
20 Perspective Taking: Misstepping Into Others' Shoes

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INTRODUCTION

The ability to intuit another person's thoughts, feelings, and inner mental states is surely among the most impressive of human mental faculties. Adopting another's perspective requires the ability to represent the self as distinct from others, the development of a theory of mind to realize that others have mental states in the first place (see also Saxe, Chapter 17, this volume) and the explicit recognition that others' mental states and perceptions could differ from one's own. Humans appear to be born with absolutely none of these capacities but instead develop them during the first few years of life (Callaghan et al., 2005; Flavell, 1999; Gopnik & Meltzoff, 1994). Developing these perspective-taking abilities appears critical for many of the good things in social life, from empathy, to cooperation, to possible acts of altruism. Not all humans develop these skills to equivalent degrees, and those who do not develop these skills to any degree are among the most puzzling (and occasionally horrifying) members of society as they look perfectly human but act completely *unhuman*. Of course, humans are not alone in their capacity for self-awareness, their considerations of others' mental states, or perhaps even their awareness of differing perspectives and resulting mental states, but comparing the abilities of even the closest nonhuman relative is a bit like comparing sandcastles to skyscrapers (Hare, 2007).

But, as anyone who has recently purchased a cell phone, computer, or almost any other technological gadget knows all too well, owning impressive technology and using it correctly are two entirely different things. One of us, for instance, owns a cellular telephone that is also able to take pictures, play music, and do something called "texting," but so far is only able to use it to call other telephones. The same gap also holds for mental technologies, for which the possibility of performing some impressive mental operation need not equate with one's actual ability to perform this operation. From memory, to altruism, to self-control, the gap between what is possible with one's psychological abilities and what is probable can appear somewhat "canyonesque." The same, we argue, is also true of perspective taking. Humans possess the mental capability necessary to adopt

another's perspective and consider another's thoughts, feelings, and internal mental states. This may happen when trying to consider another person's perspective in the present, such as when we wonder how our children could possibly have believed *that* was a good idea, or when people are trying to consider their own perspective at some other point in time, such as when a person anticipates how happy she would be in a new job or 1 year following her own wedding ceremony (see also Dunn, Forrin, & Ashton-James, Chapter 22, this volume). Possessing this capability does not, however, mean that people will necessarily use their perspective-taking skills when they should, or that their skills will actually lead them to accurately identify another person's mental states. Recent advancements in research on the processes underlying perspective taking, in fact, suggest several important challenges to using one's perspective-taking capabilities to their fullest potential and demonstrate a series of reliable missteps that perspective takers are likely to take when stepping (or failing to step) into others' shoes.

Making any kind of general statement about the accuracy of perspective taking is about as hopeless as making a general statement on the value of the U.S. dollar—it depends where you look, when you look, and how you measure it. People are quite capable, for instance, of recognizing the emotion a person is experiencing by looking at his or her facial expressions (Ekman, 1982) and can even detect certain false displays of emotion from truly felt displays (Frank, Ekman, & Friesen, 1993). Empathy for others in distress can be evoked automatically when one is explicitly directed to attend to another's pain and suffering (Batson, 1998), yet in the absence of such explicit direction, empathy is likely to be considerably less automatic (Batson, Chapter 18, this volume; Batson & Shaw, 1991; Hodges & Wegner, 1997; Myers & Hodges, Chapter 19, this volume). People are also reasonably good at recognizing what future versions of themselves will like and dislike but have considerably less ability to predict how much or for how long they will like or dislike those things (Wilson & Gilbert, 2003). Young children before age 4 have difficulty recognizing that others may have beliefs that differ very considerably from their own (Flavell, 1986; Perner, 1991; Wimmer & Perner, 1983) but come to appreciate this as a relatively common occurrence in everyday life as they get older (Wellman, Cross, & Watson, 2001). And, people are reasonably good at intuiting the impressions they convey to others in general but considerably less good at intuiting any specific individual's impression of them (Kenny & DePaulo, 1993). It is not clear that people's beliefs about their ability to accurately adopt another person's perspective map in any way to their actual ability to do so (Realo et al., 2003), and confidence in one's ability to intuit another's thoughts consistently appears to outstrip accuracy—even among married couples (Swann & Gill, 1997). About the only general conclusion one can render is that the ability to accurately adopt someone's perspective is better than chance but less than perfect. Thankfully for psychologists, that conclusion leaves plenty of explaining to do.

Understanding how perspective taking operates in everyday social life requires both a consideration of the impressive strengths of this mental ability as well as a recognition of its weaknesses. There is no question that humans are capable of adopting others' perspectives and that doing so can increase social coordination, cooperation, and even psychological altruism, and discussions of such desirable consequences of perspective taking in social interaction are numerous (e.g., Batson, 1994; Galinsky, Ku, & Wang, 2005; Galinsky & Moskowitz, 2000; Lozano, Hard, & Tversky, 2006; Paese & Yonker, 2001; Wade-Benzoni, Tenbrunsel, & Bazerman, 1996).

Our treatment is decidedly less flattering, however, and considers in more detail the barriers that keep people from using their perspective-taking ability to its full potential. That considering another's perspective is difficult and less than perfect will be a surprise to none, but to understand why it is less than perfect and what one might do to improve the accuracy of this ability in everyday life requires an appreciation of the major barriers that keep people from using their potential abilities more completely. We believe there are three critical barriers—activating the ability, adjusting an egocentric default, and accessing accurate information about others. Perspective taking inherently involves simulating another person's thoughts and feelings, and our goal in this chapter is to outline in turn how each of these barriers can influence use of this particular aspect of mental simula-

tion. This treatment is not meant as an implicit or explicit endorsement of the flawed nature of this particular aspect of human judgment, as a pejorative statement about the quality of human mental faculties more generally, or as an implication that accuracy in judgment is always desirable. Indeed, we suggest that many of the factors that reduce accuracy in perspective taking can, at times, also be responsible for many of the desirable outcomes of perspective taking in daily life. Instead, we believe that identifying the barriers that keep people from using their perspective-taking abilities to their full potential provides insights into how this ability is likely to operate in the barrier-heavy nature of social life and how people might go about improving on this already-impressive human faculty.

GAINING PERSPECTIVE ON PERSPECTIVE TAKING

Psychologists communicate their ideas in words rather than numbers, which means that ambiguity is an inherent feature of psychological discourse. Different words can be used to describe the same phenomena, and the same word can be used to describe very different phenomena. This latter problem characterizes discussions of perspective taking, for which the term has been used to describe everything from experiencing another person's emotion, to sympathizing with someone's experience, to anticipating another person's thoughts, to adopting another's visual perspective.

