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# You Are the One I Want to Communicate With!

## Relational Motives Driving Audience-Tuning Effects on Memory

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**Abstract.** This article investigates the role of relational motives in the saying-is-believing effect (Higgins & Rholes, 1978). Building on shared reality theory, we expected this effect to be most likely when communicators were motivated to “get along” with the audience. In the current study, participants were asked to describe an ambiguous target to an audience who either liked or disliked the target. The audience had been previously evaluated as a desirable vs. undesirable communication partner. Only participants who communicated with a desirable audience tuned their messages to suit their audience’s attitude toward the target. In line with predictions, they also displayed an audience-congruent memory bias in later recall.

**Keywords:** relational motives, saying-is-believing, audience-tuning, communication, memory

Imagine that a neighbor of yours, A, asks your opinion regarding a new person, X, who recently moved to your street. You’ve never really had the opportunity to have more than a few fleeting conversations with X and are now faced with the task of communicating your impression of this person to A. Will you first elaborate a *private* impression, based on the bits of information you can remember about this newcomer, and then communicate it to A? Or will your communication reflect what you think A already believes about the newcomer? Assuming you opt for the latter option, will your impression of X be influenced by your *biased* description?

This particular issue is addressed in studies using the *saying-is-believing* paradigm (Higgins & Rholes, 1978). In this paradigm, the attitude of the audience about a communication topic influences the way participants communicate about the topic as well as their memory for it. In the original study, Higgins and Rholes (1978) provided participants with a description of ambiguous behaviors displayed by an individual target and asked them to produce a description of this target (i.e., the message) for an audience, who either liked or disliked the target. The results showed that participants shaped the message in such a way that it matched the audience’s attitude regarding the target. This effect is known as *audience tuning* (Higgins, 1992, 1999). Furthermore, participants’ later memory of the information about the target was also biased so as to be consistent with their previous message. In other words, participants end up remembering what they had pre-

viously said rather than what they had originally read about the target (Echterhoff, Higgins, & Groll, 2005; Kopietz, Hellmann, Higgins, & Echterhoff, 2010). This audience-tuning effect on memory has been labeled the *saying-is-believing* effect and is a robust phenomenon (for a review, see Chiu, Krauss, & Lau, 1998; Echterhoff, Higgins, Kopietz, & Groll, 2008; Echterhoff, Higgins, & Levine, 2009).

### Epistemic and Relational Motives Driving Shared-Reality Creation

Shared reality theory (Echterhoff, Higgins et al., 2009) explains the saying-is-believing effect specifically focusing on socially embedded processes. According to this theory, communication effects on memory (i.e., the saying-is-believing effect) are particularly likely to occur when participants try to create a shared reality with their audience. Shared reality is defined as the experience of a commonality with others’ inner states about the world (Echterhoff, Higgins et al., 2009). Within the saying-is-believing paradigm, this corresponds to the subjective experience of reaching a common understanding with the audience about the received information: Only when participants experience a successful connection to the audience’s inner states (in this case, to the audience’s attitude toward the target) is a shared reality achieved. According to

this theory, shared reality creation is motivated by *epistemic* as well as by *relational* factors (Echterhoff, Higgins et al., 2009).

With respect to the former, the need for uncertainty reduction has been considered as the key factor that prompts people to develop a shared reality with others (e.g., Festinger, 1950; Hardin & Conley, 2001; Hardin & Higgins, 1996; Sherif, 1935). In fact, when confronted with experiences that are ambiguous or difficult to understand, people need to reduce the feeling of uncertainty aroused by such a confrontation. In order to achieve this aim, they try to conform to the social reality provided by relevant others or by a referent group (Festinger, 1950). Sharing their own opinions with others allows people to satisfy the *epistemic need*. In line with this assumption, Kopietz et al. (2010) showed that people high in uncertainty (and therefore assumed to experience a strong epistemic need) displayed the saying-is-believing effect.

The *relational motive* is assumed to drive people to affiliate with others so as to gain a reasonable level of well-being, of relational satisfaction or, for example, to identify with a positively valued group and protect their own self-identity or self-esteem (see Echterhoff, Higgins et al., 2009). Social sharing is thought to respond to these needs (Echterhoff, Higgins et al., 2009; Hardin & Conley, 2001; Hardin & Higgins, 1996). As Hardin and Conley (2001, p. 6) pointed out, early social psychologists like Sherif (1936) and Asch (1951) not only recognized social sharing as a means for individual understanding but they also emphasized the function of socially shared understanding in regulating relationships. Confirming this intuition, Hardin and Conley (2001) highlighted that the achievement of a shared reality within a relationship is a precondition for establishing and maintaining such a relationship. Therefore, participants within the saying-is-believing paradigm should be motivated to share reality because of their motivation not only to better *know* but also to actively *connect* with their audience.

Building on this theoretical framework, the present study examines such an affiliative function of creating a shared reality within the saying-is-believing paradigm. Previous studies have already addressed this issue, but we believe that they failed to demonstrate unambiguously the causal role of relational motives in the saying-is-believing effect as we shall argue in the following section.

