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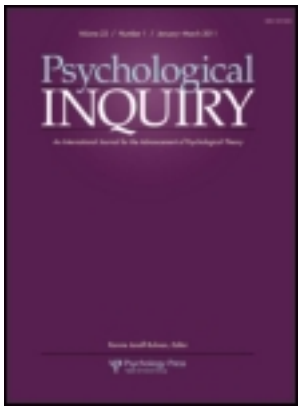

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Integrations Need Both Breadth and Depth: Commentary on Zaki and Ochsner

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Zaki and Ochsner (this issue) put out a call for social cognition researchers to integrate work on the processes that enable mind perception with work on the accuracy with which people reason about other minds. We welcome this call and believe it is long overdue. Indeed, the main reason that psychologists are interested in underlying psychological processes at all is because they give insight into how effectively these processes are likely to function in everyday life. Understanding *how* people reason about the minds of others is interesting mainly because it provides insight into *how well* they are likely to do so.

Zaki and Ochsner echo the arguments that process researchers have been making for many years—that people rely on multiple processes and cognitive tools to reason about the minds of others. We agree with Zaki and Ochnser that neuroscience may aid process researchers in understanding exactly how these different processes operate in any given social judgment given that these underlying processes cannot be observed directly. We also agree that neuroscience has the potential to provide a more concrete understanding of exactly when different processes are utilized to make inferences about the minds of others. And we therefore agree that neuroscience may help to integrate the processes that guide mind perception to the accuracy that those processes produce.

Although we found much to like in this target article, we also found three points that could count as disagreement. First, we are concerned that an increased focus on accuracy inevitably leads to useless and misleading arguments about how good people really are at judging the minds of others. Oversimplified statements that people are "consummate experts" or amateurs at judging the minds of others are a waste of time and reflect opinions from authors more than facts from experiments. Second, we think that Zaki and Ochsner have overlooked, or at least underemphasized, the main benefit of linking process to accuracy. This benefit is that understanding process enables researchers to predict when people are likely to be accurate and when they are not. This, in turn, also enables researchers to predict the systematic mistakes that people might make and provides insight into how to systematically increase or decrease accuracy. Finally, Zaki and Ochsner suggest focusing on the adaptive consequences of accuracy rather than simply on accuracy as an end goal in itself. We think that research area is already getting considerable attention, and instead we suggest zooming out to the beginning of the mind perception process to understand the factors that trigger people to think about the minds of others in the first place.

Oversimplifying Accuracy

Bernard Madoff ran an investment securities firm for nearly 50 years that defrauded its investors of billions of dollars. The magnitude of Madoff's fraud appears unprecedented. More amazing, however, was that Madoff's lies went undetected by his closest friends, and apparently even his family members, for well over 20 years. Day after day, year after year, one dinner party and lunch meeting after another, Madoff sat across the table from friends and family members and other close investors telling lies that nobody seemed able to detect. It is hard to fault Madoff's investors. Detecting whether people are lying or telling the truth appears, based on experiment after experiment, with both novices and experts, to be a very difficult task. A recent meta-analysis of 206 lie detection experiments found that people could accurately distinguish between lies and truths 54% of the time, on average, when chance accuracy was 50% (Bond & DePaulo, 2006).

We were therefore rather surprised to read in the opening paragraphs of Zaki and Ochsner's article that

> whether we're sniffing out the intentions of a used car salesman or figuring out the right thing to say to an upset friend . . . we are consummate experts at this task, accurately reading the internal mental states that guide other's behavior with an ease and skill that would be shocking if it wasn't so universal. (p. 159)

Really? Lies and truths, remember, are detected accurately only 54% of the time. People do indeed find it easy to reason about the minds of others, but you have to evaluate the scientific evidence for accuracy with at

least one eye closed in order to conclude that "we are consummate experts."

Our concern with this opening emphasis, revisited again later in the article in caricatured descriptions of the heuristics and biases research tradition, is important, because all calls to consider accuracy in social cognition seem to start out the same way, whether it is a call from a reporter or a call by researchers to study accuracy. These calls almost inevitably seek some statistics, ideally a single statistic, that will tell us how good people "really are" at whatever we are trying to measure accurately. The problem with a simple answer to these calls, such as the "consummate expert" characterization offered by Zaki and Ochsner, is that it is misleading to readers and unhelpful to psychological science.

