INTRODUCTION TO THE SPECIAL ISSUE: SITUATED SOCIAL COGNITION

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What is situated social cognition? Certainly, it is not a completely new idea, one that has arrived out of whole cloth with no ties to earlier approaches in psychology. Indeed, many of its basic themes can be found throughout the history of psychology, as far back as William James, John Dewey, and the American Pragmatists (Dewey, 1896), through the Gestaltists (Heidbreder, 1933), and even in some measure in modern social cognition research (Fazio, Jackson, Dunton, & Williams, 1995; Levine, Resnick, & Higgins, 1993). As with historical trends for most broad approaches in psychology, the emphasis on situatedness has ebbed and flowed. Yet within the lifespan of social cognition research, such an emphasis has largely been ignored. Indeed, scholars behind some of the best known effects, paradigms, and measures within social cognition not only disregarded situatedness, but were often explicitly antagonistic to it, preferring to emphasize the supposed "direct" and "context-free" aspects (e.g., Bargh, Chen & Burrows, 1996; Greenwald, McGhee, & Schwartz, 1998).

Recently, traditional paradigms have been challenged in regard to the degree to which the expression of stored, stable representations can adequately account for social cognitive processes (Barsalou, 2008; Fazio & Olson, 2003; Katzko, 2006; Smith & Semin, 2004), and evidence for more general effects of context sensitivity has gathered (e.g., Castelli & Tomelleri, 2008; Cesario, Plaks, Hagiwara, Navarrete, & Higgins, 2010; Fitzsimons & Fishbach, 2010; Gawronski & Sritharan, 2010; Jonas & Sassenberg, 2006; Sechrist and Stangor, 2001; Wittenbrink, Judd, & Park, 2001). Indeed, there has been something of a groundswell of research in the last 5–10 years illustrating the many ways in which social cognition must move beyond the early approaches; such research has generally fallen under the terms *situated cognition*, *grounded cognition*, or *contextualized cognition*.

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What then is situated cognition? As defined by Smith and Semin (2004), this approach advances four core ideas: (1) cognition is for adaptive action; (2) it involves both the body and sensori-motor systems; (3) it is situated in an immediate intercourse with its environment; and (4) it is distributed across other people's minds.

Developments both within and outside social psychology have supported these core postulates. For example, in the area of automatic social behavior following priming of social categories, we have recently reported findings suggesting that an understanding of these areas must consider its situated nature (Cesario et al., 2010) and the self-regulatory significance of social groups and behavioral responses (Cesario & Jonas, 2013). A similar picture emerges in research on indirect measurement as well. Indirect measures have been shown to be dependent on context differences on the side of the participants (Richetin, Richardson, & Mason, 2010), and also for context variations of the stimulus material itself (Dimmock, Hallett, & Grove, 2009; Wittenbrink et al., 2001). Findings from embodiment research point to the necessity of considering the physiological state and location of the individual (Barsalou, 2008). For sound methodological reasons, we control and restrict the richness of the experimental situation. Yet these reasons are not without consequences, as they can limit the range of potential response options available to participants. For example, Harmon-Jones demonstrated the influence of body position on neural responses related to aggression (Harmon-Jones & Peterson, 2009). The utility of a situated approach has also been demonstrated by research in subdisciplines outside of social psychology, across topics as varied as visual perception, motor control, and language perception (e.g., Blakemore, Goodbody, & Wolpert, 1998; Clark, 2013; Friston, 2009, 2010; Hosoya, Baccus, & Meister, 2005; Otten & Van Berkum, 2007; Sharma, Dragoi, Tenenbaum, Miller, & Sur, 2003; Van Berkum, Brown, Zwitserlood, Kooijman, & Hagoort, 2005; Wolpert & Ghahramani, 2000).

In sum, there is accumulating evidence across subdisciplines of psychology that more nuanced, situated theories and methodologies are able to capture the interplay of multiple determinants of cognitive processes. This special issue was designed to capitalize on this momentum.

THIS SPECIAL ISSUE

When thinking about the range of potential submissions for a special issue on "situated social cognition," we aimed at assembling research contributions that captured exciting new and classic directions in social cognition, where general principles could be understood in light of situational connections and vice versa. The special issue is designed to capture research in which context and individual cognitive functioning interpenetrate one another. Additionally, we were interested in papers that challenge situated approaches or suggest principled ways in which situated and non-situated findings could be distinguished. We explicitly issued this latter challenge because whenever a new area of research attracts excitement, there is the potential danger of over-enthusiasm, such that researchers seek to interpret every finding within the new framework, even when such findings could be understood from more traditional approaches.

