Situating person memory: The role of the visual context on memory for behavioral information

Tomás A. Palma [a,*], Margarida V. Garrido [a,b], Gün R. Semin [b,c]

[a] *Instituto Universitário de Lisboa (ISCTE-IUL), Cis-IUL, Lisboa, Portugal*
[b] *Faculty of Social and Behavioural Sciences, Utrecht University, Utrecht, The Netherlands*
[c] *College of Social Sciences and Humanities, Koç University, Istanbul, Turkey*

HIGHLIGHTS

- Person memory is constrained by the visual context where encoding and retrieval take place.
- The meaningfulness of the context information for a stereotypical target-person was manipulated.
- Meaningful contextual information presented at encoding improved memory.
- This memory advantage only occurs when the encoding goal requires cognitive organization.
- Meaningful contextual information also enhances memory only when presented at retrieval.

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ABSTRACT

Person memory has been mainly investigated as an individual process. In contrast, we argue that person memory results from the interplay between the individual and the context. Thus, the way people acquire and retrieve social information is constrained by the context in which these processes take place. This argument was explored in three experiments. In an impression formation paradigm, we manipulated the meaningfulness of contextual information (objects) for a stereotypical target. Results showed that meaningful contextual information presented during the encoding of behavioral information improved memory for the behavioral information but also for the contextual information (Experiment 1–2); that this memory advantage only occurs when the encoding goal requires some degree of cognitive organization (Experiment 2); and finally, that meaningful contextual information also enhances memory when presented at retrieval (Experiment 3). These results are consistent with a situated cognition perspective according to which the context where cognitive activities take place can be used to facilitate cognitive activity. We discuss the implications of these results for the standard person memory view and identify new routes for future research.

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Introduction

> [W]hen entities and events occur in their expected situations, processing is relatively easy and effective.
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> [(Barsalou, 2008, p. 242)]

Impressions of others are fundamental tools to navigate a complex social world. The research on impression formation and person memory has occupied center stage in social psychology ever since its early beginnings and has inspired various theories and led to increasingly sophisticated methods to identify the cognitive structures and processes driving it (for reviews, see Carlston & Smith, 1996; Smith, 1998; Skowronski, McCarthy, & Wells, 2013). However, one common criticism that has been made of the field has been the individualistic approach that has typically guided person memory research (e.g., Smith & Collins, 2009; Smith & Semin, 2004). Despite the significant progress towards understanding how social targets are perceived and represented in concrete social situations, the field is still highly influenced by a characterization of cognitive mechanisms as processes taking place exclusively within the individual mind regardless the context in which they unfold (e.g., Wyer & Srull, 1989).

Recent research, inspired by the 'situated cognition' perspective (e.g., Smith & Semin, 2004; Yeh & Barsalou, 2006), has started to investigate the role played by factors external to perceivers in shaping mental representations about others. For example, research has shown that

* Corresponding author at: Institute of Social Sciences, University of Lisbon; Av. Prof. Aníbal Bettencourt, no. 9 1600–189, Lisbon, Portugal.
E-mail address: tomas.palma@ics.ul.pt (T.A. Palma).

some features of the physical (e.g., IJzerman & Semin, 2009; Semin & Garrido, 2012; Williams & Bargh, 2008) and social context can shape the impressions we form about a target (Garcia-Marques, Garrido, Hamilton, & Ferreira, 2012; Garrido, Garcia-Marques, & Hamilton, 2012a, 2012b; Garrido, Garcia-Marques, Hamilton, & Ferreira, 2012; Smith & Collins, 2009).

In the current work, we extend this research by investigating the influence of another contextual variable,[1] namely the visual context in which the target's behavioral information is acquired and retrieved. In the following, we begin by presenting research illustrating how context has been addressed in the study of person memory. We then review relevant findings illustrating how physical and social contexts can influence cognition and memory from a situated cognition perspective. Finally, we outline three studies designed to investigate how specific visually presented physical contexts can influence person memory.

Person memory: From individual traits to complex behaviors

Solomon Asch's seminal work (1946) placed the study of impression formation in the spotlight and shaped the path of what would become 'person memory' research (Hastie & Carlston, 1980). Asch (1946) was interested in understanding how people form coherent impressions of others based solely on individual personality traits and in identifying which principles determine the integration of these traits into a coherent impression. As this research area developed, interest increased in understanding the processes by which these impression formation processes unfold in the social context. Thus, the information about target-persons became richer by including behavioral descriptions in specific contexts (e.g., "He helped an elderly person to use the ATM", Palma, Garrido, & Semin, 2011). Implicit in the use of these kinds of stimulus materials was the notion that the target behavior is interpreted by taking into account different types of information about the context in which the behavior is displayed. Some of the questions that guided this research were, for example, what is the role of the context in influencing what is encoded and retrieved about a person and whether the information that is recalled is also used in judgment (see Carlston & Smith, 1996; Skowronski et al., 2013; Smith, 1998).