## The Role of Relational Motives in Previous Saying-Is-Believing Literature

Studies indirectly tackling the relational factor have often relied on experimental manipulations that, at least in part, confound the epistemic and the relational variables (Echterhoff et al., 2005, 2008; Echterhoff, Lang, Krämer, & Higgins, 2009). The appropriateness of the communication

partner (e.g., in terms of sufficient similarity, trustworthiness, suitability as partner in the creation of a social bond) is a crucial factor behind the motivation to share reality with others (Echterhoff, Higgins et al., 2009). Such appropriateness may depend on the relational and epistemic factors that have been confounded. Indeed, previous empirical efforts offered participants the opportunity to develop a shared reality with the audience whose suitability as a relational partner was varied, in terms of referential group (Echterhoff et al., 2005: Experiment 2 and 3; Echterhoff et al., 2008: Experiment 1; Kopietz, Echterhoff, Niemeier, Hellmann, & Memon, 2009) and in terms of social status (Echterhoff, Lang et al., 2009; Higgins & McCann, 1984).

In studies relating to a referential group, participants were asked to communicate with an ingroup versus outgroup audience. The audience's group membership is likely to be one of the important qualities that matter in judging an audience as more or less appropriate (Echterhoff, Higgins et al., 2009). However, it remains uncertain whether the audience's appropriateness (manipulated through the audience's group membership) is due to relational *or* epistemic characteristics of the audience. Indeed, the pattern of results (i.e., the saying-is-believing effect obtained just in communication with ingroup audiences) could be explained both in terms of relational *and* epistemic motives driving shared reality. On the one hand, ingroup members could conform to the ingroup's perspective on a relevant issue so as to be recognized as true insiders and avoid group rejection (Klein, Spears, & Reicher, 2007; Noel, Wann, & Branscombe, 1995). On the other hand, the ingroup audience can serve as a tool to test communicators' knowledge about reality (Festinger, 1954; Turner, 1991). Fittingly, the studies under consideration showed also that *epistemic trust* in the audience (i.e., trust in the audience's ability to judge others) mediated the effect of the group membership on the memory bias. Therefore, group membership has been demonstrated to be an important characteristic to establish the audience's appropriateness to share reality with (Echterhoff, Higgins et al., 2009), and in these cases may be a matter of epistemic competence attributed to the audience rather than a relational motive toward it.

The moderating role of the audience's social status in the saying-is-believing process was recently investigated by Echterhoff, Lang et al. (2009). Results showed that, although participants tuned their messages independently of the audience's status, only those in the equal status condition later showed a congruent memory bias. Moreover, those participants displayed higher levels of epistemic but also of *relational trust* toward the audience, i.e., "the sense of a meaningful connection and affiliation with the audience" (p. 154), which was assessed through a new measure. These two scales were later combined because of their high correlation, and the obtained score was found to mediate the relation between the audience status and the audience-congruent memory bias. The authors claimed that this pattern of results could be due to the combined working of epistemic and relational motives driving shared reality. As in the above-mentioned studies, the

relative and specific contribution of the relational motive in this process remains unclear.

Let us now turn to a second gap in the literature: Whereas the epistemic need has recently been manipulated (Kopietz et al., 2010; Pierucci, Marchal, Klein, & Echterhoff, 2012: Study 1), no study to date has directly manipulated the relational motive driving audience-tuning effects. Indeed, even though other previous saying-is-believing studies have directly focused on the role of affiliative motives (Higgins & McCann, 1984; McCann & Hancock, 1983), they only relied on observed variables assumed to affect these motives, whereas we designed an ecological setting where levels of the relational need are experimentally manipulated.

For example, Higgins and McCann (1984) showed that, when communicating to a higher status audience, high authoritarians displayed *super-tuning* (i.e., they greatly distorted their messages to suit their audience) and later expressed the memory and impression bias congruent with the sense of their previous communication. Low authoritarians instead expressed *anti-tuning* (i.e., they distorted the messages in the opposite direction of the audience's attitude) and failed to show audience-congruent memories and impressions (see also Higgins, 1992). Moreover, as for the above-mentioned studies, epistemic concerns could have played a role here: High authoritarians should trust a high status audience to a higher extent than should low authoritarians (Altemeyer, 1998).

Along the same lines, McCann and Hancock (1983) found that high self-monitors tuned to their audience and expressed audience-congruent recall and impressions whereas low self-monitors did not. The authors claimed that high self-monitoring participants were motivated to behave appropriately in the situation, thereby tuning to their audience. Again the relational motive was inferred from an observed individual measure and once more there could have been a confound: High self-monitoring participants should rely on the audience's view as a guide for their own behavior, whereas low self-monitors act in accordance with their inner beliefs (Klein, Snyder, & Livingston, 2004; Snyder & Gangestad, 1986). Thus, it cannot be excluded that the effects observed were also due to participants' (high versus low) trust in their respective audience's beliefs about the topic of the communication.

This overview suggests that, in order to clearly establish the influence of relational motives on the saying-is-believing effect, a rigorous manipulation of these motives is called for, while controlling the epistemic ones as efficiently as possible.

