUTION OF PARTICIPANTS ACROSS EXPERIMENTAL CONDITIONS AND SELF-REPORTED POLITICAL ORIENTATION [STUDY 1]**

<i>Self-categorisation</i>	<i>Priming condition</i>				Total
	Control	Personal	Ingroup	Superord.	
As Leftwinger	10	8	22	12	52
“ unclassified ”	2	8	-	6	16
As Rightwinger	3	4	6	3	16
Total	15	20	28	21	84
Total minus excluded	13	12	28	15	68

However, the above-mentioned comparison in terms of the reported position towards September 11<sup>th</sup> confirms that participants self-categorised as rightwingers are pro-coup, and that participants self-categorised as leftwingers are anti-coup. In case of the former, a mean of 2.38 ( $SD = .81$ ) is a moderate anti-coup attitude, between ‘in favour but with nuances’ and ‘neutral’. The latter, with a mean of 4.54 ( $SD = .50$ ), represents an extremely anti-coup attitude, between ‘against but recognising some points’ and ‘absolutely against’. These data reinforce the decision made in the study reported previously regarding the definition of the pro-coup as moderate and of the anti-coup as extreme.

Moreover, the left-wing and right-wing groups gave judgements of agreement with the ideological statements presented at the beginning consistent with their declared political group (see details in Appendix C). In particular, right-wing participants agreed more with the idea that “despite inconveniences and severe costs, the military intervention of 1973 was good for the country” than leftwingers;  $t(66) = 8.34, p < .001$ . Conversely, left-wing participants agreed more with the proposition that “Human Rights violations during the military government are unjustifiable, and all responsible people have to be brought to trial” than rightwingers;  $t(66) = 5.39, p < .001$ . These two were critical statements within the series, because they were meant to express typical positions of the right and the left wing, respectively, towards the coup.

Because the set of target statements in the second phase of the experiment was displayed as a function of the participants’ self-categorisation, the ideological difference among participants is not a factor of the design. Thus, the bottom row of Table 5. shows the final distribution of participants as determined by the randomisation function already described in the Procedure section.

### **Judgements**

The truth-value of judgements is not the dependent variable of the study, because the hypotheses concerned judgement latencies only. However, a look at the degree of acceptance and rejection of each type of statement is a necessary context for the analysis. Moreover, it would count as a manipulation check, because some expected patterns of judgements ought to be observed in order to rely on the experimental manipulation. In particular, participants are expected to show more acceptances to CONGRUENT statements than to INCONGRUENT statements.

A simple way to represent the truth-value for a given judgement would be to code rejections as 0s and acceptances as 1s. Then the mean would indicate the truth-value tendency as the *proportion of acceptances over rejections*, across the three statements of a given type, and across all participants. The pattern of results in terms of such indicator is summarised in Table 6..

TABLE 6. MEANS OF ACCEPTANCE AS A FUNCTION OF SHAREDNESS AND CONGRUITY OF THE TARGET STATEMENT, AND OF THE TYPE OF PRIME [STUDY 1]

Sharedness	Congruity	Prime
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		Control	Personal	Ingroup	Superord.	Overall
Consensual	Congruent	.79	.92	.83	.65	.80
	Incongruent	.49	.50	.46	.53	.49
Polemical	Congruent	.81	.92	.98	.93	.92
	Incongruent	.35	.50	.18	.70	.38
Overall	Congruent	.86	.93	.89	.82	.87
	Incongruent	.49	.58	.48	.69	.55

From the table it can be seen that CONGRUENT statements were more accepted than INCONGRUENT statements. The table also suggests that POLEMICAL statements are more sharply discriminated than CONSENSUAL ones. Finally, judgements in the SUPERORDINATE priming conditions show less discrimination between CONGRUENT and INCONGRUENT statements than the remaining conditions.

The comparison between the CONTROL condition and the INGROUP priming condition suggests interesting differences in the amount of statements that are accepted, compared to the amount rejected. In particular, according to Table 6., on average 98% of the judgements of POLEMICAL-CONGRUENT statements made by a participant in the INGROUP priming condition were accepted, whereas only 81% of judgements to the same type of statements made by an average participant in the CONTROL condition were accepted. By the same token, participants in the INGROUP priming condition accepted, in average, only 18% of the POLEMICAL-INCONGRUENT statements. In contrast, on average participants in the control condition accepted 35% of this type of statement.

A 2 (sharedness) 5 2 (congruity) 5 4 (type of prime) analysis of variance with repeated measures on the first factor was carried out in order to test some of these impressions. The analysis included a planned contrast regarding the interaction between the factors, in particular to test the difference of the SUPERORDINATE priming condition from the rest in the discrimination of statements. No main effect of the sharedness of the statements was observed;  $F < 1$ . There was a main effect of congruity, confirming previous impressions;  $F(1,64) = 125.09, p < .001, \eta^2 = .66$ . Also there was a significant main effect of the type of prime;  $F(3,64) = 5.99, p < .$

005,  $\eta^2 = .22$ . The expected interaction between the type of prime and the congruity of the target was significant as well;  $F(3,64) = 7.53, p < .001, \eta^2 = .26$ . The contrast on the interaction confirmed that the SUPERORDINATE priming condition discriminated less between CONGRUENT-POLEMICAL and INCONGRUENT-POLEMICAL statements than the remaining conditions;  $F(1,64) = 14.26, p < .001, \eta^2 = .18$ .

Even if sharedness of statement did not have a main effect, its interaction with the other factors was significant. Sharedness by type of prime:  $F(3,64) = 8.56, p < .001, \eta^2 = .29$ ; sharedness by congruity:  $F(1,64) = 8.47, p < .01, \eta^2 = .12$ ; and the three-way interaction;  $F(3,64) = 2.97, p < .05, \eta^2 = .12$ .

### **Latencies**

A total of 27 observations out of 1,632 (24 experimental judgements by 64 participants) were eliminated from the database because these latencies were more than 2.5 standard deviations greater than the mean for each statement across subjects. These outliers represent less than 2%.

What is the effect of the enhancement of a given identity on the ease with which participants judge the truth of social memories? The basic pattern of latencies is summarised in Table 7..

TABLE 7. MEAN OF LATENCIES (IN MILLISECONDS) OF ACCEPTANCE AND REJECTION AS A FUNCTION OF SHAREDNESS AND CONGRUITY OF THE TARGET STATEMENT, AND OF THE TYPE OF PRIME [STUDY 1]

Sharedness	Congruity	Prime				Overall
		Control	Ingroup	Personal	Superord.	
<i>Acceptance</i>						
Consensual	Congruent	2,872	3,095	3,150	3,552	3,176
	Incongruent	3,599	4,344	3,865	4,643	4,083
Polemical	Congruent	3,135	3,080	3,267	4,909	3,571
	Incongruent	3,244	3,372	4,174	4,291	3,863
<i>Rejection</i>						
Consensual	Congruent	4,031	6,666	4,735	4,036	4,560
	Incongruent	3,003	2,287	3,312	3,359	3,083
Polemical	Congruent	4,538	2,133	4,010	5,270	4,232
	Incongruent	3,054	3,230	3,337	4,739	3,421

Direct observation of this pattern of means suggests a number of interesting effects. A look at the marginal means in the right column shows a systematic tendency concerning the congruity of the target: Participants were generally quicker in accepting CONGRUENT than INCONGRUENT statements, and slower in rejecting CONGRUENT than INCONGRUENT statements. No clear effect of the sharedness of the statements is directly recognisable. But slightly longer latencies can be observed in the SUPERORDINATE priming condition, compared with the rest, both in acceptances and in rejections. Now these and other impressions are examined more in detail.

For analytical purposes, raw latencies were transformed into a *relative inhibition score*, according to the following two steps. First, the difference between the raw latency—for statement *S* when associated with a prime *P*—and the mean latency of CONTROL cases *C* for statement *S*, was computed. The mean latency of CONTROL cases—that is, with no priming manipulation—was used as a baseline measure, relative to which a prime is said to produce relative facilitation or inhibition. Second, this difference score was divided by the average of response times *A* for all experimental judgements made by each participant, so that the inhibition effect *I* would be proportional to the relative speed of each participant.

$$I_{S-P} = (t_{S-P} - t_{S-C}) / t_A$$

With this formula, an inhibition score greater than 0 should be interpreted as relative inhibition, while negative scores mean relative facilitation. Table 8. displays the pattern of this inhibition score for all experimental conditions.

TABLE 8. MEAN OF INHIBITION AS A FUNCTION OF SHAREDNESS AND CONGRUITY OF THE TARGET STATEMENT, AND OF THE TYPE OF PRIME [STUDY 1]

	Sharedness	Congruity	Prime			Overall
			Personal	Ingroup	Superord.	
<i>Acceptance</i>						
Consensual		Congruent	0.07	0.03	0.21	0.05
		Incongruent	0.23	0.05	0.25	0.10
Polemical		Congruent	-0.08	-0.04	0.34	0.01
		Incongruent	0.04	0.40	0.30	0.22
<i>Rejection</i>						
Consensual		Congruent	0.99	0.39	-0.29	0.18
		Incongruent	-0.11	-0.01	0.03	-0.05
Polemical		Congruent	-0.16	0.20	0.60	0.26
		Incongruent	-0.05	-0.07	0.23	-0.06

Note. A complete table, including standard deviations and cell-sample size, is found in Appendix D.

### Acceptance versus rejection

As a first step, the difference between acceptance and rejection was assessed. Overall, the inhibition score for acceptances ( $M = .10$ ) was not significantly greater than for rejections ( $M = .05$ );  $t(54) = 1.80$ , ns. However, only the mean score of acceptances was significantly greater than 0, indicating some inhibition effect;  $t(54) = 3.94$ ,  $p < .001$  and  $t(54) = 1.33$ , ns, respectively. More specifically, the acceptance of CONGRUENT statements ( $M = .07$ ) was relatively less inhibited than the rejection ( $M = .24$ );  $t(54) = 3.94$ ,  $p < .001$ . Conversely, the acceptance of INCONGRUENT statements ( $M = .17$ ) was relatively more inhibited than the rejection ( $M = .03$ );  $t(54) = 3.94$ ,  $p < .001$ . To understand these differences, more detailed analyses are needed.

Unfortunately, however, a full factorial analysis of variance was not viable, because some of the cells were too small in sample

size. Specifically, the rejection of CONGRUENT statements was a type of behaviour rarely observed. For example, only two participants rejected at least one of the three CONGRUENT-POLEMICAL statements in the personal priming condition (see Appendix D, page 290, to check other cases). On the one hand, this is expected if participants were responding to the meaning of the statements given their ideological position. However, it is interesting to note that the scarcity of group-discordant judgements was not that dramatic for acceptances. For example, eight participants accepted at least one of the three INCONGRUENT-POLEMICAL statements in the personal priming condition.

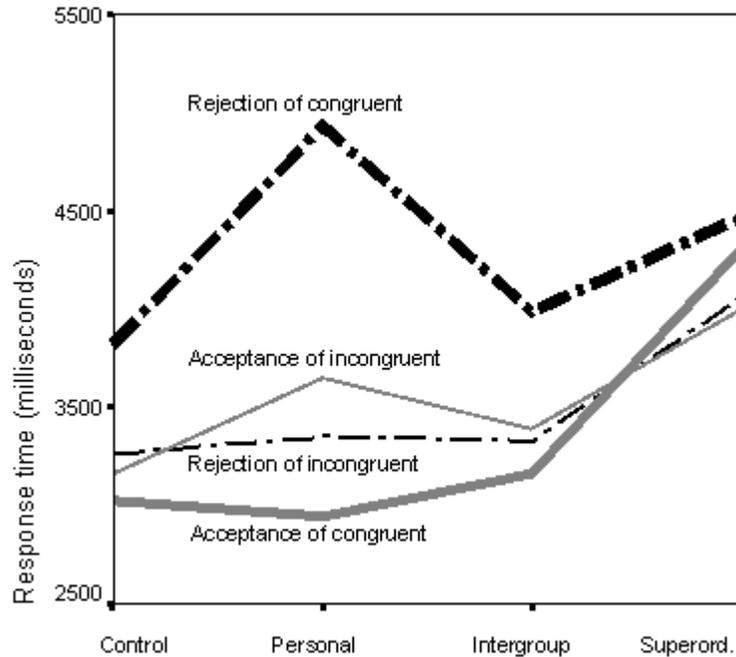
On the other hand, the small sample size of some cells forces us to restructure the analysis at this stage. Thus, two analyses of variance were carried out, one combining the type of prime with the congruity of statements, and the other with the sharedness of statements. In the 3 (type of prime) 5 2 (acceptance/rejection) 5 2 (congruity) analysis, with repeated measures on the last two factors, no main effect of the acceptance/rejection factor was found;  $F < 1$ . However, this factor did interact with congruity;  $F(1,43) = 22.52, p < .001, \eta^2 = .34$ . This confirms the previous observation that it was faster to accept CONGRUENT than INCONGRUENT statements, and slower to reject CONGRUENT than INCONGRUENT statements.

Also the interaction of the acceptance/rejection factor with the type of prime was significant;  $F(2,43) = 11.33, p < .001, \eta^2 = .35$ . A three-way interaction was reliable as well;  $F(2,43) = 15.00, p < .001, \eta^2 = .41$ . These two effects are presented graphically in Figure 3.. For ease of comprehension, raw latencies are presented in this graph, instead of inhibition scores. Following the same reasoning, the CONTROL was included in the graph, despite the fact that this group did not appear as a level of priming in the analysis of inhibition scores.

What these effects suggest is that the interesting interaction between the acceptance/rejection factor and the type of prime is largely the product of CONGRUENT statements. On the one hand, rejection of these statements is highly inhibited in the PERSONAL priming condition, moderately inhibited in the INGROUP priming condition, and slightly facilitated in the SUPERORDINATE priming condition. On the other hand, acceptance is neither facilitated nor inhibited in the PERSONAL and INGROUP priming conditions, but moderately inhibited in the SUPERORDINATE condition. In the case of INCONGRUENT statements, acceptance is moderately inhibited,

whereas rejection is neither facilitated nor inhibited—irrespective of the type of prime.

Figure 3. Inhibition of acceptance and rejection as a function of the type of prime and the congruity of target statements.

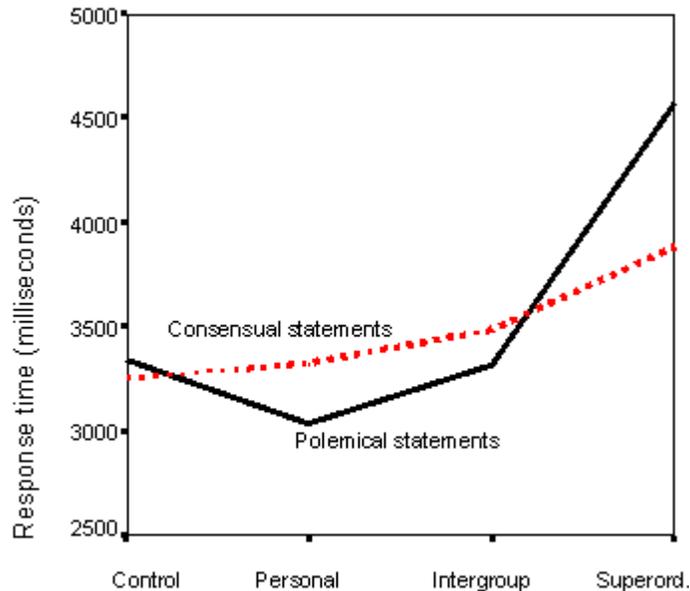


Finally, neither the congruity nor the type of prime had a reliable main effect; respectively:  $F < 1$ ; and  $F(2,43) = 1.94$ , ns. However, these two factors did interact;  $F(2,43) = 4.35$ ,  $p < .05$ ,  $\eta^2 = .17$ . As Figure 3. shows, this effect seems to be due only to the above-mentioned inhibition of the rejection of CONGRUENT statements in the PERSONAL priming condition.

Note that the previous analysis of variance, because of the relative lack of cases in certain cells of the design, included 47 participants only. In the 3 (type of prime) 5 2 (acceptance/rejection) 5 2 (sharedness) analysis, with repeated measures on the last two factors, 48 participants could be included. Here only one effect was significant, namely, the interaction between the type of prime and sharedness of target;  $F(2,44) = 4.54$ ,  $p < .05$ ,  $\eta^2 = .17$ . As shown in Figure 4., the tendency described earlier, to the effect that in the SUPERORDINATE condition latencies were slightly longer, is reliable only with POLEMICAL statements. Recall this was the principal hypothesis of

this study. Interestingly, no main effect of the sharedness of statements was observed;  $F < 1$ . This means that collapsing across priming conditions dissolves the effect of sharedness, as predicted.

Figure 4. Latency of judgement as a function of the type of prime and the sharedness of target statements.



This effect was not moderated by the acceptance/rejection factor, whose main effect was again not significant;  $F < 1$ . The interaction between this factor with sharedness of statement was  $F(2,44) = 1.02$ , ns.; and with the type of prime:  $F < 1$ . The three-way interaction term yielded  $F(2,44) = 2.76$ , ns. Finally, the independent between-subject effect of the type of prime did not reach significance;  $F(2,44) = 2.62$ , ns.

### **Type of prime 5 sharedness of target**

The previous two analyses must be interpreted cautiously, because only part of the sample could be included. In order to surmount this problem, and given that the effect of the acceptance/rejection factors is already studied, a 3 (type of prime) 5 2 (sharedness) 5 2 (congruity) analysis of variance, with repeated measures on the two last factors, was conducted. In other words, acceptances and rejections were collapsed into a single index of response time inhibition. In this analysis the 55 (68 minus the 13 participants in

the CONTROL condition, who were used as baselines) participants could be included. The analysis also included a specific contrast on the interaction between the type of prime and sharedness of target, to test whether the greater inhibition of judgement in the SUPERORDINATE condition was more acute regarding POLEMICAL statements.

The analysis yielded a significant interaction between the type of prime and sharedness of target;  $F(2,52) = 3.92, p < .05, \eta^2 = .13$ . In addition, the specific contrast of this interaction confirmed the hypothesis that judgements of POLEMICAL statements are more inhibited in the SUPERORDINATE condition, compared to the other two priming conditions;  $F(1,52) = 7.84, p < .005, \eta^2 = .13$ . Complementarily, the type of prime had a reliably main effect;  $F(2,52) = 9.64, p < .001, \eta^2 = .27$ . This shows that although the greater inhibition of judgement in the SUPERORDINATE condition was more acute regarding POLEMICAL statements, the inhibition effect of this condition is important even collapsing across differences of sharedness.

All other effects were non-significant. The independent effect of sharedness of statement, the main effect of the congruity, the interaction of this last factor with the type of prime, and also with the sharedness of the statement, yielded  $F_s < 1$ . The three-way interaction was  $F(2,52) = 1.80, ns$ .

### Group-attuned versus group-discordant judgements

Another interesting way to look at the data was based on the relationship between the congruity of statements and the acceptance/rejection of them. The problem of small sample size in conditions involving the rejection of CONGRUENT statements could be partially amended by the following re-coding of data. Both acceptances of CONGRUENT and rejections of INCONGRUENT statements were considered as *group-attuned* judgements; whereas rejections of CONGRUENT and acceptances of INCONGRUENT statements were considered as *group-discordant* judgements. Table 9. displays the basic data.

TABLE 9. MEANS OF INHIBITION AS A FUNCTION OF GROUP-ACCORDANCE OF JUDGEMENTS AND THE TYPE OF PRIME [STUDY 1]

<i>Group-accordance</i>	<i>Prime</i>			Overall
	Personal	Ingroup	Superord.	

Group-attuned	-.02 (.12)	-.03 (.19)	.24 (.12)	.04 (.20)
Group-discordant	.26 (.17)	.15 (.21)	.16 (.11)	.18 (.18)
Overall	.00 (.14)	-.01 (.18)	.21 (.11)	.05 (.18)

Note. Standard deviations are shown in parenthesis.

What is suggested by this pattern of means is that group-discordant judgements are always inhibited, whereas group-attuned judgements are only inhibited in the SUPERORDINATE priming condition. In the PERSONAL and the INGROUP priming conditions there seems to be neither inhibition nor facilitation of group-attuned judgements.

A 3 (type of prime) 5 2 (congruity) analysis of variance with repeated measures on the last factor was carried out, with a specific contrast on the interaction to compare the SUPERORDINATE priming condition with the other two. In this analysis, the 55 participants could be included. Results suggest that there were main effects of prime,  $F(2,52) = 4.54, p < .05, \eta^2 = .15$ , and group-accordance,  $F(1,52) = 30.86, p < .001, \eta^2 = .37$ . However, these two main effects, as Table 9. makes clear, have to be interpreted on the light of their interaction;  $F(2,52) = 20.51, p < .001, \eta^2 = .44$ . In fact, the specific contrast confirmed that the interaction relies on the difference between the SUPERORDINATE priming condition with the other two;  $F(1,52) = 40.81, p < .001, \eta^2 = .44$ . In that condition the inhibition was relatively high for both types of judgements, whereas in the PERSONAL and the INGROUP conditions only group-discordant judgements showed relative inhibition.

## Discussion

The hypotheses were that the dominant identity would make more accessible those memories about the coup that are expected to be relevant for the social comparison dimension at which the identity is defined, irrespective of the ideological congruity of memories. In addition, the argumentative relevance model predicts that the accessibility effect should be particularly, if not only, true in the case of polemical memories. Findings supported the argumentative relevance hypothesis. I summarise and discuss them in three parts, one related to the predicted accessibility effect of ingroup versus superordinate identities on controversial memories. The

second part relates to the more specific effect of the social sharedness of the statements. Finally, the third part comments upon findings that were not the focus of the study but, nevertheless, were consistent with the argumentative relevance hypothesis.

### ***Overall accessibility effects: the role of primes***

Latencies were shorter for both PERSONAL and INGROUP primes than following a SUPERORDINATE prime. This was true both overall (difference of about 800 milliseconds) and especially in the case of polemical statements (difference greater than 1 second). This suggests that the mere manipulation inducing greater salience of one of the available social identities of participants influenced the accessibility of social memories. Moreover, these memories concerning the military coup are inherently controversial. Hence, the fact that PERSONAL and INGROUP primes had a relative facilitation effect, and the SUPERORDINATE prime a relative inhibition effect, gives support to the argumentative relevance model. To put it in terms of the hypothesis of the study: If a left-wing (right-wing) participant has his/her left-wing (right-wing) identity especially salient, memories about the coup will be more accessible than if his/her Chilean identity is especially salient.

### **Some distinctions**

From this finding, however, no conclusion can be drawn regarding the specific mechanism by which the effect is achieved. The salient identity can influence the accessibility of memories by means of actively *obstructing* the processes involved in their generation, or by actively *promoting* them. For example, a facilitation effect can be explained either by more promotion or by less obstruction of a process. Therefore, it is important to distinguish between (a) more/less accessibility as inferred in terms of latencies, (b) promoting/obstructing as hypothetical mechanisms, and (c) facilitation/inhibition as an experimental effect. The first opposition means that a process P is easier or faster than Q, and that Q is slower or harder than P. The second opposition means that a given process is affected by positive or negative feedback. The third opposition means that a given process is easier or faster under a priming condition than under a non-prime or neutral-prime condition. In this and other studies within the present dissertation, I use the terms *facilitation* and *inhibition* in this last sense only, that is, as an experimental effect.

Moreover, it is possible to distinguish between *relative* and *absolute* facilitation/inhibition. Absolute facilitation/inhibition means that a given process is easier or faster under a priming condition than under an absolutely *neutral*-prime condition. Prime neutrality implies that it triggers the same amount of processing and produces the same consequences on cognition as a non-neutral prime, except in the specific aspect in which the non-neutral prime is assumed to have a meaningful impact. Absolute facilitation/inhibition is an ideal that is hard to approach (see Neely, 1991 for a discussion). Relative facilitation/inhibition means that the CONTROL condition employed as a baseline is not “pure” but at least that the control prime is neutral regarding the specific features that are hypothesised to be responsible for a priming effect. Results of this study can be interpreted in terms of relative facilitation and relative inhibition.

### **Relative inhibition but not relative facilitation**

Because the topic of September 11<sup>th</sup> is controversial, it may trigger social categorisation processes at an intergroup level, thus favouring an ingroup identity over personal and superordinate alternatives. Following this assumption, participants in the CONTROL priming condition are expected to behave similarly to those in the INGROUP condition. In fact, this was systematically observed in this experiment.

Moreover, participants in the PERSONAL priming condition behaved similarly to those in the CONTROL and also to those in the INGROUP condition in several respects. The fact that participants whose personal-level identity was enhanced gave similar judgements and judgement latencies than those whose ingroup (or intergroup-level) identity was enhanced, might also be due to the controversial nature of September 11<sup>th</sup>. The mere presence of the topic might activate an intergroup level of categorisation that the personal-level identity manipulation could not override. The important consequence of this reasoning is that also participants in the INGROUP condition would have their intergroup-level identity already activated. The manipulation, then, might be superfluous in these cases, in the sense that its effect would already be in operation. The lack of systematic differences between the in the INGROUP and the PERSONAL priming conditions supports this interpretation. Finally, it is implied that the manipulation would be effective and non-redundant only in the case of participants whose superordinate-level identity was enhanced.

This may explain why the effect of the manipulation was that of a relative inhibition (of the superordinate category), and not relative facilitation (of the ingroup category).

### ***Selective accessibility effects: feature matching versus argumentative relevance***

Models of feature matching predict that memories positively associated with a social category label, or to the corresponding stereotype, ought to be more accessible than those unrelated or negatively related. In other words, a main effect of the congruity of the statement on judgement latencies should be expected. However, no such main effect was found. An interaction between this factor and the type of prime would be a more sophisticated prediction of feature-matching models. Thus, a greater effect of congruity would be expected for the INGROUP priming condition.

### **Ideological congruity of statements**

Is the effect of identity enhancement on knowledge accessibility moderated by the congruity of the target statements? Recall that the 3 (type of prime)  $\times$  2 (acceptance/rejection)  $\times$  2 (congruity) analysis yielded a significant interaction between congruity of the target and type of prime. However, this effect was not mainly due to faster acceptance of congruent statements than that of incongruent statements, as would be predicted—see Figure 3.. In addition, this interaction term was not significant in the 3 (type of prime)  $\times$  2 (sharedness)  $\times$  2 (congruity) analysis. Summing up, it was not found that when a given statement is consistent with the ideological position of participants, the accessibility effect previously described is stronger. These results speak against the feature-matching model.

### **Sharedness of statements**

Is the effect of the enhancement of a given identity on the ease with which participants judge social memories, moderated by their consensual/polemical nature? Judgements of POLEMICAL statements were in fact faster than CONSENSUAL ones with PERSONAL and INGROUP primes, and slower with a SUPERORDINATE prime. In other words, the effect of prime type was greater in the case of polemical statements—see Figure 4..

These findings support the hypothesis that the subjective dominance of a given social identity makes pieces of social knowledge easier or harder to judge, depending upon the

argumentative relevance of the piece of knowledge to the dominant identity. This pattern of behaviour can be modelled in terms of the following reasoning: A dominant identity at any given moment makes those knowledge structures that are expected to be useful in the corresponding argumentative situation more accessible. Assume that a left-wing participant has his/her identity as leftwinger (Chilean) particularly salient at the moment of judgement. Then the argumentative relevance model predicts that those memories that are relevant for the “horizontal” (“vertical”) differentiation of the leftwingers (Chilean) are going to be more accessible. It is the case that polemical knowledge is expected to be useful in an intergroup argumentative situation, and that consensual knowledge is expected to be useful in a superordinate argumentative situation. The function of such an effect would be to prepare the judge for the selective use of these knowledge structures in a way relevant for the social differentiation context.

### ***Indirect evidence***

A number of findings go beyond the hypotheses of the study. Firstly, there were influences of the experimental factors on judgements, that is, on the acceptance/rejection of statements as true. Secondly, there were some findings regarding judgement latencies that were not the focus of the study, but that are worth noting.

### **Discrimination**

Discrimination between statements favourable to the ideology of the ingroup and those favourable to the outgroup was better when statements were POLEMICAL than CONSENSUAL. Such discrimination was also affected by the priming manipulation. Judgements in the SUPERORDINATE priming conditions showed less discrimination than the other conditions. These findings are consistent with the argumentative relevance model.

### **Pseudo assimilation and contrast**

The comparison between the CONTROL condition and the INGROUP priming condition suggests that in the INGROUP priming condition participants tended to *assimilate* CONGRUENT-POLEMICAL statements to the implications of the prime, and to *contrast* INCONGRUENT-POLEMICAL statements away from the implications of the prime.

However, the notion of assimilation is employed here in an unorthodox manner. It does not refer to a shift in judgement (in the direction of the meaning of the prime) regarding a single dimension or object but to a difference in the amount of statements that are accepted, compared to the amount rejected. One can say, then, that in the INGROUP condition there was a *pseudo-assimilation* of POLEMICAL-CONGRUENT statements. For example, according to Table 6., on average 98% of the judgements of POLEMICAL-CONGRUENT statements made by a participant in the INGROUP priming condition were acceptances, whereas only 81% of judgements to the same type of statements made by an average participant in the CONTROL condition were acceptances. In fact, the ingroup prime can be argued to have implications for social categorisation that are absent when no prime is provided. In this context, *to pseudo-assimilate would be to accentuate the similarity between a given type of statement and one's own primed position*. In this sense, *pseudo-contrast* of POLEMICAL-INCONGRUENT statements appears in this condition as well, because judgement here shifts away from the implications of the prime. *Here, the difference between this type of statement and one's own primed position is accentuated*.

This effect is consistent with previous findings concerning the impact of concept priming on judgement (Higgins, Rholes, & Jones, 1977; Herr, Sherman, & Fazio, 1983; Martin, 1986; Ford & Thompson, 2000).

### **Accordance of judgement with ingroup opinion**

It was faster to accept CONGRUENT than INCONGRUENT statements, and slower to reject CONGRUENT than INCONGRUENT statements. This pattern is consistent with the notion that judgements attuned with the participant's group ideology are easier than group-discordant judgements (Smith, 1936).

### **Conclusion**

The general hypothesis of the study was that the subjective salience of a social identity tends to facilitate or inhibit collective memory judgements as a function of their argumentative relevance. For example, the enhancement of a superordinate identity (Chileans) was expected to facilitate judgements of consensual rather than polemical statements. By contrast, the enhancement of an ingroup identity (either a right- or a left-wing identity) was expected to facilitate judgements of polemical rather

than consensual statements, irrespective of the attitude implied by the statement (either pro- or anti-coup). However, these predictions were not corroborated.

It was observed that a superordinate-identity prime inhibits judgement of consensual statements less than judgement of polemical statements, and that an ingroup-identity prime slightly inhibits judgement of consensual statements only. In addition, participants' behaviour following a personal-identity prime was similar to behaviour following an ingroup-identity prime, and also similar to a non-prime, control condition. Finally, it was found that the superordinate prime, compared to all other conditions, systematically inhibited judgements of a controversial theme—September 11<sup>th</sup>. Note that although initial predictions were not corroborated in the detail, what was actually found is still consistent with the general hypothesis.

Study 1 suggests that the kind of social identification that is related to social memory accessibility in this way, is at least that resulting from perspective taking and endorsement of an ingroup's belief. The identity enhancement manipulation involved the repeated expression of attitudes that were both representative of the participants and of the assigned group. Other authors have defined social identification in different terms. In particular, self-categorisation theory postulates that social identification is essentially a cognitive process of self-stereotyping. Study 2 was designed to explore this other aspect of social categorisation processes.