It is misleading to readers because there is simply no general statement that can be made about how good people really are at understanding the minds of others. People are *relatively* good at some tasks, such as knowing how they will be judged by others in general, and *relatively* bad at more challenging versions of the same task, such as knowing how specific individuals within a group will judge them (Kenny & DePaulo, 1993). Some traits (e.g., extraversion) are easier to judge than others (e.g., neuroticism; Funder & Dobroth, 1987; Hall, Andrzejewski, Murphy, Schmid Mast, & Feinstein, 2008). Some people (e.g., high in intelligence) are better mind readers than others (Callaghan et al., 2005; Davis & Kraus, 1997; Realo et al., 2003). Some cultures (e.g., collectivistic) seem to foster capacities that would enable better mind reading than others (Cohen & Gunz, 2002; Wu & Keysar, 2007). Some people, such as our friends, are easier to read than others (Stinson & Ickes, 1992) but still not as easy to read as we might think (Savitsky, Keysar, Epley, Carter, & Swanson, 2011; Swann & Gill, 1997). Finally, trying harder to be accurate appears to improve accuracy in some domains (Epley, Keysar, Van Boven, & Gilovich, 2004) but has no effect in others (Hall et al., 2009; Myers & Hodges, 2009). The only general thing that can be said about mind perception is that it is sometimes better than chance, almost never perfect, and leaves plenty of opportunity for improvement.

Instead of noting the enormous variability in accuracy observed in both process- and accuracy-oriented research, Zaki and Ochsner (this issue) repeat a common (but empirically unsubstantiated) claim of critics that studies of social cognitive error "typically use highly superficial and nonnaturalistic tasks that . . . are designed to create the errors they document" (p. 169). We wonder what the actual evidence is for such a claim. For instance, process researchers study how partisans on opposite sides of the abortion debate (Chambers, Baron, & Inman, 2006), an educational dispute (Robinson, Keltner, Ward, & Ross, 1995), or a labor/management conflict (Robinson & Friedman, 1995) view each other's attitudes and beliefs. Process researchers ask people to predict if someone else can detect when they are lying or telling the truth (Gilovich, Medvec, & Savitsky, 2000), predict how attractively they will be judged by a member of the opposite sex based on a photograph (Eyal & Epley, 2010), or predict when another person will be able to detect that they are "only teasing" when they poke fun at someone versus when they are actually intending to be critical (Kruger, Gordan, & Kuban, 2006). We are curious to know how these experiments count as "superficial" or "nonnaturalistic."

Accuracy researchers, in contrast, take posed photographs of people pretending to experience an emotion and ask people to report what the person is "really feeling" (Nowicki & Carton, 1993). Or they clip out faces from advertisements, get consensus judgments from a small number of raters about what mental state that person is probably feeling or thinking, call those consensus judgments a measure of accuracy, and then measure how well people can predict those consensus judgments looking at only a cutout of the target's eyes (Baron-Cohen, Wheelwright, Hill, Raste, & Plumb, 2001). Or they ask people to interact with each other, go back and watch a videotape of that interaction trying to remember every point at which they had a thought, and then measure how well the interaction partner can predict the other person's recalled thought after the interaction (Ickes, 2003). We are curious to know in what way these studies are somehow deeper and more naturalistic.

Zaki and Ochsner are, however, absolutely right that accuracy researchers typically use chance as the baseline of comparison. Doing better than chance is therefore counted as evidence of accuracy, no matter how slight. Process researchers, in contrast, typically use perfect accuracy as the baseline, and any deviation is therefore counted as error, again no matter how slight. Whether people look like "consummate experts" or not therefore depends on the researcher's basis of comparison rather than on people's actual ability. We wish that researchers would stop making such claims. Accuracy research will benefit markedly, we think, when researchers get beyond overly simplistic statements about people's true ability and instead attend to how the processes underlying mind perception can predict variability.

Process Predicts Accuracy

Accuracy researchers "crowded the exits" (Gilbert, 1998) after Cronbach's critique and started studying more basic psychological processes because, at least in part, researchers had gotten ahead of themselves. Understanding the processes that enable mind perception is the first necessary step in understanding when those processes are going to produce accurate

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judgments and when they are not. Early researchers had overlooked this first step altogether. With 30 years of subsequent process research, psychologists are now better positioned to understand when people are likely to be more or less accurate and how to increase accuracy systematically. The real benefit that we think comes from linking process to accuracy is the ability for underlying processes to predict accuracy. Zaki and Ochsner describe this possibility in their Processes' Situation-Specific Utility section but underemphasize the value of this benefit.

