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I'm Right, You're Biased: How We Understand Ourselves and Others

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Abstract

This chapter concerns the divergent processes by which people come to know themselves and other people, and the resulting consequences. People come to know themselves (or come to gain "intrapersonal knowledge") primarily by looking inwards to internal thoughts, feelings, and motives (i.e., by "introspecting"). They come to know others (or come to gain "interpersonal knowledge") primarily by looking outwards to observable behaviors (i.e., by "extrospecting"). These different processes for gaining knowledge lead to important differences in what people believe about themselves versus others. Importantly, the divergent routes of introspection and extrospection lead people to see others as biased, and themselves as "right"—especially when the self and other disagree in their perceptions and beliefs. This *bias blind spot* gives rise to intellectual arrogance and escalates interpersonal conflict. The differing epistemological routes of introspection and extrospection do not always lead people to feel better about themselves than others, however. For example, people may view themselves as uniquely prone to worry, uniquely motivated by fear of embarrassment, and uniquely subject to deviant thoughts—all as a result of their reliance on introspection for assessing themselves but extrospection for assessing others.

The desire for knowledge and understanding is a basic human motivation. Even the most rudimentary decisions that we make, such as whether to move forward to approach or backward to avoid, are rooted in an understanding, however flawed, of our ongoing state and impinging needs. When it comes to more complex decisions, such as which political candidate to vote for or what career path to pursue, we seek to make those decisions based on our understanding of our own preferences, needs, and values. Importantly, it is not only the self that we are motivated to know and understand. Knowing and understanding those around us is also a high-ranking motive. From the most basic decisions about whether to "fight" versus "flee" a potentially dangerous other, to more complex decisions about whom to vote for, whom to go on a second date with, or whose advice to take seriously, we aim to make these judgments based on our knowledge and understanding not only of ourselves but of the person we are considering. But *how* do people come to know and understand themselves and others?

A large literature in social and cognitive psychology has revealed that people pursue knowledge about themselves and others in asymmetrical ways. When people assess themselves, they tend to *introspect* by considering internal sources of information such as goals, motives, and thoughts. In contrast, when seeking information about others, people often *extrospect* by looking instead to external information sources such as behavior. This asymmetry in strategies of information acquisition has perceptual routes: people have immediate access to their own internal states, but at best limited access to the internal states of others, whereas they have direct access to others' behavior, but less direct access to their own behavior (e.g., because of their visual perspective). These divergent strategies, in turn, yield divergent views of the self and other. Understanding how people attempt to learn about the self and others can therefore shed light on why the conclusions people ultimately draw may be flawed.

In this chapter, we begin by providing a theoretical overview of how people seek information about themselves and others. Next, we highlight previous research across a variety of experimental paradigms that has documented how learning about the self through *introspection* (looking inwards to thoughts, feelings, etc.) while learning about others through *extrospection* (looking outwards to observable behaviors) can shape divergent ways of seeing the self and others. We then explore the mechanisms underlying asymmetrical social information-seeking strategies in the context of research on the "bias blind spot," whereby people believe they are less biased than others. Next, in turning to research on pluralistic ignorance (i.e., the widespread false belief that the group's views or feelings differ from one's own), we explore instances in which relying on extrospection can also lead people astray. Finally, we consider implications of these epistemic approaches in the "post-truth" era.

Seeking Self-Knowledge versus Social Knowledge: Introspection versus Extrospection

Several decades of research in social psychology have documented widespread asymmetries in how people see themselves and how they see others. In their classic theoretical account, Jones and Nisbett (1972) argued that there are important differences in the evidence available to actors and observers when they seek to explain actors' behavior. Actors have direct access to their inner states, such as goals, emotional reactions, and intentions, whereas observers "have no direct knowledge of the experiential accompaniments of the act for the actor" (1972, 84). In contrast, observers have direct perceptual access to actors' behaviors; indeed, Jones and Nisbett argued that, "for the observer, the focal, commanding stimulus is the actor's behavior"

(1972, 85), whereas for actors, due to their outward visual perspective, their own behavior is less salient and accessible. The authors drew on this analysis of contrasting sources of information to explain why actors and observers make different patterns of attributions to explain actors' behavior, positing that actors' outward perceptual focus and inattention to their behavior leads them to focus on situational factors when making attributions, whereas observers' focus on actors' behavior leads them to focus on actors' dispositions when making attributions.

