Influence from representations of others' responses:

Social priming meets social influence

Eliot R. Smith and Diane M. Mackie

Indiana University and University of California, Santa Barbara

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Direct correspondence to Eliot R. Smith, Department of Psychological and Brain Sciences, 1101 E. Tenth St., Bloomington, IN 47405 or esmith4@indiana.edu.

Abstract

The Representation and Incorporation of Close Others' Responses model (RICOR; Smith & Mackie, 2015) proposes that social influence occurs because 1) people naturally and spontaneously construct mental representations of others' responses or experiences (their beliefs, emotions, attitudes, or behaviors) and 2) those representations are then spontaneously and unknowingly incorporated (via parallel constraint satisfaction processes) into the perceiver's own responses. Psychological closeness (conceptualized as self-other overlap) is a powerful moderator of these processes, with the reactions of close others (those with interpersonal or group connections) more likely to be represented, and their representations more likely to be unknowingly incorporated, compared to strangers or outgroup others. Emerging empirical evidence supporting the model is reviewed and implications of the model for traditional approaches to influence are discussed.

Influence from representations of others' responses: Social priming meets social influence

Everyday observations as well as scientific findings show that people frequently adopt the beliefs, emotions, preferences, or behaviors of psychologically close or physically present others. Several distinct motives, such as the desire to hold correct and accurate beliefs and to win social approval by fitting in with others, are usually assumed to underlie such social influence. We propose a novel mechanism that can also produce social influence, but by default, in the absence of the typically assumed motives and without any special processing. In brief, we argue that social influence can occur because people construct mental representations of others' responses or experiences (their beliefs, emotions, attitudes, or behaviors) and those representations can "spill over" and become incorporated into the perceiver's own responses. This process is more likely to occur with others who are psychologically close, such as friends and ingroup members, compared to strangers or outgroup others. For this reason our model is called RICOR for Representation and Incorporation of Close Others' Responses [1].

In our model, influence occurs as a result of two processing stages. First, people naturally and spontaneously represent the responses of others who are important to them or who are psychologically salient in some way. This is functional: Noticing and mentally representing "that person is angry" or "he is buying a Coke," can help anticipate the other's future behaviors, and prepare for the perceiver's own interactions with them. Others' responses may be represented as episodic or exemplar representations of specific attitudes, emotions, or behaviors (as in the examples just given). Or they may be abstract representations of general response patterns such as "she usually supports Republican candidates," based on repeated observations or socially communicated information.

Second, once such representations are formed, it is very difficult for perceivers to avoid having their own responses influenced by them. An underlying parallel constraint satisfaction (PCS) process generates people's own responses by simultaneously taking account of multiple constraints to arrive at the best compromise decision (see Schroeder & Thagard [2], for details). But the PCS process is affected by any representations that are currently accessible – including representations of other people's responses. Priming paradigms show that information that is accessible (even if due to an irrelevant or serendipitous event) influence an individual's own responses to stimuli [3]. And people have great difficulty in avoiding such influences, as has been demonstrated for example in the Affect Misattribution Paradigm [4; see also Loersch & Payne, this issue]. First, people are often unaware of or incapable of recognizing the source of activated information, and thus of evaluating whether it is relevant to the task at hand. Second, even if people can sometimes successfully identify the source of the activation as irrelevant, avoiding being influenced takes time and attention. When responses are low-effort or constrained by time or processing resources, therefore, they are still influenced [5].

Consistent with the RICOR model, extensive evidence supports the operation of these two processes even in the absence of the "normal" motives assumed to underlie social influence. For example, people's hand movements in response to an experimental signal are facilitated or inhibited by observing a task-irrelevant video of a hand performing the same or different movements [6]. Informational influence motives are absent because the video is explicitly labeled as task-irrelevant, and social motives (e.g., to obtain positive social responses from the other person) are also absent in the case of a video presentation of a disembodied hand. Similarly, people are unintentionally influenced by others' displays of emotions [7], including those portrayed in images or videos where again standard motives for conformity are absent.

