Presentation Proposal

Title: Memory for Serial Order in Social Cognition: Does Order Matter When We Are Forming Impressions About Strangers?

Author(s): Rui S. Costa & Leonel Garcia-Marques

Abstract (1): Keywords: Person memory, memory for serial order, impression formation, item information, order information

The study of serial order effects is one of the main topics in human memory. In fact, much of our cognitive performance that uses memory involves compilations of events whose order of occurrence is determinant.

The majority of models about memory for serial order have been stressing the distinction between item information and order information. TODAM (Lewandowsky & Murdock, 1989), for instance, emphasizes the difference between three types of information: *item information* allows the recognition of single objects or events; *associative information* underlies the recognition or recall of pair of objects/items; *serial order information* preserves the temporal order information in a sequence. This critical distinction remains absent in the social cognition literature. Furthermore, the systematic study of memory for serial order has not been seriously regarded, though many order output effects are very well known (e.g. primacy and recency effects, Asch, 1946).

According to associative person memory models the organizational process underlying impression formation is very dynamic. During encoding, each element of information will be integrated with items previously known in the emergent impression (Hamilton, Katz & Leirer, 1980b). The resultant cognitive representation, defined as a network of associative links (Sherman & Hamilton, 1994), should facilitate the recall of item information in impression formation conditions, but make the recall of order information more difficult, since this organization disrupts the behaviour's order of presentation. As so, a direct comparison between an impression formation and a memorization goal condition should highlight the difference in the amount of associative elaboration that characterizes these two tasks.

We generally followed Hamilton, Katz & Leirer (1980a), but we presented participants with information relative to multiple targets. Furthermore, we included measures for both memory for order and source[1]. We expected that memory for source should be better recalled under an impression formation than memory goal due to the intra-target organizational process triggered by impression formation. Nevertheless, the opposite result was expected for memory for order of successive items, because this organizational process that occurs under impression formation should disrupt the natural sequence of information in the stimulus list. It was expected then, that memory for the order of behaviours that have been presented successively would be better in memorization than in impression formation conditions. In contrast we expected impression formation to outperform memory participants in their memory for order of behaviours that have been assigned to the same target because the intra-target organizational process facilitates the knowledge of the relative positions of intra-target behaviours.

Participants were randomly assigned to the cells of a 2 (processing goals: impression

[1] A measure of source information (Ehrenberg & Klauer, 2005; Garcia-Marques & Hamilton, 1996; Johnson, Hashtroudi, & Lindsay, 1993) was used instead of a measure of item information to avoid contamination problems that would emerge if we had used memory for order after memory for item, or vice-versa.

formation set vs. memorization set) X 4 (replications of stimulus list: version 1, version 2, version 3 and version 4) X 2 (succession of behaviours: successive vs. non-successive) X 2 (nature of the behaviours: intra-target vs. between-target) factorial mix design with the last two variables grouped within-subjects in the four versions of the stimulus list.

Subjects were presented with 32 behaviours of 4 targets. 16 of these behaviours were organized in 4 blocks of 4 behaviours each, according to the combination of the variables succession and nature of behaviours. The 32 behaviours were presented to the participants for 8 seconds each, followed by a distracter task. Finally, they were asked to order the 4 behaviours of each block according to their position in the stimulus list, and to identify the target that had performed each one of the 32 behaviours[2].

Results show (a) that participants retrieved more easily the target that had performed the behaviours when they were forming impressions. These data replicate the effects found by Hamilton et al. (1980) and Garcia-Marques and Hamilton (1996) with a different measure, namely source memory instead of free recall, supporting the idea that forming an impression is organizing information in a way that attempts to make sense of a person. If that organized representation results in a pattern of inter-item associations, when we use the behaviour to trigger the person node, there will be plenty of ways to access it.

Results of memory for order (b) seem to suggest that participant's performance is always better when they are forming impressions (contrarily to what was expected initially). The main explanation for this pattern of results is that serial order information was not preserved efficiently under both processing goals, as such order judgments were based in associated cues. Since successive items share many of these cues, order judgment performance was impaired. The fact that this pattern was replicated across processing goals (predicted only for impression formation) suggests that memory participants spontaneously encoded items in a way that was independent from serial order.

In the case of non-successive behaviours (c), results corroborated our contentions that performance should be improved under impression formation conditions for behaviours performed by the same target as a consequence of the integrative processes underlying impression formation.

[2] The behaviors were presented randomly, both for order and source information.