## The Present Study

We often have to interact with an audience we previously did not know. In these cases, the first impression we form about the other person could impact on relational motives

driving the interaction and therefore influencing its outcome. Capitalizing on this aspect of everyday interactions, we plan to assess the extent to which participants would like to communicate with different possible audiences based on a snap judgment of their physical appearance. Based on this first assessment, we invited them to communicate with the audience they had previously judged as either desirable or undesirable for communication purposes, thereby affecting the intensity of their relational motives toward their audience. Note that there were no particular reasons to expect that our manipulation based on a spontaneous judgment influenced epistemic trust. Even if so, we could not exclude in advance that the desired communication partner was also perceived by participants as holding a more valid vision of reality. Therefore, we assessed levels of epistemic trust on the audience and controlled that this measure did not vary across the communication desire conditions. The experiment was based on the classic saying-is-believing paradigm (Echterhoff et al., 2005; Higgins & Rholes, 1978) with the following alteration: After having informed participants of their audience's attitude toward the target, we let them communicate their description of the target either to the desirable communication partner (high communication desire condition) or to the undesirable one (low communication desire condition). Assuming that participants held equivalent levels of epistemic trust but different levels of relational motivation depending on the desirability of the audience, we expected participants in both conditions to tune their message to their audience's attitude toward the target (Hypothesis 1a). They would do this because of their knowledge of the audience's presumed task (i.e., recognizing the target of their description) and in line with previous evidence attesting that communicators tune to an audience for other reasons than the creation of a shared reality with the audience (e.g., Echterhoff et al., 2005, 2008). Alternatively, it is also conceivable that such an audience-tuning would be mainly driven by the high communication desire condition. Indeed, as we know from the self-presentation literature (e.g., Jones & Pittman, 1982; Schlenker & Weigold, 1992), people may be more motivated to express thoughts and beliefs that are consistent with their audience to the extent that they wish to establish a positive relationship with this audience, which should not be the case for participants in the low communication desire condition (Hypothesis 1b).

As for the audience tuning effect on memory, we expected the effect to occur just for participants communicating with an audience they had previously judged as desirable (high communication desire condition). Instead, participants in the low communication desire condition were not expected to show such memory bias in reason of their lower (or even absent) relational need, which was expected to be fulfilled by means of the creation of a shared reality with the audience (Hypothesis 2).

## Method

### Participants

Seventy-five first-year psychology students (66 women and 9 men) participated in the experiment in exchange for course credits. The mean age was 19.20 years ( $SD = 1.95$ ), and they were randomly assigned to the experimental conditions of a 2 (Audience attitude: positive vs. negative)  $\times$  2 (Communication desire: high vs. low) between-participants design.

### Materials

Two pretests were conducted to select the content of the original target information and the pictures of the possible audience partner. In the first one, 20 participants evaluated the ambiguity of 12 passages containing a behavioral description of the target. These passages, designed to evoke either a positive or negative trait label (e.g., independent vs. aloof), were taken from previous studies (Echterhoff et al., 2005; Higgins & Rholes, 1978; Sedikides, 1990) and translated into French. Participants rated the evaluative tone of the passages on an 11-point scale ranging from  $-5$  (= *very negative*) to  $+5$  (= *very positive*). Moreover, they rated to what extent each passage described a person who could be defined with two opposing traits proposed on a 7-point scale ranging from the positive trait label (e.g., *persistent*) to the negative one (e.g., *stubborn*). Finally, they rated the credibility of each passage from 1 (= *not at all credible*) to 9 (= *very credible*). We chose the five passages with the highest credibility scores (all above 6), good correlations between the two evaluative measures (tone and correspondence to traits), and with mean ratings on the bipolar trait labels scale closest to the midpoint (from 3.75 to 4.65) to ensure equal likability of both the negative vs. the positive trait they were supposed to evoke.

The second pretest was used to select two sets of pictures for the purpose of manipulating participant's desire to communicate with the audience. The 18 participants (mean age = 22.72,  $SD = 4.87$ ) were asked to rate on an 11-point scales (1 = *not at all*, 11 = *very much*) their desire to communicate with each of 17 men<sup>1</sup> of the same age range, based on a head-to-waist snapshot. Picture order was counterbalanced. We chose the two pictures with the photographed person judged as the least desirable for communication ( $M = 3.61$ ,  $SD = 1.65$  and  $M = 4.16$ ,  $SD = 1.46$ ), the two best-rated communication partners ( $M = 7.61$ ,  $SD = 2.48$  and  $M = 7.5$ ,  $SD = 1.15$ ), and four pictures with mean ratings closest to the midpoint between the two extremes of the scale. Each of the two series of photographs used in the experi-

ment included one of the two most desirable and one of the two least desirable photographed communication partners and two other pictures of men rated as moderately desirable communicators. This combination was chosen to maximize the likelihood that participants would indeed perceive sensible differences in desirability among the presented targets.

### Procedure

The entire questionnaire was designed for computer-assisted administration using MediaLab (Jarvis, 2005). Each participant was first asked to rate four photos (two sets were used<sup>2</sup>, see above) on the basis of their perceived desire to communicate with the photographed person. Participants were told that we were interested in the initiation of interactions with strangers. These ratings were later used to randomly assign participants to the high versus low communication desire condition. Participants later received the ambiguous description of the target person. As in recent saying-is-believing studies (Echterhoff et al., 2005, 2008; Kopietz et al., 2010), their task was to communicate this description (without mentioning the target's name) to an audience (named Nicolas) through a chatting module. Before receiving the target information, participants were told that both the target and the audience, as part of a group of students, had previously agreed to participate in a long-term research. Hence, the audience supposedly knew the target personally and had already had the opportunity to form an impression of him. Participants were informed about the audience's (positive vs. negative) attitude toward the target. Moreover, they were told that the audience's task was to recognize the target as the referent of their description sent through chat, among a set of possibilities represented by other persons involved in the project. Half of participants were asked to communicate the description of the target to the person they had previously judged as a desirable communication partner (high communication desire condition), and the other half described the target for the less desirable audience (low communication desire condition). These descriptions, that we call *messages*, represent the first dependent variable of our study. As in previous studies, after 10 min of an unrelated filler task participants were provided with questions about their epistemic trust in the audience (e.g., "Is your addressee a person whose judgment about other people one can trust?"; see Echterhoff et al., 2005, 2008) evaluated on a 7-point scale (ranging from 1 = *not at all*, to 7 = *very much*). Later, they were asked to remember and write down as precisely as possible the original target information: the valence of these recall texts corresponds to our second main dependent variable. The final questions evaluated possible suspi-

<sup>1</sup> The sample was mostly female and heterosexual. So, we decided to use only male audiences to maximize variations in communication desire. Also, most studies using the saying-is-believing paradigm rely on male audiences.