## **STUDY 2. STEREOTYPING AND MEMORY**

The hypothesis of this study was that an active stereotype at any given moment makes those memories about the coup that are expected to be prototypical of the corresponding social group more accessible. The only difference with Study 1 is that in this case stereotyping rather than identification is the focus, but the prediction is the same. Therefore, an aim of Study 2 is to test whether the effect of these two processes on memory is similar or different. The standard hypothesis is that the effect should be convergent, if not the same, for categories with which a person may identify. As observed before, a self-stereotyping theory of social identification (Turner, 1984) would also predict such convergence. In addition, the importance of comparison between

Study 1 and the mere stereotyping experiment presented here, is that social cognition research has concentrated on the functions of stereotypes as stored knowledge structures in order to account for prejudice and intergroup behaviour (for instance, van Knippenberg & Dijksterhuis, 2000). That is to say, stereotyping is posited as the main explanatory mechanism.

## **Participants**

Sixty-eight Chilean people between 17 and 32 years old participated in the study. All of them described themselves as extremely anti-coup. Pro-coup people were avoided in order to maintain a simple design, and also because of the difficulty in recruiting pro-coup participants within the population initially contacted. Between Studies 1 and 2, there were no overlapping participants. No gender information was collected.

## **Rationale and design**

The manipulation was priming one of the following categories: 'Yourself' (PERSONAL category), 'Chileans' (SUPERORDINATE category), 'Leftwingers' (INGROUP category), and 'Rightwingers' (OUTGROUP category). As in Study 1, participants had to judge the truth of a set of factual statements about the Chilean military coup presented in a random sequence. Again, these target statements were either CONSENSUAL or POLEMICAL among the two ideological views of September 11<sup>th</sup>, and at the same time were either inclined to the anti-coup view (CONGRUENT statements) or to the pro-coup view (INCONGRUENT statements).

This yields a 2 (*sharedness of target*) 5 2 (*congruity of target*) 5 4 (*type of prime*) factorial design—with the two first factors manipulated within-subjects and the last factor manipulated between-subjects.

Importantly, the present study was conducted with Study 1 in parallel, using similar procedures, and employing the same dependent measures, in order to make the results of these two studies comparable.

## **Procedure**

Everything was identical to Study 1, except for the priming manipulation. Again, participants were asked to perform a small, "unrelated" task while the program for the main study was

downloading. A demonstration version of the manipulation procedure can be observed at the following URL:

<http://www.shef.ac.uk/~hrp/demo/study2/>

In the first task, participants were asked to think for one minute about one of the following categories: 'you as a distinctive individual' (PERSONAL condition), 'Chileans as a whole, above particular interests' (SUPERORDINATE condition), 'people from the left' (INGROUP condition), or 'people from the right' (OUTGROUP condition).

Then participants were asked to write, in six text fields on screen, ideas or words to describe mental, physical, or cultural characteristics typical of the corresponding category. After 20 seconds, irrespective of how many characteristics had been written, the task was stopped. This interruption of the stereotype activation task was decided on the basis of experimental evidence that priming effects are more effective when the priming task remained incomplete (Martin, 1986; Lombardi, Higgins, & Bargh, 1987).

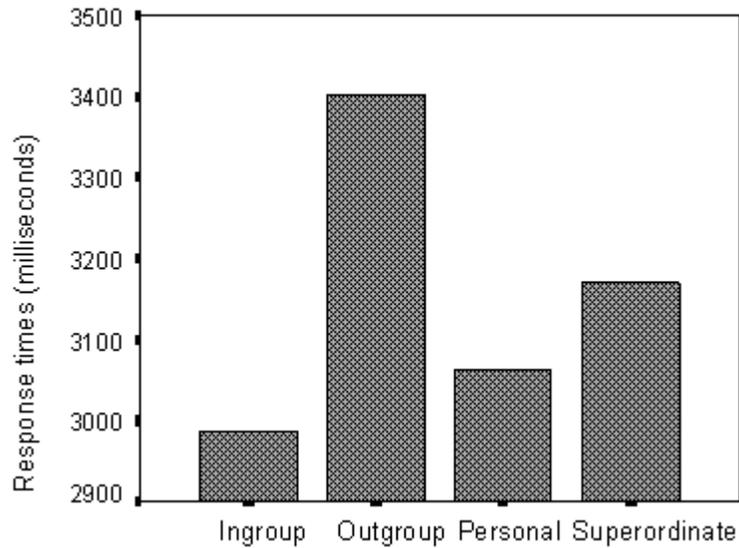
After this manipulation phase, participants were told that the main questionnaire was now ready, apologising for interrupting the filler task. Then the second part was presented, which was the same truth-judgement task employed in Study 1 (step 3).

## Results

All participants reported at the end of the session that they saw no connection between the two phases of the experiment, and considered that answering the first part had no influence on their performance in the second part.

What is the effect of priming with a given stereotype on the ease with which participants judge the truth of social memories? Figure 5. illustrates the basic pattern of results. The most salient difference of latencies is that between the OUTGROUP category and the rest. In this condition, when the stereotype of the rightwingers was primed, the latencies were longer. Recall that participants were all left-wing supporters. In addition, consider that the control condition in Study 1 can be used as a reference of non-primed judgements in the present study, because all the procedure, except the priming manipulation, was identical among these experiments. As compared to the non-primed baselines ( $M = 3,382$  milliseconds), the OUTGROUP prime had no effect on judgement. Other primes produced a slight facilitation of judgements.

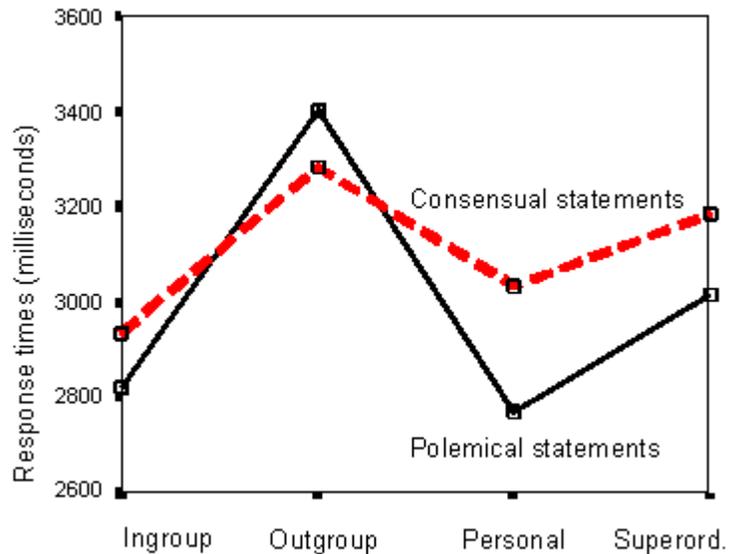
Figure 5. Latency of judgements as a function of the type of stereotype primed.



Despite the fact that the overall 4 (type of prime)  $\times$  2 (congruity)  $\times$  2 (sharedness) analysis of variance yielded a non-significant main effect of the type of prime, a planned contrast between the INGROUP and the OUTGROUP conditions showed a reliable difference;  $F(1,65) = 4.53, p < .05, \eta^2 = .07$ .

As in the results of Study 1, the effect of priming with a given category on the ease with which participants judged social memories was moderated by their consensual/polemical nature. Indeed, separate analyses for each level of sharedness showed a main effect of the type of prime on judgements of polemical statements only;  $F(3,64) = 3.20, p < .05, \eta^2 = .14$ . Figure 6. depicts this effect.

Figure 6. Latency of judgements as a function of the type of stereotype primed and the sharedness of the target statements.



## Discussion

Although the most salient result was the comparatively long latencies in the OUTGROUP condition, recall that these latencies are equivalent to those obtained in the control condition of Study 1. In other words, it can be stated that our stereotyping manipulation produced no effect on latencies when the prime was an outgroup. One important implication is that the relative facilitation effect in other conditions might be due to a factor that could be argued to be absent in the OUTGROUP condition. One of such possibilities is, indeed, identification.

In this line, an interesting finding is that priming an ingroup stereotype makes it easier or faster to judge statements about the coup than the outgroup stereotype. An interesting way to understand this is in terms of the cognitive guiding role of a social category with which the person can identify. A possible ingroup category contrasts in this respect with a category with which no identification is plausible. This interpretation is an alternative to the standard assumptions in social cognition research, according to which an ingroup prime should inhibit ideologically congruent memories, and an outgroup prime should facilitate, or at least not inhibit, ideologically incongruent memories. The experiment show,

however, that the INGROUP prime makes it easier to judge even right-wing (INCONGRUENT) statements, compared to the OUTGROUP prime.

A second finding is especially interesting to underscore, namely, that the global effect of the type of prime on judgement latencies is remarkably similar to the pattern obtained in Study 1. If we exclude for the moment responses following an outgroup prime, which did not exist in Study 1, we obtain basically the same design for both studies. The only difference would be that now the stereotype priming replaces the identity enhancement. Have these two manipulations a similar effect on memory accessibility? In both cases, the activation of a superordinate category seems to have an inhibition effect compared to the activation of a category defined at an intergroup or even personal level. At first sight, then, it seems that identification and stereotyping have a convergent effect on memory (for categories with which a person may identify).

Although the effects of identity enhancement and stereotype priming on memory accessibility have a similar shape, the effect of the latter on knowledge accessibility is much weaker than the effect of the former. In fact, in Study 2 there is no reliable inhibition due to the SUPERORDINATE prime compared to the INGROUP prime. Moreover, the stereotype priming manipulation cannot rule out the implicit activation of identification processes that might be explaining the effect. That is to say, the effect of stereotyping on memory can be argued to be an indirect consequence, or even a fading correlate, of the effect of identification.

## **GENERAL DISCUSSION**

Study 1, where anti-coup participants were identified with either leftwingers or Chileans, shows that an identification at the intergroup level facilitates judgements of statements about a controversial issue, while an identification at the superordinate level produces an inhibition of the same process. This suggests that the social category with which one identifies operates as a cognitive guide in memory formation. It is important to note that the leftwinger identity facilitated the formation of polemical memories, either favourable or unfavourable to the leftwinger interpretation or ideology. That is, this cognitive guidance is not oriented towards flattering oneself, or supporting what is

distinctive and convenient for ingroup, but to preparing the relevant memories for an argumentative context.

Study 2, where anti-coup participants were asked to think about the typical characteristics of a member of different social group, yields a pattern of results similar to the study where participants identified with given social categories (Study 1). However, two differences between these result patterns are worth noting. First, the facilitation effect of thinking about leftwingers and the inhibition effect of thinking about Chileans were much weaker than in the study where they identified with those groups (actually, the effects are only marginally significant). This suggests that stereotyping itself is not enough for the influence of group formation on memory formation to take place; more than stereotyping, the formation of a social identity seems to be necessary. In fact, the weaker effect of stereotyping could be explained entirely in terms of the concomitant identifications that the stereotyping manipulation could trigger. The second difference reinforces this interpretation: only thinking about leftwingers yielded a facilitation effect, but thinking about the outgroup (rightwingers), that is, about a group with which participants would hardly identify, produces no effect.

## 5 Use of social categorisation cues in collective memory situations

*Obviously nobody ever thinks who has not been effectively challenged in some way, who has not got up against a difficulty. He merely acts automatically and habitually. Equally nobody ever thinks who, being challenged, merely sets up an image from some specific and more or less relevant situation, and then finds for himself a solution, without in any way formulating the relational principle involved [in the situation to which reference is made].*

—Bartlett, 1932, p. 225

In the previous chapter, some evidence has been offered to the effect that the psychological processes involved in group identification constrain the psychological processes involved in memory generation, and that such a constraint appears to follow the argumentative relevance hypothesis. Evidence against the feature-matching hypothesis has been obtained, particularly the fact that the social categorisation priming had a strong *selective* accessibility effect on judgement latencies regarding polemical memories, over and above the ideological congruity of memories with the judge's position.

Moreover, this influence has been observed to be unintended, that is, without the awareness of the influence and the intention to implement it—provided that participants were consciously engaged in a goal-oriented and ego-involving task. Thus, it is possible to argue that the argumentative-relevance relationship between social categorisation processes and memory judgements enjoys some degree of conditional automaticity (see Bargh, 1989 for this notion).

However, Studies 1 and 2 do not prove that social categorisation is *used* in collective memory judgements, as suggested by the theoretical framework advanced in Chapter 3. The selective accessibility effects of priming with social category labels might well be accounted for as a particular type of association, without

reference to the function of these category labels as social categorisation cues. The present chapter reports two additional studies designed to complement the preceding ones in this respect. In other words, here the aim is to offer evidence to the effect that social categorisation processes are actually *used as categorisation cues* in collective memory situations.

Two lines of inquiry are undertaken. Firstly, does the accessibility effect observed (from social categorisation to memories) operate from memories to social categorisation? In particular, it is important to know whether the argumentative relevance of a piece of memory constrains social identification. Study 3 addresses this question. The reasoning is that if social categorisation cues are actually used as such, and not merely as fixed associations, then also stated memories would work as social categorisation cues because the social mapping function is assumed to be preserved over changes in the specific arrangement of the situation. More specifically, if stated social memories seem to be used as cues for social identification, then it is more convincing that identification is *used as a cue for truth-judgement*.

Secondly, Studies 1 and 2 have shown that a superordinate prime tends to produce longer judgement latencies. Two explanations may be offered. From the point of view of the argumentative relevance model, this would reflect the fact that September 11<sup>th</sup> is a controversial topic. Indeed, the model predicts that the self-categorisation at a superordinate level will inhibit judgements about a controversial topic because it will be *used as a cue for relevant social categorisations*. Alternatively, it could be argued that longer latencies following a superordinate prime reflect a greater difficulty in processing that prime or in identifying with the superordinate category. Study 4 was designed to test the latter hypothesis, which draws on an idea other than the use of social categorisation cues.

### **STUDY 3. MEMORY OF OTHERS AND SOCIAL IDENTIFICATION**

The previous studies suggest that people take into account their own position within a social dimension when faced to understand and to judge a social memory. In those studies, participants were asked to express their position towards several memories, in terms of truth-judgements. Therefore, participants approached the given

memories with an ego-involving judgement goal from the beginning. This was, after all, the task in those studies, namely, to use social memories as means of position taking. However, in everyday life this is not always the case. Sometimes people take a given social memory as a clue about the social position of its source. In such cases, people are engaged in an impression-formation goal.

What are the consequences of the nature of the memory disclosed by other people on the way one represents them? Even more important for my argument: What are the consequences on the way one represents oneself? The present study addressed these questions, with an emphasis on the second one. In particular, the study focused on the influence of perceiving a social memory as expression of an unknown source on people's social identification. It was expected that the comprehension of a social memory, even with an impression-formation goal, would spontaneously trigger identification of oneself with an argumentative-relevant group.

In the present research, the idea was to explore the influence of priming social memories on the accessibility of social categorisation processes, in particular of social identification. In Studies 1 and 2, the *prime* was a social categorisation process and the *target* of judgement was a social memory. In the present study, it was the other way around. Social identification was understood as "readiness of self-categorisation" (Turner, 1999). It was assumed that the identification with a given social group makes it easier for people to categorise in terms of that group, compared to alternative reference groups.

## **Participants**

Sixty-four Chilean people between 17 and 32 years old participated in the study. Between Studies 1, 2, and 3, there were no overlapping participants. No gender information was collected.

## **Materials**

Four statements from the pool of statements analysed in a pilot study were selected as stimuli. These items were statements 2, 15, 26, and 36—as numbered in Table 1 (page 109). The index of sharedness—effect size of the difference between left- and right-wing groups—for these statements was .02, .14, .46, and .44, respectively. The first two, as these indices show, were consensual

and the last two were polemical statements. Among consensual statements, 2 and 15 were selected because they were highly consensual items of pro- and anti-coup ideological inclination, respectively. A similar criterion was used to select statements 26 and 36 among polemical items.

## **Rationale and design**

Participants were presented with a social memory of a fictitious source. In one condition, this source provided a polemical social memory about the Chilean military coup (a statement that was extremely accepted by pro-coup people and extremely rejected by anti-coup people, or vice versa, as shown in the pilot study described above). In the other condition, a consensual statement was activated. Again, this consensual statement was either extremely accepted by pro-coup people and extremely rejected by anti-coup people. In a subsequent task, participants were presented with a random sequence of social labels, and in front of each label they pressed one of two keys as quickly as possible to express whether or not they considered themselves to belong to that category. The two experimental categories were defined at an intergroup ('Leftwingers') and at a superordinate level ('Chileans').

In sum, the study entailed a 2 (*identification category*) 5 2 (*sharedness of source's statement*) 5 2 (*congruity of source's statement*) factorial design—with the first factor manipulated within-subjects and the last two factors manipulated between-subjects.

### ***Independent variables***

- Firstly, the category refers to the *social category* in relation to which the ease of identification is been assessed. It was manipulated within subjects, with two levels: CHILEANS and LEFTWINGERS.
- Secondly, the *sharedness of message*, either CONSENSUAL or POLEMICAL, as in Studies 1 and 2.
- Thirdly, the *congruity of message*, that is, the ideological congruity between the statement about the coup provided by the fictitious source and the participant's political orientation. This factor was manipulated between subjects, with two levels: CONGRUENT and INCONGRUENT.

### ***Dependent variable***

The response times in a self-categorisation task where participants had to express, before each of the category labels displayed in sequence, whether they felt themselves to be a member of the corresponding social category.

### **Procedure**

Participants were contacted by e-mail, and asked to open a web page to answer a questionnaire about historical memory. At the beginning of the questionnaire a character was introduced to participants. The character was introduced as “Prado,” a common name equally applicable to a woman or a man, and with no socio-economic or political associations. No physical or gender information about Prado was provided. Participants were to pay attention to what Prado would say and try to form an impression on the basis of the opinion disclosed.

In the fiction of the experiment, Prado was asked to express the one idea that first came to mind regarding any Chilean historical event. As Prado’s memory, a single statement appeared in the centre of the screen and remained there for 10 seconds. Prado’s memory was a memory about September 11<sup>th</sup> 1973. Until this moment, no reference was made to this topic. The statement provided by Prado was randomly chosen for each participant. It could be either a CONGRUENT or an INCONGRUENT statement, and either a POLEMICAL or a CONSENSUAL statement.

Afterwards, in a supposedly unrelated task, participants were presented with a sequence of social category labels. The category labels were: ‘people from Santiago’ [Santiaguinos], ‘women’ [Mujeres], ‘Latin-Americans’ [Latinoamericanos], ‘men’ [Hombres], ‘Chileans’ [Chileno/as], ‘people from the political centre’ [De centro], ‘rightwingers’ [De derecha], ‘leftwingers’ [De izquierda], and ‘people politically independent’ [Independientes]. From these, the categories of experimental interest were only those referring to Leftwingers and to Chileans. For each participant, the order of presentation was randomised, except for the fact that the three categories of experimental interest were presented always at the end of the sequence. In front of each label participants had to press one of two keys as fast as possible to express whether or not they considered themselves to belong to that category. This procedure is a modified version of the ones successfully used by Markus (1977) and Mussweiler & Bodenhausen (2002).

Finally, participants answered some additional questions regarding their perception and attitudes towards the virtual character (how much did they like Prado, for instance), as well as about the relationship perceived between the two tasks involved in the session.

A demonstration version of the study can be observed at the following URL:

<http://www.shef.ac.uk/~hrp/demo/study3/>

## Results

From the 64 participants who submitted their answers to the questionnaire, 5 were eliminated because it could be argued that they did not pay any attention to the manipulation or that they suspected about the relationship between the manipulation and the dependent measure. This could be inferred from the answers given by participants at the end of the session, when they were asked about the relationship perceived between the two tasks involved in the session. Three participants reported believing that the first part (the actual manipulation phase) could influence their performance in the second part. Two participants reported that they have been distracted by an event external to the experiment during the first part.

From the 59 remaining participants, only the 34 who self-categorised both as Chilean *and* as Leftwinger were taken into account for the study. The number of participants who self-categorised as Chilean and as Rightwinger was too small (only 6).

Because only left-wing participants were considered for the analyses, CONGRUENT messages are anti-coup messages, and INCONGRUENT messages are pro-coup messages.

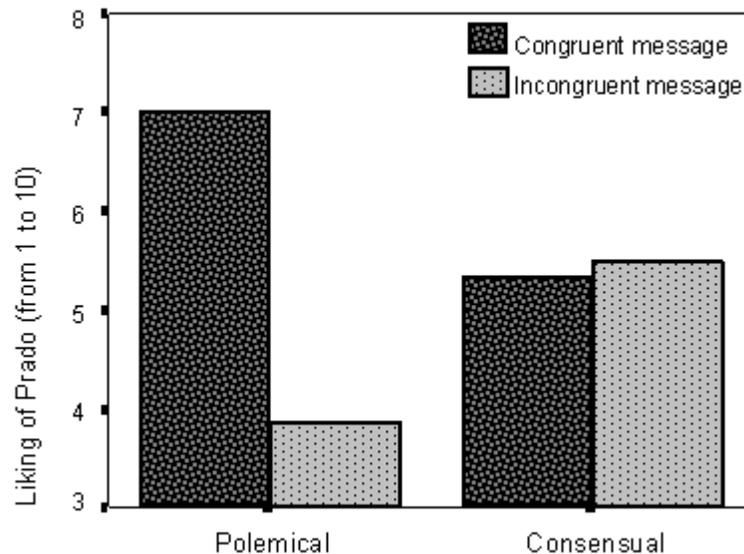
### ***Preliminary analyses***

When Prado provided a CONSENSUAL statement, the attitude towards both Prado and his or her assumed social category are moderate and very similar across levels of congruity ( $M_{\text{congruent}} = 5.33$  and  $M_{\text{incongruent}} = 5.50$  for Prado;  $M_{\text{congruent}} = 5.33$  and  $M_{\text{incongruent}} = 5.67$  for the assumed group of Prado). If Prado gave a POLEMICAL memory, then the attitude towards Prado become polarised in terms of liking the ingroup and the ingrouper, and disliking the outgroup and the

outgroup (  $M_{\text{congruent}} = 7.00$  and  $M_{\text{incongruent}} = 3.86$  for Prado;  $M_{\text{congruent}} = 6.00$  and  $M_{\text{incongruent}} = 3.14$  for the assumed group of Prado).

A full factorial three-way (2 5 2 5 2) analysis of variance on attitudinal measures was conducted, with category type as a within-subject factor, and both sharedness and congruity of the message as between-subject factors. In the case of the attitude towards Prado him or herself, there is a main effect of congruity of the message,  $F(1,33) = 9.50, p < .005, \eta^2 = .24$ , and an interaction of this factor with the sharedness of the statement,  $F(1,33) = 11.75, p < .005, \eta^2 = .28$ . Figure 7. depicts these effects.

Figure 7. Attitude towards the source, as a function of the sharedness and congruity of the message.



In the case of the attitude towards Prado's social group, there is only a congruity by sharedness interaction;  $F(1,33) = 4.34, p < .05, \eta^2 = .13$ .

### **Self-categorisation readiness**

As an initial approach to the data, let us forget about the third independent variable (congruity of the message) for the moment. The basic pattern of latencies according to statement sharedness for each category is shown in below.

TABLE 10. MEANS OF SELF-CATEGORISATION LATENCIES (IN MILLISECONDS) AS A FUNCTION OF SHAREDNESS OF THE MESSAGE AND CATEGORY OF IDENTIFICATION [STUDY 3]

Sharedness	Category	
	Leftwingers	Chileans
Consensual	2,065 (981)	1,458 (388)
Polemical	1,214 (508)	1,722 (577)

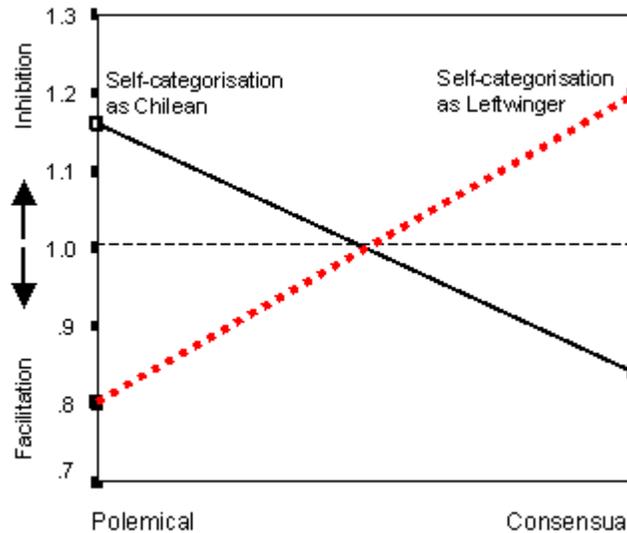
Note. Standard deviations are shown in parenthesis. For consensual statements  $n = 18$  and  $n = 16$  for polemical ones.

This pattern represents an interaction between sharedness of the statement and category of identification. A self-categorisation as Leftwinger was faster than as Chilean when a POLEMICAL piece of knowledge has been activated, whereas a self-categorisation as Leftwinger is slower than as Chilean when the knowledge activated is CONSENSUAL.

In order to test this tendency, a *relative inhibition score* was derived from raw latencies, dividing it by a baseline computed as the average latency for each participant in responding to all other category labels. This score represents the speed for a given self-categorisation proportional to the relative speed of each participant. A score greater than 1 means relative inhibition, and less than 1 means relative facilitation. Note that, in contrast with the inhibition score in Study 1, here the neutral point is 1 and not 0, because in this case the score is computed as a simple ratio of critical latencies over baseline latencies.

As shown in Figure 8., the inhibition scores for each category by sharedness of statement form a fairly symmetrical crossover interaction. Note that the inhibition score value of 1, which is the neutral, is at the middle of the cross. This suggests that a POLEMICAL message, on the one hand, facilitates self-categorisation as Leftwinger and inhibits that of Chilean, whereas CONSENSUAL messages, on the other hand, trigger the symmetrical opposite.

Figure 8. Inhibition of self-categorisation as a function of the category of identification and sharedness of the message.



Inhibition scores were submitted to a 2 (sharedness of statement) 5 2 (category of identification) analysis of variance with the first term as a between-subject factor and the second as a within-subject factor. As expected, the analysis yielded a significant interaction,  $F(1,32) = 15.46, p < .001, \eta^2 = .33$ . This result confirms the suggestions given by Figure 8.. Moreover, a similar analysis of variance on the raw latencies also confirms this pattern;  $F(1,32) = 14.72, p < .005, \eta^2 = .32$ .

If congruity of the message is taken into account, the picture is not very different, as suggested by below.

TABLE 11. MEANS OF SELF-CATEGORISATION LATENCIES (IN MILLISECONDS) AS A FUNCTION OF CONGRUITY AND SHAREDNESS OF THE MESSAGE, AND OF CATEGORY OF IDENTIFICATION [STUDY 3]

Congruity	Sharedness	Category	
		Leftwinger	Chilean
Congruent	Consensual	2,129 (1,257)	1,647 (432)
	Polemical	862 (215)	1,454 (727)
Incongruent	Consensual	2,033 (876)	1,364 (344)

	Polemical	1,264 (521)	1,760 (575)
Total congruent		1,812 (1,216)	1,598 (388)
Total incongruent		1,619 (795)	1,577 (515)
Overall		1,665 (894)	1,582 (496)

Note. Standard deviations are shown in parenthesis.

A full factorial three-way (2 5 2 5 2) analysis of variance on raw latencies was conducted, with category type as a within-subject factor, and both sharedness and congruity of the message as between-subject factors. The analysis yielded only a significant category by sharedness interaction,  $F(1,30) = 8.06, p < .01, \eta^2 = .21$ , which captures the effect discussed in the preceding paragraph. There was neither a reliable main effect of congruity nor a significant interaction with any other factor.

## Discussion

The conclusions that can be clearly drawn from these analyses are, on the one hand, that the activation of different social memories makes it easier or harder to categorise oneself, depending upon the relevance of the category of identification to the argumentative situation implied by a given piece of knowledge.

In addition, it can be concluded that this effect of social memories' sharedness on identity accessibility is valid irrespective of the social source of these memories. That is, it does not matter whether the piece of knowledge activated is attributed to an ingrouper or to an outgrouper. The effect is due to the consensual versus polemical value of the given piece of knowledge rather than to its social origin.

### ***Social memory and intergroup behaviour***

Despite its lack of influence upon identity accessibility, the congruity of the message proved to produce a reliable effect on other variables. In particular, the attitude towards both Prado and his or her assumed social category are moderate and almost the same across levels of congruity, but only when Prado provided a consensual statement. If Prado gave a polemical memory, then the attitude towards Prado become polarised in terms of liking the ingroup and the ingrouper, and disliking the outgroup and the

outgroup. This effect can be interpreted as a mutual moderation between congruity and sharedness of the message in their influence upon attitude towards the source of the statement.

Assume that the knowledge source is an outgroup expressing POLEMICAL social memories. In this case, it is expected that one will dislike Prado as one dislikes people who proclaim ideas opposite to one's own ideas. If, under the same conditions, the source is an ingroup, one is expected to like Prado as a person who defends one's own ideas.

However, if the knowledge source is expressing CONSENSUAL social memories, one is not expected to have strong reasons to dislike Prado as an outgroup, for the moderate outgroup does not dispute social memories. Likewise, it is expected that one will have no strong reasons to dislike an ingroup even if an ingroup is not prototypical or radical enough.

### ***Social identification, self, and memory***

The idea of *social identity accessibility* can be understood in different ways; at least in the following three:

- as ease of retrieval of the corresponding social category,
- as the strength of association between the social category and the self,
- as the degree of automaticity with which the sentiment of attachment to a given category is triggered by the category label.

Our current research does not enable us to decide among these explanations. However, the difference between these alternatives looks irrelevant as soon as they all assume that identification depends on basic memory dynamics. This link between memory processes and identity has been stressed in several ways since long time ago. In the last decades, a number of authors have argued that the self *is* a memory device (Greenwald, 1981; Bellezza, 1984; Kihlstrom, Cantor, Albright, Chew, Klein, & Niedenthal, 1988; Greenwald & Banaji, 1989). For example, Greenwald and Banaji (1989) argue that the self can be regarded as a rich organisation of knowledge, or memory network, that provides effective retrieval cues. The self thus works very much as the mnemonic strategy of associating new information to familiar and highly interconnected knowledge (see Yates, 1966).

The present research suggest a complementary view, namely, that in some circumstances the activation of information about an

object may work as a “retrieval cue” for the self. In other words, information about an object may affect the accessibility of different self-concepts. In particular, results of the present study suggest that this may be the case when the object is a collective memory object, when the information about this object is provided by another individual perceived as involved in the collective memory situation, and when the information can be categorised in terms of a controversy.

A final comment on the relationship between identity and memory. In research on the self as a memory system, the self is one. Others theories assume that there are several possible selves available for an individual at any given moment (Oakes & Turner, 1986; Markus & Nurius, 1987), or even that the nature of the self varies along a continuum from an interpersonal to an intergroup pole (Tajfel, 1974). A view of the self as multiple is more consistent with the present research. As concluded from Study 1, different social identities seem to entail different “weightings” in memory. Such a view would imply that, if the self is a memory system, it consists of several memory systems, or of a complex memory system with relatively independent sub-systems.

