



Shared Reality: From Sharing-Is-Believing to Merging Minds

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Abstract

Humans are fundamentally motivated to create a sense of *shared reality*—the perceived commonality of inner states (feeling, beliefs, and concerns about the world) with other people. This shared reality establishes a sense of both social connection and understanding the world. Research on shared reality has burgeoned in recent decades. We first review evidence for a basic building block of shared-reality creation: *sharing-is-believing*, whereby communicators tune their descriptions to align with their communication partner's attitude about something, which in turn shapes their recall. Next, we describe recent developments moving beyond this basic building block to explore *generalized* shared reality about the world at large, which promotes interpersonal closeness and epistemic certainty. Together, this body of work exemplifies the synergy between relational and epistemic motives. Finally, we discuss the potential for another form of shared reality—shared relevance—to bridge disparate realities.

Keywords

shared reality, communication, epistemic motivation, interpersonal relationships

Humans are fundamentally motivated to share with others their feelings, beliefs, and concerns about the world (Echterhoff et al., 2009; Higgins, 2019; Higgins & Pittman, 2008). In their interactions, they seek to create a sense of *shared reality*: the perceived commonality of feelings or beliefs about a target referent (e.g., an object, an event, or another person). As a fundamental factor underlying cooperation and coordination in social interaction, shared reality plays a critical role in human evolution (Higgins, 2019) and childhood development (Higgins, 2016). To deal with the world effectively, humans need to feel that their interaction partners share what matters to them—how they think about and respond to the world.

Shared reality lies at the intersection of two motives: the need to connect with other people, such as friends, partners, or fellow community members (*relational* motives), and the need to understand things, like events, objects, or persons (*epistemic* motives). Thus, shared reality involves motivated connection (the “shared” in “shared reality”) and motivated cognition or understanding (the “reality” in “shared reality”). These two motivational components of shared reality

are synergistic (Echterhoff & Higgins, in press). First, sharing feelings and beliefs with other people transforms these inner states from feeling subjective to feeling objective—they begin to feel like the truth about the world (Hardin & Higgins, 1996). Second, sharing inner states about the world develops and strengthens social connection to other people (Rossignac-Milon & Higgins, 2018). For example, if two people share the same interpretation of an event, they will feel that they understand what really happened during that event and also feel more connected to each other.

Historically, psychologists, sociologists, and, especially, social psychologists have appreciated the importance of the motivation to share inner states about the world (Asch, 1956; Festinger, 1950; Mead, 1934; Sherif, 1936; Weber, 1971). Yet the empirical study of shared reality has accelerated in recent decades (see Echterhoff & Higgins, 2018, a special issue on shared reality in *Current*

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Opinion in Psychology). In this article, we first review research on a basic building block of shared-reality creation, whereby people tune not only what they say to fit with their communication partner's attitudes, but also what they subsequently remember—sharing-is-believing. Next, we review recent research moving beyond this building block to examine shared reality in conversation contexts and interpersonal relationships, in which people create a generalized sense of shared reality about the world at large.

Sharing-Is-Believing

The motivation to share reality is so pervasive that it occurs during one of the most basic instances of communication: when one person describes something to another person. Research has shown that even during this minimal communication unit, people tune what they say to fit with their communication partner's attitude. For example, people will describe a new colleague more positively if they know their communication partner liked that colleague (or more negatively if they know their partner disliked that colleague). Critically, this process will subsequently bias their memory of the colleague's behavior accordingly—for example, they will later recall the new colleague's behaviors more positively (or negatively). This phenomenon was originally explained through a cognitive lens and called the "saying-is-believing" effect (Higgins & Rholes, 1978), but later, Higgins (1992) proposed shared reality as the underlying mechanism. Since then, evidence has mounted that this phenomenon is, indeed, *sharing-is-believing*.

In the standard saying-is-believing paradigm, participants read a description of a *target person's* behaviors, for example,

Once Michael makes up his mind to do something, it is as good as done, no matter how long it might take or how difficult the going might be. Only rarely does he change his mind even when it might well be better if he did.

This description is *evaluatively ambiguous* because Michael can be perceived as either persistent or stubborn. Participants are told that they will communicate with another person (their *audience*) who knows Michael and somewhat likes (or somewhat dislikes) him. They are instructed to describe Michael to their audience, without mentioning Michael's name, so that their audience can identify Michael from a group to which both the audience and Michael belong. Participants who are told that their audience likes Michael tend to describe him as "persistent," and those who are told that their audience dislikes Michael tend to describe

him as "stubborn"—a message tailoring called *audience tuning*. When participants are subsequently asked to recall the original information they read about Michael, their memory matches their biased message: They exhibit *recall bias*.