<sup>2</sup> Since there was no effect of the series of photographs given to participants, this factor is not mentioned further.

cion regarding the hypothesis of the study and manipulation checks. The relational motive was assessed by six items (ranging from 1 = *not at all*, to 7 = *very much*) checking participant's desire to communicate with the audience (e.g., "To what extent are you glad that the specific audience was randomly assigned to you as addressee?"). Participants were then informed about the actual goals of the study and thanked.

## Measures

Three judges blind to the experimental condition rated the overall valence of the messages and the overall valence of recall texts on a bipolar 11-points scale, ranging from  $-5$  (= *extremely negative*) to  $+5$  (= *extremely positive*) as in previous saying-is-believing studies (Echterhoff et al., 2005, 2008; Kopietz et al., 2009, 2010). Each message and recall text was broken down into units corresponding to the original passages of the target information. Coders assigned scores for positive or negative distortions to each unit and they later inferred an overall valence for each text ( $\alpha_{\text{message}} = 0.94$  and  $\alpha_{\text{recall}} = 0.93$ ; for details on this system of coding see Echterhoff et al., 2005). Disagreements between judges were discussed. Means for message and recall valence are our main dependent measures.

A critical aspect of our study<sup>3</sup> is that we did not rule out the possible significance of a halo effect: Indeed, participants' heightened relational motivation (in the high communication desire condition) could have driven up their perception of higher epistemic trust toward the audience. To control for this possibility we ran a principal components analysis with Varimax rotation including all items used to measure both the epistemic and the relational motive. This analysis highlighted two independent factors that jointly accounted for the 62.35% of the overall variance. The first factor (explaining 35.09% of the variance) was labeled Relational Motive, whereas the second one (explaining 27.26% of the variance) was labeled Epistemic Trust (the relational items had loadings higher than .72 on the first factor and lower than .31 on the second factor and vice versa the epistemic items). We computed the associated factor scores to create two orthogonal scales rather than summing the items loading on each factor, which would have resulted in slightly correlated scales. Note that

these two scaling methods tend to be equivalent in terms of reliability (Judd & McClelland, 1998).

## Results

### Manipulation Check

#### Audience Attitude

A 2 (Audience attitude [positive, negative])  $\times$  2 (Communication desire [high, low]) analysis of variance (ANOVA) confirmed that participants addressing a positive attitude audience rated their audience's attitude toward the target as more positive ( $M = 5.42$ ,  $SD = 0.15$ ) than participants in the negative audience's attitude condition ( $M = 2.19$ ,  $SD = 0.16$ ),  $F(1, 71) = 217.35$ ,  $p < .001$ ,  $\eta_p^2 = .75$ . Therefore, we assume that participants were aware of their audience's attitude toward the described character. No other effects reached significance.

#### Relational Motive and Epistemic Trust<sup>4</sup>

Moreover, the 2  $\times$  2 ANOVA on the factor scores measuring participants' Relational Motive confirmed that participants in the high communication desire condition expressed higher levels of relational need toward their audience ( $M = .31$ ,  $SD = 0.16$ ) than participants in the low communication desire condition ( $M = -.30$ ,  $SD = 0.16$ );  $F(1, 71) = 7.50$ ,  $p < .01$ ,  $\eta_p^2 = .10$ . This effect was independent of the audience attitude manipulation ( $F < 1$ ).

As argued, in our study we intended to manipulate relational motives driving the communication with the audience while keeping participant's epistemic trust in the audience constant. Indeed, a 2  $\times$  2 ANOVA on the extracted scores about participants' Epistemic Trust did not reveal any effect of communication desire: Participants in the high communication desire condition did not show higher levels of epistemic trust in their audience than participants in the low communication desire condition ( $F < 1$ ). Nevertheless, we noticed a significant effect of the audience's attitude  $F(1, 71) = 4.72$   $p < .05$ ,  $\eta_p^2 = .06$  in such a way that participants showed more trust if they communicated with an audience holding a positive, rather than negative, attitude

<sup>3</sup> We thank an anonymous reviewer for pointing out this possibility.

<sup>4</sup> Alternatively to the factor extraction method, we also computed two different scales with items conceived to measure the relational motive and the epistemic trust. They formed respectively a 6-item scale:  $\alpha = 0.85$ ,  $M = 3.64$ ,  $SD = 1.15$  and a 4-item scale:  $\alpha = 0.80$ ,  $M = 4.43$ ,  $SD = 0.99$ . The six items controlling for the relational motive driving the communication were: "To what extent did you want to communicate with your audience at the moment of rating the photographs/at the beginning of the chat session?"; "To what extent are you glad that the specific audience was randomly assigned to you as addressee?"; "To what extent do you want to meet the audience personally?"; "To what extent do you think that your audience is nice/physically attractive?". These two scales correlated at  $r(75) = .38$ ,  $p < .01$ . Nevertheless, also with these two measures we found a significant effect of the communication desire on the Relational Motive scale:  $F(1, 71) = 6.71$ ,  $p < .05$ ,  $\eta^2 = .09$ ; but not on the Epistemic Trust scale ( $F < 1$ ). Thus, the 2  $\times$  2 ANOVAs confirmed that participants in the high communication desire condition expressed a greater desire to communicate with their audience ( $M = 3.97$ ,  $SD = 0.18$ ) than participants in the low communication desire condition ( $M = 3.31$ ,  $SD = 0.18$ ), whereas they did not express higher levels of epistemic trust in their audience in comparison to low communication desire participants.