The range of submissions only in part covered our expectations. We were fortunate to receive many excellent submissions that spanned a wide range of topics, from communication, to social facilitation, to automatic activation of response

behaviors. This resulted in a special issue which, we believe, contributes to the theoretical and applied understanding of social cognitive processes by emphasizing the impact of multi-factor influence on cognitive functioning. It captures exciting new directions in social cognition in a manner consistent with the traditional interest in process-analytical approaches in our field.

At the same time, however, research on embodiment clearly dominated the themes and approaches chosen, while other paradigms and topics were represented to a lesser degree. Further, our challenge to outline theoretically derived tests to distinguish situated from non-situated approaches was not heeded. This was unfortunate, given that the field of embodiment is badly in need of such theoretical argument. Any study involving manipulation of the body in any way appears to have the keyword "embodiment" attached to it, whereas many of these effects can likely be explained equally well by classic priming mechanisms.

When conceptualizing the special issue, we thought it to be a proper moment to approach those authors who have largely defined research in this area during recent years (Smith & Semin, 2004, 2007). Luckily, these authors agreed and were willing to provide both a review and outlook on the field. Again, as in 2004, *Semin and Smith* make use of their conceptual framework of "socially situated cognition" and extract two themes from the research in the field. First, contextual characteristics as well as movements of others are mapped onto the body of the perceiver, and second, they point to an emergent process characteristic. They define social cognition as emergent, meaning that it influences those determinants that generate it, rather than the reverse causal direction. Semin and Smith point to the fact that much research on socially situated cognition has been undertaken in domains adjacent to social psychology, which increases the need for future integration.[1]

The first empirical paper in this special issue addresses a simple but elegant idea: Relevant social contexts prompt situated cognition. By means of coming back to an overlooked sibling of the well-known studies by Allport (1920) on social facilitation, namely the spreading-out-of-thought effect, *Fonseca and Garcia-Marques* test the hypothesis that this effect is based on an increased salience of context which is in turn processed more deeply. For example, these researchers demonstrate that the mere presence of others reduces performance on a field-dependence task, as the presence of others broadens thought to "incorporate contextual information in cognitive processing."

As the second paper, *Echterhoff, Kopietz, and Higgins* extend research on shared reality by investigating, within the context of the audience tuning effect, whether communicators' memory is sensitive to changes in their relation to the audience. The memory adjustment can be interpreted as a reflection of the situatedness of the shared reality that was relevant during the communication act itself.

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1. It is noteworthy that the title of this special issue differs in word order from the description used by Semin and Smith. While we titled the special issue "situated social cognition," these authors chose the term "socially situated cognition." The difference is not only a shift in word order, but has programmatic implications. Whereas *socially situated cognition* refers to a broader group of paradigms and research, it limits its situation to social contexts. The term we used, *situated social cognition*, is somewhat more exclusive in the associated range of paradigms, but is more open to non-social situational influences. We made use of this word order effect by trying to arrange the papers in this special issue along those lines. Starting with basic cognitive effects that are subject to socially situational influence, we move to research that is less socially situated, but non-socially contextualized.

Leander and Shah investigate a contextualization of goal contagion. In line with our structuring of the papers in the special issue, this approach also uses a social influence paradigm and modulates it by employing non-social contextualization. The mere presence of others, who are not functionally related to one's own behavior, lead to a change in goal-driven actions.

The fourth paper in line turns to construal level theory and continues the interpersonal interaction context set by Echterhoff and colleagues. *Jiga-Boy, Clark, and Semin* extend existing research and theory on construal level by incorporating the interpersonal context. Set in a conversation context, their results show that typical effects of temporal distance, for example more abstraction given larger temporal distance, get overruled by the incorporation of the interaction partner's knowledge on the topic. Their results extend our understanding of construal level from a merely intra-individual to an inter-personal process and once again root construal level theory within socially situated cognition.

The fifth paper also points to a tuning effect, but does so on a much larger scale. While the previous approaches investigated specific audiences or interpersonal contexts, the next papers address relevant cultural embedding. More specifically, the effect of culture on interpersonal evaluation above and beyond methodological constraints is tested. *Uskul, Oyserman, Schwarz, Lee, and Xu* show that culture and rating format interact with rating target to influence response patterns. Their results underline that when responding to a question, respondents must make culturally relevant, context-sensitive pragmatic inferences about what the question means to them, given a specific cultural backdrop.