Higgins and Rholes (1978) initially proposed that labeling the behaviors as "persistent" or "stubborn" biased reconstructive memory. From this purely cognitive standpoint, recall bias should occur regardless of the motivation behind audience tuning. But from a shared-reality perspective, the goal matters. Communicators should incorporate their audience's attitude into their memory of the target only if they are both relationally motivated to connect with their audience and epistemically motivated to understand what the target is really like. They need to be motivated to share with their audience their inner states about the target (to create a shared reality). When this occurs, communicators experience their message about the target as the truth about the target, which is why their message shapes their recall of the target's behaviors.

From this perspective, if communicators audience-tune for goals other than shared reality, recall bias should be reduced, or even eliminated—even given the same degree of audience tuning. A study by Echterhoff et al. (2008) compared the effects of two non-shared-reality goals with the standard shared-reality goal. Participants in an incentive condition were offered financial compensation for audience tuning. Participants in an entertainment condition were told to entertain themselves by exaggerating their audience tuning. Participants in both of these conditions exhibited even greater audience tuning than participants in the standard shared-reality-goal condition. However, only participants in the shared-reality-goal condition exhibited recall bias. The saying-is-believing effect was eliminated in the other goal conditions because the message was no longer experienced as the truth about the target (see Fig. 1).

The classic in-group/out-group distinction relates to both relational and epistemic motives: People are less likely to desire connection with out-group members, relative to in-group members, or to trust them as a source of truth. Several studies have found that when communicating to an out-group audience (e.g., at a German institution, German students communicating to a Turkish student), participants exhibit audience tuning, but not recall bias (e.g., Echterhoff et al., 2005, 2008, 2017; see also Skorinko & Sinclair, 2018). These results are inconsistent with a cognitive-dissonance explanation, which would predict greater dissonance (and greater attitude change) in the out-group condition (see Echterhoff et al., 2009, for an in-depth explanation). Once again, the saying-is-believing effect

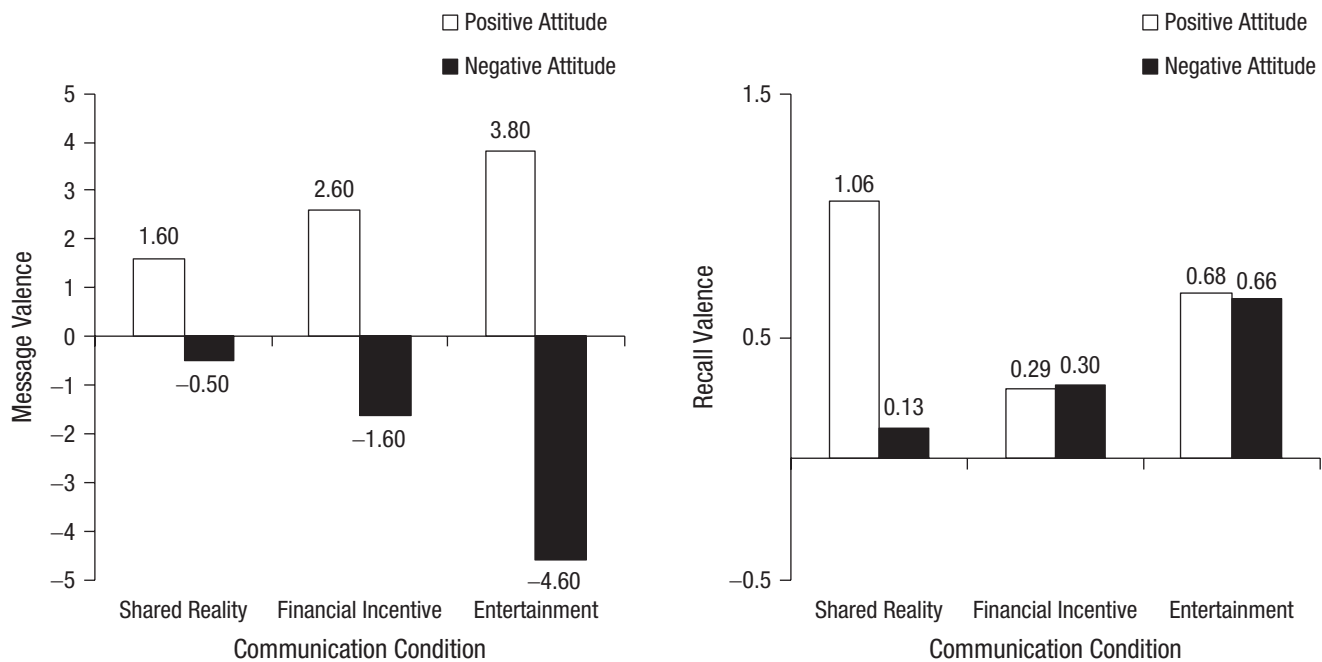


Fig. 1. Message valence (left panel) and recall valence (right panel) as a function of the audience's attitude (positive vs. negative) and the participant's communication condition (shared-reality, financial-incentive, or entertainment goal) in the study by Echterhoff et al. (2008).

depends on the motivation to create shared reality—it is sharing-is-believing.