Although the underlying psychological mechanisms may vary (see Batson, Chapter 18, this volume), the feature shared by all instantiations of perspective taking is the need to get beyond one's own point of view to consider the world from another's perspective. Sometimes, psychologists mean this quite literally and measure people's ability to recognize what another person is able to see (Piaget, 1932/1965) or to consider a situation from a completely different visual perspective (Keysar, Barr, Balin, & Brauner, 2000; Libby & Eibach, Chapter 24, this volume, and 2002). But, more often point of view is used figuratively to describe assessments based on one's own ideology, emotion, direct experience, or preexisting attitudes and knowledge. Perspective taking then requires getting beyond one's own literal or psychological point of view to consider the perspective of another person who is likely to have a very different psychological point of view. Overcoming egocentrism and one's own current state is therefore the essence of accurate perspective taking. People can certainly consider the mental states of someone who happens to share their own perspective, but doing so cannot meaningfully be distinguished from not doing so at all and remaining completely egocentric.

BARRIERS TO ACCURATE PERSPECTIVE TAKING

Successfully performing this particular feat of mental gymnastics requires at least three mental operations, and the absence or erroneous operation of any of these can be a source of inaccuracy or miscalibration in perspective taking. First, the mental process of perspective taking must be activated. This requires people to actively think about another person's mental state when it is appropriate to do. Some situations automatically elicit empathic attempts to perceive the world from another person's perspective, such as seeing one's child in pain (Decety & Sommerville, 2003; Decety & Stevens, Chapter 1, this volume), but many do not and require explicit attempts to understand the world from another's perspective. Abilities are of practical importance only when people try to use them, and there is no more immediate barrier to accurate perspective taking than failing to use it in the first place.

Second, people who are actively attempting to adopt another's perspective must first get over their own to try to experience, simulate, or infer the perceptions of another person. One's own perspective is typically immediate, automatic, and easy, whereas reasoning about another's perspective is typically slow, deliberate, and difficult. Because people tend to perform easy tasks more readily and reliably than hard ones, the second major barrier to perspective taking is failing to get beyond the easy default of one's egocentric experiences to consider the perceptions of another in a different psychological state.

Finally, overcoming one's egocentric perspective may require using some other information in its place to intuit another's perspective. Such substitutes include stereotypes or other idiosyncratic information known about the target being evaluated. Everyday life provides people with a wealth of nonegocentric information about others that can be used to make inferences about their beliefs, attitudes, and motivations. Some of this information is likely to be quite accurate and revealing, such as a facial expression of disgust or happiness, whereas other information is likely to be fairly inaccurate and misleading, such as gossip or erroneous stereotypes. Accurate perspective taking requires using diagnostic and useful information about another's mental state and avoiding nondiagnostic or useless information, and this differentiation serves as what we believe to be the third major barrier to accurate perspective taking.

Barrier 1: Failing to Activate

One of our favorite urban legends is that people only use 10% of their brains. The statement for any psychologist is instantly hilarious, as if an fMRI scan might show that 90% of the brain is doing absolutely nothing at any given time, but the legend does capture some element of truth. People's brains are capable of a great deal of effortful thinking, but effortful thinking is hard, and people may therefore avoid doing it. People rely, for instance, on defaults in judgment, rapid first impressions when evaluating others, and simple heuristics for important decisions (Gigerenzer, Todd, & the ABC Research Group, 1999; Kahneman & Frederick, 2002). Adopting another's perspective is exactly the kind of mental effort and hard thinking that people may do considerably less often than they could (or than they should).

As barriers to almost anything go, this particular barrier to accurate perspective taking would seem relatively minor. People, after all, have been described as chronic mind readers (Baron-Cohen, 1995) who, after a certain point in development, seem to rapidly and automatically think about others' perspectives (Ickes, 2003). Being unable to consider others' thoughts is grounds for suffering from a psychological disorder (i.e., autism), and these extreme forms of mind-blindness would seem to leave the rest of us comfortable in our fairly automatic tendencies to at least think about others' perspectives when situations explicitly require us to do so. Experimental evidence, however, suggests that this hurdle may be higher than intuition would suggest.

When people are faced with one task that is easy and one that is hard, they can be counted on first to do the easy thing and only subsequently and unreliably do the hard thing (Fiske & Taylor, 1991; Gilbert, 2002). Because one's own perspective tends to come to mind more rapidly, readily, and reliably than information about others' perspectives, one's own point of view may tend to serve as the default perspective for interpreting the world even among full-grown adults (Krueger, 1998). Reducing the automaticity of this default to see things from another's perspective then requires either repeated and frequent practice, as in collectivistic cultures in which greater value is placed on others' perspectives compared to individualistic cultures (Cohen & Gunz, 2002; Wu & Keysar, 2007), or the strong motivation to exert the mental effort necessary to adopt another's perspective (Epley, Keysar, Van Boven, & Gilovich, 2004; Galinsky, Magee, Inesi, & Gruenfeld, 2006). In the absence of sufficient training or sufficient effort, people in social contexts can fail to consider another's perspective even when it is transparently obvious, on reflection, that they need to do so.

Consider, for instance, the ubiquity of social comparisons that require people to directly compare themselves to others. Stating that one is a good leader, a mediocre guitarist, and a bad hockey player, for instance, all require comparisons between one's own abilities and others' abilities. And yet, research suggests that people in these cases think less about others (if at all) than they should. In one study, for instance, people asked to report "how happy you are compared to the average student" instead appeared to answer the much simpler question, "How happy are you?" (Klar & Giladi, 1997). This same tendency leads people to evaluate themselves as consistently above average on tasks that are objectively easy (such as using a computer mouse) and as consistently below average on tasks that are objectively difficult (such as computer programming; Kruger, 1999) and

to believe that they are going to gain a unique advantage from benefits that are in fact shared by all in a competition (Windschitl & Chambers, 2004; Windschitl, Kruger, & Simms, 2003). In essence, people substitute the relatively easy assessment of their own absolute performance in the place of a more complicated assessment of their own performance compared to others.

These examples, of course, are not strictly about perspective taking, but they do make it clear that the self is likely to be a focal source of attention that will exert inordinate influence on judgment in social contexts that explicitly require consideration of others. More compelling are demonstrations involving social interaction in which perspective taking is clearly required but not necessarily activated. The most blatant example of this is self-presentation, in which people strategically attempt to convey a desired impression to another person. Such self-presentation inherently requires considering how one will look through the eyes of another, and conveying a desired impression necessitates thinking about what one's target will find desirable. This does not, however, appear to be what people actually do.