#### **STUDY 4. SOCIAL CATEGORISATION AND MEMORY FOR A “UNIFYING” ISSUE**

Does a superordinate prime have an inhibition effect compared to intergroup primes or a personal prime? The importance of this question is that it addresses a possible criticism against the conclusions of Studies 1 and 2. In both studies, there was an inhibition effect of the superordinate prime compared to the null effect of the ingroup and the personal primes. One possible explanation is that maybe a superordinate prime is cognitively harder to process, either to retrieve or to use. In that case, the inhibition effect would be due to the greater difficulty of the category rather than to its argumentative relevance. Study 3, nevertheless, offers partial evidence that this alternative explanation does not hold. In that experiment it was observed that it is harder to identify with a superordinate category only when the polemical memories are salient. When consensual memories are made salient, it is easier to identify with a category at the superordinate than at the intergroup level. However, this

experiment did not assess the priming effect of the category on memories, but of memories on categories.

Thus far I have been comparing statements typical of or favourable to the ingroup and the outgroup, as well as polemical and consensual statements. The basic idea is that attitude generation and social mapping are at the core of the act of taking a position towards a representation of the controversial object. However, this means that a very different pattern of results should be expected for neutral or “unifying” issues, that is, topics in relation to which no intergroup difference is relevant. A comparable example of “unifying” knowledge is the memories regarding a historical event representing a truly nation-wide identity. In particular, the priming effects found in experiments 1 and 2 ought to be different or null in this case.

To test whether a superordinate prime produces inhibition of judgements of “unifying” knowledge, a different priming procedure was employed. In particular, a sequential priming paradigm was used, because it is assumed to be more sensitive to the immediate consequences of primes. If a superordinate category is harder to process, this priming procedure is expected to make it evident. Before reporting the experiment I first discuss relevant aspects of this paradigm.

## **The sequential priming paradigm**

In a semantic priming paradigm, the typical procedure involves a series of trials, each involving two events. First, the presentation of a single item (the *prime*, usually a single word or an image), to which no response is required. Second, the presentation of another single item (the *target*) to which a response such as a lexical decision, a pronunciation, or an evaluative judgement, is required. The stimulus onset asynchrony (SOA) is the time elapsed between the onset of the prime and the onset of the target. The target and its prime are either related or unrelated to each other. This relation is usually a category-exemplar relation. In addition, the prime is usually a semantic context for the target, but it also could be a neutral prime, that is, not giving any semantic context. *It is important to note that in this paradigm every target is preceded by a given priming event.* Following Neely (1991), this is what I call the sequential priming paradigm. Although there are variations that deviate from this model, I will focus on this paradigm for explanation purposes.

In the sequential priming paradigm, the participants' attention is not drawn to the very focus of the measure; thus, it is an implicit measure. Whilst the focus of attention is a response based upon one of the two stimuli involved in each observation, the focus of measurement is the relationship between this response and the other stimulus.

However, since statements about a past event are not single words, the typical semantic priming paradigm must be altered in order to fit it to our purposes. This means that response times and effect magnitudes will not be directly comparable with past research using single words as targets. To start with, in judging social memories response times should be longer and may display different statistical properties. In addition, judgements ought to be dependent upon more complex and extensive processes of comprehension of the target statements. Finally, in the context of collective memory, targets carry with them an intergroup context that is not inherent to standard semantic priming targets. All this makes the use of the sequential priming paradigm in relation to collective memory judgements a novel effort, because it involves theoretical and methodological challenges rather than a straightforward application of an already-known procedure.

The basic assumption of the priming paradigm is that the semantic or affective context given by the prime will temporarily change the accessibility of targets as a function of the prime-target relatedness in memory. The overall priming effect is simply the fact that the more the prime and the target are related, the more the target accessibility is increased by the prime. The facilitation/inhibition effects are understood as the fact that some semantic context will increase target accessibility while other will decrease it, compared to a neutral or non-contextual prime. This assumption is very robust in the sense that holds across the several relevant theoretical models that try to explain these effects.

### **Findings**

The typical finding is that, when subtracting response times for targets that follow related primes from response times for targets following unrelated or neutral primes, the result is, under certain circumstances, significantly different from zero. If performance for targets that follow unrelated or neutral primes is taken as the baseline, the difference is a *facilitation effect* if positive and an *inhibition effect* when negative.

In social cognition research, both facilitation and inhibition effects have been found in the activation of attitudes (Fazio, Sanbonmatsu, Powell, & Kardes, 1986; Bargh, Chaiken, Raymond, & Hymes, 1994) and stereotypes (Banaji, Hardin, & Rothman, 1993; Banaji & Greenwald, 1994; Blair & Banaji, 1996; Dijksterhuis & van Knippenberg, 1996).

A more specific finding is that at shorter SOAs, that is, 500 ms or less, only the facilitation effect is observed. However, at longer SOAs, that is, between 700 ms and 2,000 ms, both facilitation and inhibition effects are apparent (Neely, 1976; 1991). This finding suggests that at shorter SOAs only fast and effortless processes take place, while at longer SOAs slow and effortful processes are added. The hypothetical suggestion here is that the *automatic* tendency work by facilitation, while the controlled, corrective operations work by inhibition.

### ***Modifications of the paradigm***

Three qualifications of the basic experimental paradigm were implemented to meet the objectives of the present research. Two pertain to the nature of the stimuli, and the third to the nature of the task.

On the one hand, statements about historical events replace single-word target stimuli. In addition, prime stimuli are not semantically related to target stimuli. For instance, 'It was a necessary but painful intervention' is neither an instance of the class 'Rightwingers' nor part of its defining attributes, or vice versa. In particular, prime stimuli are assumed to have a potential guiding function in the social mapping involved in target-judgements. The relation is, thus, that of a possible *cue* for categorisation. This is in line with Ratcliff and McKoon' (1988) theory of semantic priming in terms of the use of a prime-target compound retrieval cue.

On the other hand, in the present experiment participants were asked to memorise the prime while judging the target. This practice followed Fazio, Sanbonmatsu, Powell, and Kardes (1986), who employed it to ensure that participants attend the primes. However, this is not common practice, and it has been criticised for drawing too much conscious attention to the prime. In fact, it has been argued that the best way to ensure that the prime has an automatic effect is by presenting it subliminally. In consequence, in some versions of the paradigm participants are asked to attend to the shortly presented prime, but do nothing about it (for instance,

Bargh, Chaiken, Raymond, & Hymes, 1996). In other versions participants are told to attend the prime because it is needed for a recognition task later (for instance, Fazio, Jackson, Dunton, & Williams, 1995; and after them Livingston & Brewer, 2002).

## **Participants**

Ten university students from Santiago, Chile, were contacted by e-mail. All of them took part in the survey for the construction of materials used in other studies, and confirmed that they would be interested in further participation. Only left-wing participants were selected (people's political orientation was known from the initial survey). A meeting with each participant were scheduled to take place in a laboratory room. No gender information was collected.

## **Rationale and design**

The “unifying” historical event chosen was a naval battle of 1881, better known as the Naval Battle of Iquique after the name of the port city in which shores a Peruvian warship sunk one of the Chilean units. This battle, lost by the Chilean navy, is the most remembered event pertaining to the war between Chile and a coalition of Peru and Bolivia. The war lasted for 8 years and was finally won by the Chilean army. The reasons to choose this topic were two. First, as with September 11<sup>th</sup> 1973, it was an historical event politically relevant at the level of the Chilean society as a whole, also centred on military actions, and it is part of the living collective memory in Chile. Second, regarding the Naval Battle of Iquique, not only is there no conflict or difference among ideological groups regarding values and narrative versions, but also it is widely used to represent national unity. People from whatever ideology perceive it as one of the most important symbols of national spirit, patriotism, and heroism. In fact, the political and cultural relevance of this event is defined at a superordinate, international level: it marks the difference from neighbouring countries, thus leaving intra-national differences in the shadow.

Within a modified sequential priming, statements about the Naval Battle of Iquique were used as targets. The target-task was to judge the truth of each given statement. The primes were labels of categories defined at different levels: personal, intergroup (both ingroup and outgroup), and superordinate.

The aim of the study was to assess the effect of the concurrence among categorisation cues and judgement processes, because such a concurrence is expected to increase the cognitive load so as to make behavioural measures more sensitive to the cognitive effort demanded by primes. One way to maximise the likelihood that primes are processed simultaneously with targets is to make participants rehearse the prime during judgement. For this reason, the prime-task was to memorise the given category label for a few seconds. Finally, two different SOAs were used. Following Neely's (1976) findings, the time elapsed between the prime and the target was either long enough to allow controlled processes or short enough to permit relatively automatic processes only.

This study, then, entailed a mixed design of 4 (*type of prime*)  $\times$  2 (SOA), with the former factor manipulated within-subjects and the latter manipulated between-subjects. Note that, in contrast to the procedure in Studies 1 to 3, here each trial involves a different prime.

### ***Independent variables***

- The *type of prime* refers to the category label that appeared as the prime. There was an INGROUP ('leftwingers'), an OUTGROUP ('rightwingers'), a PERSONAL ('yourself'), and a SUPERORDINATE prime ('Chileans').
- The SOA—the time between the onset of the prime and the onset of the target—was either 400 ms or 700 ms.

### ***Dependent variables***

- The judgement, that is, the acceptance or rejection of the statement referring to the "unifying" topic.
- The response time for truth judgements about statements referring to the "unifying" topic.

## **Materials**

Twelve statements were constructed on the basis of several accounts of the Naval Battle in history textbooks. Half were true, as regard to the common version of the event, and half were slightly distorted in details, thus converted into statements at odds with the official story. Their length varied from a minimum of 8 words to a maximum of 12, with a mean of 10.50, a standard

deviation of 1.51, and a mode of 8 words. These statements, and an English translation, can be found in Appendix E (page 291).

## **Procedure**

Participants were assessed individually in an isolated computer room. The whole session was executed by a programme using Superlab Pro, version 2.0 (see <http://www.cedrus.com/>) for Windows systems, running on the same PC across participants.

The main instructions were given on the screen. The instructions presented the study as exploring whether the fact of having some historical knowledge in mind could interfere with an unrelated, basic short-term memory capacity of retaining a single word for a few seconds. Then the procedure was explained as a computer game against time, in which the participants had to go through a sequence of trials challenging their short-term memory.

Each trial was composed of three stages. First, a single to-be-memorised word (printed in a clear, bold font of 8 mm tall approximately, in sentence case) was presented in the middle of the screen for 300 milliseconds. Immediately afterwards a black block masked this stimulus for 100 milliseconds.

Then, a statement about an historical event was shown in clear 5-mm tall font, also in sentence case and always using one row. The participants' task here was to press keys 'K' or 'D' of the keyboard as quickly as possible to express whether the statement was thought to be true or false. The association between these two keys and the truth-values was randomly assigned for each participant. The statement remained on screen until the participant pressed one of these two keys. After the judgement, a message alerting the participant to be faster was displayed if the participant took more than 4 seconds to respond. The third step was the presentation of two probe words, one at each side of the screen. The participant had to press keys 'K' or 'D' on a standard keyboard to express whether the initial memory-word corresponded to the probe word on the right or on the left. The side of the screen in which the "correct" word appeared was counterbalanced across trials.

Before the participants started with the experimental trials, there was a whole series of practice trials to ensure that the rules of the game were understood and to make them familiar with the procedure. If participants felt they needed more practice to get the basic cognitive and motor co-ordination, a second practice block

was initiated. These practice trials used statements about World War II.

Then came the series of experimental trials, involving statements about the Naval Battle of Iquique. There were four blocks of 12 trials each. Each of these trials appeared in every block. In each block, any given statement was paired with one of four primes. Between each trial, there was a period of 2 seconds with a blank screen.

Half of the participants were randomly assigned to experimental sessions with a SOA of 400 milliseconds in all trials, whilst for the other half the SOA was set to 700 milliseconds.

The experimenter stayed with the participants until they finished the practice block and confirmed that they fully understand the instructions. Then the experimenter left. At the end of the session the participants were thanked and debriefed. In debriefing, participants completed a brief paper-and-pencil questionnaire about their ideological position in general and also about their position towards September 11<sup>th</sup> 1973. Finally, participants were asked about their impression of their own cognitions, feelings, and performance while playing the “game.”

## **Results**

Most participants judged the experimental task as very demanding, particularly because the retention of the primes while understanding and evaluating the target statements was difficult. All perceived the task as a game against time, where cognitive skills were challenged, and where “mistakes”—either forgetting the prime or misjudging the target—were unavoidable at a certain rate. Some reported that their effort focused on avoiding “interference” among concurrent tasks as much as possible. Participants’ impression of the task did not differ as a function of the SOA in any noticeable way.

Some participants reported to be impressed by the subjective uncertainty they felt about the truth of most of the target statements.

All participants described themselves as from the political left wing, and definitely against the military coup of 1973.

Before analysing judgement latencies, a basic analysis of the direction of judgements is important. A look at the distribution of ‘true’ and ‘false’ responses is necessary to interpret judgement latencies in relation to this information.

## **Judgements**

To compute the amount of acceptance/rejection of each statement, 'true' responses were coded as 1 and 'false' responses as 0 for each of the four judgement of the given statement. These scores represent the proportion of instances of acceptance versus rejection. As Table 12. shows, the pattern of means suggests an important effect of the length of SOA: With a shorter SOA, acceptance was slightly more favoured than rejection, whereas the opposite happened with a longer SOA.

TABLE 12. MEANS OF ACCEPTANCE/REJECTION AS A FUNCTION OF THE TYPE OF PRIME AND THE SOA [STUDY 4]

<i>Prime</i>	<i>SOA</i>		<i>Overall</i>
	400 ms	700 ms	
Leftwingers	.60	.38	.49
Rightwingers	.58	.33	.46
Yourself	.67	.37	.52
Chilean	.63	.40	.52
Overall	.62	.37	.50

Confirming what Table 12. suggests, no reliable effect of the type of prime was found in a repeated-measures analysis of variance collapsing across levels of SOA.

Regarding the effect of the SOA, the small sample size—five participants for each of the two levels of SOA—makes inadequate to carry out between-subjects tests.

## Latencies

As the marginal means of Table 13. indicate, the SUPERORDINATE prime tends to facilitate judgements, both with short and with long SOAs, relative to the other three types of prime.

TABLE 13. MEANS OF LATENCY OF JUDGEMENT (IN MILLISECONDS) AS A FUNCTION OF THE TYPE OF PRIME AND THE SOA [STUDY 4]

Prime	SOA		Overall
	400 ms	700 ms	
Leftwingers	2,501	2,939	2,720
Rightwingers	2,529	2,795	2,662
Yourself	2,496	2,740	2,618
Chileans	2,365	2,630	2,498
Overall	2,472	2,777	2,625

A 4 (type of prime)  $\times$  2 (SOA) analysis of variance was carried out including a special contrast in order to compare condition SUPERORDINATE with all the rest together. Results were, for the type of prime:  $F(3,24) = 3.57, p < .05, \eta^2 = .31$ ; for SOA:  $F < 1$ ; for the interaction between the two factors:  $F < 1$ ; and for the special contrast:  $F(1,8) = 15.14, p < .01, \eta^2 = .65$ .

## Discussion

The main conclusion of the present experiment is that, for a non-controversial topic such as the Naval Battle of Iquique, there tends to be easier (faster) judgement following a superordinate category prime than following any of the other types of prime. This supports the hypothesis that the concurrence of categorisation cues referring to a superordinate level of identity—or their presence plus the goal to memorise them—increases the accessibility of knowledge structures that are not diagnostic of intergroup differences but appealing to consensus.

As it was reasoned at the introduction of this study, this conclusion speaks against explanations of the results of Studies 1 and 2 in terms of the differential processing complexity of primes. The present study shows that the superordinate prime does not

demand more cognitive effort. Hence these new results reinforce the conclusions suggested by those studies, namely, that social categorisation processes modify the accessibility of a given knowledge structure as a function of its argumentative relevance.

A second conclusion of Study 4 is that, for non-controversial topics, the distribution of acceptance and rejection of statements tends to be a function of the possibility to engage in controlled processes. In particular, the pattern of results suggests that such possibility favours rejection: Acceptance was favoured with short SOA, and rejection was favoured with long SOA.

The most convincing and conservative interpretation of the last conclusion is that it is easier to say “yes” than “no” to social memories about the Naval Battle of Iquique. But an additional, more adventurous interpretation is also possible. Within the research on priming effects of social judgement, it has been argued that *assimilation* works in automatic mode, whereas *contrast* needs the intervention of more cognitive effort of correction (Martin, 1986; Moskowitz & Skurnik, 1999; see also Ford & Thompson, 2000). The concepts of assimilation and contrast refer to a relative shift in judgement in direction to, and against, the semantic implications of the prime, respectively. These phenomena cannot be mapped onto the present experiment, because there is no systematic way to describe the relation between a given judgement about the Naval Battle of Iquique and the implications of its preceding prime. Because it is a “unifying” topic, the meaning of the primes employed does not define a direction in terms of acceptance and rejection. However, acceptance could be thought of as a form of assimilation of a given statement to one’s own position—defined in each case as that position which is eminently affirmed by the participant. By the same token, rejection would be a form of contrast of a given statement from the participant’s position. Following this reasoning, the present results would be regarded as supporting the proposition that the restriction to automatic processing through a shorter SOA favours assimilation, whereas the room for more controlled processing opened by a longer SOA tends to favour contrast.

## SUMMARY

Studies 3 and 4 offer complementary evidence in favour of the argumentative-relevance interpretation of the findings of Studies 1 and 2. In particular, they allow us to argue that, in collective memory situations, stimuli—either category features or stated memories—*are used as social categorisation cues*, instead of working as fixed associations in a feature-matching fashion. Study 3 shows that the cueing function, assumed to be part of the social mapping process, is preserved over changes in the specific arrangement of the situation. Study 4 suggests that inhibition of judgement regarding a controversial issue by a superordinate-identity prime is not due to a possible higher cognitive complexity of such a prime. It also suggests that the influence of a superordinate-identity prime on collective memory judgements can be meaningfully interpreted as used in an argumentative-relevance fashion even regarding a “unifying” issue very different from September 11<sup>th</sup> 1973.

In addition, Study 3 on its own is a source of important findings, some of which have been discussed already in terms of the influence of communicated social memories on intergroup attitudes, and in terms of the self-memory link. However, perhaps the most important outcome of this study depends on the fact that the interaction between the sharedness of statements and the level of identification was stronger in this simulated communicative situation than in the merely judgmental task of Studies 1 and 2. For example, comparable effect sizes of this interaction between the sharedness of statements and the level of identification were  $\eta^2 = .13$  in Study 1 and  $\eta^2 = .21$  in Study 3 (in analyses where the congruity of statements was also included). This suggests that stated social memories in a communication context have a greater potential impact on social mapping and position taking, compared to the use of incidental category labels to guide categorisation.

## 6 On the social distribution of knowledge

*Any sudden furry of effort arising within a group, such as the Elizabethan outburst in literature, discovery and colonisation, where, though in different fields of culture, the same characteristics recur, seem to force us towards the notion of a socially determined constructiveness.*

—Bartlett, 1932, p. 279

In the two previous chapters, four studies have been reported, which offer evidence in favour of an argumentative relevance model of the relationships between social categorisation and memory. As a whole, they suggest that the social distribution of knowledge is an important determinant of collective memory judgements. In particular, Studies 1 and 3 offer evidence that the sharedness and the ideological congruity of given social memories modulate the time it takes to judge them. This modulation, as it has been demonstrated, seems to follow the principle of argumentative relevance, which implies a consideration of the way in which knowledge is socially distributed and the position one occupies with this distribution. The psychological factors supposedly responsible for the position-taking processes have been manipulated, yielding variations in the accessibility of social memories. Such variations can be accounted for in terms of *argumentative readiness*.

However, in these studies there was no manipulation of the social distribution of knowledge that could be argued as a direct test of its hypothesised dynamic properties. Before any such a test, the concept of knowledge distribution needs further development. This chapter aims at offering a conceptual account of the dynamic properties of the social distribution of knowledge. First I discuss social psychological developments concerning the crucial role of social organisation of groups in the intertwining of intra-psychological and inter-psychological processes. Then, I reformulate the concept of the social distribution of knowledge as a path to generalise the dynamic properties of social organisation within small groups to large communities of memory.

## GROUP MEMORY RESEARCH

Within the literature on organisational and educational psychology, there is a recent perspective that explicitly focuses on the interplay between intra-psychological and inter-psychological processes. It conceptualises this condition of learning, thinking, and memory in terms of *distributed cognition* (see contributions in Salomon, 1993a). Among other topics, this perspective addresses some basic collective memory processes. However, this tradition draws upon contributions from different lines of research on intra-group phenomena. In this section I review selected literature on distributed cognition and its foundations in small group research. I propose 'group memory research' as a label spanning over part of each of these traditions, directly or indirectly offering a psychological account of the relationship between knowledge and social organisation. Contributions in Resnick, Levine, and Teasley (1991) are a representative sample of what I call *group memory research*. For a wider discussion of the notion of memory as social process see Weldon (2001).

Group memory research focuses on collective processing of information. This approach distinguishes from the sociocultural approach to collective memory in a number of ways, of which some are worth noting in order to specify its domain. Group memory research is at the same time more general and more specific. On the one hand, its topic is more general, abstract, than the object of social memory studies. The patterns of memories about shared past events in a large population are particular cases of knowledge distribution within and between groups. On the other hand, group memory research implies a more micro-social perspective. The main issue is to understand the role of knowledge distribution within groups, either episodic or semantic, in the maintenance and performance of the group as a whole as well as in the guidance of individuals' cognitive processes. To study this, small group research is emphasised.

This domain is studied mainly by social psychologists. However, several related disciplines contribute to this social psychological level of analysis of collective memory, such as organisational psychology, philosophy of language, cognitive anthropology, sociology of knowledge, and computing and information sciences. At the risk of overgeneralization, this tradition asserts (a) that social interaction can be analysed as co-ordination of individuals' information processing, and (b) that this co-ordination imposes

some specific, social constraints on both group dynamics and the cognition of individuals.

For instance, research on group formation and development has shown the importance of shared knowledge among group members for achieving and maintaining group cohesion and coherence (Carley, 1991; Haslam, Turner, Oaks, Reynolds, Eggins, Nolan, & Tweedie, 1998; and indirectly Stasser & Titus, 1985). Sharing knowledge is perhaps the simplest form of inter-cognitive co-ordination, but it has an important effect at the group level. At one extreme, groups can develop a very strong consensus and pressure towards intragroup homogeneity in knowledge expression, against any challenging external evidence, just to protect their group identity (Turner, Pratkanis, Probasco, & Leve, 1992; see also Spitzer, 1964; Haslam, Oaks, & Turner, 1996). The negative side of this *group-maintenance effect* of consensus is the *individual-inhibition effect* of conformity. Studies following the groupthink hypothesis, for example, state that group pressures to uniformity or intragroup consistency may interfere with cognitive efficiency and moral judgement, thus seriously reducing the quality of decision making (Janis, 1972; Tetlock, Peterson, McGuire, Chang, & Feld, 1992). This is basically because minority and critical alternatives to the group's dominant opinion are inhibited. Moreover, knowledge that is more frequently expressed in social interaction is likely to be more accessible in individuals' memory in an automatic, non-conscious way (Cacioppo & Petty, 1979; McCann & Higgins, 1990). At the same time, this increases the likelihood that such pieces of knowledge will be expressed in further interaction (Stasser, Taylor, & Hanna, 1989).

On the other hand, the collaborative nature of information processing in groups helps explain why group performance in recall, recognition, and decision making is in some circumstances better than individual performance (Hinsz, 1990; Weldon & Bellinger, 1997). This suggests that social interaction has a *synergistic effect* on individual's cognition. Through social interaction, individuals combine each members' contributions and produce a global performance outcome that is more than the sum of the parts (Davis, 1982). Whether the global performance is better or not than individual performance depends basically on the combination process, which involves social organisation. It is important to note that knowledge can be distributed among group members in ways very different from sharing the same bits of information, and an organised division of knowledge seems to be a

key factor in both group integrity and group performance (Hutchins, 1991). Cognitive specialisation among group members not only affects each member's cognition but also produces cognitive interdependence.

In what follows, I focus on two complementary topics concerning this synergistic effect of social interaction on cognition, namely, the emergence of group-level patterns from the information processing co-ordination in social interaction, and the emergence of a collective memory system from social organisation of knowledge distribution.

## **Interaction and knowledge**

Does knowing that other people have similar or different knowledge have any effect on the way we perceive those others and on the cognitive properties of that knowledge in our minds? Similarity-attraction effects are well documented in research on person perception (see Byrne, 1971; 1997). We feel closer to people with whom we share our experience. In addition, this shared experience seems to have more subjective reality than non-shared experience (Ladd & Emerson, 1984; Hardin & Higgins, 1996), because the mere fact that it is shared counts as a confirmation of that experience. At a group level, shared knowledge could be an important element that people search for in order to establish intergroup categorisations. As some pieces of knowledge become part of the group's distinctive shared reality, it is expected that this knowledge produces durable effects on members' cognitions concerning intergroup relationships. This argument is illustrative of the importance of shared knowledge in our everyday experience, though it has not been tested empirically.

### ***Inter-cognitive convergence and social stability***

One of the most overlooked everyday experience is the fact that we only and always use shared knowledge to express our inner states of mind. Socially shared descriptions of individual experience are not only a shorthand but the very nature of self-perception (Caporael, 1997; Shore, 1996). This point makes sense if the relationship between private experience and shared or conventional meaning is turned around. Instead of seen the former as the origin that produce the latter by means of the process of expression, we can imagine that shared reality is the origin that

produce conscious experience through the process of internalisation of meaning (Vygotsky, 1934/1962; Wertsch, 1985). The conflict between these two interpretations can be better illustrated in the classic experimental studies on conformity (Sherif, 1935; Sherif, 1936; Asch, 1956; Campbell, 1961).

Sherif (1935) proposed a very simple and interesting idea, namely, that people quickly develop a consensus towards an ambiguous stimulus. This consensus constitutes a social norm within the group, which stabilise individual perceptions or judgements for future opportunities. In fact, in the future they will not develop a new norm easily, but tend to maintain the original. Jacobs and Campbell (1961) demonstrated that a social norm generated by the group towards an ambiguous stimulus remains stable in time even if the original participants who set the norm were replaced. They interpret this as analogous to the stability of traditional beliefs. In particular, they found that an arbitrary norm could survive replacement of the confederates who set the norm even when strongly inconsistent with individual perception. Later I consider some recent hypotheses about group and cognitive processes underlying yielding and conformity behaviour.

This phenomenon of inter-cognitive convergence has an important role in social life. Instead of viewing yielding and conformity as individual-inhibition effects, it can be seen as a positive human tendency towards society. That is the last interpretation made by Campbell (1990) in an essay about Solomon Asch's position. Against the interpretation that stresses the irrationality of adapting to others, Campbell highlights the rationality of trusting in others. The rational nature of this behaviour rests in the social nature of human beings, for whom consensus must have priority over validity. "Human nature [...] may have been shaped in an ecological niche in which collective action was more adaptive than either uncoordinated individual action, or collective *inaction*, as a response to inconsistent, incomplete, or incompetent information" (p. 46). From this point of view, the function of inter-cognitive convergence is the formation of regularity in social behaviour.

Regularities in social behaviour are the basis for the stability of social interaction and indeed all other kinds of social systems. In the sociological tradition, behavioural regularities are explained as a function of social norms and their legitimacy or power as means to produce conformity. Also in social psychology behaviour that is situated in a social system is distinguished from merely individual

cost-benefit behaviour by its conforming relation to social norms. As an example of application of this criterion in social psychology, see Schmitt, Dube, and Leclerc's (1992) demonstration that queuing is a social behaviour rather than an individual-level one. Although this normative explanation goes beyond the account of social regularity made by behaviourism in psychology, it seems circular when the sociological argument refers again to legitimacy or to power when trying to come to terms with the foundations of social norms. Following either a micro-sociological (Berger & Luckmann, 1967) or a social psychological perspective (Asch, 1956; Campbell, 1990; see also Schmitt, Dube, & Leclerc, 1992), the very formation of social norms and their conforming force could be explained in terms of shared knowledge, in particular, shared systems of expectancies.

According to Lewis, behavioural regularities that are based on shared systems of expectancies are social conventions. A convention is a self-organised pattern of co-ordination of individuals' behaviour and mutual expectancies, which can perpetuate itself indefinitely. "As long as uniform conformity is a coordination equilibrium, so that each wants to conform conditionally upon conformity by the others, conforming actions produces expectations of conforming action and expectations of conforming action produce conforming action" (1969, p. 42). Thus, social norms, as well as traditions, are supported by what can be interpreted as self-stabilised collective memory structures. That is, norms emerge from groups whose members maintain certain stable pattern of behaviour towards other members because others' behaviour confirms our expectancies about it and this confirmation reinforces our behaviour, confirming others' expectations about it. A possible behaviour regulated by such a system could be the recollection of a particular past events rather than other, or the practice of certain commemoration rituals. However, not only mnemonic social regularities but most of social practices—that is, particular co-ordinations between individuals' actions—can be seen as the outcome of a certain self-organised pattern of mutual knowledge among group members, dynamically shaped by the same social interactions that they make possible.

This dynamic relationship between social distribution of knowledge and social interaction have been proposed as an important source of group stability (Carley, 1991). Assuming that interaction leads to shared knowledge (Meckley, 1994), and that relative shared knowledge leads to social interaction, she has

shown with computer simulations that social change and stability result from changes in the distribution of knowledge as individuals interact, acquire, and disseminate information.

### ***Inter-cognitive co-ordination and meaning***

It is important to consider that not only shared knowledge, but also diversity of knowledge is an important source of group stability. Stesser and Steward (1992) have shown that groups are better in solving problems collectively when they are able to consider information that is not previously shared among members. There is a particular kind of social distribution of knowledge that is especially important as a source of group-level patterns of behaviour, namely, *mutual* knowledge. When individual 1 knows that individual 2 knows X, and individual 2 knows that individual 1 knows Y, then we have knowledge that is not simply shared but mutual.

Mutual knowledge is particularly important for communicative actions, in which the speaker cannot make everything explicit and has to rely on expectations about the hearer's expectations about his (the speaker's) communicative intention. This is even more important when there is more than one hearer, because the speaker must believe that both hearers have certain shared knowledge (Clark & Carlson, 1982; Krauss & Fussell, 1991). Following Grice's (1975; 1989) analysis of meaning in conversation, a long discussion about the role of mutual knowledge in utterance interpretation has been developed within philosophy of language. The point of this discussion is that, because almost all utterances are ambiguous, to disambiguate them we have to use as a context some sort of structured background knowledge shared among speaker and hearer. Without this common ground, it seems that communication is impossible (for divergent positions, see Sperber & Wilson, 1986; Edwards, 1997).

Shared and mutual knowledge cannot be simply presupposed in ambiguous interactions, for example if it is a first-time encounter. Shared and mutual knowledge is continuously produced through interaction. Studies on joint recall and collaborative problem solving show that social interactions have an important function in the regulation of group action and the construction of groups' shared knowledge (Edwards, 1997; Bangerter, von Cranach, & Arn, 1997). Bangerter and colleagues trained nine 4-person groups in a complex collaborative task where each member accomplished a different role, acquiring specialised knowledge. Then groups had to

collaboratively solve problems concerning the managing of a complex city, following a structured discussion scheme. During this second phase, group interactions were videotaped. A quantitative analysis of the interactions showed that collective memory processes vary significantly as a function of the different regulative contexts. In particular, it was found that the act of recalling shared knowledge during interaction took their meaning from the particular activity context. Those situated acts of social recall had an intragroup co-ordination effect that enhanced the collaboration on, and the organisation of, the activity. What this study suggests is that shared and mutual knowledge that is used and produced in social interaction results in a global structuring at the level of the group.