More recent research has shown that it is possible to build up sharing-is-believing with an out-group audience (Echterhoff et al., 2017). Three factors were manipulated. One factor was whether or not the communicator actually produced a message for the audience (message production) or could not because the recording device was unavailable (no message production). Message production, by facilitating social verification and connection with the audience (see Echterhoff et al., 2013), enhanced sharing-is-believing. Sharing-is-believing was also enhanced when the audience's epistemic expertise was increased, for example, when the target person was a member of the audience's in-group (instead of the communicator's in-group). For example, sharing-is-believing was enhanced when German students communicated to a Turkish audience about a Turkish target person. Finally, sharing-is-believing was enhanced by increasing the epistemic authority of the audience via consensus (e.g., an out-group audience of three people with the same attitude vs. a single person). When all three factors that increased sharing-is-believing were combined, recall bias was equally great for in-group and out-group audiences (see Fig. 2; see Echterhoff & Higgins, 2017, for a model). Together, this research demonstrates the importance of motivated cognition and motivated connection for sharing-is-believing.

Given the power of these in-group/out-group effects, one might wonder why in the original saying-is-believing

studies, the communicators exhibited sharing-is-believing effects when communicating with a stranger. However, in these studies, the communicator and audience belonged to the same community (e.g., a university) and were assigned as partners working on a common task. In human evolution, especially as communities became larger, it was critical that humans cooperate on tasks with community members they might not have met before (Higgins, 2019). Thus, exhibiting sharing-is-believing in communication with strangers is consistent with an evolutionary perspective on cooperation.

Generalized Shared Reality in Dyadic Relationships

In the sharing-is-believing paradigm, shared reality is about one target in particular (e.g., a third person). Recent research has examined how, in real-world conversations and relationships, people often experience shared reality with another person as being about more than a single target in particular. Instead, people often experience shared reality with a conversation partner about various topics (e.g., art, food, current events)—about reality at large (Rossignac-Milon & Higgins, 2018). Rossignac-Milon et al. (2021) introduced the construct of *generalized shared reality* (SR-G): the subjective experience of sharing in common with an interaction partner a set of inner states about the world in general. SR-G is *topic-general* (about multiple topics and domains) and *dyadic* (shared with a particular interaction partner