In one recent experiment, for instance (Epley & Myrseth, 2007), participants were asked to indicate the likelihood that they would tell each of a series of jokes to a new acquaintance to make that person laugh and thereby make a good impression. In addition to these likelihood ratings, participants also rated the extent to which they personally found each of the jokes to be funny and the extent to which they thought their intended target would find the jokes funny. Results demonstrated a strong partial correlation between how funny participants themselves found the jokes and their likelihood of telling the joke to their acquaintance ($r = .42$, controlling for how funny they believed their acquaintance would find the joke) but no relationship between the likelihood of telling the joke and how funny they thought their acquaintance would find the joke ($r = .00$, controlling for how funny they personally found the joke). Similar strong and significant effects of one's egocentric evaluations were found in contexts ranging from using pickup lines, to constructing a résumé for a job, to providing excuses to a professor for turning in a paper late. Self-presentation involves presenting oneself to others, but these data suggest that people may be presenting primarily to themselves (see also Leary, 1995, p. 161).

Perhaps the clearest evidence, however, of this failure to consider others' perspectives comes from experiments that explicitly manipulate the instruction to consider another's perspective or not. If people in social contexts are already getting beyond themselves and engaging their perspective-taking abilities, then such an instruction should strike participants as redundant and have no measurable effect on thought or action. This does not seem to be the case. Participants in one condition of a prisoner's dilemma game, for instance, were shown the standard payoff matrix and asked to indicate whether they would cooperate or defect (Caruso, Epley, & Bazerman, 2007). In another condition, participants first were asked to consider what their partner would be thinking about this game before indicating whether they personally would cooperate or defect. Because one's payoff depends on his or her own behavior as well as the partner's behavior, it is obvious that participants should be considering what their partner is likely to be thinking such that these two conditions would therefore be statistically identical. They were not. A full 60% of participants in the control condition chose to cooperate, but less than half of this figure (27.5%) chose to do so when first asked to think about others' thoughts (see also Idson et al., 2004; Samuelson & Bazerman, 1985). That being explicitly asked to consider the other player's thoughts has such a noticeable effect on behavior, for whatever reason, suggests that participants in the control condition were not already doing so.

In another set of experiments that manipulated the focus on relevant others (Savitsky, Van Boven, Epley, & Wight, 2005), participants were asked to indicate the percentage they personally contributed to a variety of different group tasks, from fourth graders working in a statewide debate team competition to college students recalling group tasks. Of course, the percentage of work one has contributed depends on how much people personally contributed compared to how much others in their group contributed. But, people seem to think far more about their own contributions than about others' (Ross & Sicoly, 1979; Thompson & Kelly, 1981), which leads them to reliably

claim that they personally contributed far more than is logically possible (for a review, see Leary & Forsyth, 1987).

This “overclaiming” result consistently emerged in the control conditions of these experiments, such that self-reported responsibility summed to more than 100%. More important, however, participants in other conditions were explicitly asked to think about others’ contributions by first reporting the percentage that others contributed to the group task or were implicitly asked to think about others’ contributions by simply listing the initials of each of their other group members. Both of these manipulations that led people to think beyond their own egocentric perspective significantly reduced the amount participants claimed they personally contributed (from 155% to 106% in the experiment with the student debate teams, for instance). More important, explicitly being led to consider other group members tended to systematically decrease reported enjoyment and interest in working with this group again in the future among those who believed they contributed much to the group itself (Caruso, Epley, & Bazerman, 2006).

Every parent at one point or another has told his or her child to try to see things from another’s point of view, and these experiments in some ways can make people look fairly childish. Piaget (1932/1965) recognized some time ago that childhood was characterized by an inability to see things from any perspective other than one’s own, but people seem to outgrow this soon enough and move on to higher levels of cognitive development. These results serve as a reminder, however, that perspective taking is not a skill that turns on somewhere around the age of 5 and remains active thereafter. It is instead more like a light switch that must be switched on when needed. Failing to switch on one’s perspective-taking ability when needed—perhaps because one lacks the attentional resources, time, or motivation to do so—can easily leave perspective takers reasoning in the dark.

Barrier 2: Miscalibrated Adjustment

If activating one’s perspective-taking abilities were the only requirement for accurately adopting another’s perspective, then this section could serve as our chapter’s last. Adopting another person’s perspective requires getting over one’s own, and simply because people are trying to leave their own perspective behind does not ensure that they will do so completely. Many human judgments, from social comparisons (Mussweiler, 2003), to probability estimates (Griffin & Tversky, 1992), to dispositional inference (Gilbert, 2002), seem to be inordinately influenced by the first information that comes to mind. Perspective taking is no exception, and the first perspective that comes to one’s mind often tends to be one’s own.

This primacy may have such a profound effect on people’s perceptions of an event that it may not even occur to them that others’ perceptions may differ from their own and may therefore be in need of adjustment. Consider, for instance, an experiment in which participants were asked to send either sincere or sarcastic messages to another participant, either over the telephone or via e-mail (Kruger, Epley, Parker, & Ng, 2005, Study 1). Participants were asked to predict, for each of 10 sincere and 10 sarcastic messages, whether the recipient would interpret the message correctly or incorrectly. Sarcasm involves interpreting a message in precisely the opposite tone of its literal content and is therefore communicated by the tone in one’s voice or other paralinguistic cues rather than by the literal content of the message—cues that are decidedly absent over e-mail.

It is perhaps not surprising, then, that recipients were not significantly better than chance (50.0%) at distinguishing between sarcasm and sincerity over e-mail ($M = 56.0\%$) but were significantly more accurate over the telephone ($M = 73.1\%$). More interesting, however, was that senders of these messages anticipated no difference in the recipients’ accuracy when communicating over e-mail or the telephone ($M = 78.0\%$ vs. 77.9% , respectively). The senders’ intentions to communicate sarcasm or sincerity were so clear that it rendered them unable to appreciate, it appears, that the perception of the person on the other end of the computer monitor would be very different from the person on the other end of the telephone. Similar difficulties plague teasers, for whom it is so clear that they are

“just kidding” that they may completely fail to recognize that their target may take the “obvious” joke quite literally (Kruger, Gordan, & Kuban, 2006).

Even when people are fully aware that another’s perspective is likely to differ from theirs, however, this initial egocentric assessment is likely to serve as a starting point in judgment that is subsequently corrected or adjusted. For instance, teachers know what they are trying to communicate to their students and need to overcome this knowledge to accurately assess the clarity of their lecture. Attempts to adopt others’ perspectives can retain some traces of this initial egocentric assessment because attempts to adjust or correct such starting points in judgment tend to be insufficient (for reviews, see Epley, 2004; Keysar & Barr, 2002; Nickerson, 1999; Royzman, Cassidy, & Baron, 2003), leaving final judgments biased in the direction of the initial egocentric default.