Table 1. Means of message and recall valence as a function of audience's attitude and participants' communication desire (high vs. low)

Communication desire	Message				Recall			
	Negative		Positive		Negative		Positive	
<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
High	-1.10	2.71	1.84	1.93	-0.63	1.48	0.28	1.21
Low	0.18	2.43	0.79	1.97	-0.07	1.79	0.37	0.81

toward the target ( $M_{attitude+} = .24$ ,  $SD = 0.16$ , ( $M_{attitude-} = -.25$ ,  $SD = 0.16$ ). This attitude asymmetry is typically found with the epistemic trust measure of previous studies and predicted by the shared reality account (Echterhoff et al., 2005, 2008).

### Message Length

It may be argued that participants in the low communication desire condition should be less interested in the experiment or should be less willing to help the experimenter since they were first asked to rate the desirability of other persons as communication partner and then assigned to the least desirable one. To probe such a possibility we checked the length of their communicated messages. A one-way ANOVA showed no effect of the communication desire factor:  $F(1, 73) < 1$ , *ns*. This suggested that all participants were involved in the task to the same extent.

### Message Valence

Our first hypothesis (1a) postulated that participants in both communication desire conditions would tune their message as a function of their audience's attitude toward the target. Alternatively, it is possible that this effect will be mainly driven by the high communication desire condition (Hypothesis 1b).

A  $2 \times 2$  analysis of variance (ANOVA) showed a main effect of Audience Attitude,  $F(1, 70^5) = 11.32$ ,  $p < .01$ ,  $\eta_p^2 = .14$  and no effect of communication desire. Moreover, a significant interaction between audience's attitude and communication desire was found,  $F(1, 70) = 4.85$ ,  $p < .05$ ,  $\eta_p^2 = .07$ . Separate analyses revealed a simple effect of audience's attitude in the high communication desire condition,  $F(1, 70) = 15.07$ ,  $p < .001$ . Participants who communicated with the desirable audience adapted their message as a function of their audience's attitude, producing more positive messages for a positive attitude audience ( $M = 1.84$ ;  $SE = 0.53$ ) than for a negative attitude one ( $M = -1.10$ ,  $SE = 0.57$ ). On the other hand, participants in the low communication desire condition did not tune to their audience,

$F < 1$ , *ns* (see Table 1). Thus, these results showed audience tuning just for participants in the high communication desire condition confirming our Hypothesis 1b.

### Recall Valence

We hypothesized that only participants in the high communication desire condition would display a saying-is-believing effect. A  $2 \times 2$  ANOVA revealed a main effect of Audience Attitude,  $F(1, 71) = 4.54$ ,  $p < .05$ ,  $\eta_p^2 = .06$ . Neither an effect of Communication Desire,  $F(1, 71) = 1.05$ , *ns*, nor an interaction ( $F < 1$ ) were found. Nevertheless, since audience tuning was observed just in the high communication desire condition (and this is the precondition for testing the audience-tuning effect on recall, i.e., saying-is-believing), we had reasons to analyze the two groups separately. As expected, a simple effect of audience attitude was found for participants in the high communication desire condition  $F(1, 71) = 4.08$ ,  $p < .05$ , but not for participants with a low desire to communicate with their audience,  $F < 1$ . Thus, participants communicating with a desirable audience whose attitude toward the target was positive recalled the original information in a more positively biased way ( $M = 0.28$ ;  $SE = 0.31$ ) than participants in the negative attitude audience condition ( $M = -0.63$ ;  $SE = 0.32$ ), see Table 1.

### Mediated Moderation

In line with Kopietz et al. (2010), we argue that the effect of audience attitude on recall valence should be mediated by the audience-tuned message. This, however, should only hold in the high communication condition. When a treatment indirect effect on the outcome depends on a moderator, a moderated mediation occurs (Muller, Judd, & Yzerbyt, 2005). Since this should be the case of our data, we decided to test for a moderated mediation, in which audience attitude is the main treatment variable X, participants' communication desire is the moderator, message valence is the proposed mediator and recall valence the outcome variable Y.

Following Muller et al. (2005), we developed three

<sup>5</sup> According to Cohen, Cohen, West, and Aiken (2003) one extreme case was excluded from the analysis because largely exceeding the minimum cutoff of Cook's *D* statistic diagnostic for outliers.

Table 2. Moderated mediation equations

Criterion	Equation 1		Equation 2		Equation 3	
	Recall valence		Message Valence		Recall valence	
Predictors	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Attitude (ATT)	.25 ( $\beta_1$ )	4.67*	.36( $\beta_4$ )	11.32**	.11( $\beta_7$ )	.92
Communication desire (CD)	-.12 ( $\beta_2$ )	1.14	-.02( $\beta_5$ )	.04	-.09( $\beta_8$ )	.66
ATT $\times$ CD	.09 ( $\beta_3$ )	.63	.24( $\beta_6$ )	4.85*	.03( $\beta_9$ )	.08
Message valence (MV)					.48( $\beta_{10}$ )	17.90***
MV $\times$ CD					-.15( $\beta_{11}$ )	1.75

Equation 1:  $Y = \beta_1X + \beta_2Mo + \beta_3XMo$

Equation 2:  $Me = \beta_4X + \beta_5Mo + \beta_6XMo$

Equation 3:  $Y = \beta_7X + \beta_8Mo + \beta_9XMo + \beta_{10}Me + \beta_{11}MeMo$

Notes. Each equation is characterized by a specific constant ( $\beta$ ) and error term ( $\epsilon$ ). \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

equations in order to test for such moderated mediation hypothesis (see Table 2).