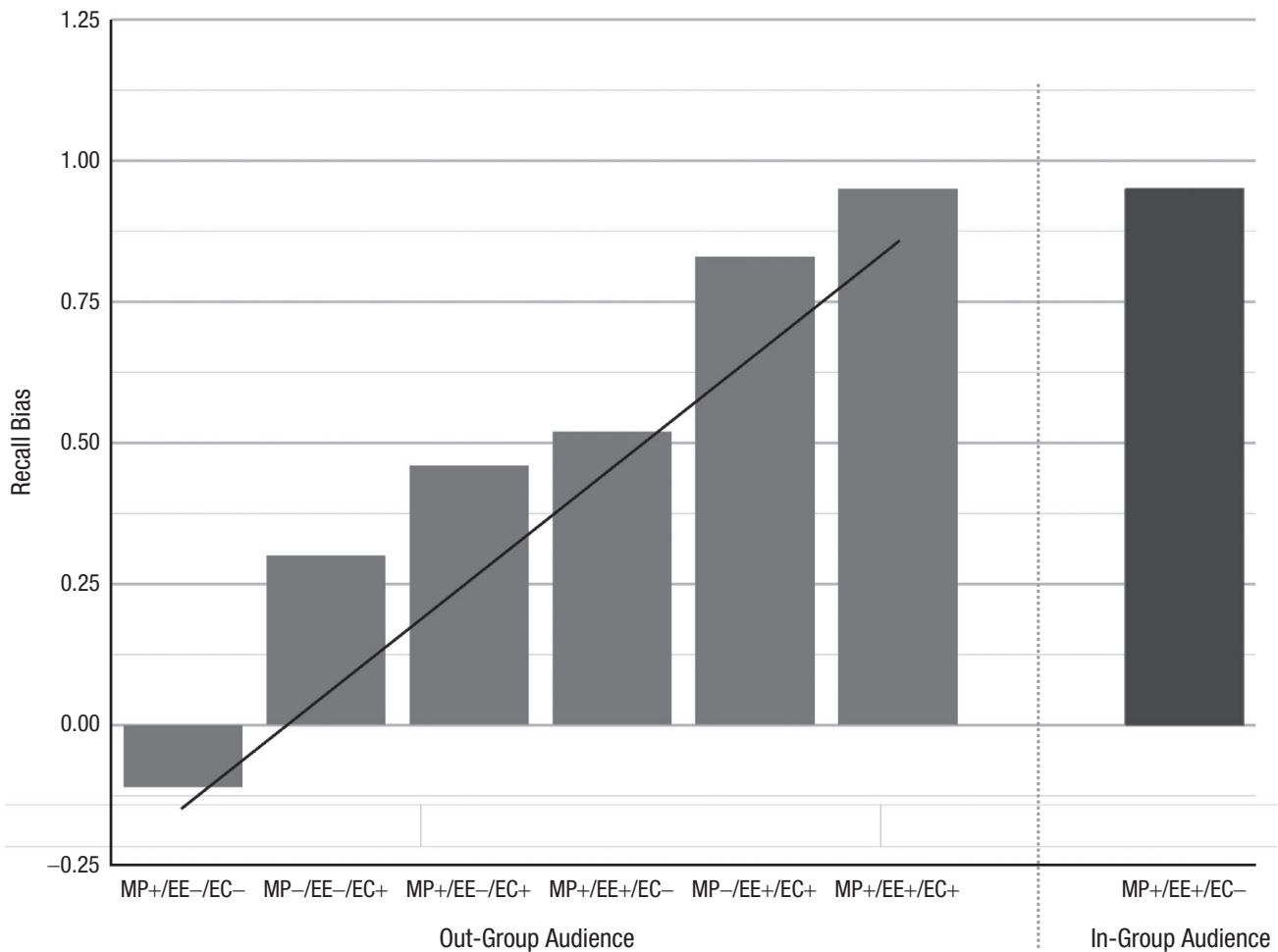


Fig. 2. The audience-tuned recall bias as a function of three shared-reality factors (message production, epistemic expertise, epistemic consensus) across four experiments by Echterhoff et al. (2017). The line represents the estimated linear trend, based on ordinary least squares approximation. Results are shown for different combinations of the shared-reality factors with an out-group audience (left) and for one condition with an in-group audience (right). The presence and absence of the shared-reality inputs, message production (MP), epistemic expertise (EE), and epistemic consensus (EC), are indicated by plus and minus symbols, respectively. Higher scores for recall bias denote a greater audience-tuning effect on memory, reflecting shared reality with the audience.

rather than with a general group of people). For example, close partners with a high sense of SR-G may feel that they frequently think of things at the exact same time and often develop a joint perspective. Rossignac-Milon and colleagues' (2021) research suggests that people are motivated not only to uphold SR-G in their ongoing close relationships but also to create SR-G in their interactions with new people.

In one study, pairs of newly acquainted participants discussed several ambiguous images in a real-time, online conversation. As in the sharing-is-believing paradigm, they belonged to the same general community (Amazon Mechanical Turk) and worked on a common task (figuring out what was going on in the images). Participants who experienced a greater sense of SR-G with their conversation partner (e.g., "During our discussion, we shared the same thoughts and feelings

about things," ". . . we thought of things at the exact same time") felt closer to their partner, established greater rapport, felt like they "clicked," and wanted to converse with their partner again. These participants also perceived that they made sense of the images with their partner, trusted their partner more as a source of truth about the images, and ultimately felt more certain of what was really going on in the images. Moreover, SR-G continued to predict these outcomes in analyses controlling for perceived similarity and perceived partner responsiveness. This result suggests that SR-G contributes to relational and epistemic outcomes over and above the effects of inferring similarity to one's partner or feeling listened to and valued by one's partner. SR-G also predicted these outcomes over and above target-specific shared reality, which suggests that SR-G did not affect closeness or certainty simply because participants