Several empirical findings are consistent with this egocentric adjustment account of at least some instances of perspective taking. First, explicit instructions to adopt another person’s perspective tend to increase the accessibility of self-related thoughts (Davis et al., 2004) and decrease the accessibility of stereotypes applicable to the target (Galinsky & Moskowitz, 2000). When given no explicit instructions about how to adopt another’s perspective, people appear to start by using themselves as a default or a guide. This helps to explain why adopting the perspective of another person tends to increase the perceived similarity with the target and a merging of the self and the other (Davis, Conklin, Smith, & Luce, 1996).

In fact, when asked explicitly to predict how other people feel, people’s own current feelings heavily influence their evaluations. When participants were asked to predict the level of unpleasantness experienced by a group of hungry and thirsty hikers who had gotten lost in the woods, those participants who were themselves thirsty thought that the hikers would be more bothered by thirst than hunger relative to participants who were not thirsty (Van Boven & Loewenstein, 2003). Such egocentric projection of drive states suggests again that people make predictions about how others will feel by first imagining what they themselves would feel in the others’ situation and do not adjust sufficiently to overcome their own egocentric perspective.

Second, people tend to make egocentric inferences more quickly than nonegocentric inferences. In one experiment, participants were told that a telephone message left for another person was intended to be either sincere or sarcastic (Epley et al., 2004). Participants were faster to indicate that the recipient of the message would interpret the message in a manner consistent with their own interpretation than in a manner inconsistent with their own interpretation. In another experiment, participants who saw pictures of a person holding an object in one of their hands were faster to indicate which side of the computer screen the object was on (consistent with their own perspective) than to indicate which hand the person was holding the object with (consistent with the target’s perspective; Amorim, 2003; Michelon & Zacks, 2006; Presson, 1982).

Researchers armed with more sophisticated video equipment are even able to catch people in the very act of adjusting an initial egocentric assessment. In the most telling research paradigm, participants are asked to play a referential communication game in which they are told to move objects around a grid of boxes. On critical trials, participants are given an ambiguous instruction that will lead them to look at one object if they interpret the instruction from their own egocentric perspective but to look at another object if they interpret the instruction correctly from the director’s perspective. Eye-tracking measures reveal that participants consistently look first at the object suggested by an egocentric interpretation and only subsequently (and not universally) look at the object suggested by adopting the other person’s perspective (Keysar et al., 2000).

This ability to overcome or adjust an egocentric default may even help to explain the well-known perspective-taking differences between children and adults. In a replication of the eye-tracking procedure just described, children and adults were both equally quick (after controlling for baseline differences in reaction times) and equally likely to look at an object suggested by an egocentric interpretation and differed only in the speed and likelihood with which they corrected that egocentric interpretation to look at the correct object from the other person’s perspective (Epley, Morewedge, & Keysar, 2004). Development brings with it the recognition that others’ perspectives

indicate whether Epley, Keysar, et al., 2004, or Epley, Morewedge, & Keysar, 2004 (and cite in text as such), not Epley, Morewedge, & Keysar, after first mention of each cite as Epley, Morewedge, et al., 2004. Follow same throughout for all Epley et al., 2004, tries.

may differ very considerably from one's own, but that does not mean that people outgrow their initial egocentric tendencies.

Third, overcoming any default in judgment requires deliberate reasoning that takes time, attention, and motivation to expend mental effort. Anything that hinders people's ability to engage in such deliberate reasoning should therefore increase reliance on an egocentric default among perspective takers. Consistent with this account, such egocentric biases tend to increase when people are asked to respond quickly and decrease when people are given financial incentives to be accurate in their judgments (Epley et al., 2004).

Fourth, adjusting an egocentric default requires some assessment of when to stop. Homeowners may recognize that they have overvalued their house and need to adjust their asking price downward, but how far? Research demonstrates that altering the likelihood of accepting a value encountered early in the adjustment process tends to increase egocentric biases, such that the extent of adjustment can be influenced by manipulating people's tendency to accept an intermediate estimate (Epley et al., 2004). A downward-adjusting home owner may ask a higher price if they are rushed for time, for instance, or unable to think very carefully at the time of judgment.

These findings demonstrate that self-knowledge can produce assimilation effects in judgment, and a wide variety of egocentric biases attest to the generality of this process. This insufficient adjustment account can help to explain why people tend to overestimate the extent to which others share their attitudes, beliefs, and knowledge (Birch & Bloom, 2007; Keysar & Barr, 2002, Krueger & Clement, 1994), the extent to which their internal states and intentions are transparent to others (Gilovich, Medvec, & Savitsky, 2000), and their personal contribution in collective endeavors (Ross & Sicoly, 1979), among many others (Nickerson, 1999; Royzman et al., 2003). But, general rules are not without their exceptions, and the self can also serve as a source of contrast when adopting the perspective of others (Beauregard & Dunning, 1998; Dunning & Hayes, 1996).

In particular, others who are centrally defined by their dissimilarity to the self lead to judgments that highlight these differences and can induce contrast with the self. Labor versus management, Republican versus Democrat, Yankees fan versus Red Sox fan—all of these groups are defined by their dissimilarity to each other on specific dimensions that can lead perspective takers to use their own beliefs as a point of contrast when stepping into the shoes of the opposing side. In these cases, it is possible for perspective takers actually to overestimate the extent to which the beliefs of opposing groups differ from their own (Robinson, Keltner, Ward, & Ross, 1995), often on the very beliefs that people themselves hold with the greatest conviction (Chambers, Baron, & Inman, 2006; Chambers & Melnyk, 2006).

All of these findings converge on the conclusion that people's attempts to adopt another's perspective are likely to retain some residue of their own. When there are few cues that others are likely to see the world very differently, people may not adjust or correct an egocentric default at all. When the cues are ambiguous and there is some uncertainty about others' perspectives, attempts to adjust one's own perspective will tend to be insufficient, and resulting judgments are likely to be egocentrically biased. And, when the target of perspective taking is defined by its polar opposition to the self, people are likely to assume that the other person's perspective is also the polar opposite of their own—a belief that can exaggerate the differences between opposing sides that actually exist (see Markman & McMullen, 2003, and Mussweiler, 2003, for theoretical accounts related to egocentric assimilation and contrast effects). Perspective takers may get beyond the first hurdle mentioned in this chapter and be fully motivated to see things from another person's shoes, but such motivation does not ensure that they will leave their own perspective behind entirely.

Barrier 3: Inaccurate Adjustment

The research described thus far makes it clear that people often use themselves as a guide when perspective taking, using their own knowledge or perceptions as an anchor that can be subsequently adjusted as people attempt to get over themselves. Getting over the self to achieve an accurate sense

of another's perspective, however, requires that the information used in place of an egocentric simulation or judgment itself be accurate. Considering the perspective of a child, a nonhuman animal, or an elderly neighbor may call to mind a host of information about how these targets are likely to perceive the world, and using that information in place of an egocentric perspective will yield accurate judgments only to the extent that this alternate information itself is accurate. Using accurate information in place of one's own perspective is therefore the third and last major barrier to accurate perspective taking that we discuss.