By testing Equation 1, we expected that an overall treatment effect (i.e., audience attitude on recall valence) would be observed, and that this effect would not depend on the moderator message valence. As predicted, an effect of audience attitude on recall valence was found ( $\beta_1 = .25$ ,  $t(70) = 4.67$ ,  $p < .05$ ), and no interaction between audience attitude and message valence was revealed ( $\beta_3 = .09$ ,  $t(70) = .63$ ,  $p = .43$ ).

Second, Equation 2 provided evidence for an effect of the treatment variable (i.e., audience attitude) on the mediator message valence ( $\beta_4 = .36$ ,  $t(70) = 11.32$ ,  $p = .001$ ). Furthermore, there is an interaction between the audience attitude and participant's communication desire ( $\beta_6 = .24$ ,  $t(70) = 4.85$ ,  $p < .05$ ), which is indicative of moderated mediation. Indeed, this means that the magnitude of the indirect effect of audience attitude on recall valence via message valence varies as a function of participants' communication desire. Just for participants with a high communication desire audience attitude affected message valence.

Finally, a significant effect of the mediator message valence on recall valence ( $\beta_{10} = .48$ ,  $t(70) = 17.90$ ,  $p = .000$ ) was found in Equation 3. The residual treatment effect resulted not to be moderated by participants' communication desire (i.e., the interaction between communication desire and audience attitude was nonsignificant:  $\beta_9 = .03$ ,  $t(70) = .08$ ,  $p = .78$ )<sup>6</sup>.

In sum, according to Muller et al. (2005), the moderated mediation is confirmed because in Equation 1  $\beta_1$  was significantly different from zero, while  $\beta_3$  was not. In equations 2 and 3 both  $\beta_6$  and  $\beta_{10}$  were significant. This means that there was an unmoderated overall effect of audience attitude on recall valence, but that the indirect effect of audience attitude on recall valence via message valence is moderated by participants' communication desire.

## General Discussion

This study tested the role played by relational motives in the saying-is-believing effect. Specifically, we tested whether the affiliative motivation could impact on the establishment of a shared reality with the audience beyond the epistemic motivation. We reasoned that, compared to participants expressing a low one, those expressing a high desire to communicate with a specific audience would be strongly motivated to "get along" with the audience. Given this differential motivational state, we hypothesized that they would especially tune their message to the audience's position and remember the target in line with their message.

Our data supported these hypotheses, confirming that only participants who experienced higher levels of communication desire tailored their message to suit the audience's attitude toward the individual target (Hypothesis 1b). Moreover, we verified hypothesis 2, showing that participants who strived to connect with their audience, namely, those with high communication desire, reported an audience-congruent memory bias. Thus, these results demonstrated that, for equal levels of epistemic trust across experimental conditions, the saying-is-believing effect was found only among participants who were motivated to establish and maintain a relationship with the audience. Given this state of affairs, our data support the idea that especially participants who intended to share a common reality with the audience as a means to satisfy their relational need, further expressed an audience-congruent memory about behaviors of the individual target. This happened since they previously tuned their message to follow the known audience's impression about the target. In line with this interpretation, our moderated mediation showed that the impact of the audience's attitude on participants' memory was mediated by their tuning to

<sup>6</sup> Accordingly to Muller, Judd, and Yzerbyt (2005), even if the residual treatment effect did not result to be moderated (i.e., no significant Audience Attitude  $\times$  Communication Desire interaction on recall valence was found), this is not a necessary condition for establishing moderated mediation.

their audience only for those participants who displayed higher communication desire.

As already argued, the relevance of the affiliative motivation for audience tuning effects was addressed by previous saying-is-believing studies (indirectly by Echterhoff et al., 2005: Experiment 2 and 3; Echterhoff et al., 2008: Experiment 1; Echterhoff, Lang et al., 2009; and more straightforwardly by Higgins & McCann, 1984; McCann & Hancock, 1983). We pointed out how the relational motive in these studies could have impacted the audience tuning effect in association with the epistemic-related characteristics consequently attributed to the audience. Contrary to these studies, we used participants' spontaneous judgments of others to manipulate their relational motive without affecting their epistemic trust toward the addressee. In line with recent developments in shared reality theory (Echterhoff, Higgins et al., 2009), we demonstrated that the audience tuning of communicators to create a shared reality also works to fulfill specific affiliative needs toward the audience which are not related to epistemic ones.

Our results are also in line with previous literature asserting that the expression of thoughts and beliefs is used to establish a positive relationship with others (e.g., Jones & Pittman, 1982; Schlenker & Weigold, 1992). If we consider that getting along with others implies making people's own view of reality acceptable by those persons, then it is also meaningful to mention studies based on the accountability model (Tetlock, 1983). Taking a new perspective, these studies illustrate how people strategically shift their own attitude on social issues (e.g., capital punishment) as a function of their audience's viewpoint within a communication setting where they are asked to justify their position to another individual (Lerner & Tetlock, 1999; Tetlock, 1983; Tetlock, Skitka, & Boettger, 1989).