Moderation by interpersonal closeness

The RICOR model postulates that the psychological closeness of the other person (e.g., due to friendship or shared ingroup membership) is a powerful moderator of social influence. First, close others are likely to receive more attention in the first place, making it more likely that we will construct representations of their responses. Second, closeness makes it relatively more difficult to disentangle the other person as a source of influence. We conceptualize psychological closeness as self-other overlap [8], the weakening or even elimination of self-other boundaries. Self-other overlap is illustrated by studies showing that people are slower and make more errors in reporting the traits that they do not share with a close other, compared to traits that they do share. Such findings show that self-other overlap can literally produce confusion between self and other, hampering our ability to avoid influence from the other's responses.

Again, there is evidence for the role of this moderator. Contagion from, imitation of, and conformity to others' emotions occurs more for ingroup than for outgroup members [9]. Observed hand movements and behaviors also influence one's own actions more when they are performed by friends and ingroup members than by others [10]. For example, people are more influenced by a video depicting movements of a same-race hand (based on skin tone) than a different-race hand [11]. Even learning of a trivial connection to another person such as sharing a birthday can lead to influence by the other person's attitudes [12]. Simply priming the concept of social connection (with words such as friend or cooperate) compared to anti-social concepts (such as single or selfish) produces greater imitation in the hand-movement paradigm [13].

Influence by others' simulated responses

Nothing about our model requires that perceivers directly observe others' responses. In fact, people will frequently mentally simulate the responses of unobserved others who are

psychologically salient. For example, if you know that a specific other person is perceiving a stimulus, you may simulate that person's response, and then be influenced by it when you judge the stimulus yourself. We believe that these simulations often occur without specific intentions; for example, when watching a political speech on television a viewer might spontaneously think about how much his mother would hate this politician. Of course, sometimes people deliberately simulate others' responses, for example simulating a colleague's reaction to a presentation that the individual is preparing. Whether spontaneous or more intentionally formed, representations of others' responses presumably have a similar likelihood of influencing one's own responses.

If you simulate the other person's response as similar to your own, your own response will typically be amplified. Shteynberg and colleagues [14] demonstrated exactly such effects for emotion when they had participants in on-line studies view brief, emotionally evocative videos that generated feelings of anger, anxiety, amusement, and so forth. Participants who believed that another participant (somewhere on the internet) was viewing the same video at the same time reported stronger emotional reactions, compared to participants who were not told anything about another viewer. Effects of simulating others' behavior have also been demonstrated. Pfister and colleagues [15] showed that people performed movements directed by an experimenter more quickly when they expected to be imitated by another participant, compared to those who expected the other participant to do something different. This facilitation was presumably mediated by a simulation of the other participant's expected movement. Given the current importance of social media, it is common for people to become aware that others are viewing the same information as themselves. For example, a website may display a video with a note that "14 other people are currently viewing this video." The potential impact of such

awareness on people's own responses, as predicted by the RICOR model, is a fascinating new area for research.

Relation to priming

How does the social priming described by the RICOR model differ from other forms of priming? There are parallels, in that in both cases, an underlying PCS mechanism [2] operates to incorporate accessible mental representations into the individual's responses. The key differences are that the RICOR model does not simply involve priming from the spread of activation along pre-existing mental pathways, and that it is fundamentally interpersonal rather than intrapersonal in its operation. First, in our model influence is not merely due to the spread of activation along an existing associative link, as assumed by many traditional models of priming. For example, seeing a nurse may activate a representation of "doctor" based on semantic similarity and past co-occurrences. We assume instead that people actively construct new representations of others' responses rather than simply activating existing conceptual representations. Witnessing a nurse being harassed by a demanding patient, one might simulate the nurse's annoyance. Such a simulated reaction might not be based on stereotypes (that nurses are empathetic) or other existing knowledge, but instead is a construction of the person's likely response given the entire situational context. These accessible representations can then influence the perceiver's own responses.

Second, the construction of such representations involves observation of or knowledge about the other person, as well as on properties of the stimulus. Seeing a delicious ham sandwich in the restaurant, I may simulate my lunch companion's favorable reaction to it – unless I know that he is a vegetarian. In either case, the simulated response relies on knowledge or assumptions about the other person, so the simulation may differ from one's own response.