Kühnen, Hannover, Pöhlmann, and Roeder also use cultural variation as a setting for studying situated effects. These researchers use an attribution paradigm to test the impact of primed self-construals. Context (in)dependency is thus a relevant predictor of attributional direction.

The next paper draws on a different embodiment effect, namely that of "power poses." While one perspective on embodiment posits that bodily states exert direct, context-free effects on psychological states, *Cesario and McDonald* propose instead that bodily states influence one's action ecology by supplying information about what actions are possible or limited by external restraints. They show in two studies that expansive and constrictive poses influenced power-related decisions only when held in an interpersonal context, or in line with social roles.

Testing a typical embodiment effect, *Steidle, Hanke, and Werth* focus on the effects of the physical environment on social cognition and behavior. In their research, they differentiate between the embodiment of contents and procedures and uncover the underlying processes of an embodied procedure. Using a lightness vs. darkness manipulation on self-construal and cooperation, their results reveal that darkness triggers interdependent self-construal, which in turn promotes cooperation.

The final paper in the special issue addresses an innovative extension of the automatic response behavior paradigm (Jonas & Sassenberg, 2006). While response selection has been investigated, other dependent variables, such as visual attention processes, have yet not been tested. *Faber and Jonas* build on research on automatic behavior that has shown how contexualized social category priming can activate unique responses toward such categories. Their results show that visual attention is affected by contextualized social category primes and that context determined attention to functional means for the behavioral response.

The assembled collection of manuscripts on situated social cognition span across a wide range of topics and build connections across disparate areas of study. This issue could be especially valuable for research groups who either work on social cognitive processes, and thus would benefit from being informed about situational influences, or who are actively interested in integrating existing social cognitive approaches into larger applied constructs, such as intercultural effects, military, consumer behavior, or disaster psychology. More and more, "pure" research that used to proceed unconnected to life outside the laboratory is moving into the realm of impacting policy decisions (Nosek & Riskind, 2012). If the field accepts this challenge, it must, while safeguarding its experimental rigor, take on the related challenges and offer findings that bear a broader ecological validity. The missing links that fit between abstract processes obtained in the lab and applicable findings have to be closed. We hope that this special issue will serve to help close these gaps.

REFERENCES

Allport, F. (1920). The influence of the group upon association and thought. *Journal of Experimental Psychology, 3*, 159-182. doi:10.1037/h0067891

Bargh, J. A., Chen, M., & Burrows, L. (1996). Automaticity of social behavior: Direct effects of trait construct and stereotype activation on action. *Journal of Personality and Social Psychology, 71*, 230-244. doi:10.1037/0022-3514.71.2.230

Barsalou, L. W. (2008). Grounded cognition. *Annual Review of Psychology, 59*, 617-645. doi:10.1146/annurev.psych.59.103006.093639

Blakemore, S. J., Goodbody, S. J., & Wolpert, D. M. (1998). Predicting the consequences of our own actions: The role of sensorimotor context estimation. *Journal of Neuroscience, 18*, 7511-7518.

Castelli, L., & Tomelleri, S. (2008). Contextual effects on prejudiced attitudes: When the presence of others leads to more egalitarian responses. *Journal of Experimental Social Psychology, 44*, 679-686. doi:10.1016/j.jesp.2007.04.006

Cesario, J., & Jonas, K. J. (2013). The role of ingroup coalitions in action preparation: A resource computation framework for automatic responses. Manuscript under review.

Cesario, J., Plaks, J. E., Hagiwara, N., Navarrete, C. D., & Higgins, E. T. (2010). The ecology of automaticity: How situational contingencies shape action semantics and social behavior. *Psychological Science, 21*, 1311-1317. doi:10.1177/0956797610378685

Clark, A. (2013). Whatever next? Predictive brains, situated agents, and the future of cognitive science. *Behavior and Brain Sciences.*

Dewey, J. (1896). The reflex arc concept in psychology. *Psychological Review, 3*, 357-370.

Dimmock, J. A., Hallett, B. E., & Grove, J. R. (2009). Attitudes toward overweight individuals among fitness center employees: An examination of contextual effects. *Research Quarterly for Exercise and Sport, 80*, 641-647.