Closer to our specific paradigm, the "go along to get along" heuristic is used by impression-motivated perceivers (i.e., participants motivated to adopt attitudes to get along with the partner) in studies focusing on attitudes (Chen, Shechter, & Chaiken, 1996; see also Chaiken, Giner-Sorolla, & Chen, 1996).

Along similar lines, studies on the so-called affiliative social tuning (see Huntsinger & Sinclair, 2010) demonstrated that beliefs and implicit attitudes of people motivated to affiliate with others, spontaneously adjust to the perceived others' attitudes and beliefs, about a group and about themselves, as well as through explicit and automatic response (Lowery, Hardin, & Sinclair, 2001; Sinclair, Huntsinger, Skorinko, & Hardin, 2005; Sinclair, Lowery, Hardin, & Colangelo, 2005). Because achieving shared reality is thought to establish and maintain social bonds (Sinclair, Lowery et al., 2005), people should experience a heightened desire to develop shared reality with another social actor to the extent that they want to get along with this other person. As a consequence, the hypothesis of affiliative social tuning posits that individ-

uals will adjust – or "tune" – their beliefs to the ostensible beliefs of another social actor when they desire to get along with this person (Sinclair, Lowery et al., 2005; p. 584). Thus, the present study connects with previous findings by exploring the specific role played by the relational motive per se within the saying-is-believing paradigm.

Of particular interest are the implications of our study for the shared reality account of the saying-is-believing effect (Echterhoff, Higgins et al., 2009). In the current study participants were faced with uncertainty (i.e., they were all presented with ambiguous input), and they trusted their audience to a sufficient extent to tune their message ( $M = 4.43$ ,  $SD = 0.99$  of the epistemic trust scale, which was significantly different from the scale midpoint 4:  $t(74) = 3.77$ ,  $p = .000$ ). This is consistent with the presence of epistemic motives, which are thought to induce communicators to share reality with their audience (e.g., Higgins & Rholes, 1978; Kopietz et al., 2010; Pierucci et al., 2011). However, only participants with high communication desire shaped their impressions on the audience's advocated position. Furthermore, message valence was found to mediate the relationship between audience attitude and the recall valence depending on communication desire (i.e., for participants whose relational motive was high). Thus, the basis for participants to display their memory bias was the message they produced. In other words, in an uncertain situation, since just high communication desire participants were sufficiently motivated (for affiliative reasons) to tune to their trusted audience, they ended up showing memory bias.

To more precisely pinpoint the processes through which message tuning may have led to a memory bias, it can be useful to distinguish three potential epistemic inputs in the saying-is-believing paradigm, as Kopietz et al. (2010) suggested: (1) communicators' own opinion of the target after reading the input information, (2) the audience opinion, and (3) the opinion of the target contained in the audience-tuned message. In our study, we found no difference between conditions on participants' trust in point (2). This trust was sufficiently high to lead to tuning (i.e., to reduce uncertainty), though only high communication desire participants were in fact motivated to do it for other reasons (i.e., relational ones). So, participants' trust in point (3) should have driven the memory bias only found in the high communication desire condition, as suggested by the moderated mediation.

Unlike the epistemic motivation, the relational one had not yet been demonstrated as a necessary precondition of the saying-is-believing effect. The present data suggest that, at same levels of necessary epistemic need, the motivation people have to get along with the audience plays a role in the extent to which they create a shared reality with the audience. New research should help to disentangle the relative contribution of both the epistemic and relational motive by manipulating both motives concurrently and orthogonally in the same experiment.

## Acknowledgments

This research was supported in part by Concerted Research Action 06/1-342 entitled “Culturally Modified Organisms: What It Means to Be Human in the Age of Culture,” financed by the Ministère de la Communauté Française (Belgium) and by a grant of the Office of International Relations and Cooperation, Université Libre de Bruxelles, to the first author.

We are grateful to René Kopietz for his helpful comments on the manuscript and to the undergraduate students who took part in a social psychological methods class for their involvement in data collection and coding.