So far, I have shown that shared knowledge in general and mutual knowledge in particular play an important role in the emergence and maintenance of group-level patterns of behaviour—from the very formation of social norms to the shaping of collective action. In this argument, the collective nature of memory is given by the sharedness of knowledge. In the following section I try to extend this argument about inter-cognitive co-ordination focusing on group memory processes.

## **Social organisation of knowledge**

The concept of collective memory is explicitly used in experimental comparisons between group and individual memory performance. An important outcome of this research tradition in social psychology is the identification of interaction and group-level factors to explain the superiority of groups over individuals. Group recognition and recall memory superiority—in confidence, accuracy, and stability—has been found dependent on consensus and collaboration. Even the fact that real groups do not perform as well as nominal groups has been explained highlighting social interaction: Collaborative inhibition appears to be a function of retrieval-strategy disorganisation within the group (Weldon & Bellinger, 1997).

Collaboration of several individuals in a socially organised way is necessary whenever the cognitive task is beyond the cognitive capabilities of a single individual (Hutchins, 1994). This has been emphasised in relation to the simplest organisational environments (Huber & Daft, 1987). The extreme example is the maintenance and transformation of the whole body of knowledge of a single culture through its history. Certainly, even the simplest society

uses more information than could be learned by any individual in a lifetime (D'Andrade, 1995). Hence, social organisation of distributed knowledge processing is a necessary condition for culture survival. Furthermore, co-ordination of socially distributed knowledge is the case in many daily life activities where the cognitive task seems to be within the limits of an individual, as when a couple divides to buy their groceries in the supermarket or try to cook together. As Hutchins puts it:

All divisions of labor require some distributed cognition in order to coordinate the activities of the participants. Even a single system of two men driving a spike with hammers requires some cognition on the part of each to coordinate his own activities with those of the other. When the labor that is distributed is cognitive labor, the system involves the distribution of two cognitive labors: the cognition that is the task, and the cognition that governs the coordination of the elements of the task. In such a case, the group performing the cognitive task may have cognitive properties that differ from the cognitive properties of any individual. (1991, p. 284)

Between the two extremes of large cultural groups and partners in daily activities (cooking, dancing, playing), there is a variety of explicitly task-oriented groups whose performance has been studied in terms of information management strategies. Most of this research field is explicitly oriented by a computational metaphor: groups seen as distributed database systems. First, I briefly describe the meaning of this metaphor. Then I review the transactive memory approach that has developed a theoretical model for small groups on the basis of that metaphor. Finally, the implementation of an inter-network, connectionist metaphor of collectively distributed cognition is discussed.

### ***Groups as distributed databases***

As a means of satisfying the information requirements of organisation with multiple databases, since the late 70s a great deal of work on decentralising information management and enabling global-level co-operation between local control units has been invested by computing scientists. The main concepts developed within this effort were that of distributed database and transactive architectures. The general advantages of distributed database systems, in comparison with unitary databases, are (a) that information does not need to be replicated as many times as users can have access to it, (b) that allows a more efficient use of

the processing capacity of nodes because they can be working in parallel, and (c) that the whole database is more stable because it is distributed among several subsystems. A basic description of this framework would be useful to understand its analogy with knowledge organisation in human groups.

The basic question motivating this field is how to process information belonging to several linked databases, either physically separated or not. Distributed databases usually need two types of users, one processing data at a global level—that is, using multiple databases—and a local one, ideally as autonomous as possible from the global controller, or database management system, and unconcerned with it. One of the main problem areas in managing distributed databases—in contrast with unitary databases—is the co-ordination of the two database control levels implicated, say, the local and the global database management systems. There are two polar models of architectures concerning multilevel control. Firstly, a centralised system, where all global processing is controlled by a central node. Such a system favours the preservation of consistency but reduces the stability of the system, because a failure in the central node implies a failure of the whole distributed database. Secondly, a decentralised system. The latter is more stable, because each node plays either total or partial controlling functions at the global level, thus reducing the generalisation of nodal failures in storage, processing, or communication processes. However, in this case the co-ordination of controlling functions becomes a problem as difficult as the preservation of consistency.

In the context of human groups, there is a cognitive processing at an individual level but also a collective information processing at the level of inter-cognitive transactions. The group-level processing implies transactions between a number of group members. The problem is how to control these transactions—that is, how to execute, supervise, and co-ordinate them. The centralised option is similar to groups where the leader is in charge of the co-ordination of group-level operations and the transactions between members' memories that are involved in such transactions. A decentralised architecture is like a horizontal group network where each member takes care of his or her own global transactions. It is common sense that centralised group networks seem to be more efficient for a number of tasks, but their main problem is the concentration of responsibility in a single mind. The basic idea of liberal democracy is to divide power and implement a multiple-head

structure (multiple powers and multiple parties). Probably decentralised group networks are less efficient—that is, require more time and effort—for some tasks than centralised ones, though the preference for a decentralised co-ordination strategy for distributed databases did not arise in computing science merely because of political considerations. Actually, the primary advantage of democratic organisations is their dynamism and flexibility. Decentralised networks, either in politics or in smaller organisations, are indeed more efficient in tasks demanding more adaptability and complexity management. Again, it is common sense that global and rapidly changeable environments of organisations demand decentralisation of the controlling mechanism in distributed database systems. One can think of several analogies of this in the comparison of performance between serial, consciously controlled versus parallel, automatic processing for daily cognitive tasks.

Although this computer network metaphor might be useful for the understanding of collective memory, it has some limitations. I indicate two of them analysing one of Wegner's initial argument: "If individuals are computers, every social group is a computer network" (1995, p. 319). This appealing idea contains problems that can be generalised to the computing approach to collective memory.

The first one is the meaning of the term 'computers'. Are we talking about the kind of computers we currently use—*database + processor* devices? Or does this word refer to all possible systems whose activity can be described as symbolic processing? The point is that it is not fair if one thinks of computers in this second, general way, and then apply a distributed database approach. This is so because this computing framework refers to systems that do not have a dynamic memory, that is, a system that do not learn through experience (see Shank, 1999 for more detail). Therefore, the first limitation of this metaphor is that the dynamic nature of human memory is modelled by a static system. The consequences of this limitation are the subject of a wide discussion not addressed here. However, some elements of this discussion are offered in the contrast between two models of collective memory reviewed below, namely, the model of transactive memory and a connectionist approach to human networks.

The second limitation is more a warning for future theorising than an actual problem. To specify it, an additional, implicit premise used in Wegner's syllogism should be made explicit: All

groups are networks of individuals. But is that true? Again, it depends in what is meant by 'network'. If one is transferring the concept from the computing domain, then one ought to exclude some kinds of human groupings from this *group* category. This is so because individuals are not connected in all human groups, either through a physical or a virtual device, so to communicate to each other directly or indirectly. (There is another solution, namely, to replace the universal quantifier of that premise with an existential one, and say something like "some groups are networks of individuals". Nevertheless, no one would prefer this solution because a conclusion like "at least one human group is a computer network" is not interesting.) The point is that the computer network metaphor could bias our notion of network in a direction that excludes real societies in their historic time-lags. This undermines the integration of macro-social and group levels of analysis of collective memory.

### ***A model of transactive memory***

Wegner (1995) has demonstrated that we can learn important things about human group memory systems by discussing how distributed database systems are built and the problems that have to be solved in building them. I discuss the structure of a group memory system prototype and the problems that a more sophisticated model ought to deal with.

A simple, two-person distributed-database system can be modelled as comprising two long-term memory and two processor devices, and pathways allowing each processor to write and to read from one of the memory devices. In addition, the model proposes a pathway connecting both processors. Rough similarities between such a model and the classic information-processing representation of memory in cognitive psychology are apparent. There is a storage structure, a working memory, and encoding-retrieval processes. Encoding-retrieval processes are executed by the processor or working memory, which is the active device in contrast with the storage structure, the passive one. However, in Wegner's model there is a communication link between each processor. Note that stored memories are neither directly linked, nor unified in a single, common memory storage bin. Through this inter-processor link, each individual can have some access to the other's memory, but this access is not as direct as the one each has to their own memory. This feature resembles

the everyday experience of non-transparency of the other's mind, that is, the necessarily indirect access to others' mind.

Another element of Wegner's model is that each memory device stores two directories—two stable descriptions of the location of memory contents: one internal, referred to the contents stored in its own memory, and another one external, modelling at least part of the ones stored in the other's memory. Information accessible to others and whose location is modelled by an external directory is *shareable* information. An external directory presupposes that the information stored in individual memories is organised in terms of similar categories or labels. Wegner talks of *directory sharing*, suggesting that there should be some shared knowledge among group members concerning the location of information in the whole distributed memory system. However, taking into account previous distinctions it must be noted that a shared directory is but one possibility in this model. A meta-external directory, that is, a common description of the location of every shareable information within the whole distributed system, is certainly much more than Wegner's notion of an external directory. With the basic idea of the external directory Wegner is modelling mutual knowledge, not shared knowledge.

In so doing, however, he is incidentally offering a plausible implementation of a more important aspect of collective memory: In distributed systems, knowledge can be usefully shared only if there is some appropriate mutual knowledge. In other words, inter-cognitive knowledge co-ordination is a necessary condition for a distributed group memory. Moreover, inter-cognitive co-ordination about the information labels or retrieval cues, best accomplished during face-to-face communication (Wegner, 1987), makes it easier to access information from each other (Anand, Manz, & Glick, 1998). However, also a truly shared directory, which is a kind of second-order shared knowledge—a meta-directory—, would be an efficient means for searching information in the whole group memory. This is especially the case if the group involves a large number of members, as Anand, Manz, and Glick (1998) have suggested for complex organisations.

With an external directory, member K can know whether member J does have or does not have the information that K is looking for. If member J actually has it, the processor of member K can ask J to share it. An interesting point, though already anticipated, arises when noticing that according to such a system an individual can, so to say, "know some information without

knowing it.” Member K does not have the required piece of information in his or her memory, but he or she knows where it is located and how to retrieve it—how to ask J for it. Member K knows that without knowing the content of the required piece of information. If K knew it, then such piece must be stored in K’s own memory.

In a distributed group memory, then, most of the shareable knowledge is opaque from the point of view of each member. However, this non-transparency of distributed knowledge also characterises individual memory. Wegner draw our attention to the classic distinction between *knowing something* and *knowing that we—or others—know it*. Therefore, even a single, one-person memory system is assumed to work at least in part as a distributed database with internal and external directories. To put it in a stronger way after Wertsch (1997), even in every day activities an individual’s memory system works within a wider, distributed memory system that involves cultural devices such as cultural artefacts and social institutions.

The problem of distributed knowledge opacity is how group members know where the information to be retrieved is located. Wegner distinguishes four basic ways in which they create and update their external directory or directories. First, by intuitive inferences based on the mere social categorisation of the others (“J seems to be a lawyer, so J probably knows about the new law”). Second, by explicit or planned division of labour (defining that “K is in charge of P and J has to remember Q”). This second strategy is more reliable than the first one, and it involves social organisation of the group’s distributed knowledge through communication. Third, by probabilistic inferences based on differential roles or expertise of others (“J is the lawyer of the group, so J must know the new law”). The advantage of this strategy in comparison with the second one is that it does not need explicit agreement and conversation. Fourth, by probabilistic inferences based on overtly known differential exposure to information of others (“K knows about the state of P yesterday, then K probably knows how P is today”). Wegner, Erber, and Raymond (1991) have found that real-life external directories created through this last strategy depend on primacy, duration, and recency effects. That is, someone is more likely to be associated with a certain kind of information if he or she was the first of the group in having access to it, has been exposed to it in more opportunities, or has the most recent access to it. There is a fifth, more sophisticated way to

create/update other-directories, namely, by the designation of a member especially in charge of the directory updating for the whole group. As discussed above, this sort of centralised control system does not work as well as a socially organised decentralised system under high complexity conditions. As a possible solution in the context of complex organisations, Anand, Manz and Glick (1998) have proposed the replacement of external directories in each member by a *locator system*. That is, either a human or an automatic searcher for the available information within the distributed collective memory in response to local requests, which could work with a single, rough, and easy-to-update directory.

The interesting point about directory updating is that from the most simple strategy—the use of stereotypes in daily life—to the more technologically advanced—powerful locator systems within an organisation's intranet—they all can be seen as forms of inter-cognitive co-ordination of distributed knowledge. The implication is that without any form of this kind of co-ordination, without directories, a group behaves as predicted by the information-sampling model of group discussion proposed by Stasser and Titus (1985). According to these authors, group members share with each other only trivial knowledge, that is, information that was already common before discussion. Therefore, the social organisation of distributed knowledge seems to be a necessary condition for collectively distributed memory systems to have a *synergistic* effect on members' cognition. Further, it means that the collective processing of information in groups that have a common experience or history should be different from the processing that can be found in newly, ahistoric groups. Examples of the latter are such groups as those produced ad hoc by mere categorisation, where it makes no sense to talk about a collective memory.

From the model of transactive memory presented here, three important theoretical statements about collective memory dynamics with interesting testable predictions can be derived. First, Wegner stresses that a consequence of inter-cognitive co-ordination in task groups is the progressive knowledge differentiation or division of cognitive labour among group members. At the beginning of group life everyone may start with similar knowledge. But the co-ordination of cognitions to achieve a common task will magnify the small initial differences in knowledge accessibility among group members. From sharing trivial, pre-shared knowledge, they will come to distribute their

knowledge according to a specialisation pattern, and to combine their knowledge in non-trivial ways. Thus, it is hypothesised that the social organisation of knowledge distribution impacts on individuals' memories in the long run, by changing knowledge accessibility. This theory implies that only knowledge that is relevant to the group task is likely to be specialised, or distributed among members.

Second, Wegner observes that we often ask someone else about his or her knowledge of P even if we know it. This tends to happen when it is easier to ask the other to share that piece of knowledge than to retrieve it from our own memory. Two possible explanations are given for this tendency in retrieval co-ordination (see Wegner, 1995). On the one hand, it is plausible that high-level knowledge about the way to find some information is more accessible in memory than low-level knowledge about details. High-level knowledge is assumed to be more summarised, or schematised. This means that knowledge opacity is also the case in an intra-cognitive context. In fact, normally one is unaware of either what one knows or the location of the required piece of knowledge in one's memory system. One is unaware at least until the required piece of knowledge is consciously activated or applied in one's activity. The knowledge non-transparency postulate, then, predicts that low-level, target information "stored" in memory is less accessible than high-level information concerning external sources of the same target information, specifically other group members in a knowledge-distributed situation.

On the other hand, a complementary hypothesis is that the boundaries between ones' own memory and the memory of others become fuzzy or undetermined with recurrent inter-cognitive co-ordination, because the source of information is rapidly forgotten. In addition, people tend to rely more in other's memory when they are not sure about their own memory. Cognitive studies on recall suggestibility are consistent with both parts of the hypothesis: Source misattribution seems to underlie serious confusions between real own experiences and stories told by others (Loftus, Feldman, & Dashiel, 1995), and suggestibility has been associated with persuasive factors and inaccuracy (Smith & Ellsworth, 1985; Loftus, 1991). The global hypothesis is similar to the one Betz, Skowronski, and Ostrom (1996) offer to explain yielding in recall. Consequently, Wegner's hypothesis can be interpreted as attempting an explanation of the inter-cognitive convergence effect observed in conformity studies, but in terms of

collective memory dynamics. As a result, people tend to prefer an inter-cognitive rather than an intra-cognitive retrieval.

In principle, this hypothesis helps explain why group performance is better than individuals' performance. It also helps explain why groups do not perform as well as nominal groups. Individuals who are unsure about their responses, yield to other members' responses. Moreover, the same mechanism of self-other confusion would explain the fact that people in groups express more confidence about memory performance than as individuals outside groups. This could be because any given group member may feel that he or she knows not only what is actually "stored" in his or her memory but also part of what is "stored" in other members' memory. Some specific predictions of this theory concerning are, first, that group memory performance is better in groups with better retrieval co-ordination in terms of external directory accuracy. Second, that accuracy is better in groups with more common experience or a better organisation of knowledge distribution. Third, that performance confidence is greater as a function of both the external directory accuracy and the group size. Some of these predictions have empirical support (Hinsz, 1990; Hinsz, Tindale, & Vollrath, 1997), but most of it is indirect and partial.

The third theoretical output of the model of transactive memory is that organised, specialised knowledge co-ordination makes groups perform better than individuals not because of the specialisation itself but because social organisation of knowledge is an integral part of a concrete transactive memory system that has its own history. Initial experimental evidence in favour of this idea is reported by Moreland, Argote, and Krishnan (1996; 1998), who found that performance was better in groups of individuals trained together than in groups of individuals trained separately. Additionally, groups of individuals trained in groups, but tested in a new group, performed as poorly as in the individual training condition.

Finally, some words about the limitations of this model are necessary. Some of its limitations are due to the theoretical assumptions of the model, whereas others only demand the extension of the model so as to be applicable to more complex situations.

The more salient limitation of the transactive memory model is that, because it was developed for close relationships, it does not account for the complexities of larger groups. For instance, it does

not consider the nature subgroups. If the model is to be applied to real-world task-groups, from informal or occasional teams to large organisations, the whole idea of inter-memory transaction has to be expanded in many respects. Anand, Manz, and Glick (1998) have proposed an extended transactive memory model for information managing in complex organisations. In so doing, they distinguish three different levels of memory: an individual, a group, and a systemic or organisational level. Each level is assumed to contain both structures internal to the organisation and environmental structures. Another organisational-level model based on the distributed database metaphor has been proposed by Smith (1994), but in his work there is no elaboration of the transactive memory approach. Both organisational-level models consider subgroup formations and also take into account the fact that there is not only one possible communication network within the group, as in Wegner's model. This may have significant effect in the relationship between knowledge distribution and group performance. Nevertheless, these two extensions of the model are still in a speculative and initial form. Some of their features are discussed below, in the context of other limitations of Wegner's model of transactive memory.

As Wegner himself declares, the model is restricted to verbally communicable knowledge. If a piece of knowledge cannot be communicated clearly, either because it is a kind of knowledge that is difficult to verbalise—for instance, intuitions or skills—or because it is not well organised according to directory labels, then it fall outside the relevant domain of the transactive memory model. This is a problem particularly in the case of beliefs that the group does not express in communication but presupposes, which are hypothesised to be important elements of collective memory. The transactive memory framework, restricted to verbal communication, offers no tools to ask about the role of shared non-conscious beliefs and their dynamics of change and differentiation in a distributed system. Perhaps this restriction to verbal communication is a heritage from the computing inspiration of the model. Whether this is so or not, the point is that a simple extension of the model is not enough to include in its domain the dynamics of knowledge distribution in society. A similar argument can be made concerning skills. Cognitive specialisation among group members not only refers to verbally communicable knowledge but also to procedural knowledge. In their extension of the transactive memory approach, Anand, Manz, and Glick (1998)

try to incorporate what they call *soft* knowledge in the model. But they do so only by specifying that directories, or locator systems, must know how the specialised skills are distributed within the organisation. Even if these ideas were a good solution for information management in organisations, they cannot be a model of collective memory in natural groups or societies because there is nothing in these kinds of groups resembling these tools.

A third general limitation of Wegner's model is that it oversimplifies the communication links. After all, the model was developed to understand face-to-face interactions. Wegner uses the distributed database metaphor to understand simple computer-like networks of nodes, but not computers truly. In contrast, Anand and colleagues, as well as Smith (1994), think of groups in organisations as social networks working within computer networks. This allows these authors to develop a more complex model of communication links, in particular because these links are mediated by cultural artefacts—from memos to intranet facilities. This extension of the model of transactive memory is important because cultural artefacts may explain much of the inter-cognitive “flow” and “storage” of information. In terms developed in Chapter 2, cultural artefacts may be conceived of as conventionalised knowledge structures, functioning as polyphonic, high-dimensional devices for inter-cognitive co-ordination. In Smith's model, cultural artefacts are “the body of tangible knowledge that the group works with” (1994, p. 110). This tangible knowledge refers to all physical, long-term representation of shared knowledge within the group, including the final outcome of the productive processes. Strictly speaking, tangible knowledge is the long-term storage system at the group level. Between the private, individual-level long-term memory, and this shared long-term memory, Smith locates the collective working memory. The latter is both the shared, intangible knowledge—that is, knowledge merely expressed in an ephemeral way during interactions—and the context of instruments that groups use as means to share, discuss, and produce their common knowledge. Hence, cultural artefacts do not only refer to structures of tangible knowledge but also to the cultural tools that make possible the transformation of shared intangible knowledge into a tangible format. In other words, it can be argued that they are the responsible of retrieval, encoding, and storage processes defined at the group level.

A final limitation of the transactive model approach and its extensions is that the database metaphor attaches the conceptualisation of collective memory to the classic information-processing paradigm in cognitive psychology. Within this framework, memory consists of two basic structures, a database and a processor—a long-term memory and a working memory. In addition to these structures, there are processes of information “flow” between each other—encoding and retrieving. Despite the fact that this framework can actually explain several aspects of collective memory in task groups—such as the problem of directory updating or retrieval co-ordination—it does not seem very useful to explain other collective memory features, particularly its dynamic and emergent properties. The model next discussed, elaborated from a connectionist framework, illustrates this point.

### ***Inter-network model of distributed cognition***

In simple terms, memory from a connectionist point of view is an information processing system constituted by a network and its component units. Each unit represents an elemental condition or aspect of a mental state, for instance, a perceptual or conceptual feature. The connections among them represent influence paths between units. Paths vary in terms of the constraints they impose on the probability of co-activation among units—that is, on the strength of association. These constraints conform a pattern of connectivity at the level of the whole network and they can change dynamically as a function of co-activation patterns. At the same time, those co-activation patterns are determined as a function of both the actual pattern of connectivity and the prior co-activation pattern. A particular co-activation pattern of the whole network represents a particular mental state, while the whole pattern of connectivity represents a network or mental predisposition, or tendency, and its change is interpreted as learning. Within this framework there is no long-term storage structure linked to a central, processing structure. The interconnectivity structure and pattern of connectivity play the storage function, and each unit is a local processor.

One attempt at applying connectionism to a group level that has been proposed (for instance, Latané, Nowak, & Liu, 1994; Latané & Nowak, 1994; see Nowak & Vallacher, 1998) simply transfers this framework from the intra-cognitive to the inter-cognitive domain. Within this approach, the units of the network represent individuals

and their connections represent communication links. This attempt has the problem that does not consider individual memories as complex networks but as internally uniform processors. For this reason, it seems that an application of connectionism to the group level must conceive groups as dynamic networks which components units are dynamic networks as well (Eiser, 1994). This is precisely the strategy followed by Hutchins (1991) in his inter-network model of a collectively distributed memory.

The essential idea of Hutchins' model is that an inter-network system has different properties than the constituent networks. He distinguishes seven parameters that are specific to this second order, group-level network. A brief description of them may be a good summary of the model.

- (a) The *pattern of interconnectivity among units of a subordinated net*, representing the schema about a given object. The group level of this parameter consists basically in the differences in the interconnectivity pattern between the subordinated nets. If all the nets have the same links among their units, there is a shared schema about the event in the group, but there are several other possibilities concerning individual differences and differences between subgroups.
- (b) The *external inputs* to particular units in the superordinate net, that represent which conditions of the event are affected by environmental evidence. This could be very different among subordinated nets, as is the case when division of cognitive labour implies differential exposure to information concerning different aspects of the object.
- (c) The *pattern of activation across units in the subordinated nets*, representing current their predisposition or states of mind. A similar patterns of activation across subordinated nets means group consensus, but many other distribution patterns of beliefs or states of mind are possible in a group.
- (d) The *interconnections* among the subordinated nets, which represent the communication network of the group. All subordinated nets can be communicated to each other, or there can be a queue formation, or there could be overlapping subgroups, and so on. This parameter is much more flexible and general than Wegner's and Smith's models of task-group networks of close interactions, for it is able to take into account large societies where each member is only connected with his or her immediate neighbours.

- (e) The *pattern of interconnectivity among units across subordinated nets*, representing constraints concerning what topics or contents are likely to be communicated between nets. One of the units of net 1 could be connected to a couple of units of net 2, but net 3 could be connected to net 2 through all its units including those that are not linked with net 1. This is one of a number of possible arrangements. In that case net 2 can talk with net 1 about different topics or aspect of the past event than the ones that can with net 3.
- (f) The *strength of connection between subordinated nets*, that represents how persuasive one net is to the other, concerning the particular units actually linked. This parameter summarises the “peripheral” factors of persuasion, including power relationship patterns, whether the source is an ingrouper or an outgrouper, or regularities in interpersonal motivation. Likelihood of interpersonal influence is represented in terms of strength of associations.
- (g) Finally, the *time course of communication*, which represents the temporal pattern of communication among members and concerning each link between units. This can be a continual communication in all links or a cyclical pattern of connections and disconnections specific for each link, and so forth. The importance of this parameter relies on the differences between pairs of subordinated nets in terms of when and how long can they communicate.

Since these parameters are dynamically interrelated, it is expected the emergence of several patterns of configuration of distributed cognition in this seven-dimensional space. Latané and L’Herrou (1996) offer an illustration of this dynamic interrelationships between just two of the above mentioned parameters. Using a simplified network approach, they found that varying only the communication networks within the group—who talks with whom—produces different self-organised patterns of beliefs. What would be the effects of different arrangements of schemata among group members, of differential access to environmental evidence, of the initial predisposition, of the different topics that are more likely to be communicated among each pair of individuals, of the persuasive value of each communication path, and of the temporal pattern of communication?

The connectionist inter-network approach to collective memory offers a much richer and dynamic conceptual space to explain the group level information processing than the classic “store +

processor” model. However, this connectionist approach to collective cognition is more a research tool, a framework within which one can formulate interesting questions, than a theory that can give by itself answers about the dynamics of collective cognition. However, some general insights concerning the nature of collective memory can be drawn from Hutchins’ (1991; 1994) meta-theory.

The first one is that now it makes sense to talk of a collective level of cognition. As a reaction against the concept of the *group mind* (McDougall, 1920), social psychology has been centred in an individual level of behaviour and cognition—even if these are studied in a social context. For Bartlett the ones who think, perceive, remember, decide, talk and act are the individuals (1932, cf. pp. 296–300). In that case, what does a collective or social level of cognition mean? A connectionist approach to mind, however, is formulated in such an abstract way that the hypothesis that individuals have states of mind sounds as reasonable and mysterious as the hypothesis that groups have states of mind. Since it is plausible that human individual organisms have memory, it now sounds plausible that socially organised groups have memory.

Both from a distributed database metaphor and from a neural network metaphor, the collective level of cognition has been conceptualised as a distributed inter-cognitive system. However, there are some important differences among these two metaphors. Smith’s model of collaborative groups is an explicit attempt to conceive “as if the group, itself, were a coherent, intelligent organism working with one mind, rather than a collection of independent agents” (1994, p. 1). The collective level of cognition is just the expression and combination of individual cognitions in an objective, shareable form. Similarly, Wegner’s model of transactive memory is concerned with inter-cognitive access to information, where memory structures are defined only at the individual level. Neither of these models offer a satisfying metaphor of the social level of cognition and memory, as the connectionist approach does.

A second aspect of collective memory that is illuminated by the connectionist approach is that this group-level, distributed cognition has emergent properties that distinguish it from individual cognitive systems. Hutchins has shown that properties of individual cognition are not simply transferred to the group cognition, as if this were the same kind of system but in a different

scale. Nor they are determined independently of individual cognitions. Rather, “group level cognitive properties are produced [...] by an interaction between structures internal to the individual and structures external to individuals” (1991, p. 306). This means that in explaining, for example, why societies remember their past the way they do, culture, mind, and interaction must be put together as dynamically interdependent aspects of an inter-network system.

Finally, a third idea derived from the general connectionist approach to collective memory is the importance of social organisation. Structures external to individual cognitions play a major role in the dynamics of distributed group cognition. This is not a new insight, since also the transactive approach has made this point, as well as most of the social studies of collective remembering. Furthermore, what is important to note is that the connectionist framework has to be extended so to take into account the whole meaning of this. It already considers the communication network structure, the division of cognitive labour among group members, the temporal patterns of communication, and the socially differentiated persuasive force of different members. But so far it does not include the role of social cultural artefacts as part of social organisation. Tools are not only cognitive amplifiers but, firstly, inter-cognitive co-ordination devices. However, in social psychology there is a lack of attention to cultural artefacts and tools (Caporael, 1997). For instance, even if they supposedly have a great importance in human definition, in their account of shared reality Hardin and Higgins (1996) do not mention them. Hodges and Baron (1992) stress the importance of cultural artefacts in inter-individual behaviour co-ordination. More than their utility, according to these authors, they have meaning. Ironically, Hutchins (1994) has developed a detailed description of the functions of cultural artefact within a socially distributed cognition, but in the inter-network model reported in the same book there is no integration of it.

## **DIMENSIONS OF KNOWLEDGE DISTRIBUTION**

Overall, group memory research presents both insights and limitations. Among its insights, I underscore the notion that social groups can function as memory systems, thus challenging Bartlett’s criticism of such possibility. In group memory research it

is not suggested that groups as such remember, but that they may be an emergent organisation of inter-psychological processes that make possible new forms of intra-psychological outcomes.

However, among the limitations of this approach, one is especially critical regarding collective memory, namely, the restriction to small group processes. In what follows I analyse the concept of social distribution of knowledge as a way to generalise the dynamic properties of social organisation to an intergroup context.

## **Interpretation and information**

In the previous studies reported here, the knowledge-distribution pattern has been reduced to the ideological congruity and the degree of sharedness of specific knowledge structures. Moreover, both congruity and sharedness depend on the relation that a given piece of knowledge has with the ideological position of individuals. However, a given piece of knowledge is not only congruent or incongruent with one's ideology, but also more or less informative, appealing, and so forth. Some of these properties of a knowledge structure might be reducible to their ideological value. Alternatively, one can argue that some analytical distinctions are worth trying.

In its simplest form, knowledge distribution is to do with the degree and way in which knowledge is shared among individuals or groups within a social aggregate. For instance, there could be a fully shared pattern (homogenous knowledge), a total differentiation (heterogeneous knowledge), or any mixture of both. This simple dimension is usually referred to as the *social organisation of knowledge*, which has been studied as an important factor in group memory performance.

However, that which is to be shared or non-shared is usually assumed in the literature to be one and the same thing: just "knowledge". This assumption does not recognise that knowledge is not a simple, undifferentiated thing. In fact, there is an important ambiguity concerning the nature of knowledge in the sharedness dimension. Consider a differentiated pattern. Do two non-shared pieces of knowledge oppose to each other, or their difference does not cast aside a consistency relationship?