To illustrate this point, consider the (often-painful) task of purchasing a birthday gift for a loved one. Identifying one's own favorite gift is simple, but few buy others exactly what they would like to be given themselves and instead try to infer what their loved one would like best. Similarity attracts in relationships, and loved ones become loved precisely because their preferences tend to match one's own. It is a good idea to use one's preferences when anticipating the preferences of a highly similar other and a bad idea to use them when picking for dissimilar others, yet people's sense of when exactly they should use themselves as a guide and when they should use other information does not seem completely calibrated with reality. People may differentiate too much between their own preferences and others' when thinking about others who are highly similar—such as a spouse (Hoch, 1987)—but differentiate too little when thinking about others whose preferences and perspectives are actually considerably different from their own (Lerouge & Warlop, 2006). Given these difficulties, it is understandable how gift-givers can reliably pay more money for their gifts than their recipients would be willing to pay for them (Waldfogel, 1993).

When people fail to use themselves as a guide for others' perspectives, they tend to rely on stored knowledge about the target under consideration. This may include stereotypes about what humans are like in general, attributes presumably shared by group members, or idiosyncratic knowledge about specific individuals derived from direct or indirect experience (Ames, 2004a, 2004b; Gopnik & Wellman, 1994). The use of such stored knowledge and stereotypes appears to be triggered, quite rationally, from the perception of dissimilarity between the self and a target. When another person seems similar to the self, egocentrism dominates perspective taking, but when another person seems very dissimilar to the self, stored knowledge may be used when trying to adopt another's perspective. In one experiment, for instance, Columbia University students used their own preferences when predicting the preferences of another Columbia student but used their stereotypes about University of California at Berkeley students when predicting the preferences of another Berkeley student (Ames, 2004b). In a more recent neuroimaging experiment, neural regions associated with self-referential thoughts were activated when participants reasoned about the mental states of a person perceived to be similar to themselves but not when they reasoned about a person perceived to be very different (Mitchell, Macrae, & Banaji, 2006).

More interesting, however, are systematic biases in the stored knowledge that people possess about others that may lead to systematically mistaken inferences about another person's thoughts, feelings, or likely behavior. The list of these systematic biases may be long, but we believe the most problematic for perspective takers is the tendency to be overly cynical about others' intentions and motivations. People do not need training in economics to believe that others are powerfully (if not exclusively) motivated by their own self-interest (although such training tends to help; Frank, Gilovich, & Regan, 1993). In one set of experiments, for instance, children as young as those in the second grade actively used a target's self-interest to evaluate the credibility of his or her statements, whereas kindergarteners did not (Mills & Keil, 2005). Such learning obviously did not come from first-grade classes on the power of self-interest but rather from informal instruction in the classroom of everyday life.

Like many other basic bits of learning at this time in life, cynicism provides a set of beliefs that can forever after serve as the basis of folk psychology and people's intuitive understanding of how the mind works (Miller, 1999). By adulthood, however, beliefs about the power of self-interest appear to have become so strong that they can sometimes exaggerate the actual power of self-interest. In one experiment (Miller & Ratner, 1998), participants predicted that nearly 30% more people

would donate blood if they were paid \$15 to do so than if they were paid nothing (62% vs. 33%, respectively). The actual difference in the percentage who indicated that they would be willing to donate among the same sample was only 11% between those who would be paid \$15 versus nothing (73% vs. 63%, respectively). In another study (Kruger & Gilovich, 1999), spouses were asked to indicate how much credit they deserved for a variety of household tasks (e.g., walking the dog, doing the dishes, etc.). Spouses believed that their loved ones would claim responsibility self-servingly, so that they would happily accept more responsibility than they were due for desirable activities but deny more responsibility than they were due for undesirable activities. In reality, spouses tended to claim more responsibility than they were due for both desirable and undesirable activities. As Miller and Ratner (1998, p. 60) suggested, people may not always be ardent self-interested agents, but they are certainly ardent self-interested theorists.

These cynical beliefs about the power of self-interest are especially relevant for perspective taking because people tend to use them primarily when thinking about others. What people learn about self-interest as they age, in other words, is that other people are the ones primarily motivated by self-interest. In one series of experiments, participants consistently predicted that other people would behave more selfishly than they would themselves in contexts ranging from giving donations to support the American Cancer Society, to voting in a U.S. presidential election, to cooperating in a prisoner's dilemma game (Epley & Dunning, 2000, 2006). In another, customer service managers reported being equally motivated by extrinsic incentives (e.g., salary, fringe benefits) and intrinsic incentives (e.g., developing skills, accomplishing something worthwhile) but believed that other managers in the firm were considerably more motivated by extrinsic incentives than by intrinsic ones (Heath, 1999). Cynicism may be the foundation on which folk psychology is built, but that foundation is particularly strong when people are thinking about others.

This tendency toward egocentrism means that leading people to adopt another's view of the world and consider another's thoughts and feelings may have problematic effects in the very contexts in which it could be most beneficial. In particular, conflict between individuals and groups is typically marked by a divergence in perspective, a divergence that nearly every thinker on the human condition, including one's mother, has believed could be overcome by a concerted effort to see things from the other side's perspective. If people are inclined to overcome egocentrism and rely on stored knowledge when they are adopting the perspective of someone who appears different from them, and if self-interest is a basic piece of stored knowledge that people use when thinking about others, then adopting the perspective of another person in the midst of conflict can actually make matters worse rather than better (but see Myers & Hodges, Chapter 19, this volume, for a somewhat different view). Perspective takers who look across ideological divides and try to see things from the opposite side's perspective may not, after all, like what they see.

Consider the paradigmatic conflict scenario of separate parties (industrialists vs. environmentalists, for instance) vying over a portion of the same (presumably) fixed resources. Far from reducing conflict, trying to adopt the other side's perspective in these cases may activate a variety of cynical thoughts about the other side's motivations, intentions, and likely behavior. Such perspective taking may activate cynically biased knowledge and therefore undermine trust, diminish the apparent credibility of the other side, and perhaps more problematically increase how selfishly people behave themselves. Those who adopt the perspective of others in conflict may therefore come to behave more selfishly themselves out of the (often overly extreme) belief that others will behave selfishly, a phenomenon we have called *reactive egoism* (Epley, Caruso, & Bazerman, 2006).