## References

- Altemeyer, B. (1998). The other “authoritarian personality”. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 30, pp. 47–92). San Diego, CA: Academic Press.
- Asch, S. (1951). Effects of group pressure upon the modification and distortion of judgments. *Groups, Leadership, and Men*, 190, 177.
- Chaiken, S., Giner-Sorolla, R., & Chen, S. (1996). Beyond accuracy: Defense and impression motives in heuristic and systematic information processing. In P. M. Gollwitzer & A. Bargh (Eds.), *The psychology of action: Linking cognition and motivation to behavior* (pp. 553–578). New York: Guilford.
- Chen, S., Shechter, D., & Chaiken, S. (1996). Getting the truth or getting along: Accuracy- versus impression-motivated heuristic and systematic processing. *Journal of Personality and Social Psychology*, 71, 262–275.
- Chiu, C., Krauss, R. M., & Lau, I. Y. (1998). Some cognitive consequences of communication. In S. R. Fussell & R. J. Kreuz (Eds.), *Social and cognitive approaches to interpersonal communication* (pp. 259–278). Hillsdale, NJ: Erlbaum.
- Cohen, P., Cohen, J., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- 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, 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, 496–521.
- Echterhoff, G., Lang, S., Krämer, N., & Higgins, E. T. (2009). Audience-tuning effects on memory: The role of audience status in sharing reality. *Social Psychology*, 40, 150–163.
- Festinger, L. (1950). Informal social communication. *Psychological Review*, 57, 271–282.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117–140.
- Hardin, C., & Conley, T. (2001). A relational approach to cognition: Shared experiences and relationships affirmation in social cognition. In G. B. Moskowitz (Ed.), *Cognitive social psychology: The Princeton Symposium on the legacy and future of social cognition* (pp. 3–17). Mahwah, NJ: Erlbaum.
- Hardin, C. D., & 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* (Vol. 3, pp. 28–84). New York: 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.
- Higgins, E. T. (1999). “Saying is believing” effects: When sharing reality about something biases knowledge and evaluations. In L. L. Thompson, J. M. Levine, & D. M. Messick (Eds.), *Shared cognition in organizations: The management of knowledge* (pp. 33–49). Mahwah, NJ: Erlbaum.
- Higgins, E. T., & McCann, C. D. (1984). Social encoding and subsequent attitudes, impressions, and memory: “Context-driven” and motivational aspects of processing. *Journal of Personality and Social Psychology*, 47, 26–39.
- 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, 363–378.
- Huntsinger, J. R., & Sinclair, S. (2010). If it feels right, go with it: Affective regulation of affiliative social tuning. *Social Cognition*, 28(Special Issue: Shared Reality), 290–305.
- Jarvis, B. G. (2005). MediaLab (version 2008) [Computer software]. New York: Empirisoft Corporation.
- Jones, E., & Pittman, T. (1982). Toward a general theory of strategic self-presentation. *Psychological Perspectives on the Self*, 1, 231–262.
- Judd, C. M., & McClelland, G. H. (1998). Measurement. In D. Gilbert, S. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed, pp. 180–232). New York: McGraw-Hill.
- Klein, O., Snyder, M., & Livingston, R. W. (2004). Prejudice on the stage: Self-monitoring and the expression of group attitudes. *British Journal of Social Psychology*, 43, 299–314.
- Klein, O., Spears, R., & Reicher, S. D. (2007). Identity performance: Extending the strategic side of SIDE. *Personality and Social Psychology Review*, 11, 1–18.
- Kopietz, R., Echterhoff, G., Niemeier, S., Hellmann, J., & Memmon, A. (2009). Audience-congruent biases in eyewitness memory and judgment. *Social Psychology*, 40, 133–144.
- Kopietz, R., Hellmann, J., Higgins, E. T., & Echterhoff, G. (2010). Shared-reality effects on memory: Communicating to fulfill epistemic needs. *Social Cognition*, 28, 353–378.
- Lerner, J., & Tetlock, P. E. (1999). Accounting for the effects of accountability. *Psychological Bulletin*, 125, 255–275.
- Lowery, B. S., Hardin, C. D., & Sinclair, S. (2001). Social influence effects on automatic racial prejudice. *Journal of Personality and Social Psychology*, 81, 842–855.
- McCann, C. D., & Hancock, R. D. (1983). Self-monitoring in communicative interactions: Social cognitive consequences of goal-directed message modification. *Journal of Experimental Social Psychology*, 19, 109–121.
- Muller, D., Judd, C. M., & Yzerbyt, V. Y. (2005). When moderation is mediated and mediation is moderated. *Journal of Personality and Social Psychology*, 89, 852–863.
- Noel, J. G., Wann, D. L., & Branscombe, N. R. (1995). Peripheral ingroup membership status and public negativity toward out-

- groups. *Journal of Personality and Social Psychology*, 68, 127–137.
- Pierucci, S., Marchal, C., Klein, O., & Echterhoff, G. (2012). *Audience-congruent memory bias at work! Judging sexual harassment under uncertainty in interpersonal communication*. Manuscript in preparation.
- Schlenker, B., & Weigold, M. (1992). Interpersonal processes involving impression regulation and management. *Annual Review of Psychology*, 43, 133–168.
- Sedikides, C. (1990). Efforts of fortuitously activated constructs versus activated communication goals on person impressions. *Journal of Personality and Social Psychology*, 58, 397–408.
- Sherif, M. (1935). A study of some social factors in perception. *Archives of Psychology*, 27(No. 187).
- Sherif, M. (1936). *The psychology of social norms*. New York: Harper & Row.
- Sinclair, S., Huntsinger, J.H., Skorinko, J.L., & Hardin, C. (2005). Social tuning of the self: Consequences for the self-evaluations of stereotype targets. *Journal of Personality and Social Psychology*, 89, 160–175.
- Sinclair, S., Lowery, B., Hardin, C., & Colangelo, A. (2005). Social tuning of automatic racial attitudes: The role of affiliative motivation. *Journal of Personality and Social Psychology*, 89, 583–592.
- Snyder, M., & Gangestad, S. (1986). On the nature of self-monitoring: Matters of assessment, matters of validity. *Journal of Personality and Social Psychology*, 51, 125–139.
- Tetlock, P.E. (1983). Accountability and complexity of thought. *Journal of Personality and Social Psychology: Attitudes and Social Cognition*, 45, 74–83.
- Tetlock, P.E., Skitka, L., & Boettger, R. (1989). Social and cognitive strategies of coping with accountability: Conformity, complexity, and bolstering. *Journal of Personality and Social Psychology: Interpersonal Relations and Group Dynamics*, 57, 632–641.
- Turner, J. (1991). *Social influence*. Milton Keynes, UK: Open University Press.

Received November 23, 2010

Final revision received June 6, 2011

Accepted June 16, 2011

Published online June 1, 2012

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