In order to disambiguate the meaning of a differentiated pattern, I make a general distinction between, on the one hand, knowledge that is put forward as evidence or any kind of support for an intended conclusion and, on the other, knowledge that counts as

the intended conclusion or implicit assumption to be suggested, defended, or demonstrated. This general argumentative distinction can be embodied in several forms. One is the difference between antecedent and consequent terms in a logical argument. Another is the difference between knowledge representing partial aspects of an object and knowledge representing a global appreciation of the object—a distinction common in attitude research. The difference between factual knowledge about a past event and the global interpretation of the episode is another alternative.

For the collective memory context focus on the third form of the distinction. On the one hand, there is *information* about specific facts constituting an event, on the one hand, an *interpretation* of the way in which facts are configured as a whole or ideologically arranged.

Note that this is a relative distinction, that is to say, the piece of knowledge that plays the role of interpretation in a given argument can take the place of information in another argument. However, the difference between information and interpretation could be a critical basis for distinguishing the *intergroup* position of a given individual. That is, for distinguishing his or her position relative to his or her ingroupers from his or her position relative to outgroupers.

The conceptual difference between interpretation and information can also be useful to conceptualise the location of pieces of knowledge within a social landscape. In particular, it helps understand the distinction between polemical and consensual knowledge. Stands are said to be *polemical* if they are based on information that support competing interpretations, and *consensual* if they can be used to substantiate different interpretations. For instance, the statement that the rightwingers and the US government conspired against Allende's regime is used to support the leftwing interpretation of the military coup, and is totally inconsistent with the rightwing interpretation. On the other hand, the statement that the Presidential Palace was bombarded, is put forward to furnish any interpretation of the coup. Note that this distinction reshapes the sharedness dimension in the sense that, for instance, a consensual/polemical piece of knowledge implies that the interpretation of the object is shared/non-shared but it does not imply that the specific information contained in a piece of knowledge need to be common/differentiated.

## **Specific patterns of knowledge distribution**

One important aspect of the decomposition of knowledge in terms of information and interpretation is that it allows us to model different situations. For instance, suppose the situation where one individual shares some factual information about an event with other individual, but differing in terms of the ideological interpretation they give to the whole event. This situation is difficult to model, although it is necessary because that is the case in several conflicts.

In the previous example, the information is shared but the interpretation is in opposition—assuming that it is an intergroup-controversial context. The information-interpretation compound is defining a relation of *dispute* among two positions. Suppose now that another piece of knowledge, another information-interpretation compound, involves the same information as the one of the previous example. However, this new piece may involve a shared interpretation, in which case it defines a relation of *confirmation*. Other variations apply. In what follows I present and discuss a scheme of the basic types of relations among positions, according to the distinction among interpretation and information.

### ***Ideal types of knowledge relations among social positions***

Information can be more or less shared. Independently, interpretation can be more or less shared. This yields a two-dimensional space. To simplify the picture, assume that each dimension is dichotomous. Then information is either homogenous or heterogeneous; and, independently, interpretation is either homogenous or heterogeneous, yielding a specification of four ideal types. Table 14. depicts the result of crossing the interpretation-information distinction with the sharedness dimension.

TABLE 14. IDEAL TYPES OF KNOWLEDGE RELATIONS

<i>Interpretation</i>	<i>Information</i>	
	Homogenous	Heterogeneous
Homogenous	Confirms	Complements
Heterogeneous	Disputes	Diverges

### ***Information and common sense***

Let us assume that people usually take commonplaces as their starting point when faced to give an opinion or when they are asked to express the first memory that comes to their mind concerning a social past event. This could be true for several reasons, such as frequency and recency, and other factors enhancing the salience of common-sense knowledge, or the higher automaticity or accessibility given by its well-known, over-learned nature.

Given that, the four ideal types already specified can be understood in the following terms. If the stand of Alter (an individual or a group) confirms or disputes the initial stand of Ego (an individual or a group), the former is based upon a piece of factual knowledge that is a commonplace: an already known piece of information in society. It does not matter whether everybody agrees with this commonplace or not. For instance, the statement 'there was a popular pressure on armed forces to intervene' is a commonplace. It is so in the sense that everybody in Chile has repeatedly heard that as part of one of the conventional accounts, even if many versions would deny this statement as true. *Commonsensical*, however, is not the same as *consensual*.

On the other hand, if the stand of Alter complements or diverges from the stand of Ego, then the former is based upon an elaborated piece of factual knowledge, that is to say, a sophisticated argument or a piece of information not well-known in society. An example is any vivid testimony of a particular episode of the military coup, giving detailed information that is not part of the conventional pool of accounts of the event.

Note that the distinction between commonsensical and elaborated knowledge is a specific way to understand the sharedness dimension, although it is not the most frequent approach in the literature. However, it is reasonable to assume that this is the way in which the sharedness dimension is usually embodied in collective memory contexts. Moreover, this dimension can be mapped onto a more simpler parameter: the amount of information that a given piece of knowledge offers to a given position. In other words, commonsensical and sophisticated memories differ in their *informational novelty*. This is summarised in Table 15..

TABLE 15. INFORMATIONAL NOVELTY IN IDEAL TYPES OF KNOWLEDGE RELATIONS

<i>Interpretation</i>	<i>Information</i>	
	Homogenous	Heterogenous
Homogenous	Confirms (Common sense)	Complements (Sophisticated knowledge)
Heterogenous	Disputes (Common sense)	Diverges (Sophisticated knowledge)

***Interpretation, and the intergroup context***

Let us propose a second assumption. On the one hand, if the stand of Alter confirms or complements the stand of Ego, it is because both stands are based on pieces of information that support the same ideological interpretation. In this case, it is reasonable to assume that in a collective memory context Ego and Alter are members of the same ideological group. On the other, if the stand of Alter diverges or disputes the one of Ego, the information contained in both positions support opposing or competing ideological interpretations. In this second case, it is usually true in a collective memory context that there is an intergroup relation between Ego and Alter.

The explication of some ideal types of knowledge relations among social positions, combined with the discussed assumptions about the social distribution of both information and interpretation

in a collective memory context, leaves us in a better condition to model realistic scenarios. In other words, the social distribution of knowledge is now systematically linked with intergroup relations and common sense, factors that can be argued to be essential for collective memory dynamics.

The aim of the Study 5, reported in the next chapter, was to manipulate the distribution of knowledge in a social aggregate in order to see whether this parameter affects both recognition memory performance and intergroup differentiation simultaneously. In other words, to explore the role of the social distribution of knowledge in both the memory generation process and the group formation processes.

## 7 Social distribution of knowledge, intergroup differentiation, and memory

*There are numberless ways of conduct and of thought that are the direct outcome of social organisation. Created by the group, they cease to be explicable the moment the group is ignored.*

—Bartlett, 1932, pp. 299–300

One general postulate in this dissertation is that the intergroup distribution of knowledge affects the memory generation process. In particular, Studies 1 to 4 offer evidence that the sharedness and the ideological congruity of social memories exert an influence on the time it takes to judge them. However, these studies present three common limitations.

Firstly, in none of the previous studies has there been a direct manipulation of the social distribution of knowledge. Secondly, the relation between memories and judges has been simplified in terms of congruity. As is has been suggested in Chapter 6, a given piece of knowledge is not only congruent or incongruent with one's ideology, but also more or less informative, appealing, and so forth. Thirdly, in Studies 1, 2, and 4, the dependent variable has been the latency of truth-judgements, which were argued to be essential in the memory generation process. However, from a different theoretical framework it could also be argued that truth-judgements are neither *exclusively* a memory process nor *properly* a memory process. From this perspective, it still needs to be shown that in collective memory contexts some aspects of the social distribution of knowledge affect basic memory behaviour.

In this chapter I try to show that the intergroup distribution of knowledge is important even for a very basic memory process, such as recognition memory. Specifically, the experiment to be reported focuses on the effects of some ideal types of social distribution of knowledge in an intergroup context, as defined in the previous chapter, which go beyond the ideological congruity of knowledge. In contrast with Studies 1 to 4, in the study to be reported here some aspects of the knowledge-distribution pattern

were experimentally manipulated. In particular, the informational novelty of congruent and incongruent knowledge was varied.

## **STUDY 5. INTERGROUP ATTITUDES AND RECOGNITION MEMORY**

Both intergroup attitudes and memory for intergroup-relevant information may depend on the way in which the ideological inclination and the informational novelty of knowledge are socially distributed. To explore this, the basic idea of the experiment was to manipulate the type of relation that both the ingroup knowledge and the outgroup knowledge have with the participant. The manipulation of the social distribution of knowledge is rooted in a simple rationale, that is, to confront each participant with a congruent narrative (either confirmatory or complementary) *and* with an incongruent narrative (that either diverges from or disputes the participants' initial stand). The reason is that in realistic collective memory contexts an individual is simultaneously in touch with forces coming from the ingroup and the outgroup, explicitly or implicitly.

It is assumed that participants' standpoint was a pro- or an anti-coup *commonsensical* standpoint. Messages received by participants were either commonsensical as well, or sophisticated. A message could come from the ingroup (congruent message) or the outgroup (incongruent message), in the sense that the message represented the beliefs of the ideological group to which a given participant belonged, or the beliefs of the opposite ideological group.

The nature of the experiment was exploratory. It aimed at describing the possible effects that the manipulation of the intergroup distribution of knowledge on both intergroup attitudes and recognition memory for intergroup-relevant messages.

### **Participants**

Two hundred and thirty-seven Chilean people between 17 and 32 years old successfully completed the experimental session through the Internet. No gender information was collected.

## **Materials**

There were four pieces of narrative on September 11<sup>th</sup> 1973, which were the critical stimuli in the experimental manipulation. Short fragments or statements were extracted from these narratives to conform the pool of targets in the recognition task. The construction of the narratives and of the pool of target statements is described below.

### ***Narratives***

Four narratives were constructed on the basis of a number of in-depth interviews (Manzi, Krause, Ruiz, Meneces, & Haye, in press) and a pilot study on initial versions of the narrative pieces (reported in Chapter 4). These narrative pieces were designed in order to meet the two-way classification of knowledge structures discussed before—in terms of ideological inclination and informational novelty. Recall that this classification is a function of the intergroup distribution of the global interpretation of September 11<sup>th</sup> and the intergroup distribution of evidential information about specific events of September 11<sup>th</sup>. Thus, there was a *rightwing-commonsensical* account of September 11<sup>th</sup>, a *rightwing-sophisticated*, a *leftwing-commonsensical*, and a *leftwing-sophisticated* account.

The core of each of the two “commonsensical” narratives was built around a particular set of factual statements taken from the same pool of statements employed in most of the other studies in the dissertation (Table 1., p. 109). In particular, “commonsensical” narratives consisted of accounts of events hypothetically part of public knowledge for Chileans of all ideological groups. “Sophisticated” narratives were taken from interviews and testimonies giving accounts of events hypothetically not part of widely shared knowledge among Chileans.

Initial versions of the narrative pieces were submitted to a pilot study in order to check their comprehensibility and the extent to which they clearly satisfied the two knowledge-distribution parameters framing their construction. As a first step, five Chilean informants read the initial versions and rated each one in terms of its ideological inclination and the amount of novel information offered. In addition, these informants gave extended impressions of the emotional, informational, and stylistic qualities of these excerpts. Commonsensical excerpts were characterised as “typical” and “well-known” accounts, whereas sophisticated

excerpts were described as “testimony-like” and “interesting” accounts.

On these bases, initial versions were modified in order to maximise their fitness to the corresponding knowledge-distribution type. Then a second version of each narrative was the subject of a survey carried out using the Internet. Twenty participants, contacted via e-mail, agreed to complete an on-line questionnaire. Participants were asked to read one narrative piece at a time, and to answer a set of questions regarding the narrative before going on with the next excerpt. Each set of questions started asking to rate the preceding narrative in terms of its ideological inclination and the amount of novel information offered. The ideological inclination was assessed, first, with a question whereby participants had to rate the political orientation corresponding to the global interpretation of September 11<sup>th</sup> in a 9-point scale from *rightwing* to *leftwing*. Secondly, participants had to write down what was the global interpretation suggested by the narrative. The amount of novel information offered by each excerpt was assessed with a 9-point scale from *mostly novel* to *mostly known*, and another from *mostly singular experiences* to *mostly common sense*. The time participants took in reading each excerpt was recorded. Results were satisfactory: Each excerpt fitted adequately to the knowledge-distribution type it was meant for.

Final versions of these narratives are found in Appendix F. These differ from the ones submitted to the pilot study only in phrasing details. Length varied between 1,013 and 1,072 words. The average reading time was approximately 2.5 minutes for each excerpt, with no systematic differences among excerpts.

### **Statements**

In the same pilot study in which the second versions were tested, recognition for a number of statements extracted from the narrative pieces was assessed. After participants read a given excerpt and then answered the questions regarding its ideological inclination and informational novelty, there was a simple recognition task. Participants were presented with one statement each time, regarding which they had to judge whether the statements was explicitly in the previous narrative piece, only implicitly, or absolutely absent. Participants could return to the text, but only in case they were not sure. After each recognition judgement, participants had to indicate whether they needed to go back to the text or not, and whether it was an easy or difficult

judgement. The recognition task for each narrative involved a series of 12 statements, all implying the same ideological inclination as the narrative previously read, from which half were verbatim phrases, the other half were distracters—hypothetically absent from the text. Most of these statements, in particular those employed in the commonsensical narratives, were identical to some of the statements listed in Table 1. (see p. 109).

For each piece of narrative, the 12 statements designed for the recognition task were re-classified on the basis of participants' answers. In particular, the extent to which given statements were felt as being present in the text, was determined by whether the statement was judged as *explicit*, *ambiguous*, or *absent* across participants. This classification was helped by factor analyses and multidimensional scaling techniques. Data concerning the ease of recognition judgements were used as a secondary guide: Statements particularly difficult to judge were classified as *ambiguous*. The three statements more easily judged as *explicit* were classified as being part of the corresponding excerpt, and the three statements more easily judged as *absent* were classified as not being part of the corresponding excerpt. This classification closely matched the original selection of verbatim versus distracter phrases.

## **Rationale and design**

Each participant received two pieces of narratives, one embodying a rightwing view of September 11<sup>th</sup> and the other expressing a leftwing view. For any leftwing or anti-coup participant, the rightwing view of the military coup counted as incongruent knowledge and the leftwing view counted as congruent knowledge. The converse is valid for rightwing participants.

The congruent narrative received by participants was either commonsensical or sophisticated, as defined in the Material section. Likewise, the incongruent narrative received by participants was either commonsensical or sophisticated. This combination of the intergroup dimension with the type of narrative yields a more detailed description of the relation that each type of narrative has with a given participant, as a function of his or her political orientation, as shown in Table 16.. The table can be read, for example, as follows: 'For a rightwing participant, a rightwing-commonsensical narrative confirms...'

**TABLE 16. FUNCTION OF NARRATIVES OF SEPTEMBER 11<sup>TH</sup> AS A FUNCTION OF PARTICIPANTS' POLITICAL ORIENTATION [STUDY 5]**

<i>Narrative to be read</i>	<i>Political orientation of reader</i>	
	Rightwing	Leftwing
(Inclination + novelty)		
Rightwing-commonsensical	Confirms	Disputes
Rightwing- sophisticated	Complements	Diverges
Leftwing- commonsensical	Disputes	Confirms
Leftwing-sophisticated	Diverges	Complements

An alternative way to read Table 16. is: 'For a rightwing participant, the knowledge relation with his or her ingroup, when a rightwing-commonsensical account is received, is a relation of confirmation...'

Because each participant received two pieces of narrative, one (congruent) representing the ingroup view of the coup and the other (incongruent) representing the outgroup interpretation, there were four possible combinations or patterns. There was a confirms-disputes, a confirms-diverges, a complements-disputes, and a complements-diverges pattern, each excluding the others. Table 17. summarises the knowledge-distribution pattern characterising each of the four experimental conditions.

**TABLE 17. EXPERIMENTAL CONDITIONS AS A FUNCTION OF THE STATUS OF THE NARRATIVE'S CONGRUITY [STUDY 5]**

<i>Congruent</i>	<i>Incongruent</i>	
	Commonsensical	Sophisticated
Commonsensical	"CONF-DISP"	"CONF-DIVE"
Sophisticated	"COMP-DISP"	"COMP-DIVE"

In summary, the experiment had a 4 (*pattern of knowledge distribution*) 5 2 (*congruity of narrative*) design, with the first factor manipulated between-subjects, and the second within-subjects.

### ***Independent variables***

- The intergroup *pattern of knowledge distribution* is the combination of the knowledge relation established by a given participant with the ingroup and that with the outgroup. The *knowledge relation with the ingroup* is the informational function that a given excerpt of congruent knowledge has for a participant. This function was either confirmatory (CONF) if the narrative was commonsensical or complementary (COMP) if the narrative was sophisticated. The *knowledge relation with the outgroup* is the informational function that a given excerpt of incongruent knowledge has for a participant. This function was either disputing (DISP) if the narrative was commonsensical or divergent (DIVE) if the narrative was sophisticated.
- The *congruity of narrative* is the CONGRUENT or INCONGRUENT nature of the ideological inclination of a given excerpt in relation to the political orientation of a given participant.

### ***Dependent variables***

- The *attitude* towards the congruent and the incongruent narratives.
- The *discrimination* of statements in two recognition tests, one regarding the congruent and the other the incongruent narrative.

## **Procedure**

Participants were contacted by e-mail and asked to access a web site in order to complete an on-line questionnaire about the way people remember September 11<sup>th</sup> 1973. The invitational e-mail was sent to the same set of Chilean university students contacted in the study that assessed the truth-value of the statements that conform the bank of materials for most of the other studies of the dissertation. Between that study and the one reported here, one year elapsed.

Participants accessed a web page following a link in the e-mail. In the web page, the study was introduced as interested in the way

people understand narratives given by others about a common event.

### ***Step 1: Discrimination of participants' position***

The first task of the session was to select, from a set of six evaluative, or interpretative, statements concerning ideological issues, the two that the participant chose as best representing his or her own opinion of September 11<sup>th</sup>. These six statements corresponded to statements 13, 21, 28, 29, 36, and 41, in Table 2. (p. 116). Consistent with the truth-values obtained for these statements in a previous study (see Figure 2., p. 118), participants' political orientation was estimated as a function of their selection. Participants were classified as pro-coup, anti-coup, or "not clear." If statement 29 or 41 was selected, the participant was initially considered pro- or anti-coup, respectively. Note that statement 29 is the most polemic one with a pro-coup inclination, and statement 41 fulfils the same function with an anti-coup inclination. If the other selection was ideologically consistent with the selection of statements 29 or 41, then the participant was pro- or anti-coup, respectively. However, if statements 29 or 41 were not selected, or if the other selections were ideologically inconsistent, then the participant was classified as "not clear." The program displaying the session computed this classification as soon as participants clicked a *continue* button. Participants were forced to choose two statements, otherwise it was impossible to continue with the session. Note that only in this case, and participants were forced to answer; all other questions in the questionnaire were answered voluntarily.

### ***Step 2: Manipulation of knowledge distribution***

Then, in a new window, two pieces of narratives were presented. The first narrative was always the one supporting the congruent interpretation, either confirming or complementing the participants' assumed standpoint—either a pro- or an anti-coup commonsensical standpoint. The second was the narrative giving an incongruent view, either disputing or diverging from the participants' assumed standpoint. For participant with a "not clear" standpoint, the order of narrative was randomised. The instructions before the narrative were approximately as follows:

In a previous study we have done a number of interviews with different people, about September 11<sup>th</sup>. On the bases of these interviews, it was possible to identify five typical views on

these events. For you to answer the present questionnaire, it is important that you get familiarised with some of them.

You will read two pieces of narrative that have been selected as examples of two of the typical views on September 11<sup>th</sup>. The two views to be exemplified have been taken randomly. That is why the pieces of narrative will appear with artificial names (P and Q). In all cases, the narratives were constructed on the basis of the interviews themselves.

Please, read the following narratives very carefully. You do not have to learn anything by memory, but later on you will be asked for your comprehension of the narratives.

If participants took less than four minutes in reading both narratives, a message was displayed asking them to consider a second, more careful reading. This was done in order to ensure that participants knew that they were expected to read each excerpt attentively. Next, manipulation checks were carried out. Participants had to answer a series of simple questions firstly regarding excerpt P (which always was the congruent account), and then the same series regarding excerpt Q (which always was the incongruent account). The series of questions included questions about the global interpretation of September 11<sup>th</sup> expressed in the excerpt, about the amount of novel information offered, and about the participants' degree of agreement with the global interpretation given by the narrative. The first of these questions involved the selection of one among three statements, one extremely right-wing, one extremely left-wing, and a third one that could neither be categorised in terms of ideological inclination nor be inferred from any of the narrative pieces. The format of the question about the amount of novel information was an 11-point scale from *nothing* to *a lot*. The question about agreement with the global interpretation given by the narrative was answered in an 11-point scale from *absolute disagreement* to *absolute agreement*.

Embedded in this series of questions regarding the narrative pieces, there was an assessment of the evaluation of each excerpt as an account of September 11<sup>th</sup>. Specifically, participants were asked "What is your personal evaluation of excerpt P (Q) from the point of view of your personal opinion about September 11<sup>th</sup>?" Participants were to answer in an 11-point scale from *very negative* to *very positive*.

Then another series of eight questions was presented, this time referring to the social groups from which the narratives were

perceived as typical. This was a filler task, to make sure that the time elapsed between the reading of the narratives and the recognition test was about five minutes.

### ***Step 3: Recognition task***

The recognition task was conducted in two phases: first regarding the narrative congruent with participant's ideological ascription, and then regarding the ideologically incongruent excerpt. Each phase involved the presentation of a sequence of 12 statements, randomly ordered. Participants were asked to judge each statement in a 6-point scale from *no* to *yes*, in accordance with instructions that were approximately the following:

If you think that the idea expressed by the statement definitely was present in narrative P (Q), being it in the same form or expressed in different words, select an alternative close to the pole 'YES'. On the contrary, if you think that the idea certainly does not correspond to narrative P (Q), select towards the 'NO' extreme. If you are not sure about the presence or absence of the idea in narrative P (Q), you can chose more intermediate alternatives.

Finally, participants were thanked and debriefed about the characteristics of both the congruent and the incongruent narrative. A demonstration version of the study can be observed at the following URL:

<http://www.shef.ac.uk/~hrp/demo/study5/>

## **Results**

### ***Preliminary results***

A score of political orientation was computed, for each participant, subtracting the degree of agreement with the global view given by the right-wing narrative excerpt from the degree of agreement with the global view given by the left-wing excerpt. Each of these agreement judgements could vary from 1 (absolute disagreement) to 11 (absolute agreement). Thus, the composite score could vary from -10 (extreme rightwing orientation) to 10 (extreme leftwing orientation). For participants initially classified as Pro-coup, the mean was -5.74 ( $SD = 2.47$ ), for participants initially classified as Anti-coup it was 7.66 ( $SD = 1.81$ ), and for those classified as "not

clear,” the mean of this political-orientation score was 2.68 ( $SD = 2.73$ ).

From the initial 237 participants, 12 were eliminated from the database because their comprehension of the narratives could not be assumed to be satisfactory. Specifically, in the phase of manipulation check these 12 participants selected either the right-wing global interpretation for both narratives, or the left-wing global interpretation for both narratives. This kind of answer could mean either that the narratives were not comprehended as expected, or that responses were not consistent with the question. In either case, there is no reason to assume that the answers to other questions were interpretable in any meaningful way. In addition, participants initially classified as “not clear” regarding their political orientation were also excluded from further analyses, because in these cases it the ideological meaning of the narrative pieces was unknown. Therefore, the functional sample was reduced to 166 participants, distributed among experimental condition as Table 5. describes.

**TABLE 18. DISTRIBUTION OF PARTICIPANTS ACROSS EXPERIMENTAL CONDITIONS [STUDY 5]**

<i>Political orientation</i>	<i>Pattern of knowledge distribution</i>				Overall
	CONF - DIVE	CONF - DISP	COMP - DIVE	COMP - DISP	
Pro-coup	20	26	11	11	76
Anti-coup	19	25	27	27	90
Overall	39	51	38	38	166

To check whether the manipulation of the ideological inclination of each excerpt of narrative was effective, the degree of agreement with both the supposedly congruent narrative and the supposedly incongruent excerpts was assessed. It was found that participants agreed more with the narrative read first (supposedly congruent,  $M = 9.19$ ,  $SD = 1.64$ ) than with the narrative read in second place (supposedly incongruent,  $M = 2.67$ ,  $SD = 1.63$ ).

A 4 (pattern of knowledge distribution) 5 2 (agreement with congruent versus incongruent narrative) analysis of variance, with repeated measures on the last factor, was carried out to test this

difference. It yielded a strong main effect of the difference in congruity, indeed;  $F(1,162) = 864.06, p < .001, \eta^2 = .84$ . In addition, there was a weak but reliable effect of the pattern of knowledge distribution;  $F(3,162) = 3.06, p < .05, \eta^2 = .05$ . The interaction between these factor was not significant;  $F(3,162) = 1.82, ns$ . In order to understand this effect of the manipulation, means for the agreement with the congruent and the incongruent narratives are shown, for each experimental condition, in the first two data columns of Table 19..

A more specific test was carried out in order to test the hypothesis that there is a systematic difference regarding the agreement with the incongruent narrative between DIVE and DISP conditions. The means suggest that when the incongruent narrative is commonsensical (DISP), participants agree less than when it is sophisticated (DIVE). A one-way analysis of variance on the agreement with the incongruent narrative, was carried out, confirming that this effect is significant;  $F(3,162) = 3.33, p < .05, \eta^2 = .06$ .

**TABLE 19. MANIPULATION CHECKS BY EXPERIMENTAL CONDITION [STUDY 5]**

<i>Pattern of knowledge distribution</i>	<i>Agreement with interpretation</i>		<i>Informational novelty</i>	
	Congruent	Incongruent	Congruent	Incongruent
CONF - DIVE	8.97 (1.33)	3.08 (1.66)	3.77 (2.42)	4.38 (3.00)
CONF - DISP	9.12 (1.89)	2.20 (1.67)	3.10 (1.98)	2.61 (2.10)
COMP - DIVE	9.13 (1.85)	3.08 (1.48)	4.89 (3.19)	4.29 (2.60)
COMP - DISP	9.58 (1.33)	2.50 (1.52)	5.11 (2.99)	3.08 (2.28)

Note. Scales were from 1 to 11.

To check whether the manipulation of the informational novelty of each narrative was successful, participants rated the amount of new information received from both the congruent and the incongruent narrative. Means for each experimental condition are shown in the last two data columns of Table 19.. As expected, concerning congruent narratives, the commonsensical (CONF) excerpts tended to be perceived as less informative than the sophisticated (COMP) excerpts. Similarly, it seems that commonsensical incongruent narratives (DISP) were perceived as less informative than the sophisticated (DIVE) excerpts.

Two separate one-way analyses of variance were carried out, one on the rating of the congruent excerpt and the other on the rating of the incongruent one, each with a planned contrast to test the corresponding hypothesis. For the informational novelty of the congruent narrative the global effect of the pattern of knowledge distribution was  $F(3,161) = 5.62, p < .005, \eta^2 = .10$ ; and for the specific contrast between CONF and COMP conditions it was  $F(1,161) = 14.38, p < .001, \eta^2 = .08$ , thus confirming the impression given by Table 19.. Now for the informational novelty of the incongruent narrative the global effect of the pattern of knowledge distribution was  $F(3,162) = 5.46, p < .005, \eta^2 = .09$ . For the contrast between DISP and DIVE conditions it was  $F(1,162) = 14.71, p < .001, \eta^2 = .08$ , again reinforcing the description of Table 19..

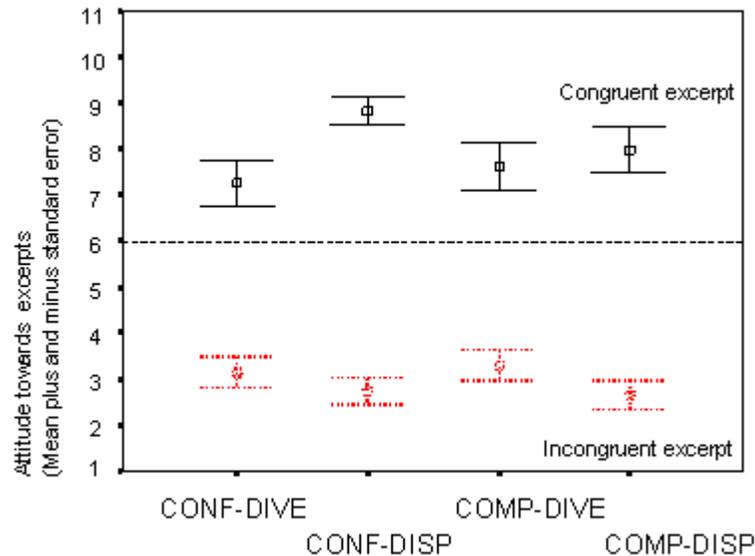
In sum, the manipulation of both the ideological inclination and the informational novelty of the narratives seem to work in the expected way.

### ***Intergroup attitudes***

Since preliminary analyses revealed very similar results for pro- and anti-coup participants, for simplicity of exposition participants' own political orientation will be ignored in the analyses reported here. In fact, participants' political orientation did not interact with any of the factors that are relevant for the study. However, a break down of the data in terms of this factor is shown in Appendix G..

Figure 9. displays the means of the attitude expressed by participants towards each the two excerpts they read. The pattern of results suggests that the difference between the attitude towards the congruent and the incongruent excerpt is larger when the outgroup offers a commonsensical account—that is, in conditions DISP.

Figure 9. Attitude towards congruent and incongruent narratives as a function of the intergroup pattern of knowledge distribution.



To explore this, a 4 (pattern of knowledge distribution) 5 2 (congruent / incongruent narrative) analysis of variance with repeated measures on the last factor was carried out. There was a strong main effect of congruity (attitude towards congruent narrative versus attitude towards incongruent narrative);  $F(1,160) = 235.68, p < .001, \eta^2 = .60$ . In other words, participants showed favouritism for excerpts that were consistent with their ideological position, compared to excerpts that were consistent with a conflicting ideological position. This can be labelled *congruity favouritism*.

The main effect of knowledge distribution did not approach significance:  $F(3,160) = 1.54, ns$ . The predicted interaction between this factor and the pattern of knowledge distribution was only marginally reliable;  $F(3,160) = 2.22, p = .09, \eta^2 = .04$ . To better analyse this interaction, however, a 2 (type of ingroup: CONF / COMP) 5 2 (type of ingroup: DIVE / DISP) 2 (attitude towards congruent versus incongruent narrative) analysis of variance with repeated measures on the last factor was conducted. As commented above, an effect of the outgroup was expected, specifically in interaction with the congruity factor.

Results were straightforward. In addition to the congruity effect already observed, the interaction between this factor and the type of outgroup was reliable,  $F(1,160) = 5.35, p < .05, \eta^2 = .03$ . This

effect means that, although people tend to accept or like an account congruent with their ideological position and to reject or dislike an ideologically incongruent account, this is especially so if the latter is commonsensical rather than sophisticated. In other words, participants showed less tolerance for a less elaborated outgroup view.

No other effect approached significance. The main effect of the type of outgroup was  $F(1,160) = 1.03$ , ns. The main effect of the type of outgroup was  $F < 1$ . The interaction between ingroup and outgroup was  $F(1,160) = 2.82$ , ns. The interaction between the type of ingroup and congruity, and the three-way interaction, were  $F < 1$ .