Jones and Nisbett's (1972) analysis coincided with, but at least superficially seemed to contrast with, Bem's (1972) proposal that people can seek to understand themselves by using the same strategies of behavioral observation that they use to understand others. Notably, though, Bem insisted that this similarity emerges when actors' "internal cues" to explain behavior are unavailable. Nisbett and Wilson (1977) similarly proposed that people sometimes fail to find explanations for their behavior when considering inner states such as thoughts and motives, and theorized that when they find introspection ineffective, people unknowingly turn to explanatory strategies they use for others' behavior, such as lay theories.

These early and important endeavors spawned a vast literature on self-perception and social perception, much of which has considered the strategies people employ to learn about themselves and others, and the consequences that arise from differential reliance on these strategies. More recent research in the vein of classic work on actor-observer differences has integrated previous theoretical approaches by demonstrating that these self-other divergences emerge out of a general tendency to mistakenly believe that introspection provides the best route to self-understanding, a belief known as the *introspection illusion* (Pronin 2009; Pronin, Gilovich, and Ross 2004).

Table 1: Components of the Introspection Illusion

Component	Description
Introspective weighting	Heavy weighting of introspection during self-perception
Self-other asymmetry	Reliance on extrospection rather than introspection during social perception
Behavioral disregard	Disregard of behavioral information during self-perception
Differential valuation	Valuing introspection as a means of self-perception but extrospection as a means of social perception

The introspection illusion has four components (see Table 1) that together describe how people differentially attend to and value diverging sources of information when they assess themselves and others (Pronin 2009). The first component is *introspective weighting*, whereby people ascribe special status to introspection as a source of knowledge about the self. People's

perceptual experience of direct access to their thoughts and feelings underlies the confidence they place in introspection, but this confidence is illusory, because people often have little access to the causes of their behavior. Although the results of thought and judgment processes are accessible, the processes producing these results rarely are, such that introspection actually offers little explanatory insight into many thoughts, feelings, and behaviors (e.g., Bargh and Chartrand 1999; Kahneman 2011; Nisbett and Wilson 1977; Pronin, Lin, and Ross 2002).

Second, although people view introspection as an effective path to self-knowledge, they weight internal states much less when judging others, leading to a *self-other asymmetry* in information acquisition strategies (see Figure 1). Instead, they rely on extrospection, drawing on others' behavior as an evidentiary source. Extrospection yields direct information from others given the perceptual access people enjoy to others' external behavior. Yet, people's own behavior is less accessible to themselves and underweighted in self-assessment, resulting in *behavioral disregard*: disregarding the self's behavior, but not the behavior of others. Finally, asymmetrical reliance on introspection versus extrospection arises not only from varying levels of perceptual access, but also from varying levels of value attributed to these strategies. That is, the fourth and final component of the introspection illusion, *differential valuation*, describes the fact that people consider introspection to be a better source of information about the self than about others, whereas they believe that the opposite is true of extrospection (e.g., Pronin and Kugler 2007).

Figure 1: Different Information Sources for Self-Perception and Social Perception

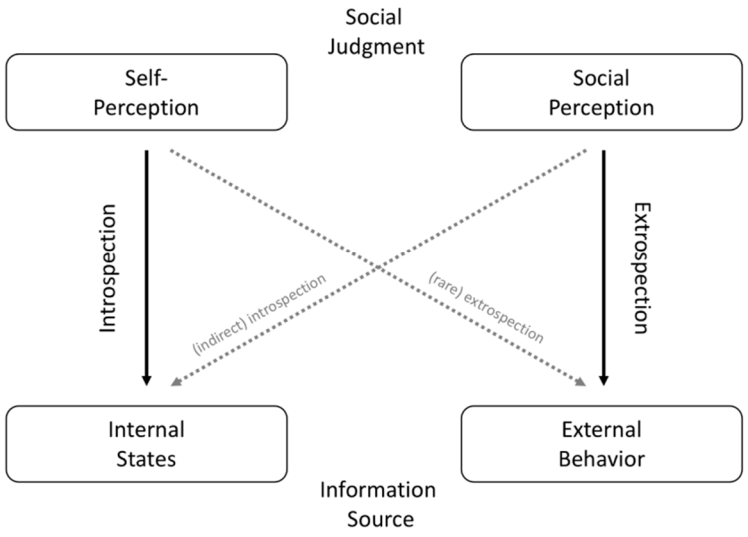

Figure Note. People tend to rely in introspection, looking at internal states such as intentions and goals, to learn about the self, but rely on extrospection, looking at external behavior, to learn about others. Internal states are more directly available for self-perception (represented by physical proximity and a dark, solid line), whereas external behavior is less accessible for self-perception (represented by physical distance and a light, dashed line). Conversely, behavior is more directly available during social perception than others' internal states.