To test for this possibility, participants in one experiment were asked to take part in a simulated social dilemma about the problem of overfishing in one portion of the world's oceans. Each member of a four-party group was asked to imagine being the representative for one particular fishing association who was meeting with members from three other associations to determine how to reduce harvest levels to preserve the species and retain long-term profitability. In the original demonstration, participants tended to claim that it was fair for them to receive more of the overall harvest than other group members believed was fair for them to receive (Wade-Benzoni et al., 1996). In a revised

version of this paradigm, participants who were first asked to adopt the perspective of each of the other group members and consider what each of them would think was a fair amount to harvest actually chose to take more of the fixed resources than those who were not induced to adopt the other group members' perspectives. This occurred because considering the perspective of the other group members highlighted cynical thoughts about their likely behavior and led participants to think that others would therefore behave more selfishly and that they should therefore behave more selfishly in return (Epley et al., 2006).

We suggest that using such cynical theories as a perspective-taking guide is a barrier to accuracy because participants in these experiments who were not led to adopt another's perspective did not behave as selfishly as perspective takers would have predicted. Notice, however, that this inaccuracy is hard to identify within any of these groups because people's cynical beliefs about others can become self-fulfilling. Members of groups who consider each others' thoughts using the same cynical theories will come to act in ways that are consistent with others' beliefs about them, but not because the beliefs themselves are necessarily accurate but rather because all members of the group are operating with the same biased pieces of stored knowledge. In this way, cynical beliefs about others' motivations and interests may come to be a self-fulfilling prophecy that can mask the inaccuracy of perspective taking (Miller & Ratner, 1998).

Given the current state of research, it is impossible to calculate how widespread such inaccurate perspective taking is outside the laboratory. Certainly, some perspective-taking tasks are dramatically easier than others. Recognizing that a grimacing person is in pain can be accurately accomplished by a 3-year-old, but reliably recognizing that a person is being dishonest can be remarkably difficult at any age. Given the difficulty people appear to have evaluating the validity and accuracy of even their own knowledge (Burson, Larrick, & Klayman, 2006; Kruger & Dunning, 1999), it is perhaps no wonder that people have such difficulty recognizing when the information they are using to adopt another's perspective is likely to be accurate and when it is not.

CONCLUDING THOUGHTS

Humans are endowed with a remarkable array of abilities, not the least of which is their ability to think about the mental states of other humans. Although the capacity to appreciate another's mind may be universal (Avis & Harris, 1991), the success and accuracy of this skill are anything but. At times, people will not recognize the need to activate their perspective-taking abilities and will therefore fail to take the first step toward understanding another's point of view. When they are able and motivated to take that first step, however, they may fall short of another's perspective because they are too heavily influenced by their own egocentric viewpoint. And, even when they manage to step beyond their own perspective, they may trip over the inaccurate or incomplete information of stored knowledge on which they rely when intuiting another's mind.

A better understanding of these barriers can help not only to determine ways to overcome them but also to determine when we should and should not try to overcome them. Although we have identified a number of biases that tend to reduce the accuracy of perspective taking, it is not clear whether such a reduction in accuracy is always desirable. Egocentrism may be a necessary ingredient for psychological altruism, may aid in the reduction of stereotype activation, and may help to avoid the cynical theories that are activated when people attempt to infer the motives and minds of others. As such, the functional consequences of perspective taking may be independent of accuracy. For instance, the extent to which members of a couple idealize each other predicts relationship satisfaction, even though these inflated perceptions are based on objectively inaccurate beliefs (Murray, Holmes, & Griffin, 1996).

Because the reduction of bias is not necessarily desirable or undesirable, perhaps the biggest benefit to a balanced assessment of perspective taking is the ability to specify the situations in which adopting another's perspective will produce beneficial outcomes and when it will not. For instance, in the simulated fishing conference study mentioned, the competitive environment led perspective

takers to adopt cynical theories about how others would behave, ultimately making all parties pay for their selfish beliefs and subsequent selfish behavior. However, in a structurally similar dilemma that was framed as a cooperative, rather than competitive, interaction, perspective taking actually decreased selfish behavior and led groups to achieve more optimal outcomes (Epley et al., 2006). Such examples illustrate how a better understanding of the barriers to perspective taking may allow us to specify when, how far, and in what direction people should step when attempting to place themselves in the shoes of others.

REFERENCES

- Ames, D. R. (2004a). Inside the mind-reader's toolkit: Projection and stereotyping in mental state inference. *Journal of Personality and Social Psychology, 87*, 340–353.
- Ames, D. (2004b). Strategies for social inference: A similarity contingency model of projection and stereotyping in attribute prevalence estimates. *Journal of Personality and Social Psychology, 87*, 340–353.
- Amorim, M. A. (2003). "What is my avatar seeing?": The coordination of "out-of-body" and "embodied" perspectives for scene recognition across views. *Visual Cognition, 10*, 157–199.
- Avis, J., & Harris, P. (1991). Belief-desire reasoning among Baka children: Evidence for a universal conception of mind. *Child Development, 62*, 460–467.
- Baron-Cohen, S. (1995). *Mindblindness: An essay on autism and theory of mind*. Boston: MIT Press.
- Batson, C. D. (1994). Prosocial motivation: Why do we help others? In A. Tesser (Ed.), *Advanced social psychology* (pp. 333–381). Boston: McGraw-Hill.
- Batson, C. D. (1998). Altruism and prosocial behavior. In D. Gilbert, S. Fiske, & G. Lindsay (Eds.), *Handbook of social psychology* (pp. 282–316). New York: McGraw-Hill.
- Batson, C. D., & Shaw, L. (1991). Evidence for altruism: Toward a pluralism of prosocial motives. *Psychological Inquiry, 2*, 107–122.
- Beauregard, K. S., & Dunning, D. (1998). Turning up the contrast: Self-enhancement motives prompt egocentric contrast effects in social judgments. *Journal of Personality and Social Psychology, 74*, 606–621.
- Birch, S., & Bloom, P. (2007). The curse of knowledge in reasoning about false beliefs. *Psychological Science, 18*, 382–386.
- Burson, K. A., Larrick, R. P., & Klayman, J. (2006). Skilled or unskilled, but still unaware of it: How perceptions of difficulty drive miscalibration in relative comparisons. *Journal of Personality and Social Psychology, 90*, 60–77.
- Callaghan, T., Tochat, P., Lillard, A., Claux, M. L., Odden, H., Itakura, S., et al. (2005). Synchrony in the onset of mental-state reasoning: Evidence from five cultures. *Psychological Science, 16*, 378–384.
- Caruso, E. M., Epley, N., & Bazerman, M. H. (2006). The costs and benefits of undoing egocentric responsibility assessments in groups. *Journal of Personality and Social Psychology, 91*, 857–871.
- Caruso, E. M., Epley, N., & Bazerman, M. H. (2007). *Reactive egoism and unwarranted distrust*. Unpublished manuscript, Harvard University, Cambridge, MA.
- Chambers, J., 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., & Melnyk, D. (2006). Why do I hate thee? Conflict misperceptions and intergroup mistrust. *Personality and Social Psychology Bulletin, 32*, 1295–1311.
- 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., Conklin, L., Smith, A., & Luce, C. (1996). Effect of perspective taking on the cognitive representation of persons: A merging of self and other. *Journal of Personality and Social Psychology, 70*, 713–726.
- Davis, M. H., Soderlund, T., Cole, J., Gadol, E., Kute, M., Myers, M., et al. (2004). Cognitions associated with attempts to empathize: How do we imagine the perspective of another? *Personality and Social Psychology Bulletin, 30*, 1625–1635.
- Decety, J., & Sommerville, J. A. (2003). Shared representations between self and others: A social cognitive neuroscience view. *Trends in Cognitive Science, 7*, 527–533.
- Dunning, D., & Hayes, A. F. (1996). Evidence for egocentric comparison in social judgment. *Journal of Personality and Social Psychology, 71*, 213–229.
- Ekman, P. (1982) *Emotion in the human face*. New York: Cambridge University Press.