And of course, as emphasized earlier, this process is profoundly interpersonal in the sense that the effects of the other's response will be moderated by one's relationship with that person.

Implications

Our argument that people are pervasively influenced by representations of the beliefs, emotions, and attitudes of ingroup others offer a novel perspective on cultural differences in judgments and behaviors. The traditional (and intuitive) picture of cultural differences depicts them as resulting from the fact that people who grow up in a culture internalize what the culture teaches (e.g., values of individualism or collectivism). Those internal representations then drive their judgments and actions. However, cultural psychologists have recently questioned this picture based on evidence that, for example, U.S. versus East Asian samples do not reliably differ in the expected directions in their value endorsements (e.g., [16]). Several researchers have proposed that people act based not on their own internalized beliefs and values, but rather on those that they perceive to be widely held in their cultural ingroup – exactly the assumption underlying the RICOR model. Consistent with this view, several studies find that judgments and behavior are better predicted by people's reports of the values held by their cultural ingroups than by their own internalized values [17]. The convergence between the evidence supporting the RICOR model from tightly controlled laboratory studies and these new findings from cultural psychology, which have emerged based on very different research traditions and methodological approaches, is compelling.

People's tendency to be influenced by widely shared beliefs and attitudes may constitute a novel reason for the power and stability of stereotypes, prejudiced attitudes, and other types of system-justifying beliefs. Even apart from other cognitive and motivational reasons (e.g., cognitive simplification or the rationalization of ingroup self-interest), people may adopt such

beliefs and attitudes simply because they are widely shared in society. In fact, conservative or traditional beliefs are likely to be perceived as even more widely shared than they actually are [18]. This possibility suggests novel research approaches, and perhaps even ultimately novel interventions, to change such beliefs.

Finally, the RICOR model has implications for how we think about the underlying functions of influence. In the cultures where most social psychological research has so far been produced, predominantly individualistic values privilege the idea that our behavior should follow from our own independent and unique personal beliefs, attitudes, and emotions. In this view, individual attitude-to-behavior consistency and individual emotion-to-action proclivity are the hallmarks of strength of character and conviction – although they are unfortunately sometimes tainted or disrupted by "conformity" or "contagion". And yet evidence continues to mount for the adaptiveness of being influenced by representations of others' beliefs, emotions, or behaviors. Perhaps most important, being influenced by others' responses facilitates social coordination [19, 20]. Influence as described in the RICOR model promotes social coordination by encouraging similarity of beliefs, emotions, and behaviors among close and ingroup others. Such influence is also generally adaptive in the sense of leading to correct beliefs. As the notion of the "wisdom of crowds" suggests [21], taking into account consensual opinions and behaviors that have been (successfully) tested by many people is probably more generally adaptive than relying on one's own potentially idiosyncratic personal beliefs and experiences [17]. Our tendency to rely on others' responses has even been considered "part of a core human-specific 'social sense,' and one of the cognitive preconditions for the evolution of the uniquely elaborate social structure in humans" [22, p. 1834]. If this is so, it is not surprising that people spontaneously observe or

simulate others' responses to situations, represent such information, and then err on the side of being influenced by it.

References

1. Smith E, Mackie DM: **Representation and Incorporation of Close Others' Responses: The RICOR Model of Social Influence. *Pers Soc Psych Rev* 2015, 1–21.

Presents a much more detailed account of the model that is briefly described here, including an extensive review of existing empirical evidence on effects on attitudes, emotions, and behavior.

2. Schroeder T, Thagard P: **Priming: Constraint satisfaction and interactive competition**. *Social Cognition* 2014, 32:152-167.

3. Schwarz N, Bohner G: **The construction of attitudes**. In *Blackwell handbook of social psychology: Intraindividual processes*. Edited by Tesser, A, Schwarz N. Blackwell Publishers; 2001: 436-457.