One concrete example of how understanding process can both predict and enable accuracy comes from our own research (Eyal & Epley, 2010) examining how well people can intuit the impressions they are conveying to others. This is not an easy mind perception task. Other people's impressions are not written on their faces in the same way that a simple emotion might be. In this case, people reason about the minds of others by using their own mental states—their own attitudes, beliefs, or impressions—as an initial starting point (Alicke, Dunning, & Krueger, 2005; Epley et al., 2004; Flavell, 1986; Keysar, Barr, Balin, & Brauner, 2000; Nickerson, 1999; Piaget, 1929; Smith, Coats, & Walling, 1999). This egocentric strategy enables accuracy when two people share the same psychological perspective but produces errors when perspectives differ (e.g., Gilovich et al., 2000; Gilovich, Savitsky, & Medvec, 1998; Keysar, 1994; Nickerson, 1999; Ross & Ward, 1996; Van Boven, Dunning, & Loewenstein, 2000).

Perspectives between two people may differ for many reasons. One of these differences is that people have much more information about themselves than others do (Jones & Nisbett, 1971). People are experts about themselves. Experts in any domain are able to notice fine-grained details and subtle distinctions that novices cannot even notice. People are therefore likely to think about themselves in much more low-level detail than others are (Chambers, Epley, Savitsky, & Windschitl, 2008; Eyal & Epley, 2010; Jones & Nisbett, 1971; Pronin, Gilovich, & Ross, 2004; Semin, 2004; Trope & Liberman, 2010). Others, in contrast, are relative novices and are therefore likely to think of the self in much more abstract, general, and high-level terms (Trope & Liberman, 2010). A professor, for instance, might evaluate the quality of her own lecture by thinking about low-level details of words and phrases in the lecture, whereas students are likely to evaluate the lecture in terms of its overall content and general interest. If people evaluate themselves under a microscope but are evaluated by others at the level of the naked eye, then people are likely to have some difficulty intuiting how they are viewed by others.

This insight from the process that guides mind perception suggests that aligning the level at which people construe themselves and others may increase accuracy. In a recent series of experiments we conducted to test this hypothesis (Eyal & Epley, 2010), participants anticipated how attractive they would be evaluated by another participant on the basis of a photograph. Half of the participants anticipated how they would be judged by someone looking at their picture later that day. The other half of participants anticipated how they would be judged by someone 3 months from now. The latter condition encourages a higher level self-construal than the former (Trope & Liberman, 2010). As predicted, participants were significantly more accurate, both in the correlation between predicted and actual evaluations and the absolute difference between them, when predicting how they would be evaluated 3 months from now than when intuiting how they would be judged right now. These differences were substantial. Participants were no better than chance at predicting how attractively they would be judged later that day ($r = –.24$) but were impressively accurate when predicting how they would be judged 3 months from now ($r = .55$).

Not only does understanding process identify how to increase accuracy for everyone but it also predicts which individuals are likely to be consistently more accurate than others. In particular, those who are particularly likely to think of themselves in high-level details should be more accurate predicting how they are evaluated by others than those who tend to think of themselves in low-level details. We measured this tendency using Vallacher and Wegner's (1989) Action Identification Scale. In this version, people imagined themselves performing a variety of different activities (such as voting) and then indicated which description of the event they preferred, either a low-level description (marking a ballot) or a high-level description (influencing the election). As predicted, those who tended to describe their own behavior in high-level terms were more accurate predicting how attractive they would be rated by a member of the opposite sex ($r = .38$). The real benefit from integrating process and accuracy in mind perception, we believe, is that only an understanding of the former can provide systematic insight into the latter.

Triggering Mind Perception

Zaki and Ochsner suggest that mind perception researchers should "zoom out" to consider the relation not only between psychological processes and their downstream consequences for accuracy but also between accuracy and their yet further downstream consequences for adaptive outcomes. Although the outcomes of accuracy for adaptive functioning are interesting and important, considerable attention is already being paid to these outcomes. Less attention is being paid, we think, to the activation of mind

perception processes in the first place. What triggers people to think about, or activate, their capacity to reason about the minds of others? Understanding these factors would require zooming out to consider the very beginning of mind perception processes rather than the outcomes that emerge at the end.