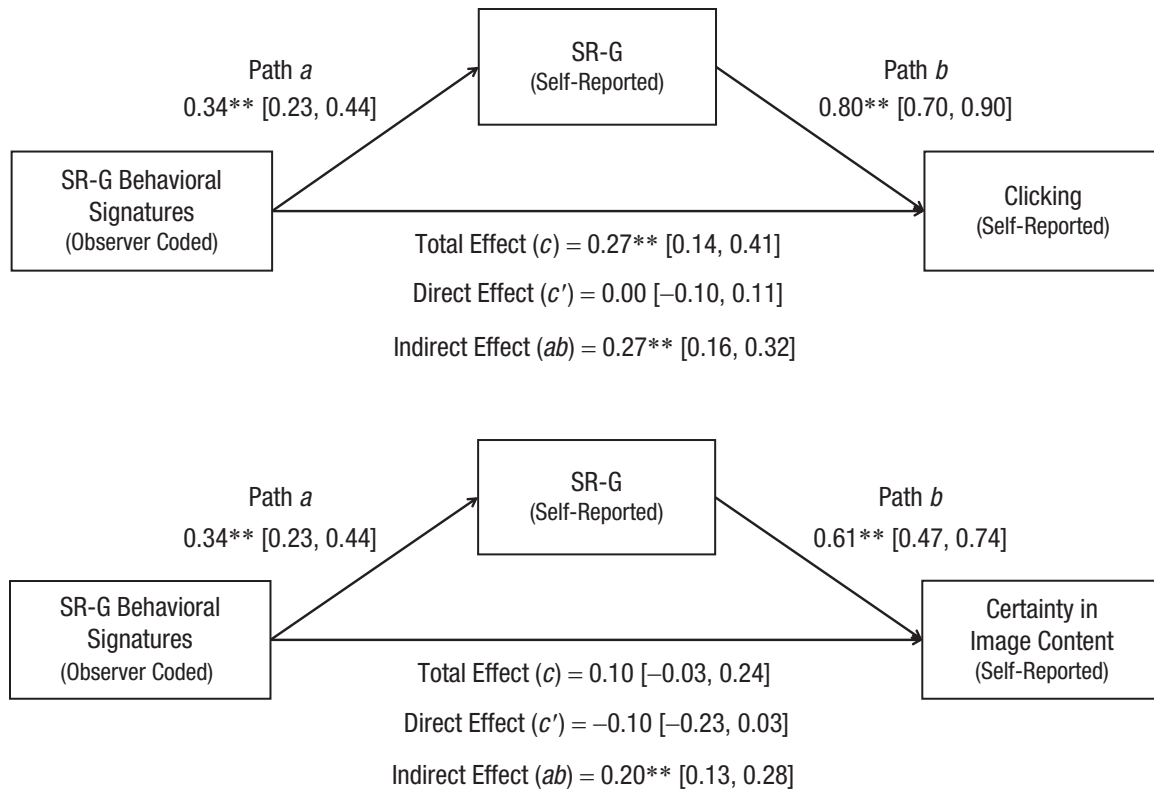


Fig. 3. Mediation models displaying the role of self-reported generalized shared reality (SR-G) between newly acquainted dyads conversing online in mediating the relationship between SR-G behavioral signatures (e.g., saying things at the same time, vocalizing thought similarity, and finishing each other’s ideas; coded by observers) and two outcome variables: self-reported “clicking” with one’s interaction partner (top panel) and self-reported certainty about what was really going on in the images being discussed (bottom panel; Rossignac-Milon et al., 2021). Asterisks indicate significance (** $p < .001$). Values in brackets are 95% confidence intervals.

felt they agreed with their partner about the particular images in the study. These findings support the idea that SR-G contributes to both social connection and epistemic certainty.

This study also examined the dyadic behavioral signatures giving rise to the experience of SR-G. Dyads who displayed interaction behaviors such as saying the same things at the same time, vocalizing agreement or thought similarity (e.g. “I was thinking the same thing!”), and finishing each other’s ideas (e.g. seemingly sharing a stream of consciousness) reported a greater sense of SR-G. Critically, these behaviors predicted relational and epistemic outcomes (such as closeness and certainty) to the extent that participants subjectively experienced them as SR-G. In addition to elucidating the behavioral antecedents of SR-G, these results suggest that shared reality, albeit a subjective experience, can be grounded in observable interaction behaviors (see Fig. 3).

Beyond identifying SR-G as a key predictor of initial human connection, this research also examined the motivation to uphold an existing sense of SR-G with a close partner (with whom participants often reported

the experience of having “merged minds”). One study examined how romantic dyads responded to feedback threatening their sense of SR-G. After answering several baseline relationship measures, including a scale measuring SR-G (e.g., “We typically share the same thoughts and feelings about things”), romantic couples independently and silently rated visual, tactile, and gustatory stimuli. They were informed that a (fictitious) software program would compute the extent to which they overlapped in their direct experience of the sensory world. Couples were randomly assigned to receive feedback that, relative to the average couple, they had low (or high) overlap in the way they experienced the sensory world.