The valuation of introspection as a route to self-knowledge, and of extrospection as a route to other-knowledge, emerges in part because of people's sense that they see the world in an objective manner. Drawing on Ichheiser (1949), Ross and Ward (1995, 1996) argued that people tend to be *naïve realists*, such that they assume that their perception of reality is veridical, unmediated by bias, ignorance, or other impeding factors. This epistemic stance leads people to trust the conclusions they reach through introspection or extrospection when assessing the self or others, respectively, because these conclusions appear untarnished by interfering factors. Thus, people mistakenly believe that they are following optimal strategies of evidence acquisition. To illustrate the breadth of this tendency, we turn now to an array of examples of self-other perceptual asymmetries that arise from the introspection illusion.

Divergent Views of the Self and Others: Some Problems with Learning from Introspection

In this section, we consider how differential reliance on introspection and extrospection lead to self-other perceptual asymmetries in judgments as varied as moral virtue, planning, free will, communication, and social influence.

Self-Righteousness

People tend to have inflated views of themselves relative to others, a tendency that has been documented across a wide variety of domains (Alicke et al. 1995; Dunning, Meyerowitz, and Holzberg 1989; Heine and Lehman 1997). Reliance on different sources of information for judgments of the self and others greatly contributes to these overly positive self-views. For example, consider people's tendency to believe that they are generally more moral than those around them, and, in particular, that they are less likely to act immorally than even relatively similar peers (Epley and Dunning 2000; Klein and Epley 2017). This self-righteousness emerges because people rely on introspection when predicting their own behavior, whereas they rely on external information such as behavior and base rates to predict the behavior of others. When people consider their personal motives and thoughts, they generally find intentions to be "good"—even if their behavior does not measure up to those intentions. By contrast, people's focus on others' actions when judging others' moral behavior, without giving a lot of weight to their intentions, can instead highlight instances of less than moral behavior. In one study, college students were asked to predict their own and their classmates' future purchases of daffodils as part of a campus fraternity and sorority charity drive (Epley and Dunning 2000). When asked whether they would buy a daffodil, 83% of participants predicted they would buy at least one flower, whereas they predicted that only 56% of other students would buy at least one flower. In reality, however, participants greatly overestimated the likelihood of buying a daffodil: only 43% ended up making a purchase. Apparently, participants' introspection yielded not only moral intentions, but also unrealistically optimistic predictions as a consequence. In a follow-up study, Epley and Dunning further found that exposing participants to information about previous donations of several peers improved the accuracy of participants' predictions of others' behavior, but had no effect on predictions of their own behavior. Participants drew on behavioral information to make predictions about others, but ignored it when making predictions about themselves. Further research by Helzer and Dunning (2012) has shown that, when making self-predictions individuals focus on the behavior they "aspire" to rather than on the behavior they have previously engaged in.

Planning Fallacy

Using introspection to make predictions about the self also leads to the well-known *planning fallacy*, whereby people routinely underestimate—sometimes dramatically, as in the case of completing this chapter—how long it will take to complete a task (e.g., Buehler, Griffin, and Ross 1994; Kahneman and Tversky 1979). When estimating how long a project will take them, people focus on their positive intentions and motives while neglecting past behavioral information (e.g., how long similar projects took them in the past) or relevant base rate information (e.g., how long similar projects typically take others; Buehler, Griffin, and Ross 1994; Lovallo and Kahneman 2003). This tendency prevents people from considering possible obstacles (e.g., other work obligations) that might delay their progress, and results in overly optimistic estimates. People tend not to fall victim to the planning fallacy when predicting others' performance, however, because they are more likely to take an outside view and consider previous behavior rather than industrious intentions. When participants in one study predicted the completion times of others, the estimates of those with access to information about others' previous completion times did not differ from the estimates of those with access to that information plus information about the thoughts and intentions of others (obtained through a thought-listing paradigm; Buehler, Griffin, and Ross 1994), indicating that they solely relied on behavioral information. Introspection (mistakenly) appears to yield reliable information for predictions of one's own completion time, but is neglected in favor of extrospection when it comes to predicting others' productivity.