A complete understanding of mind perception, we suggest, would then consider four critical components: activation (*when* mind perception is triggered), application (*how* people reason about the minds of others), accuracy (*how well* mind perception processes predict others' mental states), and adaptive functioning (in what way is accuracy is related to outcomes). We think that research on mind perception is in a similar position as research on stereotyping was roughly 20 years ago. At that time, psychologists considered stereotypes to be used almost inevitably in any social interaction. The only questions were how these stereotypes were applied to targets, how well these stereotypes actually predicted a target person's behavior, and how much these stereotypes led to discriminatory outcomes. Real progress was made in understanding how stereotypes function in everyday life, however, by considering the upstream question of when stereotypes were activated in social interaction and when they were not. Although it is relatively easy to activate stereotypes in social interaction (Devine, 1989), it is not inevitable. Activating a stereotype from memory requires attentional effort (Gilbert & Hixon, 1991; Macrae, Milne, & Bodenhausen, 1994) and is driven by the situational cues in one's environment (Wittenbrink, Judd, & Park, 2001). Knowing how stereotypes influence social life requires understanding when these processes are triggered in the first place.

Like stereotypes, mind perception processes are often considered to be activated almost inevitably whenever a person is in the midst of a social interaction. The ability to reason about the minds of others has been hypothesized to be a distinct neural module that is "rapid . . . automatic, requiring no effortful attention . . . and universal" (Stone, Baron-Cohen, & Knight, 1998, p. 640). People even find it relatively easy under the right circumstances to attribute minds to nonhuman agents, ranging from pets to gods to geometric shapes (Heider & Simmel, 1944; see Guthrie, 1993, and Epley, Waytz, & Cacioppo, 2007, for reviews). Mind perception is one of the capacities that make human beings especially intelligent compared to our nearest primate relatives (Herrmann, Call, Hernández-Lloreda, Hare, & Tomasello, 2007). It stands to reason that we would therefore make rampant use of our brain's most prized possession.

Although people have the capacity to imagine the minds of others, just as they also have the capacity to use stereotypes when evaluating others, emerging research makes it clear that mind perception is not necessarily an automatically activated process and instead can be triggered by the individual or the situational context (for reviews, see Epley & Waytz, 2010; Waytz, Klein, & Epley, in press). These triggers matter because they not only help to explain when people are likely to reason about other minds relatively rampantly, such as when they anthropomorphize nonhuman agents, but also when people are likely to fail to consider the minds of other humans, behaving either completely egocentrically or treating other people as mindless animals or objects (Bandura, Underwood, & Fromson, 1975; Haslam, 2006; Leyens et al., 2003). The accuracy and adaptive outcomes of mind perception processes matter nothing for people's behavior in everyday life if they are not activated in the first place.

Although still very much in the early stages of development, mind perception appears to be triggered by both motivational and cognitive factors. For example, thinking about the minds of others helps to explain their behavior and enables a closer personal connection with others, and people who are motivated either to explain another's actions or to connect with another person are also more likely to activate their mind perception capacities (Epley, Akalis, Waytz, & Cacioppo, 2008; Waytz et al., 2010). Thinking about the minds of others is also triggered by the degree to which one is connected to, or engaged with, another person. Such connection and engagement is increased by feeling similar to another person, and similarity therefore seems to engage both the experience sharing (Avenanti, Sirigu, & Aglioti, 2010; Batson, 1994) as well as the mental state attribution processes involved in mind perception (Harris & Fiske, 2006). These triggers are often easy to miss in the empirical literature because researchers often put people into the very contexts where those triggers are already present, making mind perception seem more automatic than it may actually be. For instance, in the widely cited Heider and Simmel (1947) study that is commonly used to show how easily people attribute minds to almost anything (i.e., geometrical shapes), participants were asked to explain the behavior of the shapes, a powerful trigger for mind perception. We think that an increased focus on the triggers of mind perception processes is every bit as important as focusing on the outcomes that these processes produce.