Although the research on impression formation and person memory has made some progress towards contextualization, the main theoretical focus and research endeavors are still on the isolated cognitive processes taking place exclusively within the individual mind. Factors like participants' processing goals (Garcia-Marques & Hamilton, 1996; Hamilton, Katz, & Leirer, 1980), their cognitive resources at encoding (e.g., Bargh & Thein, 1985; Macrae, Hewstone, & Griffiths, 1993; Sherman & Hamilton, 1994; Srull, 1981; Srull, Lichtenstein, & Rothbart, 1985) and at retrieval (Garcia-Marques, Hamilton, & Maddox, 2002), or the (mis)match between the targets' traits and stereotype-based expectancies and its behaviors (e.g., Bodenhausen, 1988; Crawford & Skowronski, 1998; Hastie & Kumar, 1979; Wyer & Srull, 1989), are some of the most common factors featuring in explanations for the amount and type of information that can be retrieved about the target. However, like most cognitive activities, person memory is often established in concrete physical and social contexts that can influence our ability to encode and retrieve information about other people.

In the next section we introduce the socially situated cognition approach (e.g., Semin & Smith, 2013; Smith & Semin, 2004) according to which contextual information is fundamental for cognition and often facilitates information processing and refer to some studies that directly examine the role of contextual information in impression formation processes.

Cognition as the interaction between the individual and the context

William James, Vygotsky, or Bartlett's views that mental representations emerge from dynamic and adaptive sensorimotor interactions with the physical and social context have regained currency with the emergence of the "situated cognition" approach (e.g., Semin, Garrido, & Palma, 2012, 2013; Semin & Smith, 2002; Semin & Smith, 2013; Smith & Semin, 2004; Yeh & Barsalou, 2006). One of the core principles of this new conceptual approach is the idea that cognition extends beyond the individual perceiver to physical and social contexts (e.g., Clark & Chalmers, 1998; Hutchins, 1995; Kirsh, 1995; Kirsh & Maglio, 1994; Yeh & Barsalou, 2006).

Recently, researchers have extended this idea to person perception with the argument that other people participate in the construction of mental representations and in the processing of information in a way that can extend our cognitive capacities (e.g., Smith & Collins, 2009). In the specific case of person memory, current research, examining the effects of collaboration in the encoding and retrieval of social information processing, has shown that the extent to which members of a collaborative recall group share similar representations of previously learned information determines the outcomes of their collaborative memory (Garcia-Marques et al., 2012; Garrido, 2006; Garrido, Garcia-Marques, & Hamilton, submitted for publication). However, other persons are not the only source of contextual information that we use when forming impressions. Recent studies based on the Asch (1946) paradigm indicate that when people form impressions in a warm context they rate the target as warmer and friendlier than when those impressions are formed in a cold context (Williams & Bargh, 2008). Therefore these and other concrete physical contexts within which impressions are formed can also constitute important sources of information. For example, let us imagine that we need to build a wall around our backyard and we want to hire a construction worker to do the job: it is very likely that we will find and interact with this person in a construction setting. What if we meet this person in a supermarket? Does the construction setting (or the supermarket setting), or the information that is typically present in such contexts (objects, tools, etc.), influence the way we encode and retrieve information about this target? This is exactly the question we pursued in this paper. Before introducing the details of our research, in the next section, we briefly review research on perception and categorization of faces and objects that illustrates the advantages of integrating the visual physical context in the cognitive system.

The importance of the visual physical context for cognition

Visual contextual information plays a significant role in a variety of cognitive and perceptual processes (for reviews, see Semin et al., 2012; Yeh & Barsalou, 2006). For example, emotion recognition research has shown that faces are not encoded in isolation but together with the context in which they are perceived (for a review, see Barrett, Mesquita, & Gendron, 2011). In a recent paper, Barrett and Kensinger (2010) showed that participants who were asked to categorize emotional faces remembered more contextual information than participants who had to make approach and avoidance affective judgments. Apparently, the goal to categorize the faces led participants to use all the information available to them – beyond the facial expressions – when computing their responses.

In social categorization, faces were more often categorized as 'White' when presented against an American scene context (e.g., house, city) and as 'Asian' when presented in a Chinese scene context (Freeman, Ma, Han, & Ambady, 2013). Interestingly, although participants' categorizations were not influenced by the context in the face-context mismatch conditions (e.g., prototypical Asian face in an American scenario), they nevertheless showed a bias towards the opposite category associated with the background scene (e.g., White), as measured by participants' computer mouse trajectories when selecting the desired

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[1] For a discussion of the multiple meanings of the term 'context', see, for example, Reis (2008) and Yeh and Barsalou (2006).