Couples responded differently to this feedback depending on their baseline level of SR-G. Among couples higher in baseline SR-G, those who received low—rather than high—overlap feedback engaged in greater motivated behaviors to reaffirm their sense of SR-G when subsequently given the chance to discuss various images: They exhibited more SR-G behavioral signatures, established greater latent shared meaning linguistically, and

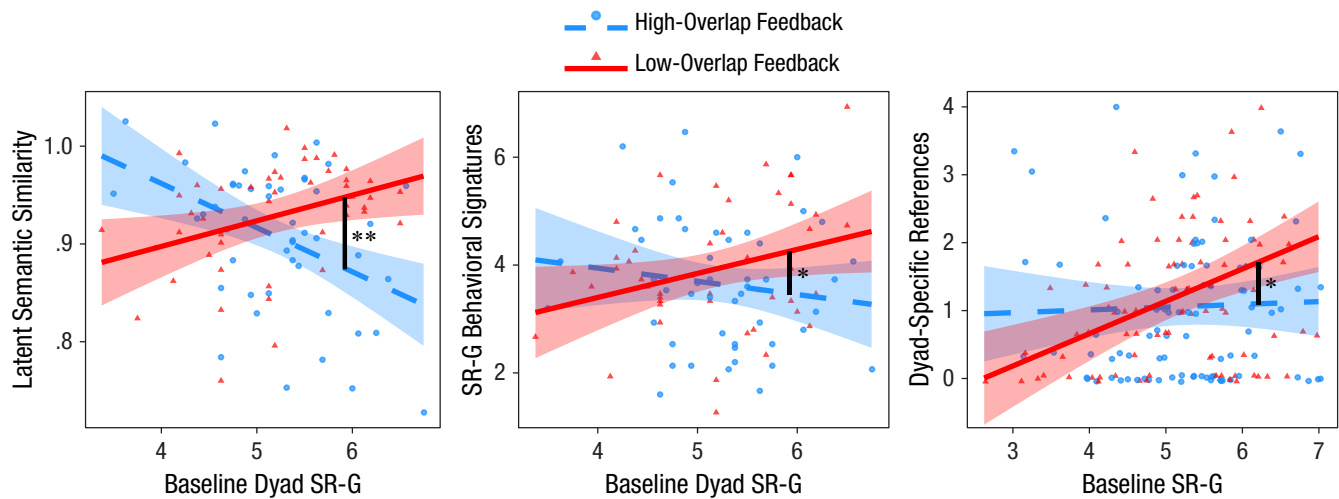


Fig. 4. Dyads' shared-reality-reaffirmation behaviors during a face-to-face interaction as a function of their baseline generalized shared reality (SR-G) and experimental condition (false feedback that they had low vs. high overlap in the way they experience the sensory world; Rossignac-Milon et al., 2021). From left to right, results are shown for three reaffirmation behaviors: linguistic shared meaning (i.e., latent semantic similarity, a computational indicator of semantic overlap between the text spoken by the two partners; Babcock et al., 2014), behavioral signatures of SR-G, and conversational references exclusive to the couple's relationship. Asterisks indicate significant differences between experimental conditions at 1 *SD* above the mean on baseline SR-G (* $p < .05$, ** $p < .001$).

made more dyad-specific references (e.g., inside jokes and shared memories). They also created greater shared reality when jointly selecting an image to take home together. In contrast, this difference between the feedback conditions was not found among dyads lower in baseline SR-G (as revealed in a significant interaction). Baseline SR-G was the only relationship construct to predict these reaffirmation behaviors in response to this threat. These findings suggest that SR-G matters enough to close partners that they are motivated to reaffirm it together in the face of threat (see Fig. 4).

This research contributes to the body of work highlighting the epistemic function of relationships. For example, related work has shown that activating a shared meaning system with a significant other, even via transference, can influence the anticipated meaningfulness of an interaction with a new person who minimally resembles this significant other (Andersen & Przybylinski, 2018). Close relationships can function as a haven of coherence: People increase their commitment to their partner when their general sense of coherence is threatened in order to restore their sense of meaning (Murray et al., 2018). Together, these lines of work exemplify the synergy between motivated connection and cognition: People frequently turn to their closest others in order to make sense of reality, and in turn, this joint sense making further enhances their connection to each other.

The importance of shared reality is also demonstrated by the harmful effects of an absence of shared reality. For instance, keeping secrets—obstructing the creation of shared reality—decreases well-being by

thwarting relational and epistemic needs (Liu & Slepian, 2018). Even subtle disruptions of conversation flow can diminish shared reality and heighten the experience of interpersonal rejection (Koudenburg, 2018). Furthermore, when close relationships dissolve, individuals lose an epistemic companion with whom they make sense of the world (Rossignac-Milon & Higgins, 2018).