### **Recognition**

As with data pertaining to intergroup attitudes, preliminary analyses revealed no systematic effects of participants' political orientation. Thus, for simplicity of exposition this factor will be ignored in the analyses reported here. A break down of the data in terms of participants' political orientation is shown in Appendix H..

From the 166 valid participants, seven had no observations in the recognition measurements, yielding a total of 159 participants for the analyses. Each participant gave a judgement for 12 statements per narrative. From these twelve statements, three were defined as *old*—those that were easily judged to be explicitly part of a given narrative in the pilot study—and three were *new*—those that were easily judged to be absent. For each narrative one score of “hits” and another for “false alarms” were computed, averaging over the three relevant observation for each case. The former is the correct recognition of an old item, and the latter is the incorrect recognition of a new item.

Two questions guided these analyses. On the one hand, it was hypothesised that the knowledge-distribution pattern would affect recognition performance. This is usually understood in terms of an index of discrimination between old and new items. On the other hand, I compared recognition of items regarding the congruent narrative with recognition of items regarding the incongruent excerpt. In general, it was hypothesised that discrimination for congruent knowledge was better than discrimination of incongruent knowledge. A further question was whether there were variations of this congruent-incongruent recognition difference as a function of the experimental conditions. Basic data concerning all these questions are presented in Table 20..

**TABLE 20. MEAN OF “HITS” AND “FALSE ALARMS” FOR CONGRUENT AND INCONGRUENT NARRATIVES, AS A FUNCTION OF THE KNOWLEDGE-DISTRIBUTION PATTERN [STUDY 5]**

Recognition judgement	Narrative congruity	Pattern of knowledge distribution				Overall (N = 159)
		CONF – DIVE (n = 37)	CONF - DISP (n = 47)	COMP - DIVE (n = 38)	COMP - DISP (n = 37)	
Old items	Congruent	4.54 (1.08)	4.38 (1.06)	4.89 (1.03)	4.68 (0.91)	4.61 (1.03)
	Incongruent	4.74 (1.24)	4.53 (0.92)	4.44 (0.80)	3.77 (1.35)	4.36 (1.10)
New items	Congruent	2.90 (1.05)	2.99 (1.23)	2.58 (1.14)	2.87 (1.21)	2.84 (1.16)
	Incongruent	3.01 (0.83)	3.09 (1.26)	2.66 (0.99)	3.02 (1.29)	2.94 (1.14)
Discrimination	Congruent	1.64 (1.54)	1.39 (1.65)	2.31 (1.58)	1.81 (1.53)	1.76 (1.60)
	Incongruent	1.73 (1.14)	1.44 (1.65)	1.78 (1.40)	0.75 (1.89)	1.42 (1.61)
Total Discrimination		1.61 (1.47)	1.36 (1.84)	2.44 (1.67)	1.85 (1.69)	1.79 (1.71)

Note. Standard deviations are shown in parenthesis. Items were judged in a 6-point scale from 1 = not there before, to 6 = present before.

Examination of Table 20. suggests that participants tended to discriminate between old and new items overall. Moreover, it seems that there is a slight variation of discrimination across knowledge-distribution conditions, as suggested by the last row. This simple discrimination score was computed by subtracting “false alarms” from “hits.” Finally, the pattern of means give the impression that discrimination of items from the congruent narrative was slightly better than of statements from the congruent excerpt, but only in the case of the complementing congruent narratives—that is, in conditions COMP.

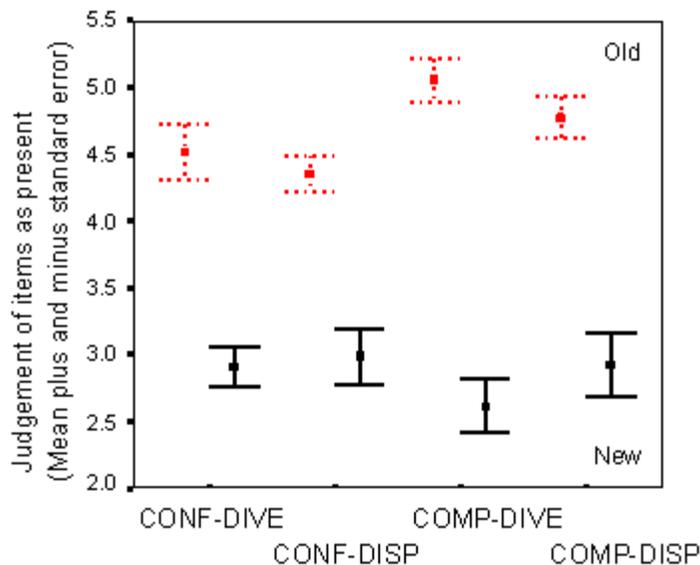
A 4 (pattern of knowledge distribution) 5 2 (“hits” versus “false alarms”) 5 2 (congruent versus incongruent narrative) analysis of variance, with repeated measures on the last two factors was conducted. The analysis included a planned contrast on the three-way interaction in order to test the specific hypothesis derived at the end of the last paragraph: that only COMP conditions discriminated better for congruent than for incongruent narratives.

Unsurprisingly, there was a main effect of the first within-subject factor, that is, “hits” versus “false alarms”;  $F(1,131) = 199.17, p <$

.001,  $\eta^2 = .60$ . This means that the (correct) recognition of old statements was reliably higher than the (incorrect) recognition of new statements. In addition, separate analyses for each experimental condition were carried out to test whether the simple discrimination score was reliably different from zero. The four t-tests yielded a significant difference; all  $ps < .001$ .

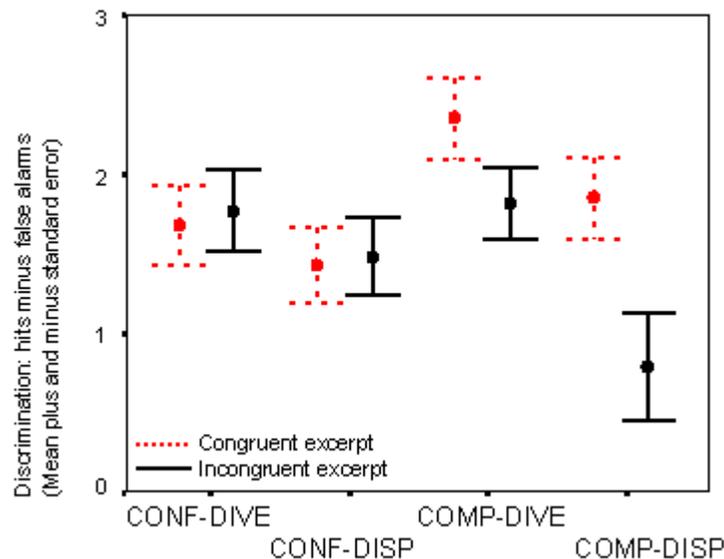
This main effect of discrimination (“hits” versus “false alarms”) was moderated by the knowledge-distribution pattern;  $F(3,131) = 2.76, p < .05, \eta^2 = .06$ . To better understand this interaction, Figure 10 depicts the mean of “hits” and “false alarms” for each experimental condition. The effect is due to a higher discrimination in the COMP-DIVE condition than in the remaining conditions. The main effect of the knowledge-distribution pattern, however, did not reach significance;  $F(3,131) = 1.56, ns$ . A second look at the marginal means of discrimination in Table 20 reveals that the greater the informational novelty of the congruent and incongruent accounts combined, the greater the recognition discrimination. The COMP-DIVE condition represents the richest informational situation, whilst the CONF-DISP condition is the weakest. Conditions CONF-DIVE and COMP-DISP represent an intermediate situation in this respect, thus showing moderate levels of discrimination.

Figure 10. Recognition of old and new statements, as a function of the intergroup pattern of knowledge distribution.



The effect of discrimination was also moderated by congruity of knowledge (congruent versus incongruent);  $F(1,131) = 5.50, p < .05, \eta^2 = .04$ . Across experimental conditions, discrimination was better for statements regarding the congruent narrative ( $M = 1.77$ ) than for statements regarding the incongruent excerpt ( $M = 1.42$ ). The three-way interaction was not significant;  $F(3,131) = 2.04, ns$ . However, the specific contrast that was submitted to analysis yielded a significant difference between the CONF and the COMP conditions;  $F(1,131) = 5.23, p < .05, \eta^2 = .04$ . This effect, as Figure 11. shows, reflects that only for the latter the discrimination of items from the congruent narrative was better than of statements from the incongruent excerpt.

Figure 11. Discrimination for congruent and incongruent excerpts.



In other words, recognition for memories congruent with the participants' ideological position was better than for incongruent memories *only when the ingroup offers an relatively informative, non-commonsensual account*.

## Discussion

Both intergroup attitudes and memory for intergroup-relevant information may depend on the way in which the ideological inclination and the informational novelty of knowledge are socially distributed. The present experiment offers some evidence in this

direction, since the difference between the congruent and the incongruent narratives can be understood in terms of knowledge from the ingroup and from the outgroup, respectively. Specifically, the major findings were two.

- Although, in general, knowledge that is congruent with one's own interpretation is evaluated more positively, this *congruity favouritism* is particularly exacerbated when the outgroup offer commonsensical knowledge (conditions DISP). In other words, the ingroup narrative favouritism was reduced when the outgroup offer elaborated or informative knowledge (conditions DIVE).
- In general, recognition memory is better when both the ingroup and the outgroup offer sophisticated knowledge (condition COMP-DIVE). In particular, recognition memory for congruent knowledge is better than for incongruent knowledge when the ingroup offers sophisticated knowledge (conditions COMP).

Summing up, *the type of ingroup produced an effect on recognition memory, whilst the type of outgroup had an impact on intergroup attitudes*. This supports the idea that it is necessary to take into account the whole intergroup pattern in order to understand collective memory phenomena. The dynamic influences between basic memory processes and intergroup attitudes, therefore, may be discerned only when taking into account at the same time the nature of the ingroup and of the outgroup, and their relationships.

### ***The intergroup context***

The four experimental conditions compared in the present study represent different intergroup situations regarding identity threat and richness of information. Conditions DISP can be regarded as situations generating higher threat to participants' social identity, because the outgroup uses common sense as their territory. Condition CONF-DISP represents a particularly weak situation, because the ingroupers are offering commonplaces only, while the outgroupers are using the same kind of information to support a competing ideological interpretation. Hence, outgroupers are suggesting that the information given by the ingroup not only is commonsensical but also weak or ambiguous, that is, not useful for supporting the ingroup interpretation. Here, both the ingroup and the outgroup claim common sense as their territory. The high levels of congruity favouritism found in conditions DISP can be accounted for as reflecting ingroup favouritism. In fact, it has been

argued that identity threat promotes ingroup favouritism (Brewer, 1999; Stephan & Stephan, 2000; Ellemers, Spears, & Doosje, 2002; Hewstone, Rubin, & Willis, 2002).

Alternatively, condition COMP-DISP may be regarded as an exceptionally strong identity situation, because the ingroupers are adding elaborated arguments or new information, whereas the outgroupers offer only commonplaces and do not challenge the grounds of the ingroup ideology. However, this interpretation based exclusively on the intergroup gradient of informational novelty does not account for the fact that the level of congruity favouritism was as high in condition COMP-DISP as in condition CONF-DISP. Therefore, the experimental conditions seem to be better described in terms of the identity threat produced by an outgroup that claims common sense as its territory.

In the case of COMP-DIVE, both the ingroup and the outgroup are informative, because they offer elaborated or novel arguments. Here, better recognition performance was observed. The links between identity threat and memory, however, are far from clear. Nevertheless, the fact that this condition is ambiguous in relation to identity threat—because the outgroup does not claim common sense and argues with arguments as sophisticated as the ingroup—suggests that an alternative explanation is needed.

### ***Argumentative relevance and recognition memory***

There are two types of explanation of memory performance relevant to the present experiment. One is centred on the notion of reinforcement of memory traces or cueing processes as a consequence of recency and frequency of use. For example, commonplaces are expected to be more recently and frequently used, hence increasing the likelihood of recognition. According to this type of hypothesis, better recognition performance would be expected for participants in conditions CONF—where the piece of narrative included knowledge that is chronically accessible. This was not observed, however. Moreover, in memory research it has long been found that although common words are better recalled than rare words, the superiority is reverted in recognition tasks (Kintsch, 1970).

A second type of hypothesis highlights the role of attention and elaboration (Lockhart, Craik, & Jacoby, 1976). For example, the more informative a narrative piece, the more is the attention that readers are expected to pay to it; and the more is the elaboration that it is expected to demand to readers. Following this kind of

explanation, a better recognition performance would be predicted in the condition COMP-DIVE, and a worse performance in condition CONF-DISP, which is precisely what was observed in the present study. This reasoning helps explain some findings, but it has an obvious limitation if taken in isolation. Namely, that it cannot be argued that a commonsensical account of September 11<sup>th</sup> tends to be less attended to, or motivates less elaboration in the part of an ego-involved reader. Both the commonsensical and the sophisticated accounts were embedded in an intergroup, controversial context, where a right- and a left-wing view were implicitly put into dialogue in the mind of the reader.

What can be argued, in line with the attention-elaboration hypothesis, is that a sophisticated argument would be more *relevant* than a commonsensical argument in a context of controversy. Moreover, note that recognition memory for congruent knowledge was better than for incongruent knowledge *only* when the ingroup offers sophisticated knowledge (conditions COMP, as illustrated in Figure 11.). But the converse—a better recognition for incongruent knowledge than for congruent knowledge when the outgroup offers sophisticated knowledge—was not observed. Thus, it is suggested that not simply the informational novelty of a piece of knowledge itself is what makes it memorable, but this novelty in relation to the wider intergroup context: in other words, because of its argumentative relevance.

## 8 Summary and implications

In the present dissertation I have argued that the ideological inclination of a piece of memory, the social identity of an individual, and the pattern of intergroup relations, set the stage and direct the action in collective memory situations. Sometimes, though, it feels importunate to try to convince people of something everybody agrees with. As the epigraph leading this dissertation says, "There is no doubt whatsoever about the operation of these social influences, they have been pointed out and illustrated by many writers" (Bartlett, 1932, p. 244). Perhaps the value of such an insistence, however, is not the originality of the thesis but the heuristic possibilities of the glasses through which a commonplace is regarded. In particular, this dissertation is more than the restatement of the general idea that the position taking that underlies beliefs and social memories are influenced by social factors. Following Bartlett's claim, here I have tried to disentangle the specific ways in which these influences work.

In a nutshell, I have explored the notion that the production of social memories involves an intertwining of the memory processes and the structure of the social milieu. Across a series of theoretical and empirical studies, I have tried to raise support for the idea that intra- and inter-psychological processes involved in being a member of a social group, and in the construction of mental models about the social distribution of knowledge, are tightly related with the intra-psychological processes involved in the taking of a truth-position towards memories. More specifically, the relation between the intra- and the inter-psychological processes has been demonstrated to be a two-way relationship, and rooted in relatively automatic mechanisms of co-ordination. Among these, one was found to play a prominent part in collective memory dynamics, namely, the argumentative relevance of memories to identities and of identities to memories.

On these lines, the present research offers empirical support to ideas that are often stated more as a dogma or an axiom than as the subject of critical inquiry. However, from the point of view of the specific implications of the present research, it suggests ideas with which neither the sociocultural nor the social cognition approaches to memory seem to agree. The former tends to overlook the intra-psychological dimension of collective memory, whereas the latter underestimates the dynamic role of the

inter-psychological processes of collective memory. In what follows I first summarise the main empirical findings. Then I briefly discuss a number of issues that limit and qualify the implications of these findings. In particular, I discuss some links between the present investigation and two fields: social judgements and group memory research. Finally, I close the chapter specifying the main conclusions of this dissertation.

## **OVERVIEW OF MAJOR FINDINGS**

The investigation has been oriented by two related questions. One concerns the potential impact of categorisation processes on the ease of collective memory truth-judgement. The other question concerns the mirror image of the first, namely, the influence of collective memory judgement on group processes, particularly social identification and intergroup attitudes.

### **Do social categorisation cues affect memory judgement?**

Study 1 showed that judgements of statements about a controversial issue (September 11<sup>th</sup> 1973) were faster in the context of an identification at the intergroup level (as Leftwinger), while an identification at the superordinate level (as Chilean) produced an inhibition of the same process. It is important to note that *this contrast between the consequences of the intergroup-level and that of the superordinate-level identity was found to be particularly accentuated in the case of polemical memories, either favourable or unfavourable to the ideological position of judges.* These findings suggest that this selective accessibility effect of social categorisation cues on judgement was not oriented towards self-enhancement, or supporting what is distinctive and convenient for ingroup, but presumably to preparing the relevant memories for an argumentative context.

More specifically, in this study participants were encouraged to take the perspective of one of their possible social identities in order to make ego-involving and ideologically laden judgements. In a second, “unrelated” task, collective-memory judgement latencies were shorter in the context of both a personal-level and an intergroup-level identity, than in the context of a superordinate-level identity. This was true both overall (difference

of about 800 milliseconds) and especially in the case of polemical statements (difference greater than 1 second). This suggests that the mere manipulation inducing greater salience of one of the available social identities of participants influenced the accessibility of social memories. Moreover, these memories concerning the military coup are inherently controversial. In fact, identification at the intergroup and the personal levels produced a pattern of latencies similar to a non-primed control condition.

Study 2, which focused on stereotype priming, yielded a pattern of results similar to Study 1. However, two differences between these result patterns are worth noting. First, the facilitation effect of thinking about the ingroup and the inhibition effect of thinking about a superordinate group were much weaker than in Study 1—which focused on the enhancement of identification with different groups. This suggests that stereotyping itself is not enough for the influence of social categorisation cues on memory judgements to take place. The formation of a social identity seems to be necessary.

The second difference is that, in Study 2, thinking about the ingroup yielded a facilitation effect, but *thinking about the outgroup, that is, about a group with which participants would hardly identify, produced no effect*. It can be argued, therefore, that the impact of the ingroup stereotype, as well as the personal and superordinate priming conditions, might be due to a factor that is absent when activating the stereotype of the outgroup. Social identification is proposed as such a factor. Further, it is suggested that the weaker effect of stereotyping is due to the concomitant identifications that the stereotyping manipulation could trigger.

Study 4 demonstrated that a non-controversial issue (Naval Battle of Iquique) produces, overall, the inverse effect. That is, a superordinate categorisation cue was found to make judgements faster than a personal or intergroup cue, which was predicted on the basis of the same reasoning employed in designing Studies 1 and 2. This study was conducted with a priming procedure particularly sensitive to the cognitive effort demanded by primes (categorisation cues), thus ruling out the possible interpretation of results of Studies 1 and 2 in terms of the cognitive complexity of primed social categories.

Finally, Study 5 showed that recognition memory is affected by the intergroup distribution of memories, particularly regarding the nature of the memories offered by the ingroup within the

intergroup context. Participants read two accounts of September 11<sup>th</sup>, one congruent with their own ideological position and the other one incongruent. In addition, the congruent account could be either more or less informative; the same alternative was manipulated for the incongruent account. In particular, *highly informative environments were found to produce better recognition discrimination than more commonsensical environments. Moreover, recognition for memories congruent with the participants' ideological position was better than for incongruent memories when the ingroup offers an informative account, but not when the outgroup offers an informative account.* Thus, it is suggested that not simply the informational novelty of a piece of knowledge itself what makes it memorable, but this novelty in relation to the wider intergroup context.

Taken as a whole, these studies support the interpretation that social categorisation stimuli are *used as cues* in the construction of a mental model of the social context of a given memory and the construction of an attitudinal commitment to a stand at the time of memory judgement. The impact of social categorisation cues on memory judgements seems to be mediated by such motivational factors as identification and identity threat.

## **Does memory judgement affect group processes?**

In Study 3 a fictitious source, Prado, was introduced to participants as a plausible Chilean, by letting participants read one of two of Prado's memories (a consensual or a polemical one) about the military coup of 1973. Then left-wing participants had to judge as fast as they could whether they felt they belonged to a series of social categories, among which Chileans and Leftwingers were the critical ones. Response times showed that *the expression of a polemical memory by a source (Prado) facilitated participants' self-categorisation with the leftwingers and inhibited their superordinate identity. Conversely, the expression of a consensual memory facilitated participant's self-categorisation with the Chileans while inhibiting their intergroup identity.*

The conclusions that can be clearly drawn from this finding are, on the one hand, that the activation of different social memories makes it easier or harder to categorise oneself, depending upon the relevance of the category of identification to the argumentative situation implied by a given piece of knowledge. On

the other hand, it can be concluded that this effect of social memories' sharedness on identity accessibility is valid irrespective of the social source of these memories. That is, it does not matter whether the piece of knowledge activated is attributed to an ingrouper or to an outgroup. The effect is due to the consensual versus polemical value of the given piece of knowledge rather than to its social origin.

The same study offers evidence of the influence of stated memory judgements on the attitude towards their source. In particular, the attitudes towards both Prado and his or her assumed social category are moderate and very similar across levels of congruity, but only when Prado provided a consensual statement. If Prado gave a polemical memory, then the attitude towards Prado became polarised in terms of liking the ingroup and the ingrouper, and disliking the outgroup and the outgroup. This effect can be interpreted as a congruity  $\times$  sharedness of the message interaction moderating the attitude towards the source of the statement.

Study 5 showed that intergroup attitudes are affected by the intergroup distribution of memories, especially regarding the nature of the memories offered by the outgroup within the intergroup context. In particular, *ingroup favouritism was observed to increase when the outgroup offers commonsensical accounts*, rather than a more elaborated view of September 11<sup>th</sup>.

In sum, Studies 3 and 5 support the idea that the activation of social memories in a communicative context has an impact on psychological processes of group formation, particularly social identification and intergroup attitudes.

## **IMPLICATIONS FOR COLLECTIVE MEMORY DYNAMICS**

On the basis of these findings it is possible to advance some postulates concerning collective memory dynamics. I will state these postulates and then briefly discuss some of their assumptions.

- The psychological processes involved in collective memory judgements and the psychological processes involved in group formation constrain each other.
- This circular dynamic operates automatically enough to be non-conscious and unintended.

- In both directions (from memory processes to group processes and vice versa) the influences follow the principle of *argumentative relevance*—instead of the principles of semantic or affective similarity or self-enhancement.
- The strongest effect of group formation processes on memory is due to social identification, which seems to be irreducible to the processes of stereotyping and the dynamics of the semantic network that underlie stereotypes.

Certainly, these postulates need some qualifications in order to understand their validity I claim for them. To start with, recall that the experiments in the present research focus on the judgement of given statements as true or false (Studies 1, 2 and 4), or as old or new (Study 5). In this sense, the experiments involved a discrimination task, not a remembering task. The place of the truth-judgement task in collective memory is similar to the place of the recognition task on traditional episodic memory research. The common feature between them is that the generation of the target is avoided in order to concentrate on the judgement of it. The differences between truth-judgement and recognition tasks, however, are worth noting. Some of these differences emerge from distinctive properties of collective memory.

Firstly, there is no encoding of the memory object, that is, the formation of a memory trace of the event is missing. Participants were at the maximum age of 32 during 2001, which means that in 1973 they were 4 year old at the most. The consequence is that remembering does not rely on the retrieval of traces but on taking a position within the social context through which one has heard about the event. In this sense, collective memory judgements may be regarded as closer to beliefs than to recognition memory.

Secondly, the truth-judgement task entailed the *construction* of a representation of the content of each given statement and, either in addition to or included in the representation itself, a personal stance towards it. The construction of the content of the statement consists of a number of parallel operations constraining each other in the building of a judgement from social cues. These operations are the execution of basic procedural tendencies, which constitute a process with its time-course and resource constraints, although it is not a fixed sequence of stages corresponding to independent factors (such as retrieval and decision).

The process of generating a memory involves the intertwining of judgmental and social mapping processes. It has been stated that this interaction is rather automatic, because the experiments were

suited to underscore implicit influences between social categorisation cues and memory. Yet, this by no means implies that the generation of memories, or the construction of truth-judgements, is automatic. According to the theoretical framework presented in Chapter 4, the engagement in a collective memory judgement carries with it the spontaneous initiation of three interrelated processes of construction: of a knowledge structure, of an attitude, and of a context model. However, each of these processes may demand varying degrees of effort, attention, and time. Moreover, highly controlled processes might be necessary if a stable solution in the co-ordination of such processes is not reached in a couple of seconds. The investigation into the aspects of automaticity involved in collective memory judgements, then, is an attempt to determine only the basic tendencies that are put into play spontaneously. These basic tendencies may be regarded as the initial set on top of which, and in interaction with which, more elaborated processes are built. For perspectives on automaticity consistent with this approach, see Cohen, Dunbar, and McClelland (1990); also Bargh and Ferguson (2000). The link suggested here between relatively automatic cognitive processes and rhetorical aspects involved in the production of social memories is consistent with the current view of humans as “motivated tacticians” in social cognition literature (Kruglanski, 1989; Fiske & Taylor, 1991; Abele & Petzold, 1998; Schwarz, 1998). In the context of this dissertation, the relative automaticity of the operation of argumentative relevance means that this principle does not assume strategic planning and reasoning, as in the job of the professional rhetorician. The present research suggests that “lay rhetoricians” have learned sequences of constructive operations that allow them to be prepared to argue in a way relevant to the intergroup context.

The strongest of the postulates stated above concerns the argumentative relevance hypothesis, which pertains to the specific way in which the intertwining of judgmental and social mapping processes is claimed to work. The next section discusses the argumentative relevance model of collective memory judgement.

## **Accessibility, accentuation, and relevance**

As already suggested by Bartlett and then restated in Chapter 3, people do not simply experience or express a description of a past event, but essentially take a social position towards the event. For this reason, the psychological process of social “mapping” is

expected to have detectable implications for social categorisation and memory judgement. The production of a social memory, for instance, implies placing the memory somewhere between the *pro-* and *anti-*coup poles of a psychological scale. Social “mapping” is the construction of a mental model of the social distribution of knowledge regarding the memory object. This model is assumed to guide the position-taking process implicated in the generation of social memories. As a result, it is argued that the more relevant a position for an argumentative context, the more it will be favoured in the course of memory production. For example, a context model representing a highly polarised (convergent) distribution of positions is expected to facilitate the generation of extreme (consensual) memories.

Across the present studies I have offered evidence that argumentative relevance indeed has a crucial role in collective memory dynamics. This evidence has been constructed in opposition to the feature-matching hypothesis, which focuses on “pure” memory mechanisms and obliterates position-taking processes implicated in the generation of social memories. But the argumentative relevance model advanced in Chapter 3 is not only a general proposition about position-taking processes. It is mainly a hypothesis about the principles that determine social judgement in collective memory context—and maybe in other contexts as well. In what follows, I first briefly summarise the most salient findings that speak in favour of the argumentative relevance model. Then, I discuss the model in more detail.

### ***Evidence regarding the argumentative relevance model***

The link between the intra- and the inter-psychological processes has been demonstrated to be a two-way relationship. The argumentative relevance of memories to identities and of identities to memories was found to play a prominent part in collective memory dynamics. Evidence comes from these two directions.

On the one hand, the readiness of the truth-judgements involved in a given social memory seems to depend upon its place within the intergroup distribution of memories, and the individual’s social identity. Studies 1 and 2 jointly suggest that identification, and stereotyping, are the crucial social categorisation processes determining collective memory judgements. According to the argumentative relevance hypothesis, people are better prepared to judge in a manner that is distinctive of the level of social categorisation at which they are identified at any given moment.

For instance, the results of Study 1 suggest that judgements of statements about September 11<sup>th</sup> were easier if an identification at the intergroup level (as Leftwinger) was enhanced, whereas an identification at the superordinate level (as Chilean) produced an inhibition of the same process. As already underscored, this contrast between the consequences of the intergroup-level and that of the superordinate-level identity was found to be particularly accentuated in the case of polemical memories, either favourable or unfavourable to the ideological position of judges. These findings support the hypothesis that the subjective dominance of a given social identity makes pieces of social knowledge easier or harder to judge, depending upon the argumentative relevance of the piece of knowledge to the dominant identity. This pattern of behaviour can be modelled in terms of the following reasoning: A dominant identity at any given moment makes those knowledge structures that are expected to be useful in the corresponding argumentative situation more accessible. It is the case that polemical knowledge is expected to be useful in an intergroup argumentative situation, and that consensual knowledge is expected to be useful in a superordinate argumentative situation. The function of such an effect would be to prepare the judge for the selective use of these knowledge structures in a way relevant for the social differentiation context. Moreover, the fact that the inverse pattern of latencies was found for judgements concerning a non-controversial topic (Study 4), reinforces this interpretation.

On the other hand, the relative readiness of people's alternative social identities and their intergroup attitudes seem to depend upon the salience of the truth-judgements involved in received social memories (Studies 3 and 5). The argumentative relevance hypothesis states that people are better prepared to identify themselves in a way that maximises the argumentative distinctiveness of a given judgement. The initial argumentative-relevance hypothesis implies that the position attributed to the source of a social memory tends to facilitate or inhibit the subjective salience of a social identity as a function of its argumentative relevance. For example, the enhancement of a superordinate identity (Chileans) was expected to be facilitated by judgements of consensual rather than polemical statements. By contrast, the enhancement of an ingroup identity (for instance, a left-wing identity) was expected to be facilitated by polemical rather than consensual statements, irrespective of the attitude

implied by the statement (either pro- or anti-coup). These predictions were corroborated in Study 3.

### ***Distinctiveness in social judgement***

To understand the implications of the argumentative relevance model to social judgement, I discuss an interesting alternative, although developed for a context related but different from collective memory.

Mussweiler and Strack (2000a) have proposed that social comparison between the self and others involve the selective accessibility of knowledge about the self. In particular, self-knowledge indicating that one is similar to the target person on a given dimension is expected to be especially accessible when comparisons are carried out on an individuating level. This is put forward to explain assimilation to an anchor in self-judgement. The importance of this concept for collective memory situations is that truth-judgements can be seen as type of judgement about the self, in particular about the self's position towards, say, September 11<sup>th</sup>. In this analogy, the authors' claim would be that *interpersonal* comparisons between one's own position and that of another person would shift one's truth-judgement in direction of the anchoring other.

In addition, Mussweiler and Strack (2000b) proposed that there are two types of self-knowledge that can be used in social comparison, *category* knowledge and *individuating* knowledge. The former entails a stereotypical representation of the self, whereas the latter entails an exemplar-based representation of the self. The authors suggest that one of the factors determining whether a comparison is category-based or exemplar-based is the category membership of the self and the target person. If they are members of the same social category, the comparison is likely to be based on individuating knowledge about the self. If the self and the target person are members of different social categories, the comparison is likely to be based on category knowledge about the self.

On these lines, Mussweiler and Bodenhausen (2002) argue that comparisons with ingroup and with outgroup members are likely to affect the accessibility of self-knowledge differently, thus yielding different self-judgement effects. "Whereas a spontaneous comparison with an outgroup member activates category knowledge indicating that the self is different from the target (i.e., belongs to a different category), a spontaneous comparison with an ingroup member activates individuating knowledge indicating

that the self is similar to the target” (p. 21). In one experiment, male participants were to judge either a male or a female target person, and then to indicate their own gender. Results show that these male participants were faster in indicating their gender after judging a female target than a male target. Further, “using category knowledge that indicates that one belongs to the category opposite to the target [...] as part of the informational basis for self-evaluation, produces a contrast effect. Using target-consistent individuating knowledge about the self, however, yields assimilation” (p. 29). In another experiment, male participants described themselves as more caring after being exposed to a highly caring man than after exposure of a highly caring woman.