- Epley, N. (2004). A tale of tuned decks? Anchoring as adjustment and anchoring as activation. In D. J. Koehler & N. Harvey (Eds.), *Blackwell handbook of judgment and decision making* (pp. 240–256). London: Blackwell.
- Epley, N., Caruso, E. M., & Bazerman, M. H. (2006). When perspective taking increases taking: Reactive egoism in social interaction. *Journal of Personality and Social Psychology, 91*, 872–889.
- Epley, N., & Dunning, D. (2000). Feeling “Holier than thou”: Are self-serving assessments produced by errors in self or social prediction? *Journal of Personality and Social Psychology, 79*, 861–875.
- Epley, N., & Dunning, D. (2006). The mixed blessings of self-knowledge in behavioral prediction: Enhanced discrimination but exacerbated bias. *Personality and Social Psychology Bulletin, 32*, 641–655.
- 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., Morewedge, C., & Keysar, B. (2004). Perspective taking in children and adults: Equivalent egocentrism but differential correction. *Journal of Experimental Social Psychology, 40*, 760–768.
- Epley, N., & Myrseth, K. (2007). *Putting the self in self-presentation: Egocentric biases in the strategic presentation of oneself to others*. Unpublished manuscript, University of Chicago.
- Fiske, S. T., & Taylor, S. E. (1991). *Social cognition*. New York: McGraw-Hill.
- Flavell, J. H. (1986). The development of children’s knowledge about the appearance-reality distinction. *American Psychologist, 41*, 418–425.
- Flavell, J. H. (1999). Cognitive development: Children’s knowledge about the mind. *Annual Review of Psychology, 50*, 21–45.
- Frank, M. G., Ekman, P., & Friesen, W. V. (1993). Behavioral markers and recognizability of the smile of enjoyment. *Journal of Personality and Social Psychology, 72*, 1429–1439.
- Frank, R. H., Gilovich, T., & Regan, D. T. (1993). Does studying economics inhibit cooperation? *Journal of Economic Perspectives, 7*, 159–171.
- Galinsky, A. D., Ku, G., & Wang, C. S. (2005). Perspective-taking: Fostering social bonds and facilitating social coordination. *Group Processes and Intergroup Relations, 8*, 109–125.
- Galinsky, A. D., Magee, J. C., Inesi, M. E., & Gruenfeld, D. H. (2006). Power and perspectives not taken. *Psychological Science, 17*, 1068–1074.
- Galinsky, A. D., & Moskowitz, G. B. (2000). Perspective-taking: Decreased stereotype expression, stereotype accessibility, and in-group favoritism. *Journal of Personality and Social Psychology, 78*, 708–724.
- Gigerenzer, G., Todd, P. M., & the ABC Research Group. (1999). *Simple heuristics that make us smart*. New York: Oxford University Press.
- Gilbert, D. T. (2002). Inferential correction. In T. Gilovich, D. Griffin, & D. Kahneman (Eds.), *Heuristics and biases: The psychology of intuitive judgment* (pp. 167–184). Cambridge, England: Cambridge University Press.
- 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.
- Gopnik, A., & Meltzoff, A. N. (1994). Minds, bodies, and persons: Young children’s understanding of the self and others as reflected in imitation and “theory of mind” research. *Behavioral and Brain Sciences, 16*, 1–14.
- Gopnik, A., & Wellman, H. M. (1994). The theory theory. In L. A. Hirschfeld & S. A. Gelman (Eds.), *Mapping the mind: Domain specificity in cognition and culture* (pp. 257–293). New York: Cambridge University Press.
- Griffin, D. W., & Tversky, A. (1992). The weighing of evidence and the determinants of confidence. *Cognitive Psychology, 24*, 411–435.
- Hare, B. (2007). From nonhuman to human mind: What changed and why? *Current Directions in Psychological Science, 16*, 60–64.
- Heath, C. (1999). On the social psychology of agency relationships: Lay theories of motivation overemphasize extrinsic rewards. *Organizational Behavior and Human Decision Processes, 78*, 25–62.
- Hoch, S. J. (1987). Perceived consensus and predictive accuracy: The pros and cons of projection. *Journal of Personality and Social Psychology, 53*, 221–234.
- Hodges, S., & Wegner, D. M. (1997). Automatic and controlled empathy. In W. J. Ickes (Ed.), *Empathic accuracy* (pp. 311–339). New York: Guilford.
- Ickes, W. (2003). *Everyday mind reading: Understanding what other people think and feel*. Amherst, NY: Prometheus Books.
- Idson, L. C., Chugh, D., Bereby-Meyer, Y., Moran, S., Grosskopf, B., & Bazerman, M. H. (2004). Overcoming focusing failures in competitive environments. *Journal of Behavioral Decision Making, 17*, 159–172.