Future research could further examine how the sense of SR-G and shared meaning systems emerge in conversation. When do conversation partners begin to feel that they share reality about the world “in general”? In addition to particular conversation behaviors (e.g., finishing one another's ideas; Rossignac-Milon et al., 2021), could experiencing a shared reality about multiple targets also enhance SR-G? If so, how many different targets, and which targets, would suffice to provoke the sense of SR-G? Might some people extrapolate a sense of SR-G from sharing feelings about a single target particularly central to their worldview (e.g., a political figure)? The readiness to extrapolate a sense of SR-G could be an individual difference: Perhaps some people are quick to generalize on the basis of minimal cues, whereas others need more evidence. Future research could also examine whether SR-G is experienced as a coherent worldview or perhaps as the expectation of experiencing new targets in the same way.

Concluding Comment

The field of shared reality has made significant progress in advancing understanding of how humans share inner states as a way to connect with each other and make

sense of the world. These advancements shed new light on current issues. For instance, exaggerated perceptions of consensus generated by filter bubbles and echo chambers may inflate the experience of shared reality on social media, especially given the intensifying effects of collective attention (Shteynberg et al., 2020) and transmission through social networks (Kashima et al., 2018). By shaping attitudes and ideological beliefs (see Jost et al., 2018; Stern & Ondish, 2018), shared reality can perpetuate insular views and exacerbate ideological divisions. But there is a different kind of shared reality that could be beneficial in this context: shared perceptions of what is worthy of attention. Wanting to establish *shared relevance* is so central to human motivation that even infants seek to establish it with their caregivers by pointing out objects deserving of co-attention (Higgins, 2016). In many respects, culture and socialization involve learning what the community treats as important—what matters in the world. As a first step to bridge ideological divides, perhaps people can highlight their shared perceptions about which issues matter and are worth discussing (Higgins, 2019). By providing an initial sense of shared reality, shared relevance could serve as a building block upon which to construct shared feelings or beliefs. Perhaps experiencing such shared relevance could foster a sense of unity with humanity, beyond siloed realities. In such ways, future research could leverage shared-reality theory to examine novel ways in which humans can connect with each other, and how, together, people can establish new ways of seeing the world.

Recommended Reading

- Echterhoff, G., Higgins, E. T., & Levine, J. M. (2009). (See References). A presentation of the psychological features of shared reality, a discussion of the evidence that supports the importance of each feature, and a review of other psychological concepts that are similar to but distinct from shared reality.
- Higgins, E. T. (2019). (See References). A broad and comprehensive review of the conceptual and empirical literature on shared reality, with discussions of how shared reality plays out in human communication, human development and evolution, feelings, beliefs and goal pursuits, and interpersonal and intergroup relations.
- Rossignac-Milon, M., Bolger, N., Zee, K. S., Boothby, E. J., & Higgins, E. T. (2021). (See References). Empirical work presenting a novel perspective on shared reality in interpersonal interactions and relationships and examining the effects of generalized shared reality on social connection and epistemic certainty between newly acquainted dyads conversing online, as well as the motivation to uphold generalized shared reality with a close partner in the face of threat to that shared reality.

Transparency

Action Editor: Robert L. Goldstone

Editor: Robert L. Goldstone

Declaration of Conflicting Interests


The author(s) declared that there were no conflicts of interest with respect to the authorship or the publication of this article.

Funding

This work was supported by the Anneliese Maier Research Award from the Alexander von Humboldt Foundation, awarded to E. T. Higgins, and by a research grant from the German Research Foundation (DFG EC 317/10-1), awarded to G. Echterhoff.