Completely in line with the main arguments of Zaki and Ochsner, we think that neuroscience is uniquely positioned to reveal these triggers. Activation of mind perception processes can be detected especially well using neuroscientific methods compared to behavioral methods, even though neuroscientific methods to date have typically been applied in understanding which type of mind perception processes are utilized once someone has already been triggered to think about the mind of another person. We are, like Zaki and Ochsner, optimistic about the advances that may come from these methods if researchers begin studying not

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only how mind perception processes are used but also when they are activated.

Conclusion

Much of everyday life involves interacting with, or thinking about interactions with, other minds. Those minds most commonly come wrapped within a human body, but minds also appear in other animals, imagined supernatural agents, or even in one's car or computer. Understanding how people act as intuitive psychologists to understand these other minds, and understanding how accurately we function as intuitive psychologists in everyday life, is therefore one of the most central issues in all of psychological science. We agree wholeheartedly with Zaki and Ocshner that psychological science will benefit from integrating mind perception processes with the accuracy of those processes, and we hope this general call will be both heard and accepted. We also agree with the bulk of their target article, particularly the benefit that could come from neuroscientific methods. We think, however, that psychological science will benefit particularly if researchers could set aside overly simplistic attempts to characterize and caricature both the processes that enable mind perception and the overall accuracy it produces, focus instead on using mind perception processes to predict both impressive cases of accuracy *and* error, and broaden their focus on mind perception processes even further to understand the triggers of mind perception.

Note

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References

Alicke, M. D., Dunning, D., & Krueger, J. I. (2005). *The self in social judgment*. New York, NY: Psychology Press.

Avenanti, A., Sirigu, A., & Aglioti, S. (2010). Racial bias reduces empathic sensorimotor resonance with other-race pain. *Current Biology, 20*, 1018–1022.

Bandura, A., Underwood, B., & Fromson, M. E. (1975). Disinhibition of aggression through diffusion of responsibility and dehumanization of victims. *Journal of Research in Personality, 9*, 253–269.

Baron-Cohen, S., Wheelwright, S., Hill, J., Raste, Y., & Plumb, I. (2001). The "Reading the mind in the eyes" Test revised version: A study with normal adults, and adults with Asperger syndrome or high-functioning autism. *Journal of Child Psychology and Psychiatry, 42*, 241–251.

Batson, C. D. (1994). Prosocial motivation: Why do we help others? In A. Tesser (Ed.), *Advanced social psychology* (pp. 333–381). Boston, MA: McGraw-Hill.

Bond, C. F., Jr., & DePaulo, B. M. (2006). Accuracy of deception judgments. *Personality and Social Psychology Review, 10*, 214–234.

Callaghan, T. C., Rochat, P., Lillard, A., Claux, M. L., Odden, H., Itakura, S., ... Singh, S. (2005). Synchrony in the onset of mental-state reasoning. *Psychological Science, 16*, 378–384.

Chambers, J. R., Baron, R. S., & Inman, M. L. (2006). Misperceptions in intergroup conflict: Disagreeing about what we disagree about. *Psychological Science, 17*, 38–45.

Chambers, J. R., Epley, N., Savitsky, K., & Windschitl, P. D. (2008). Knowing too much: Using private knowledge to predict how one is viewed by others. *Psychological Science, 19*, 542–548.

Cohen, D., & Gunz, A. (2002). As seen by the other...: Perspectives on the self in the memories and emotional perceptions of Easterners and Westerners. *Psychological Science, 13*, 55–59.

Davis, M. H., & Kraus, L. A. (1997). Personality and empathic accuracy. In W. Ickes (Ed.), *Empathic accuracy* (pp. 144–168). New York, NY: Guilford.

Devine, P. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology, 56*, 5–18.

Epley, N., Akalis, S., Waytz, A., & Cacioppo, J. T. (2008). Creating social connection through inferential reproduction: Loneliness and perceived agency in gadgets, gods, and greyhounds. *Psychological Science, 19*, 114–120.

Epley, N., Keysar, B., Van Boven, L., & Gilovich, T. (2004). Perspective taking as egocentric anchoring and adjustment. *Journal of Personality and Social Psychology, 87*, 327–339.

Epley, N., & Waytz, A. (2010). Mind perception. In S. T. Fiske, D. T. Gilbert, & G. Lindsay (Eds.), *The handbook of social psychology* (5th ed., Vol. 1, pp. 498–541). New York, NY: Wiley.