The importance of these ideas in the context of the present dissertation is that they offer an account of the fact that, in judging the truth of a given social memory, people place their position accentuating the intergroup differences, thus giving a more extreme judgement, or the intragroup similarities, thus giving a more moderate judgement. More important, the mechanism of such an accentuation is proposed, namely, by rendering intergroup differences and interpersonal similarities more accessible. Why does an intergroup-level identity make polemical memories easier to judge than consensual ones, whereas a superordinate-level identity produces the inverse pattern (Study 1)? Following Mussweiler and Bodenhausen’s (2002) reasoning, one may argue that an intergroup-level identity makes polemical memories easier to judge than consensual ones because the former are more informative of intergroup differences. Why does the exposure to a polemical memory make an intergroup-level identity more accessible than a superordinate-level identity, whereas a consensual memory produces the inverse (Study 3)? Likewise, one may argue that a polemical memory makes an intergroup-level identity more accessible than a superordinate-level identity because the former is more informative of the differences between the self (one’s position) and the target (the position implied by the given piece of memory).

However, Mussweiler and Bodenhausen’s (2002) theory has two limitations in the present context. Namely, they would predict the main difference between a personal-level identity and an intergroup-level identity, because this can be mapped onto the distinction between exemplar-based and category-based processing (Brewer, 1988). According to this framework, both an

intergroup- and a superordinate-level identity would entail self-stereotyping (Oakes & Turner, 1986; Hogg & Turner, 1987). But in collective memory situations, at least in the experimental paradigms employed here, the main difference has been observed to be between a superordinate-level identity and the rest. No systematic differences were found between the personal and the intergroup levels, probably because of the controversial nature of the topic. Now, the difference between an intergroup- and a superordinate-level identity cannot be mapped onto the distinction of exemplar- versus category-based processing. Thus, it seems that a more general model of selective accessibility effects ought to concentrate more on the distinctiveness principle than on the modes-of-processing principle. Accordingly, one may say that a superordinate-level identity makes consensual memories easier to judge than polemical ones because the former are more *distinctive*, or diagnostic, of the superordinate level of categorisation.

Likewise, in collective memory situations the general principle is that the judgement of an ingrouper renders not *interpersonal* but *intragroup* similarities more accessible. The difference is apparent if one compares between a self-categorisation at a personal and at a superordinate level. Only in the second case one ought to expect selectively high accessibility of self-knowledge (one's position) that is similar to the target (the position implied by the given piece of memory). In fact, consensual memories were made more accessible than polemical memories by a superordinate-identity prime but not by a personal-identity prime (Studies 1 and 2).

A second limitation of Mussweiler and colleagues' approach is that they explain the selective accessibility effect in terms of hypothesis-consistent testing (see Mussweiler & Strack, 1999). That is, when judging a target, people are assumed to generate evidence consistent with their hypothesis about the target. When judging an ingroup member, people are expected to set the hypothesis that the self is similar to the target, and when judging an outgroup member, people are expected to set the hypothesis that the self is different from the target. Likewise, one can describe, for instance, Study 1, in the following terms. Initially, participants perceived a statement and inferred the ideological position of a possible source. Mussweiler and Bodenhausen's (2002) reasoning would be that this social mapping process makes some self-knowledge particularly accessible, because the judgement of (the position of) the target often involves

comparisons with the self. If the target is categorised as belonging to the outgroup, the subjective hypothesis is that the self's position is different from the target's position, thus making *polemical* judgements more accessible—as it has been found—but only if they are at the same time *congruent* with the participant's ideological position. This last clause is in contradiction with what have been found in Studies 1 to 3. Here, polemical statements were made more accessible in this situation, irrespective of their congruity. Moreover, according to Mussweiler and Bodenhausen, if the target is categorised as belonging to the ingroup, the subjective hypothesis is that the self's position is similar to that of the target, thus making *congruent* judgements more accessible—which has not been found. What has been found in this last situation is that *consensual* statements are more accessible, irrespective of their congruity with participants' position. Therefore, these authors' account is applicable to our findings only at a first sight.

An alternative explanation of the selective accessibility effect is offered by a combination of self-categorisation theory and accentuation theory. Regarding the first, I focus on the theory of category accessibility, particularly the concept of social categories' structural fit (Turner, 1985; Oakes, 1987; see also Blanz, 1999). The theory assumes that the accessibility of a given category depends in part on the perceived differences and similarities among stimuli. Specifically, the *principle of meta-contrast* states that two possible clusters of stimuli are more likely to be categorised as two distinct groups to the extent that differences perceived within clusters are less than differences perceived between them. I suggest that this principle, operating as part of the social mapping process that is involved in much social judgement, may account for the selective accessibility of self-knowledge, as found in the present research. In particular, I assume that participants initially draw on multiple comparisons between the possible source of a given statement and other positions, including the self and also other well-known social positions within the frame of reference. From these comparisons, the categorisation of the target as “similar to me” or “opposite to me” is based upon an intuitive estimation of the difference between the self-target distance and the distance of the self and the target from other social points of reference.

Then, when a categorisation is made, selective accessibility effects on self-knowledge may be explained by a theory of

accentuation concerning intragroup similarities and intergroup differences (Tajfel & Wilkes, 1963; Tajfel, 1969; 1974; 1981; Eiser, 1971; Eiser & Stroebe, 1972). It can be theorised that a categorisation at an intergroup level—irrespective of the categorisation of the target as part of the ingroup or the outgroup—will make self-knowledge that is diagnostic of intergroup differences more accessible. Conversely, a categorisation at a superordinate level is expected to make self-knowledge that plays down intergroup differences more accessible. Thus, if the target is categorised as belonging to the ingroup or outgroup, intergroup differences are accentuated, making *polemical* judgements more accessible—as it has been found, irrespective of the congruity of the statement. If the self and the target are categorised in terms of a superordinate category, intergroup differences are minimised, making *consensual* judgements more accessible. At the time of judgement, the more accessible a piece of knowledge, the faster it is judged. Other judgmental consequences may follow.

Therefore, the transference of Mussweiler and Bodenhausen's (2002) theory of self-judgement to collective memory phenomena is not adequate. In contrast, Abele and Petzold's (1998) theory of impression formation may be transferred to the collective-memory domain with greater profit, because it explicitly accounts for the pragmatic use of social categorisation cues in judgement. Specifically, these authors posit that assimilation and contrast effect depend upon emphasising intragroup and intergroup differences, respectively. Further, they claim that the relative emphasis on intragroup and intergroup differences is determined mainly by the perceived task purpose, which is usually inferred from meta-informational cues. At the risk of overgeneralisation, the point I am trying to make here is that Abele and Petzold (1998), although in a particular domain, have suggested that the link between cognitive and rhetorical aspects ought to be regarded as the pivotal determinant of social judgement. As argued in the present section, such a link seems to be necessary in order to account for social judgement in the domain of collective memory.

## **Towards a global picture of collective memory**

As stated in the introduction of this dissertation, memory plays a central role in social cognition research. However, from the social cognition perspective, perception, judgement, and recall of social objects are understood as a function of “plain” memory. Likewise,

the social context is regarded as a source of possible moderators of “plain” memory processes.

In contradistinction, the sociocultural approach conceives of human memory as a cultural process rather than a cognitive one. Unfortunately, within this approach only few studies pay attention to micro-processes of memory. Moreover, even these micro-process studies are restricted to the inter-psychological domain only. In Chapter 6, I discussed lines of research challenging this limitation (Wegner, 1987; 1995; Hutchins, 1991; Salomon, 1993b; Cole & Engeström, 1993; Hinz, Tindale, & Vollrath, 1997), both from within the sociocultural approach and from a view of social groups as cognitive systems. Following this perspective, I propose that a global picture of collective memory ought to integrate cognitive and cultural processes. In what follows I point out some elements for such a global picture as it can be worked out on the basis of the present research.

Cognitive functions like storage, organisation, and retrieval of information describe metaphorically what a distributed system like the brain can do. I think that the same thing can be said about groups, as ‘second order’ distributed systems. Groups ‘store’, ‘organise’, and ‘retrieve’ information through the self-organised co-ordination among individual cognitions, for example through the division of cognitive labour and the modification of communication paths. In this sense, most natural groups, from a couple to a work team to a broad society, can be seen as socially distributed memory systems.

A crucial suggestion of this perspective is that individual cognition cannot be considered in isolation without losing what is essential to collective memory phenomena. In the same way in which each note of a melody must be understood in relation with the whole configuration, individual cognitions must be studied in relation to the whole inter-cognitive dynamic in which they are embedded. The consideration of this downward causation means that individual memory processes must be understood as a function of both the intra-cognitive dynamics and the inter-cognitive structure.

In particular, I propose that one important way in which group or collective memory dynamics affect memory performance is by activating different social self-categorisations, that is, defining different group memberships. In this sense, the social display of different self-categorisation cues is seen as an important inter-cognitive operation—as the activation of semantic categories

is at the intra-cognitive level of memory, for example. There are other important inter-cognitive operations that have not been addressed here, such as the organisation of communication networks or the display of cultural artefacts that serve as cognitive or communicative devices.

In short, collective memory can be seen a type of second order memory system with individual memory structures as its component units, whose dynamic interconnectivity explains why some memories became more prevalent and reproduced than others within a group, and why individual memory structures are influenced by social constraints.

According to Kohonen, self-organisation is “in the original sense, simultaneous development of both structure and parameters in learning” (1995, p. 275). In this sense, collective memory can be regarded as a self-organised system characterised by the following dynamic flux of modifications. Any starting point is arbitrary. The social structure largely determines the social mapping involved in memory judgements. Then, the argumentative relevance of memories to identities and of identities to memories modulates truth-judgement. At the level of individuals’ stream of experience, the salience of consensual contents is expected to facilitate a social identity at a superordinate level, and then the dominance of a social identity at a superordinate level is expected to make judgements of consensual contents easier than judgements of polemical ones. Conversely, the salience of polemical knowledge structures is expected to facilitate a social identity at an intergroup level, and then the dominance of a social identity at an intergroup level is expected to make judgements of polemical knowledge structures easier than judgements of consensual ones. On a large scale, superordinate identities push towards centralised and more homogeneous knowledge-distribution patterns, like a centripetal force. Intergroup-level identities push towards polarisation, as a centrifugal force. The primacy of one type of identity over the other determines changes in the social distribution of knowledge that, in turn, affect individuals’ judgmental process. The whole dynamic of collective memory is therefore neither controlled from a global standpoint nor reducible to intra-psychological processes.

## CONCLUSION

Overall, the present investigation substantiates the idea that, in collective memory situations, group processes and memory process are indeed connected in a *reciprocal* and *relatively automatic* way. In particular, the series of empirical studies offer the following conclusions:

- The accessibility of collective memory truth-judgements varies as a function of the social distinctiveness of a given memory in relation to the dominant social identity at any given moment. Polemical memories were observed to be easier (faster) to accept or to reject when an intergroup-level identity was predominant. Conversely, consensual memories were observed to be easier to accept or to reject when a superordinate-level identity was predominant.
- The function of the social distinctiveness of a given memory cannot be accounted for in terms of a feature-matching model of accessibility effects. For instance, when an intergroup-level identity is predominant, polemical memories were observed to be easier to judge, irrespective of the ideological inclination of a given memory. Therefore, social identification does not work as semantic priming. The argumentative relevance of a given memory to a predominant social identity seems to account for these results.
- The temporary accessibility of social memories expressed by others, as assessed in terms of recognition after a short delay, is higher when these memories come from informative rather than commonsensical narratives. This was observed independently of the ideological inclination of such memories. In other words, the less chronically accessible a recently received memory, the more temporarily accessible it is.
- The accessibility of self-categorisations varies as a function of the social distinctiveness of a memory salient in communication, in relation to alternative social identities at any given moment. For instance, a polemical memory is said to be socially distinctive of a possible intergroup-level identity, whereas a consensual memory is said to be socially distinctive of a possible superordinate-level identity. Specifically, the self-categorisation at an intergroup level was observed to be easier (faster) when a polemical memory was salient in communication. Conversely, the self-categorisation at a superordinate level was observed to

be easier (faster) when consensual memories were salient. Again, the argumentative relevance of a given social identity to a salient memory seems to account for these results better than semantic feature matching.

- Intergroup attitudes may vary as a function of the argumentative strength of an individual's position within a particular context of communication. The argumentative strength of a given position reflects the ideological and informational pattern of memories available within a communication context. Thus, when memories congruent with an individual's ideological position are commonsensical, attitudinal ingroup bias is higher than if either the congruent memories are informative.

These conclusions are consistent with the view of collective memory production outlined in Chapter 3. The basic idea of this view is that processes involved in the generation of memories and in social categorisation depend upon each other—at least in collective memory situations. Specifically, the processes involved in the generation of memories that have been studied here are those underlying the accessibility of truth-judgements and the accuracy of recognition judgements. The processes involved in social categorisation are, in particular, identification and intergroup attitudes. Across all studies, findings suggest that the notion of *argumentative relevance* is appropriate to modelling collective memory dynamics. The alternative notion of *semantic feature matching*, widely employed in cognitive theory and social cognition research to explain memory phenomena, was overall insufficient for the understanding of the relationships between truth-judgement and social identity, and between recognition judgement and intergroup attitudes.

These conclusions are twofold. On the one hand, I suggest that collective memory dynamics may be governed by principles that are emergent in relation to individuals' semantic, feature-matching memory. This possibility has been discussed in terms of the social organisation of group-memory processes, and it has been shown that the social distribution of knowledge is a group-level determinant of attitude and memory. It remains to be explored in more detail how the emergent pattern of knowledge distribution is itself modified by social interaction and how varying knowledge-distribution formations influence subsequent interactions.

On the other hand, I suggest that basic individual memory functions, such as recognition memory and truth-judgement about

past events, can also be governed by social psychological principles such as argumentative relevance. This other possibility has been discussed in terms of accessibility effects in social judgement, and it has been demonstrated that social categorisation cues are spontaneously used to select judgements that are diagnostic of the relevant level of social comparison. Because this finding contradicts current theories of selective accessibility effects in other domains of social judgement, it is important to investigate whether the argumentative relevance model can be generalised in three aspects. Firstly, to other collective memory themes, apart from the Chilean September 11<sup>th</sup> 1973. Secondly, to other forms of ego-involving truth-judgements about controversial social issues, apart from collective memory. Finally, to other forms of social judgement, apart from truth-judgement, such as self-evaluation, interpersonal and intergroup perception.

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## **APPENDIX**

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## **Appendix A. Glossary of some key terms in Bartlett's theory of remembering**

In this glossary, the meaning of the major concepts of Bartlett's theory are summarised as I employ them in Chapter 2. The aim is to help the reader to follow the reconstruction if there is any conceptual confusion, not to offer a self-contained set of definitions. In explaining some concepts, I use other concepts in a technical sense, in which case the latter are emphasised.

**Attitude** is the temporary affective *tendency* towards the memory object in the situation of remembering. It expresses the interplay among more permanent tendencies. As involved in remembering, attitude is specifically the affective general impression of the memory object or, if the clash of concurrent *interests* demand the help of an *image*, it is the momentary reaction to the image arisen. As such, the attitude serves as the main guide for the *constructive* work proceeding from the *image* of the memory object. When the *constructive* work draws upon social conventions and commonplaces, the attitude may acquire the social meaning of a given position within a socially relevant dimension.

**Construction** is the composition of a narrative or argument that gives a picture of an object, in line with a dominant *tendency*. As involved in remembering, construction is an 'effort after meaning' guided by an *attitude*, that is, an effort to justify the general impression elicited by the *image* of the memory object. *Social conventions*, in conjunction with the communication context, usually set the format of this composition of a narrative.

**Image** is a high-dimensional knowledge structure by means of which a detail of a past event is *represented*. It arises spontaneously in the rememberer's flux of experience when *recall* does not proceed smoothly and automatically following a dominant *tendency*. The polyphonic nature of images makes them suitable for connecting singularity of experience and social sharedness.

**Image function** is the effect of *images* (and words) in remembering, namely, to break the *schematic determination* of an undifferentiated past anchored in the last operation, thus opening access to remote past experiences in which to anchor

current experience. The image-function operation is to transform memory from a procedural mechanism for the production of chain continuity among low-level operations, to a content-addressable and socially shareable memory. The concepts of image and image function have a different status. Whilst the former may or may not be present in a given act of remembering, the latter is intrinsic to remembering. In fact, according to Bartlett, when no clash of tendencies appear in the course of remembering, words fulfil the image function.

**Interest** is a *tendency* that has a social nature instead of an innate origin. The former are more elaborated, are more dependent on socially constructed patterns of behaviour, and are more likely to be related or even in conflict with other tendencies than the latter.

**Recall** is the behaviour of referring to events experienced in the past.

**Reconstruction** is what characterises remembering, namely, that an affective general impression of the memory object is used as a guide to generate and organise the details that can be assumed to pertain to the memory object. (In the context of *remembering*, the term is usually employed as a synonym of *construction*; however, the latter is a more abstract notion, which in the context of remembering is put in relation to the notion of attitude in order to account for reconstructive remembering.)

**Remembering** is the psychological function of mediating present experience through experiences that are treated by the rememberer as pertaining to his or her past. This process is reconstructive instead of reproductive, that is, memories are not preserved and then reactivated, but are *constructed* in the present, for the present, and with tools available in the present.

**Schema** is the organised setting or background of psychological material *constructed* from a dominant feature of this material, in order to select a psychological operation that fits an active *tendency*. As a basic form of memory, it is the undifferentiated background of plausible past operations *constructed* in line with the last operation and a dominant *tendency* to select a next operation.

**Schematic determination** is the procedural memory mechanism for the *construction* of a chain continuity effect among

sequences of operations. In other words, it is the automatic way in which the *schema* of the past influences the present. In remembering the schematic determination is replaced by the *image function* and by *reconstruction*.

**Social convention** is a stable and socially shared pattern of behaviour within a given social group. It is the result of successive transformations of patterns acquired from an external source. This transformation process is done through social construction, that is, through the self-organisation of multiple individual contributions. In remembering, social conventions are stable and socially shared patterns of *representation* and of *reconstruction* of past experience.

**Tendency** is a selective inclination of the organism towards psychological material. Tendencies can persist over time either because of innate mechanisms or because of socially constructed patterns of behaviour. Their persistence explains stability in memory.

## Appendix B. Descriptive statistics of truth-judgements regarding statements about September 11<sup>th</sup>

N <sup>o</sup>	Right wing (n=48)						Left wing (n=124)					
	Raw		Adjusted		Skewness <sup>a</sup>	Kurtosis <sup>b</sup>	Raw		Adjusted		Skewness <sup>c</sup>	Kurtosis <sup>d</sup>
	M	SD	M	SD			M	SD	M	SD		
1	0.46	0.74	-1.24	0.74	1.67	3.86	0.01	0.09	-1.27	0.24	-1.83	10.45
2	2.42	0.99	0.73	1.10	-1.79	2.68	2.15	1.14	0.45	0.91	-1.02	-0.35
3	1.00	0.90	-0.69	0.88	0.27	-0.54	0.37	0.63	-0.96	0.50	1.40	2.08
4	2.02	0.93	0.35	0.82	-0.63	-0.44	1.48	1.00	-0.07	0.75	0.31	-0.95
5	1.65	0.96	-0.05	0.98	-0.22	-0.19	0.77	0.99	-0.63	0.79	1.04	0.10
6	1.52	1.13	-0.16	1.01	-0.13	-1.36	0.65	0.94	-0.73	0.70	1.14	0.35
7	1.94	0.95	0.24	0.93	-0.53	-0.58	0.99	1.21	-0.48	0.95	0.64	-1.11
8	2.08	0.92	0.37	0.77	-0.46	-0.90	1.31	0.76	-0.21	0.57	0.08	-0.33
9	2.31	0.83	0.62	0.82	-1.06	0.42	1.31	1.03	-0.21	0.77	0.45	-0.87
10	2.02	0.84	0.35	0.78	-0.41	-0.54	1.09	0.85	-0.38	0.61	0.50	-0.23
11	2.42	0.61	0.73	0.57	-0.91	0.48	1.56	0.94	-0.02	0.70	-0.05	-0.80
12	1.46	1.20	-0.29	1.22	-0.07	-1.33	0.19	0.47	-1.11	0.38	1.91	6.15
13	1.81	0.84	0.18	0.78	-0.04	-1.24	0.64	1.01	-0.73	0.78	1.31	0.59
14	1.88	0.82	0.18	0.77	-0.33	0.13	0.77	0.83	-0.63	0.61	0.91	0.59
15	0.25	0.73	-1.42	0.75	1.99	3.89	0.78	1.09	-0.64	0.90	0.82	-0.38
16	1.67	0.88	0.06	0.84	-0.03	-0.14	2.42	0.79	0.67	0.58	-1.11	0.80
17	1.50	0.99	-0.14	0.89	0.19	-1.03	2.42	0.90	0.67	0.71	-1.40	1.18
18	1.94	0.78	0.30	0.72	-0.85	0.97	2.71	0.65	0.90	0.49	-2.29	6.27
19	1.77	0.97	0.20	0.95	0.11	-0.72	2.81	0.64	0.99	0.53	-3.17	11.05
20	1.65	0.89	0.03	0.79	0.18	-0.99	2.56	0.75	0.78	0.55	-1.59	2.37
21	2.42	0.71	0.80	0.71	-0.36	-0.60	1.12	1.20	-0.35	0.89	0.55	-1.10
22	1.54	1.03	-0.15	0.94	0.09	-1.16	0.25	0.49	-1.06	0.37	1.12	1.52
23	2.21	0.71	0.52	0.68	-0.61	-0.07	1.11	0.67	-0.37	0.47	0.45	0.44
24	2.52	0.65	0.87	0.62	-0.88	0.65	1.27	0.81	-0.24	0.60	0.37	-0.29
25	1.54	0.80	-0.15	0.80	0.05	-0.77	0.14	0.45	-1.15	0.34	2.56	11.74
26	2.29	0.77	0.61	0.78	-0.52	-0.21	0.77	0.72	-0.64	0.54	0.51	-0.08
27	2.00	0.80	0.29	0.76	-0.49	-0.30	0.41	0.60	-0.92	0.43	1.05	1.29
28	2.17	0.86	0.44	0.84	-0.75	-0.25	0.39	0.58	-0.94	0.44	1.57	3.00
29	2.21	0.85	0.51	0.74	-0.56	-0.93	0.19	0.53	-1.11	0.40	2.85	11.86
30	0.81	0.82	-0.83	0.78	0.42	-0.46	2.12	0.92	0.42	0.71	-0.87	-0.05
31	1.81	0.76	0.19	0.66	0.26	-0.34	2.91	0.44	1.07	0.39	-3.47	17.08
32	1.69	0.88	0.02	0.78	-0.26	-0.68	2.83	0.51	1.00	0.39	-3.11	12.19
33	1.23	0.90	-0.42	0.83	-0.04	-0.90	2.54	0.60	0.75	0.51	-1.39	3.10
34	1.15	0.95	-0.48	0.88	0.31	-0.44	2.60	0.78	0.82	0.59	-2.04	4.16
35	0.60	0.84	-1.07	0.80	0.90	-0.08	2.10	0.93	0.39	0.75	-0.65	-0.63
36	1.52	0.99	-0.12	0.84	0.21	-0.98	2.80	0.51	0.97	0.40	-2.13	6.32
37	1.63	0.89	-0.03	0.76	0.08	-0.81	2.81	0.45	0.98	0.37	-1.46	2.95
38	1.50	0.97	-0.09	0.95	0.24	-0.33	2.89	0.32	1.04	0.26	-0.87	1.62
39	1.27	0.92	-0.34	0.85	0.19	-0.81	2.73	0.53	0.91	0.39	-2.13	7.20
40	1.50	0.90	-0.11	0.85	0.59	-0.14	2.94	0.25	1.09	0.25	-1.02	3.60
41	0.83	0.93	-0.83	0.89	0.57	-0.41	2.80	0.56	0.96	0.44	-2.79	9.27

---

Pro-coup: <sup>a</sup> SE(Skewness) = 0.34, <sup>b</sup> SE (Kurtosis) = 0.67.  
Anti-coup: <sup>c</sup> SE (Skewness) = 0.22, <sup>d</sup> SE (Kurtosis) = 0.43.

## Appendix C. Attitude towards ideological statements and towards the coup, according to political orientation [Study 1]

The following table displays means of a series of judgements for the three possible self-categorisations at the beginning of the experimental session.

Task within the experiment	Political self-categorisation			Overall
	Leftwing (n = 52)	"unclassified" (n = 16)	Rightwing (n = 16)	
<i>Agreement with statements</i> <sup>a</sup>				
The current President of Chile is, after all, better than any of the rightwing politicians.	0.52 (0.78)	-0.38 (0.89)	-0.88 (0.34)	0.08 (0.93)
In case one needs to choose, is better to privilege economic development than equity.	-0.81 (0.53)	-1.00 (0.00)	0.31 (0.79)	-0.63 (0.71)
Despite inconveniences and severe costs, the military intervention of 1973 was good for the country.	-0.62 (0.77)	-0.19 (0.83)	1.00 (0.00)	-0.23 (0.94)
Democracy is a value that must be actively cultivated and developed because it is a keystone for the common good.	0.96 (0.19)	1.00 (0.00)	1.00 (0.00)	0.98 (0.15)
Human Rights violations during the military government are unjustifiable, and all responsible people have to be judged.	0.92 (0.33)	0.94 (0.25)	0.06 (1.00)	0.76 (0.61)
My ideas are independent of usual opinion differences, because they are based on a very personal perspective.	0.10 (0.98)	0.94 (0.25)	0.56 (0.81)	0.35 (0.91)
My ideas are beyond usual opinion differences, because they are based on a perspective concerning what is common among all Chileans.	-0.17 (0.92)	0.06 (0.93)	0.19 (0.91)	-0.06 (0.92)
My ideas are close to the Rightwing.	-1.00 (0.00)	-0.19 (0.40)	1.00 (0.00)	-0.46 (0.80)
My ideas are close to the Leftwing.	1.00 (0.00)	-0.19 (0.40)	-1.00 (0.00)	0.39 (0.84)
<i>Agreement with statement selected as representative of the perspective given to use for opinion expression</i> <sup>b</sup>	9.85 (3.11)	9.93 (2.13)	10.54 (1.13)	9.99 (2.67)
<i>Agreement with statement selected as opposite to the perspective given to use for opinion expression</i> <sup>b</sup>	2.57 (2.58)	4.00 (2.60)	2.23 (1.17)	2.78 (2.45)
<i>Position towards September 11<sup>th</sup></i> <sup>c</sup>	4.54 (0.50)	3.50 (1.15)	2.38 (0.81)	3.93 (1.12)

Note. Standard deviations are shown in parenthesis.

<sup>a</sup> 'Agree' = 1, 'Neutral' = 0, and 'Disagree' = -1.

<sup>b</sup> 11-point scale from 'Very much in agree' to 'Very much in disagree'.

<sup>c</sup> 'Totally in favour' = 1, 'In favour, but with nuances' = 2, 'Neutral' = 3, 'Against but recognising some points' = 4, and 'Absolutely against' = 5.



## Appendix D. Inhibition as a function of the type of prime, sharedness, and ideological bias of the target statement [Study 1]

	Sharedness	Congruity	Prime			Overall
			Personal	Rightwing	Superord.	
<i>Acceptance</i>						
Consensual	Congruent	<i>M</i>	0.07	0.03	0.21	0.05
		<i>SD</i>	0.19	0.20	0.16	0.24
		<i>n</i>	12	28	15	68
	Incongruent	<i>M</i>	0.23	0.05	0.25	0.10
		<i>SD</i>	0.48	0.37	0.27	0.36
		<i>n</i>	10	26	15	62
Polemical	Congruent	<i>M</i>	-0.08	-0.04	0.34	0.01
		<i>SD</i>	0.22	0.27	0.56	0.41
		<i>n</i>	12	28	15	68
	Incongruent	<i>M</i>	0.04	0.40	0.30	0.22
		<i>SD</i>	0.18	0.59	0.14	0.39
		<i>n</i>	8	10	12	37
<i>Rejection</i>						
Consensual	Congruent	<i>M</i>	0.99	0.39	-0.29	0.18
		<i>SD</i>	0.11	0.83	0.34	0.71
		<i>n</i>	4	18	12	44
	Incongruent	<i>M</i>	-0.11	-0.01	0.03	-0.05
		<i>SD</i>	0.23	0.27	0.18	0.32
		<i>n</i>	12	28	15	68
Polemical	Congruent	<i>M</i>	-0.16	0.20	0.60	0.26
		<i>SD</i>	0.00	0.00	0.00	0.27
		<i>n</i>	2	2	3	12
	Incongruent	<i>M</i>	-0.05	-0.07	0.23	-0.06
		<i>SD</i>	0.43	0.46	0.74	0.48
		<i>n</i>	8	28	6	53

Note. For each cell, the first row displays the mean, the second row shows the standard deviation, and the third row indicate the sample size. In some of the cells corresponding to rejection, samples sizes are very low.

## Appendix E. Spanish version and English translation of statements about the Naval Battle of Iquique [Study 4]

<i>Spanish version (original)</i>	<i>English translation</i>
La Esmeralda se quedó inmovilizada porque estallaron sus calderas	The Esmeralda got stacked because its boilers blew up
¿Almorzó la gente?, preguntó Prat momentos antes del combate	Did the crew have lunch? asked Prat minutes before the battle <sup>a</sup>
La Esmeralda alcanzó a girar y recibió el espolonazo de refilón	The Esmeralda had the time just to turn and then receive the ram sideways
Un marinero peruano mató a Prat dándole un tiro en la frente	A Peruvian marine killed Prat with a shot on his head
Los botes del Huáscar salvaron a 8 oficiales y a 49 marineros	The Huascar's lifeboats saved 8 officers and 49 seamen
El cadáver de Prat fue colocado en la vereda de la calle	Prat's corpse was left at a side of the road
Ningún marinero de la Esmeralda quedó con vida	No seaman from the Esmeralda could survive
Con el Combate Naval de Iquique se ganó la Guerra del Pacífico	The War of the Pacific was won as a result of the Naval Battle of Iquique
En el primer espolonazo del Huáscar, Prat saltó al agua	Prat jumped to the sea at the first ram of the Huascar
De todos lados se escuchó a Prat cuando gritó "¡Al abordaje muchachos!"	From everywhere it could be heard Prat's shout "Stand by to board, my boys!"
La Esmeralda se fue a pique al segundo espolonazo	The Esmeralda sunk after the second ram
La Esmeralda quedó atascada en una zona de poca profundidad	The Esmeralda got stacked in shallow waters

<sup>a</sup> "Prat" = name of the Captain of the Chilean warship Esmeralda, who became well-known after he died in the Naval Battle of Iquique.

## **Appendix F. Narratives on September 11<sup>th</sup> [Study 5]**

Narratives used in the experimental manipulation of Study 5 were design as a function of their *ideological bias*—rightwing versus leftwing—and their *informational novelty*—commonsensical versus sophisticated. Thus, there was a ‘rightwing-commonsensical’ account of September 11<sup>th</sup> (1,072 words), a ‘rightwing-sophisticated’ (1,013 words), a ‘leftwing-commonsensical’ (1,044 words), and a ‘leftwing-sophisticated’ account (1,039 words).