4. Loersch C, Payne BK: **The Situated Inference Model: An Integrative Account of the Effects of Primes on Perception, Behavior, and Motivation**. *Perspectives on Psychological Science* 2011, **6**:234–252.

5. Huh YE, Vosgerau J, Morewedge CK: **Social Defaults: Observed Choices Become Choice Defaults**. *Journal of Consumer Research* 2014, **41**:746–760.

*6. Heyes C: **Automatic imitation.** *Psychological Bulletin* 2011, **137**:463–483.

Conceptual review of evidence for automatic (unintentional, spontaneous) imitation of behavioral movements, which occurs in the absence of typical motives for social influence.

7. Niedenthal PM: **Embodying Emotion**. *Science* 2007, **316**:1–5.

8. Aron A, Aron EN, Tudor M, Nelson G: **Close Relationships as Including Other in the Self**. *J Pers Soc Psychol* 1991, **60**:13.

9. Weisbuch M, Ambady N: **Affective divergence: Automatic responses to others' emotions depend on group membership.** *J Pers Soc Psychol* 2008, **95**:1063–1079.

10. Miles LK, Griffiths JL, Richardson MJ, Macrae CN: **Too late to coordinate: Contextual influences on behavioral synchrony**. *Eur. J. Soc. Psychol.* 2010, 40:52-60.

11. Müller BCN, Kühn S, Van Baaren RB, Dotsch R, Brass M, Dijksterhuis A: **Perspective taking eliminates differences in co-representation of out-group members' actions**. *Exp Brain Res* 2011, **211**:423–428.

12. Cheung RM, Noel S, Hardin CD: **Adopting the System-Justifying Attitudes of Others: Effects of Trivial Interpersonal Connections in the Context of Social Inclusion and Exclusion**. *Social Cognition* 2011, **29**:1–15.

13. Leighton J, Bird G, Orsini C, Heyes C: **Social attitudes modulate automatic imitation**. *Journal of Experimental Social Psychology* 2010, **46**:905–910.

*14. Shteynberg G, Hirsh JB, Apfelbaum EP, Larsen JT, Galinsky AD, Roese NJ: **Feeling more together: Group attention intensifies emotion.** *Emotion* 2014, **14**:1102–1114.
Empirical report of studies in which people's emotional reactions to a video are intensified by the mere knowledge that a stranger somewhere on the Internet is simultaneously viewing the same video.

15. Pfister R, Dignath D, Hommel B, Kunde W: **It Takes Two to Imitate: Anticipation and Imitation in Social Interaction**. *Psychological Science* 2013, 24:2117-2121.

16. Shteynberg G, Gelfand MJ, Kim K: **Peering Into the "Magnum Mysterium" of Culture: The Explanatory Power of Descriptive Norms**. *Journal of cross-cultural psychology* 2009, 40:46-69.

17. Chiu C, Gelfand MJ, Yamagishi T, Shteynberg G, Wan C: **Intersubjective Culture: The Role of Intersubjective Perceptions in Cross-Cultural Research. *Perspectives on Psychological Science* 2010, **5**:482–493.

Summary of several lines of recent work in cultural psychology, converging on the theme that beliefs about the attitudes or values of other members of one's culture exert a strong influence over individuals' judgments and behaviors.

18. Zou X, Tam K, Morris MW, Lee S, Lau IYM, Chiu C: **Culture as common sense: Perceived consensus versus personal beliefs as mechanisms of cultural influence**. *J Pers Soc Psychol* 2009, **97**:579–597.

19. Kashima Y: **Culture, groups, and coordination problems.** *Psychologische Beitrage* 1999, 41: 237-251.

20. Simon H: **Mechanism for Social Selection and Successful Altruism**. *Science* 1990, **250**:1–4.

21. Surowiecki J: *The wisdom of crowds: Why the many are smarter than the few and how collective wisdom shapes business, economies, societies, and nations.* Doubleday & Co., 2004.

22. Kovacs AM, Teglas E, Endress AD: **The Social Sense: Susceptibility to Others' Beliefs in Human Infants and Adults**. *Science* 2010, **330**:1830–1834.