Epley, N., Waytz, A., & Cacioppo, J. T. (2007). On seeing human: A three–factor theory of anthropomorphism. *Psychological Review, 114*, 864–886.

Eyal, T., & Epley, N. (2010). How to seem telepathic: Enabling mind reading by matching self-construal. *Psychological Science, 21*, 700–705.

Flavell, J. H. (1986). The development of children's knowledge about the appearance–reality distinction. *American Psychologist, 41*, 418–425.

Funder, D., & Dobroth, K. (1987). Differences between traits: Properties associated with intergroup agreement. *Journal or Personality and Social Psychology, 52*, 409–418.

Gilbert, D. T. (1998). Ordinary personology. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of Social Psychology* (Vol. 2, pp. 89–150). New York, NY: McGraw-Hill.

Gilbert, D. T., & Hixon, J. G. (1991). The trouble of thinking: Activation and application of stereotypic beliefs. *Journal of Personality and Social Psychology, 60*, 509–517.

Gilovich, T., Medvec, V. H., & Savitsky, K. (2000). The spotlight effect in social judgment: An egocentric bias in estimates of the salience of one's own actions and appearance. *Journal of Personality and Social Psychology, 78*, 211–222.

Gilovich, T., Savitsky, K., & Medvec, V. H. (1998). The illusion of transparency: Biased assessments of others' ability to read our emotional states. *Journal of Personality and Social Psychology, 7*, 332–346.

Guthrie, S. E. (1993). *Faces in the clouds: A new theory of religion*. New York, NY: Oxford University Press.

Hall, J. A., Andrzejewski, S. A., Murphy, N. A., Schmid Mast, M. S., & Feinstein, B. A. (2008). Accuracy of judging others' traits and

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states: Comparing mean accuracy levels across tests. *Journal of Research in Personality, 42*, 1476–1489.

Hall, J. A., Blanch, D. B., Horgan, T. G., Murphy, N. A., Rosip, J. C., & Schmid Mast, M. (2009). Motivation and interpersonal sensitivity: Does it matter how hard you try? *Motivation and Emotion, 33*, 291–302.

Harris, L. T., & Fiske, S. T. (2006). Dehumanizing the lowest of the low: Neuro-imaging responses to extreme outgroups. *Psychological Science, 17*, 847–853.

Haslam, N. (2006). Dehumanization: An integrative review. *Personality and Social Psychology Review, 10*, 252–264.

Heider, F, & Simmel, M. (1944). An experimental study of apparent behavior. *American Journal of Psychology, 57*, 243–259.

Herrmann, E., Call, J., Hernández-Lloreda, M. V., Hare, B., & Tomasello, M. (2007). Humans have evolved specialized skills of social cognition: The cultural intelligence hypothesis. *Science, 317*, 1360–1366.

Ickes, W. (2003). *Everyday mind reading: Understanding what other people think and feel*. Amherst, NY: Prometheus.

Jones, E. E., & Nisbett, R. E. (1971). *The actor and the observer: Divergent perceptions of the causes of behavior*. New York, NY: General Learning.

Kenny, D. A., & DePaulo, B. M. (1993). Do people know how others view them? An empirical and theoretical account. *Psychological Bulletin, 114*, 145–161.

Keysar, B. (1994). The illusion transparency of intention. Linguistic perspective taking in text. *Cognitive Psychology, 26*, 165–208.

Keysar, B., Barr, D. J., Balin, J. A., & Brauner, J. S. (2000). Taking perspective in conversation: The role of mutual knowledge in comprehension. *Psychological Science, 11*, 32–38.

Kruger, J., Gordan, C., & Kuban, J. (2006). Intentions in teasing: When "just kidding" just isn't good enough. *Journal of Personality and Social Psychology, 90*, 412–425.

Leyens, J. P., Cortes, B. P., Demoulin, S., Dovidio, J., Fiske, S. T., Gaunt, R., et al. (2003). Emotional prejudice, essentialism, and nationalism. *European Journal of Social Psychology, 33*, 703–717.

Macrae, C. N., Milne, A. B., & Bodenhausen, G. V. (1994). Stereotypes as energy-saving devices: A peek inside the cognitive toolbox. *Journal of Personality and Social Psychology, 66*, 37–47.