The Power of the Situation and Free Will

An interesting result of relying on external information when predicting the behavior of others is that people's predictions about others can be well-calibrated when they correctly infer external influences on behavior. For example, Balcetis and Dunning (2013) showed that people can be relatively accurate social psychologists—in two studies, participants correctly predicted the effects of group size and mood on others' prosocial behavior. When making predictions about their own behavior, however, participants failed to take the power of the situation into account, erroneously forecasting that situational influences would not influence their prosocial behavior. By relying on their prosocial motives and positive self-views, participants discounted external factors that might influence their behavior despite their best intentions.

The findings from Balcetis and Dunning may seem surprising in light of Jones and Nisbett's (1972) famous work on the actor-observer effect. This effect is often cursorily described as a tendency for people to view their own behavior as driven by external factors ("the situation") but others' behavior as driven by internal factors ("personality"). However, a closer look at the nature of the actor-observer effect would suggest otherwise. Pronin and Kugler (2010) suggest that individuals do not view themselves as buffeted about by the power of situational forces but rather view their actions as internally-driven responses to situational forces—whereas they view others' actions as driven by unwavering internal dispositional features. This distinction leads to the hypothesis that individuals are likely to view themselves as having more free will than those around them.

A fundamental element of free will is the ability to direct one's own behavior, such that intentions and desires motivate behavior, overcoming fixed and external drivers like personality

and situational forces (Watson 1982). Because people have direct access to rich introspective content, the influence of internal states is salient when people think about their own behavior, and thus seems essential to understanding when and why they act. The lack of introspective access to others' internal states, however, obscures the similar influence of motives, desires, and intentions on their behavior. Pronin and Kugler (2010) thus theorized that people may believe that intentions and desires play a larger role in driving their behavior than others' intentions and desires play in driving others' behavior, effectively ascribing more free will to themselves than others.

To test this possibility, Pronin and Kugler (2010) instructed participants to draw box models of the causes of their own behavior and that of others. Participants drew four boxes that each represented a possible cause of behavior—intentions and desires, personality, the situation, and past behavior— and was connected with arrows to a box representing future behavior (see Figure 2). Participants were instructed to make the size of each box proportional to the relative influence of each cause on behavior, and the relative perceived influence of each cause was calculated by dividing the area of a given cause's box by the total area of all four illustrated boxes. Participants drew larger boxes for intentions and desires when modeling their own behavior than when modeling others' behaviors; in fact, the box for intentions and desires was drawn the largest when participants modeled their behavior, whereas the personality box was largest when participants modeled others' behavior. In other experiments, Pronin and Kugler provided further evidence that individuals viewed themselves as having more free will than others. For example, individuals asserted that there were more possible paths (both good and bad) that their lives could take than that their peers could take.

Figure 2: Average Images Drawn by Participants Modeling Their Own (Left) or Their Roommate's (Right) Behavior.