### **I. A RIGHTWING-COMMONSENSICAL ACCOUNT**

El 11 de septiembre me recuerdo que una amiga mía que vivía en la casa golpea mi puerta y me dice “¡Calló Allende mierda!” y golpea y nosotros despertamos asustados, sin saber lo que ocurría. Ponemos la radio, abrimos las ventanas y a escuchar todo lo que estaba pasando. Nosotros estábamos muy cerca de La Moneda, estábamos en la calle San Ignacio, entonces se escuchaba todo el bombardeo, los aviones, todas esas cosas.

Para mi fue como si hubiera un día nublado, y saliera el sol, una tranquilidad tan grande, yo creía que nunca íbamos a salir de esto, que íbamos a lo que fue Cuba, algo completamente incostitucional. Con Pinochet, en cambio, tuvimos la tranquilidad más grande, no hubo Congreso, se terminó con eso en el tiempo de Pinochet, que es el sueldito que se reciben los diputados, los senadores, todo eso se ahorró, porque Chile quedó desposeído de riquezas, si era un caos tan grande, todos los negocios pelados, sin mercaderías. Todo cambio porque tuvimos más confianza, ya no había eso de llamarse “la momia”, “el comunista”, se terminó eso. Desde el primer día el gobierno de Pinochet llamó a la tranquilidad y a obedecer los nuevos ordenamientos. Fue una emoción tan grande, tan de alivio, que los militares se hayan sacrificado por el pueblo, se sacrificaron , yo tenía chiquillos, entonces fue una emoción tan grande, un agradecimiento tan grande a las Fuerzas Armadas.

El desabastecimiento, la falta de comida y de todo, no era porque los momios estuvieran acaparando, lo puedo confirmar personalmente. ¿Sabe qué hicieron las mujeres? viendo el país tan desmantelado, lo único que podían dar al Banco del Estado, no tenían otra cosa, eran las jollas familiares. Cuando fue el pronunciamiento, fui al Banco del Estado a entregar las argollas... nos había costado mucho comprarlas y las doné con tanto cariño, la joya más preciada. Llegaron señoras dueñas de fundo que estaban medias arruinadas que daban las joyas de sus

antecesoras, de sus abuelas, prendedores maravillosos, con diamantes, con perlas, todo se entregaba para hacer fondos para que Chile pudiera surgir.

Por un lado me alegro al recordar esos momentos, pero también daba un poco de pena porque quizá no debería haber sido tan violento, pero yo sentí una liberación. Claro, se dio que hubo oposición, hubo gente que no quiso entregar lo que estaban pidiendo, hubo gente que hizo resistencia, entonces fue la única forma; pero yo digo que no haya sido tan brusco, tan fuerte. Lo que más me impresionó de lo ocurrido el 11 fue el bombardeo a La Moneda, verlo en tele. Pusimos la radio y nos llamó la atención que se escuchaba pura música militar. Recuerdo que las radios, los comunicados decían que no salieran, que no se expusieran a ninguna cosa, lo único que hacía uno era ver qué tenía, qué echar mano por si acaso no había..., nosotros no teníamos pan en ese momento, teníamos pan de 3 días, entonces ver cuánto pan había para guardarlo y calentarlo y poder comer, más bien cómo atrincherarse en la casa, cerrar las ventanas, además que venía el problema del allanamiento, había mucha gente que estaba asustada, que los que tenían los libros, cosas así, estaba asustada la gente de los allanamientos, pero nosotros nos encerramos, no salimos a la calle, nos cuidamos pero sí veíamos un poco los vehículos, las patrullas, los militares, eso veíamos.

Empezaron de La Moneda a transmitir de todo esto y yo me subí al segundo piso después cuando ya empezaron los aviones a volar sobre La Moneda y sentí cuando la bombardearon. Pero yo le pedí a Dios en serio, yo se lo pedí de todo corazón que que no hicieran nada, que no hubieran muchos muertos, pero fue el pueblo el que lo pidió, yo digo que la mayoría del pueblo pidió que era que se hiciera una toma, porque ya no ya no había vuelta que darle poco menos, las fábricas no te trabajaban, se hacía samba y canuta. Las Fuerzas Armadas llegaron a La Moneda con la movilización del ejército y pidieron al presidente Allende que se rindiera y, tal como yo lo escuché en la radio, no se quiso rendir y se suicidó. Todo eso me recuerdo, ahora detalles técnicos eso no lo sé, las órdenes marciales eso no lo sé.

Allende te puedo asegurar que cuando hizo el discurso de despedida estaba absolutamente curado, esa es la voz que tenía, o sea un discurso... el típico discurso. Me acuerdo que el comentario del papá y la mamá cuando estaban escuchando fue: "Allende se va a suicidar porque está absolutamente borracho." Además que se destrozó La Moneda, este señor tampoco quiso rendirse. Porque le pusieron un avión a disposición para que se fuera toda su familia y él, soberbio, no quiso hacer eso, porque se lo plantearon, y la soberbia... él no fue humilde, hasta se mató. Se le ofreció dejar el poder sin mayor derramamiento de sangre, pero él permaneció en La Moneda, hizo un llamado hacia sus seguidores a que defendieran el gobierno de la Unidad Popular, de manera que fue un egoísmo exacerbado, porque no sólo él terminó con

sus días suicidándose sino que además llamó a otros a que siguieran su ejemplo en el sentido de defender el gobierno por las armas, y enfrentarse a los militares mediante la vía violenta, y yo creo que eso fue grave, eso yo creo que podría haberse evitado si hubiera habido más generosidad. Allende hizo un llamado a que se saliera a defender al gobierno de la Unidad Popular y llamó, hizo un llamado a que se respaldara su gobierno y que se tomaran las armas, eso fue claro y además tenían los medios para hacerlo, tenían armamento bastante sofisticado en esa época para poder combatir. Yo creo que le hizo un flaco favor a Chile el haberse mantenido en el poder, creo que la historia habría sido distinta.

También recuerdo celebrando con una botella de champaña en el techo de mi edificio junto a muchos vecinos, el hecho de que se estuviera bombardeando La Moneda, porque era el baluarte del gobierno de la Unidad Popular porque habían llegado a La Moneda a través de los votos y no a través de la fuerza, pero sin embargo a poco andar la fuerza la impuso de todas maneras. Por eso es que sentí mucha satisfacción de que estuvieran bombardeando La Moneda.

## **II. A RIGHTWING-SOPHISTICATED ACCOUNT**

Yo sé que hubo una reunión en la noche anterior con el General y quedaron de acuerdo de llegar a La Moneda y tomársela. Primero llegaron los carabineros, fueron carabineros que rodearon La Moneda. Fue entonces cuando un general que venía saliendo de una reunión muy temprano en la mañana le dice a una secretaria que trabajaba en La Moneda y a mi hermano, que pertenecía al cuerpo de carabineros: “ahora sí señores, ahora sí.” Porque hubo otro intento, anterior, que fue como un ensayo. Algunos pensaron “nooo, va a salir igual que los otros...” Cuando se completa la operación para cercar La Moneda, Allende sale como que lo estaban apoyando, sale al balcón a saludar, y ahí empiezan a llegar las otras fuerzas. Apenas los aviones comenzaron a sobrevolar La Moneda mi hermano salió, se arrancó del edificio porque él sabía que la cosa venía en serio. Luego empezó el bombardeo y Allende no se quiso rendir, se dio el tiro con el fusil que le había regalado Fidel Castro, y los sesos llegaron a la pared.

Casi todo lo que yo sé del bombardeo a La Moneda es por mi hermano, que fue un testigo directo. El pudo ver cómo el comando que defendía La Moneda comenzó a disparar contra el cerco de carabineros y militares que rodeaba el edificio, a dispararles mucho antes de que comenzaran a atacar La Moneda. Murieron varios de los que estaban allí simplemente rodeando el edificio. Luego se dio la orden de atacar porque los que disparaban de adentro no se rendían. De la misma oficina de Allende se disparaba también. Durante el combate, que duró un par de horas, ocurrió que un grupo de agentes se asomaron

tímidamente por una puerta de La Moneda agitando una camisa blanca en señal de rendición. Entonces un piquete guiado por un capitán se acercó para sacarlos. Pero resultó que se trataba de una trampa: apenas el piquete de soldados llegó a hablar con ellos, varios tipos armados ametrallaron al piquete desde posiciones estratégicas.

La gente dice “pero si los militares, mire, fueron tan agresivos...” Es cosa de fijarse en los edificios que están al frente de La Moneda: las muestras de balas por ambos lados, las murallas marcadas por los proyectiles que también se disparaban desde el interior de La Moneda. En ese tiempo se decía que los de izquierda tenían armas escondidas, pero yo pude confirmar con mis propios ojos que la cantidad real de armamento y preparación era mucho mayor que el que se suponía.

Por ejemplo mi hermano estaba infiltrado en un grupo de agentes que tenían a cargo defender a Allende. Parecerá increíble, pero lo cierto es que este grupo sabía de los planes para el 11 de septiembre con varios días de anticipación, y se encargaron de preparar para la resistencia a las ramas armadas de los diversos movimientos políticos que apoyaban al gobierno de la Unidad Popular. En verdad no hicieron nada por evitar el enfrentamiento, pues en La Moneda desde hace un tiempo ya circulaba la impresión que el gobierno ya era incapaz de salir de la crisis. Se optó entonces por cerrar los ojos frente al colapso inminente.

El día del pronunciamiento fue un alivio ver que los militares salían a recorrer las calles solamente vigilando. Porque en la mañana en mi casa se fueron a parar dos comunistas. Cuando felizmente llegaron los militares, esos dos gallos que se me fueron a instalar, a vigilar mi casa, arrancaron. Unos días antes del pronunciamiento tuve que arrancar de mi casa y salir a escondidas, porque estaban ahí vigilándome. Me avisaron que en la casa de los Cady estaban entrando y saliendo hombres, no sé si iban a dejar las armas o a armarse, eso es lo que no pudimos constatar. O las estaban sacando. Eran una casa de comunistas en toda la esquina. Entonces yo vi que salían y entraban. No sé en que forma pude que dar la vuelta, porque como tenía comunistas ahí mismo entonces dar la vuelta y meterme a la casa del frente fue bastante arriesgado. Ahí es donde avisé al regimiento de algo raro, pero el camión del regimiento pasó de largo, no pudo dar, o yo di mal el dato, ese fue un dato que di yo, porque uno estaba jugándose el pellejo, y yo me lo jugué. El 11 de septiembre vimos cómo desde aquella casa sacaron unos colchones para llevárselos en una camioneta, y las armas las tenían en los colchones, y así sacaron las armas. Como yo tenía estudiados todos sus movimientos, al final pude dar el dato y los detuvieron en la tarde.

Personalmente, ese día 11 de septiembre yo viví el ataque a un edificio de militares que había en Bilbao. Era un edificio donde vivían muchas familias de militares. Al frente había otro edificio grande, donde estaban concentrados los de izquierda, y disparaban hacia el edificio de militares. Allende llamó a la población a defenderse, a resistir. Pero

serían más preciso decir que la gente que tenía armas más bien se dedicó a atacar, especialmente cuando salió que Allende estaba muerto. Entonces los comunistas del edificio del frente desplegaron una acción muy bien planificada y con bastante apoyo de armas. Rodearon el edificio de residencia de militares y comenzaron a disparar. La mayor parte de la gente sin poderse defender, casi puras mujeres, todo lleno de vidrios el tercer piso, tener que arrastrarse con la guagua. Yo estaba muy asustada pero confiaba en que pronto algún comando militar los vendrían a neutralizar. Disparaban por unos diez minutos, luego silencio, y a los otros diez minutos volvían a disparar. En uno de estos descansos sentí cómo algunos de ellos entraban al edificio, a la planta baja. Entraron luego a uno de los departamentos y, según se supo después, tomaron como reén a una mujer y a su hija. Como a las una del día los lograron doblar y se calmó la situación.

Después de todo ese día, lo que me marcó fue la alegría de quedar libres del comunismo.

### **III. A LEFTWING-COMMONSENSICAL ACCOUNT**

Ese día 11 de septiembre los militares irrumpen en las poblaciones, en los barrios, en las ciudades; salen de sus cuarteles y fundamentalmente atacan La Moneda, incluyendo los ataques de los aviones, donde destruyen parte de La Moneda. Yo vi el bombardeo a la Moneda desde la casa. Mi casa era de dos pisos. Había una una ventana desde donde tú podías ver perfectamente bien los aviones como tomaban altura para para bombardear La Moneda y veíamos cómo tiraban los rocket y veíamos las columnas de humo. Lo simbólico es que están destruyendo la institucionalidad chilena y el desmoronamiento de lo que se suponía era un gobierno democrático.

A mí me impactó porque me imaginé una guerra. Lo recuerdo con todo, sentía como escuchaba los aviones sobre el techo de mi casa, cómo se cambió el clima esa mañana, todo se empezó a ver gris, yo siento y me recuerdo que había amanecido un día de sol, de primavera, Septiembre, pero a la diez u once de la mañana era como si todo se hubiera ensombrecido, negro, gris el ambiente, a las tres de la tarde vino el toque de queda. El Bombardeo a La Moneda me dio la pauta, porque tenían el país entero controlado, el golpe fue magistralmente planificado, y el bombardeo de La Moneda, su asalto por tierra y por aire era absolutamente desmesurado, desmedido, y lo entendí y lo interpreté como lo que era, como un símbolo de que había que acabar con esto y que podíamos esperar todos los males, que esto no iba a tener ningún límite, ninguna medida. Para mí era el fascismo que se asentaba en el poder.

Comienzan los bandos radiales en la mañana. En el bando número 1 se llama a la ciudadanía. Se dice que el gobierno de Salvador Allende ha

violado la ley, ha hecho una serie de cosas y por esa razón se llama a que renuncie inmediatamente, se le pide que renuncie. Después de eso yo recuerdo claramente cuando ellos dicen que le dan un plazo hasta las 11 de la mañana para que él renuncie y le dan un avión si quiere para que él se vaya a cualquier parte del mundo y Allende responde con su discurso. En otras palabras, Allende quiere dialogar y, a mi entender, se le niega dialogar. Recuerdo cuando dice “en este momento aviones están haciendo vuelos rasantes por La Moneda” y ahí después de eso se cortan las comunicaciones y ya no se escuchan más noticias hasta la noche. Ahí murieron varias personas que estaban acompañando a Allende, los otros los tomaron detenidos, otros desaparecieron, tal vez murieron de inmediato.

A través de los primeros bandos radiales, que llamaban a los dirigentes a someterse a las leyes que regían en ese momento, entregando nóminas, donde llamaban a la gente a presentarse y que nadie podía estar en contra porque tenía que someterse a todo lo que venía de ahí para adelante. Se llama a la población a la tranquilidad, aunque más bien yo creo que llama al temor, para que no reaccione en contra de ellos.

Yo seguí escuchando la radio toda la mañana, cuando bombardearon La Moneda. Teníamos tele en ese tiempo, era en blanco y negro y veía la tele cuando mostraron todo el bombardeo. Vimos cómo transmitían este golpe de estado y este bombardeo a La Moneda casi como como un festival pirotécnico. Recuerdo a los periodistas que estuvieron a cargo de esto, y cada vez que los veo en la TV es una impotencia, una rabia tan grande de ver a aquellos periodistas que jugaron un rol tan tremendo en esos momentos, de cómo en el fondo se regocijaban de lo que estaba pasando, de lo que pasaba en La Moneda.

Lo que me impresionó fue la honradez del compromiso de Salvador Allende, en el sentido de no entregarse. Yo creo que hay que ser muy hombre para hacer lo que hizo él, para por ejemplo hablar con esa tranquilidad con que te habla en el último discurso... él sabe que no tiene ninguna posibilidad pero él habla tranquilamente. En los primeros bandos ya se dijo formalmente que aquí se terminaba el Parlamento, se terminaba con todo, nos dimos cuenta de que el gobierno de Salvador Allende llegaba su fin, más aun cuando escuchamos el discurso de despedida de Presidente Allende, y lo recuerdo muy bien como si fuera hoy día, porque mientras él empezaba sus palabras, mi madre, hoy fallecida, se puso a llorar y me dijo “escúchalo porque él se está despidiendo”, y a la hora después se informó que Allende estaba efectivamente muerto, que primero se le había pedido que se rindiera, y él , como un hombre muy consecuente, prefirió dar su vida a cambio de traicionar a su pueblo.

No podía entender que un hombre de la calidad humana y moral del presidente Allende hubiese muerto en La Moneda y que La Moneda misma, ese símbolo de la civilización, de la democracia, de la

governabilidad, hubiese sido bombardeado. No podía entenderlo. Por supuesto que las cosas no andaban del todo bien durante el gobierno de la Unidad Popular, especialmente en la economía. Pero gran parte de eso me parece a mí que fue culpa de la misma derecha, tanto por el acaparamiento como por la falta de voluntad política con respecto al programa del gobierno. Después que asumió la Junta Militar la derecha sacó todas sus riquezas que tenían guardadas, incluso tenían como para donar al nuevo gobierno lo que le habían escondido al anterior.

Siempre se corrió el rumor de que Allende había sido asesinado a sangre fría. Obviamente nadie les creyó cuando dijeron el mismo 11 que se había suicidado. Después de un tiempo, claro, tu puedes creer, pero en aquella época tu crees que lo mataron o sea no tenía mucho sentido tampoco el suicidio. O sea sencillamente morir peleando tenía mucho más sentido que suicidarse, pero en fin. Mi convicción es que decidió quitarse la vida porque él no quería traicionar a su pueblo, y prefería pagar, como dice "pagaré con mi vida". Porque si Allende hubiese salido detenido, lo hubieran mandado al exilio, significaba que los otros tenían la razón, estaba muy consciente de lo que él estaba haciendo.

#### **IV. A LEFTWING-SOPHISTICATED ACCOUNT**

Las horas de la mañana del 11 en la universidad fueron muy confusas. Hacia el mediodía el rector Kirberg pidió calma, llamó a no desesperarse hasta no conocer el desarrollo exacto de los acontecimientos. Minutos antes habíamos presenciado desde la explanada principal de la universidad el bombardeo de La Moneda. Hacia el mediodía se había ya completado el cerco de la universidad.

Poco antes de las seis se presentó un piquete de uniformados al mando de un oficial de ejército. Después de algunos instantes de vacilación salió a su encuentro, con el ánimo de parlamentar, un grupo encabezado por Núñez, el presidente de la Federación de Estudiantes. El oficial advirtió secamente: "Lo del toque de queda va en serio. No vamos a permitir que salga nadie después de la seis. ¡Y queda prohibida la circulación por todos esos pasillos!". Indicó con la mano los largos corredores abiertos, y señalando luego la avenida Sur, que separa la universidad en dos sectores, agregó: "Y que no se le ocurra a nadie atravesar esa calle". "A usted lo hago responsable de lo que pueda pasar". Enseguida dio media vuelta y se retiró con el piquete. No era una simple amenaza. Algunos que intentaron desplazarse de un pabellón a otro tuvieron que renunciar a la idea. Los disparos llovían de inmediato.

Llegó la noche, una de las peores que he pasado en mi vida. Apenas oscureció, las ráfagas de fusilería y ametralladoras se sucedieron casi sin interrupción. Dormimos muy poco, los que pudimos hacerlo. El baleo produjo esa noche, que yo sepa, dos muertes. Alrededor de las diez fue

alcanzado por una bala Hugo Araya, fotógrafo de la universidad que antes había sido camarógrafo del canal 9. Se desangró durante horas. Kirberg hizo muchos esfuerzos, todos inútiles, con postas y hasta comisarías para conseguir una ambulancia. Falleció cerca del amanecer. Poco antes había muerto una muchacha, una estudiante cuyo nombre ignoro; recibió una bala perdida y falleció instantáneamente.

En la Escuela de Artes y Oficios la mayor parte se concentró en el casino, que parecía uno de los sitios más seguros. Algunos compañeros hablaban cada cierto tiempo a los congregados. Trataban de explicar la situación, de levantar los ánimos. En el grupo, muy numeroso, estaba Víctor Jara. Andaba con su guitarra y cantó varias de sus canciones más famosas.

A las siete de la mañana nos reunimos en la oficina de la rectoría dirigentes estudiantiles, autoridades universitarias y políticas. Nos proponíamos discutir las medidas más adecuadas para organizar una evacuación ordenada de la universidad. Los carabineros se habían retirado muy temprano, poco después de la madrugada, y ahora nos estaban cercando fuerzas del ejército. Los soldados, muy visibles y característicos porque debajo de la casaca usaban un jersey de cuello subido de color naranja muy intenso, se desplazaban corriendo de árbol en árbol, con gran rapidez y sigilo, parapetándose en posición de combate. Poco antes de las siete habían aparecido por la avenida Ecuador equipos de artillería. Un cañón de 120 milímetros fue instalado en medio de la calle que enfrenta directamente la gran explanada central. Entramos a nuestra reunión y a las siete y cinco minutos en punto sonó el primer cañonazo. El disparo hizo impacto en la segunda planta, en la oficina exactamente contigua a la que ocupábamos, y la destruyó totalmente. Nos lanzamos al suelo y acto seguido sentimos cómo se iniciaba el ametrallamiento. El fuego se mantuvo durante unos veinte minutos, me parece. Se interrumpió y nos intimaron con altavoces a rendirnos. Apenas habíamos alcanzado a salir al pasillo tres personas con los brazos en alto, cuando las ametralladoras abrieron otra vez el fuego. Otros veinte minutos de metralla. Nueva tregua y nueva exigencia de rendición.

Cuando comenzábamos a agruparnos en el hall que daba hacia la puerta de salida, vimos cómo llegaban los soldados corriendo. Ibamos saliendo y apenas traspasado el umbral empezaron a llover sobre nosotros culatazos y puntapiés. Luego nos ordenaron tirarnos al suelo, boca abajo, las piernas abiertas y las manos en la nuca. El capitán del día anterior separó a Núñez y a Kirberg, que había salido agitando una camisa blanca identificándose en su calidad de rector. Fue particularmente brutal con el dirigente estudiantil, lo abofeteó, mientras los soldados se turnaban hundiéndole la culata en las costillas. De pie otra vez, nos hicieron trotar hacia la avenida Sur en medio de una doble fila de uniformados. Son más o menos ochenta metros de corredor abierto y corrimos por ahí entre insultos, culatazos y patadas. Ya en la

avenida, de nuevo al suelo en la posición clásica, en la que estaríamos alrededor de cinco horas, mientras la tropa completaba el asalto de la universidad. El capitán pronunció mi nombre. Quién es fulano de tal. Yo indiqué y me ordenó levantarme. Vi entonces que tenía en sus manos mi carnet de militante. “Así que comunista”, dijo a gritos, “¿y qué crestas hacís vos en la universidad?”. “Profesor”, dije, por decir lo más corto. Me golpeó con la culata de su metralleta, mientras agregaba la pobre opinión que los militares tienen de los profesores.

Como a las tres de la tarde se puso fin a la torturante posición. Nos concentraron a la cancha de beibifútbol. En la cancha la espera duró otras dos horas, siempre con las manos en la nuca, aunque ahora de pie. Luego empezó el traslado hacia el Estadio Chile.

El operativo duró muchas horas y comprendió otros aspectos: la descarga de camiones militares, recuerdo, de fusiles, bazukas y cajas de municiones que apilaron por allí y que luego fueron exhibidas en la televisión como encontradas en nuestro poder.

Hubo más bajas. Unos pocos estudiantes fueron fusilados y otros fueron cazados a balazos mientras trataban de huir. Testigos de la Villa Portales cuentan que un pequeño grupo de jóvenes, en su fuga loca, se trepó a la copa de agua que hay vecina al estadio de la universidad. De allí los bajaron a tiro limpio. No sé sus nombres. Ni siquiera sabemos con exactitud cuántos fueron. Sus cadáveres fueron abandonados por el Ejército y apilados en los patios de la Escuela de Artes y Oficios. Estuvieron allí varios días y sólo fueron retirados cuando el vecindario reclamó porque la pestilencia empezaba a tornarse insoportable.

## Appendix G. Attitude towards narratives as a function of the political orientation of participants [Study 5]

Although, for simplicity, the political orientation of participants was ignored as a factor in the report of Study 5, the next table displays the means of attitude towards narratives as a function of their ideological congruity, the intergroup pattern of knowledge distribution, and the participants' political orientation. Then, statistical results of the same analyses of variance carried out in the report of Study 5 are detailed, this time including the participants' political orientation as a factor in the model. These results show not only that the political orientation of participants did not interact with any of the relevant factors, but also that the inclusion of the former strengthens the effect reported in Chapter 7.

<i>Knowledge distribution</i>	<i>Congruity</i>	<i>Political orientation</i>								
		<i>Pro-coup</i>			<i>Anti-coup</i>			<i>Overall</i>		
		<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>N</i>
CONF-DIVE	Congruent	8.65	(1.95)	20	5.79	(3.47)	19	7.26	(3.12)	39
	Incongruent	2.80	(1.54)	20	3.53	(2.59)	19	3.15	(2.12)	39
CONF-DISP	Congruent	8.85	(1.97)	26	8.83	(2.44)	24	8.84	(2.19)	50
	Incongruent	2.92	(1.92)	26	2.54	(2.32)	24	2.74	(2.11)	50
COMP-DIVE	Congruent	8.55	(2.07)	11	7.23	(3.30)	26	7.62	(3.02)	37
	Incongruent	4.45	(1.81)	11	2.81	(1.98)	26	3.30	(2.05)	37
COMP-DISP	Congruent	8.58	(1.43)	19	7.37	(4.04)	19	7.97	(3.05)	38
	Incongruent	3.11	(1.70)	19	2.21	(2.12)	19	2.66	(1.95)	38
Overall	Congruent	8.68	(1.83)	76	7.39	(3.43)	88	7.99	(2.87)	164
	Incongruent	3.16	(1.80)	76	2.76	(2.25)	88	2.95	(2.06)	164

The 4 (knowledge distribution) 5 2 (congruity: congruent / incongruent) 5 2 (political orientation: Pro- / Anti-coup) analysis of variance yielded the following results:

<i>Source</i>	<i>Type III Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>p</i>	<i>η<sup>2</sup></i>
<i>Tests of Within-Subjects Effects</i>						
Congruity	1866.53	1	1866.53	226.46	0.000	0.59
Congruity 5 Knowledge distr.	58.20	3	19.40	2.35	0.074	0.04
Congruity 5 Political orient.	12.28	1	12.28	1.49	0.224	0.01
Congruity 5 Knowledge distr. 5 Political orient.	52.42	3	17.47	2.12	0.100	0.04
Error(Congruity)	1285.78	156	8.24			
<i>Tests of Between-Subjects Effects</i>						
Intercept	9321.29	1	9321.29	2741.05	0.000	0.95
Knowledge distr.	22.20	3	7.40	2.18	0.093	0.04
Political orient.	69.10	1	69.10	20.32	0.000	0.12
Knowledge distr. 5 Political orient.	18.46	3	6.15	1.81	0.148	0.03
Error	530.50	156	3.40			

The 4 (knowledge distribution) 5 2 (type of ingroup) 5 2 (type of outgroup) 5 2 (political orientation) analysis of variance yielded the following results:

Source	Type III Sum of Squares	df	Mean Square	F	p	$\eta^2$
<i>Tests of Within-Subjects Effects</i>						
Congruity	1866.53	1	1866.53	226.46	0.000	0.59
Congruity 5 Ingroup	1.67	1	1.67	0.20	0.653	0.00
Congruity 5 Outgroup	46.33	1	46.33	5.62	0.019	0.03
Congruity 5 Political orient.	12.28	1	12.28	1.49	0.224	0.01
Congruity 5 Ingroup 5 Outgroup	4.72	1	4.72	0.57	0.451	0.00
Congruity 5 Ingroup 5 Political orient.	12.53	1	12.53	1.52	0.219	0.01
Congruity 5 Outgroup 5 Political orient.	13.10	1	13.10	1.59	0.209	0.01
Congruity 5 Ingroup 5 Outgroup 5 Political orient.	25.39	1	25.39	3.08	0.081	0.02
Error(Congruity)	1285.78	156	8.24			
<i>Tests of Between-Subjects Effects</i>						
Intercept	9321.29	1	9321.29	2741.05	0.000	0.95
Ingroup	0.18	1	0.18	0.05	0.817	0.00
Outgroup	0.44	1	0.44	0.13	0.721	0.00
Political orient.	69.10	1	69.10	20.32	0.000	0.12
Ingroup 5 Outgroup	20.67	1	20.67	6.08	0.015	0.04
Ingroup 5 Political orient.	7.72	1	7.72	2.27	0.134	0.01
Outgroup 5 Political orient.	8.07	1	8.07	2.37	0.125	0.01
Ingroup 5 Outgroup 5 Political orient.	0.94	1	0.94	0.28	0.601	0.00
Error	530.50	156	3.40			

## Appendix H. Recognition data as a function of the political orientation of participants [Study 5]

Although, for simplicity, the political orientation of participants was ignored as a factor in the report of Study 5, the next table displays the means of recognition of statements as a function of the ideological congruity of the narratives, the intergroup pattern of knowledge distribution, and the participants' political orientation.

Knowledge distribution	Congruity	Response	Political orientation								
			Pro-coup			Anti-coup			Overall		
			M	SD	n	M	SD	n	M	SD	N
CONF-DIVE	Congruent	"Old"	4.84	(0.84)	20	4.19	(1.23)	17	4.54	(1.08)	37
		"New"	3.05	(1.13)	20	2.73	(0.96)	17	2.90	(1.05)	37
	Incongruent	"Old"	4.74	(1.24)	20				4.74	(1.24)	20
		"New"	3.01	(0.83)	20				3.01	(0.83)	20
CONF-DISP	Congruent	"Old"	4.55	(1.08)	24	4.20	(1.03)	23	4.38	(1.06)	47
		"New"	3.19	(0.86)	24	2.78	(1.52)	23	2.99	(1.23)	47
	Incongruent	"Old"	4.45	(0.90)	23	4.62	(0.95)	23	4.53	(0.92)	46
		"New"	3.13	(1.29)	23	3.06	(1.25)	23	3.09	(1.26)	46
COMP-DIVE	Congruent	"Old"	4.30	(0.74)	11	5.13	(1.05)	27	4.89	(1.03)	38
		"New"	2.70	(0.78)	11	2.53	(1.26)	27	2.58	(1.14)	38
	Incongruent	"Old"	4.77	(0.83)	11	4.30	(0.76)	27	4.44	(0.80)	38
		"New"	2.71	(1.19)	11	2.64	(0.91)	27	2.66	(0.99)	38
COMP-DISP	Congruent	"Old"	4.42	(0.94)	18	4.92	(0.85)	19	4.68	(0.91)	37
		"New"	2.85	(1.02)	18	2.88	(1.39)	19	2.87	(1.21)	37
	Incongruent	"Old"	4.56	(0.99)	18	2.69	(0.99)	13	3.77	(1.35)	31
		"New"	2.91	(1.47)	18	3.18	(1.03)	13	3.02	(1.29)	31
Overall	Congruent	"Old"	4.56	(0.94)	73	4.65	(1.11)	86	4.61	(1.03)	159
		"New"	2.99	(0.97)	73	2.72	(1.30)	86	2.84	(1.16)	159
	Incongruent	"Old"	4.60	(1.01)	72	4.09	(1.13)	63	4.36	(1.10)	135
		"New"	2.98	(1.20)	72	2.90	(1.08)	63	2.94	(1.14)	135