Myers, M. W., & Hodges, S. D. (2009). Making it up and making do: Simulation, imagination and empathic accuracy. In K. Markman, W. Klein, & J. Suhr (Eds.), *The handbook of imagination and mental simulation* (pp. 281–294). New York, NY: Psychology Press.

Nickerson, R. S. (1999). How we know—and sometimes misjudge—what others know: Imputing one's own knowledge to others. *Psychological Bulletin, 125*, 737–759.

Nowicki, S., Jr., & Carton, J. (1993). The measurement of emotional intensity from facial expressions. *Journal of Social Psychology, 133*, 749–750.

Piaget, J. (1929). *The child's conception of the world*. New York, NY: Harcourt, Brace Jovanovich.

Pronin, E., Gilovich, T., & Ross, L. (2004). Objectivity in the eye of the beholder: Divergent perceptions of bias in self versus others. *Psychological Review, 111*, 781–799.

Realo, A., Allik, J., Nõlvak, A., Valk, R., Ruus, T., Schmidt, M., et al. (2003). Mind-reading ability: Beliefs and performance. *Journal of Research in Personality, 37*, 420–445.

Robinson, R. J., & Friedman, R. A. (1995). Mistrust and misconstrual in union-management relationships: Causal accounts in adversarial contexts. International. *Journal of Conflict Management, 6*, 312–327.

Robinson, R. J., Keltner, D., Ward, A., & Ross, L. (1995). Actual versus assumed differences in construal: "Naive realism" in intergroup perception and conflict. *Journal of Personality and Social Psychology, 68*, 404–417.

Ross, L., & Ward, A. (1996). Naïve realism: Implications for social conflict and misunderstanding. In T. Brown, E. Reed, & E. Turiel (Eds.), *Values and knowledge* (pp. 103–135). Mahwah, NJ: Erlbaum.

Savitsky, K., Keysar, B., Epley, N., Carter, T. J., & Swanson, A. T. (2011). The closeness-communication bias: Increased egocentrism among friends versus strangers. *Journal of Experimental Social Psychology, 47*, 269–273.

Semin, G. R. (2004). The language of self and others in contexts. In J. T. Jost, M. R. Banaji, & D. Prentice (Eds.), *The Ying and Yang of social cognition: Perspectives on the social psychology of thought systems* (pp. 143–160). Washington, DC: APA Press.

Smith, E. R., Coats, S., & Walling, D. (1999). Overlapping mental representations of self, in-group, and partner: Further response time evidence and a connectionist model. *Personality and Social Psychology Bulletin, 25*, 873–882.

Stinson, L., & Ickes, W. (1992). Empathic accuracy in the interactions of male friends versus male strangers. *Journal of Personality and Social Psychology, 62*, 787–797.

Stone, V., Baron-Cohen, S., & Knight, R. (1998). Frontal lobe contributions to theory of mind. *Journal of Cognitive Neuroscience, 10*, 640–656.

Swann, W. B., Jr. & Gill, M. J. (1997). Confidence and accuracy in person perception: Do we know what we think we know about our relationship partners? *Journal of Personality and Social Psychology, 73*, 747–757.

Trope, Y., & Liberman, N. (2010). Construal level theory of psychological distance. *Psychological Review, 117*, 440–463.

Vallacher, R. R., & Wegner, D. M. (1989). Levels of personal agency: Individual variation in action identification. *Journal of Personality and Social Psychology, 57*, 660–671.

Van Boven, L., Dunning, D., & Loewenstein, G. (2000). Egocentric empathy gaps between owners and buyers: Misperceptions of the endowment effect. *Journal of Personality and Social Psychology, 79*, 66–76.

Waytz, A., Klein, N., & Epley, N. (in press). Imagining other minds: Hair triggered but not hare brained. In M. Taylor (Ed.), *The development of imagination*. New York, NY: Oxford University Press.

Waytz, A., Morewedge, C. K., Epley, N., Monteleone, G., Gao, J-H., & Cacioppo, J. T. (2010). Making sense by making sentient: Unpredictability increases anthropomorphism. *Journal of Personality and Social Psychology, 99*, 410–435.

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

Wu, S., & Keysar, B. (2007). Cultural effects on perspective taking. *Psychological Science, 18*, 600–606.

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