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Acknowledgments

E. T. Higgins and M. Rossignac-Milon contributed equally to this article.

References

- Andersen, S. M., & Przybylinski, E. (2018). Shared reality in interpersonal relationships. *Current Opinion in Psychology*, *23*, 42–46.
- Asch, S. E. (1956). Studies of independence and conformity: A minority of one against a unanimous majority. *Psychology Monographs*, *70*(9), Whole No. 416.
- Babcock, M. J., Ta, V. P., & Ickes, W. (2014). Latent semantic similarity and language style matching in initial dyadic interactions. *Journal of Language and Social Psychology*, *33*(1), 77–88.
- Echterhoff, G., & Higgins, E. T. (2017). Creating shared reality in interpersonal and intergroup communication: The role of epistemic processes and their interplay. *European Review of Social Psychology*, *28*(1), 175–226.
- Echterhoff, G., & Higgins, E. T. (Eds.). (2018). Shared reality [Special issue]. *Current Opinion in Psychology*, *23*.
- Echterhoff, G., & Higgins, E. T. (in press). Shared reality: Motivated connection and motivated cognition. In P. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Social psychology: Handbook of basic principles* (3rd ed.). Guilford.
- Echterhoff, G., Higgins, E. T., & Groll, S. (2005). Audience-tuning effects on memory: The role of shared reality. *Journal of Personality and Social Psychology*, *89*(3), 257–276.
- Echterhoff, G., Higgins, E. T., Kopietz, R., & Groll, S. (2008). How communication goals determine when audience tuning biases memory. *Journal of Experimental Psychology: General*, *137*(1), 3–21.
- Echterhoff, G., Higgins, E. T., & Levine, J. M. (2009). Shared reality: Experiencing commonality with others' inner states about the world. *Perspectives on Psychological Science*, *4*(5), 496–521.

- Echterhoff, G., Kopietz, R., & Higgins, E. T. (2013). Adjusting shared reality: Communicators' memory changes as their connection with their audience changes. *Social Cognition, 31*(2), 162–186.
- Echterhoff, G., Kopietz, R., & Higgins, E. T. (2017). Shared reality in intergroup communication: Increasing the epistemic authority of an out-group audience. *Journal of Experimental Psychology: General, 146*(6), 806–825.
- Festinger, L. (1950). Informal social communication. *Psychological Review, 57*(5), 271–282.
- Hardin, C., & Higgins, E. T. (1996). "Shared reality": How social verification makes the subjective objective. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition: The interpersonal context* (pp. 28–84). Guilford.
- Higgins, E. T. (1992). Achieving 'shared reality' in the communication game: A social action that creates meaning. *Journal of Language and Social Psychology, 11*(3), 107–131.
- Higgins, E. T. (2016). Shared-reality development in childhood. *Perspectives on Psychological Science, 11*(4), 466–495.
- Higgins, E. T. (2019). *Shared reality: What makes us strong and tears us apart*. Oxford University Press.
- Higgins, E. T., & Pittman, T. (2008). Motives of the human animal: Comprehending, managing, and sharing inner states. *Annual Review of Psychology, 59*, 361–385.
- Higgins, E. T., & Rholes, W. S. (1978). "Saying is believing": Effects of message modification on memory and liking for the person described. *Journal of Experimental Social Psychology, 14*(4), 363–378.
- Jost, J. T., van der Linden, S., Panagopoulos, C., & Hardin, C. D. (2018). Ideological asymmetries in conformity, desire for shared reality, and the spread of misinformation. *Current Opinion in Psychology, 23*, 77–83.
- Kashima, Y., Bratanova, B., & Peters, K. (2018). Social transmission and shared reality in cultural dynamics. *Current Opinion in Psychology, 23*, 15–19.
- Koudenburg, N. (2018). Regulating shared reality with micro-dynamics in the form of conversation. *Current Opinion in Psychology, 23*, 47–51.
- Liu, Z., & Slepian, M. L. (2018). Secrecy: Unshared realities. *Current Opinion in Psychology, 23*, 124–128.
- Mead, G. H. (1934). *Mind, self, and society*. University of Chicago Press.
- Murray, S. L., Lamarche, V., & Seery, M. D. (2018). Romantic relationships as shared reality defense. *Current Opinion in Psychology, 23*, 34–37.
- Rossignac-Milon, M., Bolger, N., Zee, K. S., Boothby, E. J., & Higgins, E. T. (2021). Merged minds: Generalized shared reality in dyadic relationships. *Journal of Personality and Social Psychology, 120*(4), 882–911. <https://doi.org/10.1037/pspi0000266>
- Rossignac-Milon, M., & Higgins, E. T. (2018). Epistemic companions: Shared reality development in close relationships. *Current Opinion in Psychology, 23*, 66–71.
- Sherif, M. (1936). *The psychology of social norms*. Harper & Brothers.
- Shteynberg, G., Hirsh, J. B., Bentley, R. A., & Garthoff, J. (2020). Shared worlds and shared minds: A theory of collective learning and a psychology of common knowledge. *Psychological Review, 127*(5), 918–931.
- Skorinko, J. L., & Sinclair, S. (2018). Shared reality through social tuning of implicit prejudice. *Current Opinion in Psychology, 23*, 109–112.
- Stern, C., & Ondish, P. (2018). Political aspects of shared reality. *Current Opinion in Psychology, 23*, 11–14.
- Weber, M. (1971). *Max Weber: The interpretation of social reality* (J. E. T. Eldridge, Ed.). Scribner's.