Fazio, R. H., Jackson, J. R., Dunton, B. C., & Williams, C. J. (1995). Variability in automatic activation as an unobtrusive measure of racial attitudes: A bona fide pipeline? *Journal of Personality and Social Psychology, 69*, 1013-1027. doi:10.1037//0022-3514.69.6.1013

Fazio, R. H., & Olson, M. A. (2003). Implicit measures in social cognition research: Their meaning and use. *Annual Review of Psychology, 54*, 297-327. doi:10.1146/annurev.psych.54.101601.145225

Fitzsimons, G. M., & Fishbach, A. (2010). Shifting closeness: Interpersonal effects of personal goal progress. *Journal of Personality and Social Psychology, 98*, 535-549. doi:10.1037/a0018581

Friston, K. (2009). The free-energy principle: A rough guide to the brain? *Trends in Cognitive Science, 13*, 293-301. doi:10.1016/j.tics.2009.04.005

Friston, K. (2010). The free-energy principle: A unified brain theory? *Nature Reviews Neuroscience, 11*, 127-138. doi:10.1038/nrn2787

Gawronski, B., & Sritharan, R. (2010). Formation, change, and contextualization of mental associations: Determinants and principles of variations in implicit measures. In B. Gawronski & B. K. Payne (Eds.), *Handbook of implicit social cognition: Measurement, theory, and applications* (pp. 216-240). New York: Guilford.

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology, 74*, 1464-1480. doi:10.1037/0022-3514.74.6.1464

Harmon-Jones, E., & Peterson, C. K. (2009). Supine body position reduces neural response to anger evocation. *Psychological Science, 20,* 1209-1210. doi:10.1111/j.1467-9280.2009.02416.x

Heidbreder, E. (1933). *Seven psychologies*. New York: Appleton-Century-Crofts.

Hosoya, T., Baccus, S. A., & Meister, M. (2005). Dynamic predictive coding by the retina. *Nature*, *436*, 71-77. doi:10.1038/nature03689

Jonas, K. J., & Sassenberg, K. (2006). Knowing how to react: Automatic response priming from social categories. *Journal of Personality and Social Psychology, 90*, 709-721. doi:10.1037/0022-3514.90.5.709

Katzko, M. W. (2006). A study of the logic of empirical arguments in psychological research: "The automaticity of social behavior" as a case study. *Review of General Psychology, 10*, 210-228. doi:10.1037/1089-2680.10.3.210

Levine, J. M., Resnick, L. B., & Higgins, E. T. (1993). Social foundations of cognition. *Annual Review of Psychology, 44*, 585-612.

Nosek, B., & Riskind (2012). Policy implications of implicit social cognition. *Social Issues and Policy Review, 6,* 113-147. doi:10.2139/ssrn.1884665

Otten, M., & Van Berkum, J. J. A. (2007). What makes a discourse constraining? Comparing the effects of discourse message and scenario fit on the discourse-dependent N400 effect. *Brain Research, 1153*, 166-177. doi:10.1016/j.brainres.2007.03.058

Richetin, J., Richardson, D. S., & Mason, G. D. (2010). Predictive validity of IAT aggressiveness in the context of provocation. *Social Psychology, 41*, 27-34. doi:10.1027/1864-9335/a000005

Sechrist, G. B., & Stangor, C. (2001). Perceived consensus influences intergroup behavior and stereotype accessibility. *Journal of Personality and Social Psychology, 80*, 645-654. doi:10.1037/0022-3514.80.4.645

Sharma, J., Dragoi, V., Tenenbaum, J. B., Miller, E. K., & Sur, M. (2003). V1 neurons signal acquisition of an internal representation of stimulus location. *Science, 300*, 1758-1763. doi:10.1126/science.1081721

Smith, E. R., & Semin, G. R. (2004). Socially situated cognition: Cognition in its social context. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 36, pp. 53-117). San Diego, CA: Elsevier Academic Press.

Smith, E. R., & Semin, G. R. (2007). Situated social cognition. *Current Directions in Psychological Science, 16*, 132-135. doi:10.1111/j.1467-8721.2007.00490.x

Van Berkum, J. J. A., Brown, C. M., Zwitserlood, P., Kooijman, V., & Hagoort, P. (2005). Anticipating upcoming words in discourse: Evidence from ERPs and reading times. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 31*, 443. doi:10.1037/0278-7393.31.3.443

Wittenbrink, B., Judd, C. M., & Park B. (2001). Spontaneous prejudice in context: Variability in automatically activated attitudes. *Journal of Personality and Social Psychology, 81,* 815-827. doi:10.1037//0022-3514.81.5.815

Wolpert D. M., & Ghahramani Z. (2000). Computational principles of movement neuroscience. *Nature Neuroscience, 3,* 1212-1217. doi:10.1038/81497