- Kahneman, D., & Frederick, S. (2002). Representativeness revisited: Attribute substitution in intuitive judgment. In T. Gilovich, D. Griffin, & D. Kahneman (Eds.), *Heuristics and biases: The psychology of intuitive judgment* (pp. 49–81). New York: Cambridge University Press.
- Keysar, B., & Barr, D. J. (2002). Self-anchoring in conversation: Why language users do not do what they “should.” In T. Gilovich, D. Griffin, & D. Kahneman (Eds.), *Heuristics and biases: The psychology of intuitive judgment* (pp. 150–166). New York: Cambridge University Press.
- 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*, 32–39.
- Kenny, D. A., & DePaulo, B. M. (1993). Do people know how others view them? An empirical and theoretical account. *Psychological Bulletin, 114*, 145–161.
- Klar, Y., & Giladi, E. E. (1997). No one in my group can be below the group’s average: A robust positivity bias in favor of anonymous peers. *Journal of Personality and Social Psychology, 73*, 885–901.
- Krueger, J. (1998). On the perception of social consensus. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 30, pp. 163–240). San Diego, CA: Academic Press.
- Krueger, J., & Clement, R. (1994). The truly false consensus effect: An ineradicable and egocentric bias in social perception. *Journal of Personality and Social Psychology, 65*, 596–610.
- Kruger, J. (1999). Lake Wobegon be gone! The “below-average effect” and the egocentric nature of comparative ability judgments. *Journal of Personality and Social Psychology, 77*, 221–232.
- Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one’s own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology, 77*, 1121–1134.
- Kruger, J., Epley, N., Parker, J., & Ng, Z. (2005). Egocentrism over email: Can we communicate as well as we think? *Journal of Personality and Social Psychology, 89*, 925–936.
- Kruger, J., & Gilovich, T. (1999). “Naive cynicism” in everyday theories of responsibility assessment: On biased assumptions of bias. *Journal of Personality and Social Psychology, 76*, 743–753.
- 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.
- Leary, M. R. (1995). *Self-presentation: Impression management and interpersonal behavior*. Boulder, CO: Westview Press.
- Leary, M. R., & Forsyth, D. R. (1987). Attributions of responsibility for collective endeavors. In C. Hendrick (Ed.), *Review of personality and social psychology* (Vol. 8, pp. 167–188). Newbury Park, CA: Sage.
- Lerouge, D., & Warlop, L. (2006). Why it is so hard to predict our partner’s product preferences: The effect of target familiarity on prediction accuracy. *Journal of Consumer Research, 33*, 393–402.
- Libby, L. K., & Eibach, R. P. (2002). Looking back in time: Self-concept change affects visual perspective in autobiographical memory. *Journal of Personality and Social Psychology, 82*, 167–179.
- Lozano, S. C., Hard, B. M., & Tversky, B. (2006). Perspective taking promotes action understanding and learning. *Journal of Experimental Psychology: Human Perception and Performance, 32*, 1405–1421.
- Markman, K. D., & McMullen, M. N. (2003). A reflection and evaluation model of comparative thinking. *Personality and Social Psychology Review, 7*, 244–267.
- Michelon, P., & Zacks, J. M. (2006). Two kinds of visual perspective taking. *Perception and Psychophysics, 68*, 327–337.
- Miller, D. T. (1999). The norm of self-interest. *American Psychologist, 54*, 1053–1060.
- Miller, D. T., & Ratner, R. K. (1998). The disparity between the actual and assumed power of self-interest. *Journal of Personality and Social Psychology, 74*, 53–62.
- Mills, C., & Keil, F. C. (2005). The development of cynicism. *Psychological Science, 16*, 385–390.
- Mitchell, J. P., Macrae, C. N., & Banaji, M. R. (2006). Dissociable medial prefrontal contributions to judgments of similar and dissimilar others. *Neuron, 50*, 655–653.
- Murray, S. L., Holmes, J. G., & Griffin, D. W. (1996). The benefits of positive illusions: Idealization and the construction of satisfaction in close relationships. *Journal of Personality and Social Psychology, 70*, 79–98.
- Mussweiler, T. (2003). Comparison processes in social judgment: Mechanisms and consequences. *Psychological Review, 110*, 472–489.
- 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.
- Paese, P. W., & Yonker, R. D. (2001). Toward a better understanding of egocentric fairness judgments in negotiation. *The International Journal of Conflict Management, 12*, 114–131.
- Perner, J. (1991). *Understanding the representational mind*. Cambridge, MA: MIT Press.

- Piaget, J. (1965). *The moral judgment of the child* (M. Gabain, Trans.). New York: Free Press. (Original work published 1932)
- Presson, C. C. (1982). Strategies in spatial reasoning. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *8*, 243–251.
- Realo, A., Allik, J., Nolvak, 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., Keltner, D., Ward, A., & Ross, L. (1995). Actual versus assumed differences in construal: “Naive realism” in intergroup perceptions and conflict. *Journal of Personality and Social Psychology*, *68*, 404–417.
- Ross, M., & Sicoly, F. (1979). Egocentric biases in availability and attribution. *Journal of Personality and Social Psychology*, *37*, 322–336.
- Royzman, E. B., Cassidy, K. W., Baron, J. (2003). “I know, you know”: Epistemic egocentrism in children and adults. *Review of General Psychology*, *7*, 38–65.
- Samuelson, W. F., & Bazerman, M. H. (1985). The winner’s curse in bilateral negotiations. In V. Smith (Ed.), *Research in experimental economics* (Vol. 3, pp. 103–137). Greenwich, CT: JAI Press.
- Savitsky, K., Van Boven, L., Epley, N., & Wight, W. (2005). The unpacking effect in responsibility allocations for group tasks. *Journal of Experimental Social Psychology*, *41*, 447–457.
- 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.
- Thompson, S. C., & Kelly, H. H. (1981). Judgments of responsibility for activities in close relationships. *Journal of Personality and Social Psychology*, *41*, 469–477.
- Van Boven, L., & Loewenstein, G. (2003). Social projection of transient drive states. *Personality and Social Psychology Bulletin*, *29*, 1159–1168.
- Wade-Benzoni, K. A., Tenbrunsel, A. E., & Bazerman, M. H. (1996). Egocentric interpretations of fairness in asymmetric, environmental social dilemmas: Explaining harvesting behavior and the role of communication. *Organizational Behavior and Human Decision Processes*, *67*, 111–126.
- Waldfoegel, J. (1993). The deadweight loss of Christmas. *American Economic Review*, *83*, 1328–1336.
- Wellman, H. M., Cross, D., & Watson, J. (2001). Meta-analysis of theory-of-mind development: The truth about false belief. *Child Development*, *72*, 655–684.
- Wilson, T. D., & Gilbert, D. T. (2003). Affective forecasting. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 35, pp. 345–411). New York: Elsevier.
- Wimmer, H., & Perner, J. (1983). Beliefs about beliefs: Representation and constraining function of wrong beliefs in young children’s understanding of deception. *Cognition*, *13*, 103–128.
- Windschitl, P. D., & Chambers, J. R. (2004). The dud-alternative effect in likelihood judgment. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *30*, 198–215.
- Windschitl, P. D., Kruger, J., & Simms, E. N. (2003). The influence of egocentrism and focalism on people’s optimism in competitions: When what affects us equally affects me more. *Journal of Personality and Social Psychology*, *85*, 389–408.
- Wu, S., & Keysar, B. (2007). The effect of culture on perspective taking. *Psychological Science*, *18*, 600–606.