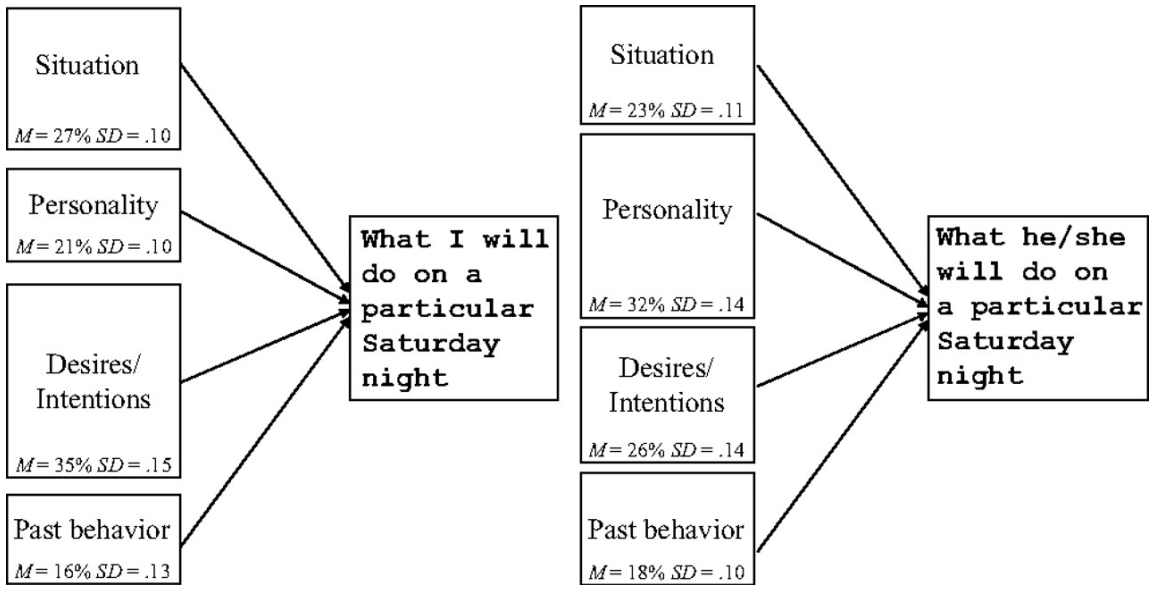

Figure Note. Box size is consistent with means of total area assigned to each cause of behavior.

Communication

In order to communicate effectively, speakers (and those communicating in other ways, whether through physical gestures, text messages, etc.) need to monitor the clarity of their communications and anticipate potential misunderstandings. Unfortunately, people often seem to fall short in these tasks, and they frequently overestimate how well others understand them. In one study (Keysar and Henly 2002), for example, speakers uttering ambiguous statements overestimated how effectively they communicated an intended meaning to a listener. In a follow-up study, observers who knew the intended meaning of the statements and listened while speakers spoke were less likely to overestimate the effectiveness of communication, suggesting that it is not mere knowledge of meaning, but the experience of intending to communicate it that leads to systematic overestimation of clarity in conversation. Speakers appeared to depend too heavily on their own communicative intent when gauging the comprehension of their audience, despite the importance of accurate perspective taking in everyday conversation.

Perceptions of Social Influence

In addition to influencing predictions of future behavior or reactions, differential reliance on introspection and extrospection can also shape diverging interpretations of the previous behavior of the self and others. One example concerns judgments of conformity and social influence. Pronin, Berger, and Molouki (2007) showed that people introspect to seek evidence of possible conformity in their actions, but when conformity arises from unconscious sources (e.g., the unconscious influence of other group members' behavior), introspection yields no evidence of conformity. In contrast, extrospection often yields conformity-consistent evidence, given that conformity—by definition—results in actions looking like those of others. Hence, when people extrospect to judge whether others have conformed, they often find behavioral evidence supporting that conclusion, leading to attributions of conformity to others alongside denials of conformity in oneself.

Summary

The different strategies people use when seeking information about themselves versus others have important implications for the conclusions they reach. When people rely on introspection to learn about themselves, they may overweight their intentions and motives, and underweight important external factors. Yet they rely on introspection because it feels directly accessible and accurate, and more so than their behavior. Indeed, people rate their inner thoughts and emotions as more reflective of and informative about who they are than their behavior (Andersen and Ross 1984). This introspection illusion was first identified in research on people's relative blindness to bias in themselves versus in others, and it is to this line of work we turn now.

Asymmetric Assessments and Imputations of Bias: The Bias Blind Spot

People are often blind to their own bias, but quick to notice bias in others. A substantial literature has documented this bias blind spot and revealed its origins in people's asymmetric self- and social perception strategies. In initial work on the bias blind spot, Pronin et al. (2002)

found that people rate themselves as less vulnerable than others to a wide range of well-documented biases, such as the tendency to create self-serving attributions for success and failure, and the tendency to selectively attend to belief-supporting evidence. This pattern emerged both when participants rated themselves relative to the average American and when they rated themselves relative to their fellow students at an elite university. Participants in Pronin et al.'s studies also denied having displayed bias immediately after displaying it in a classic "better-than-average effect" paradigm (e.g., Alicke et al. 1995; Dunning, Meyerowitz, and Holzberg 1989), and they recognized the classic self-serving bias in others' evaluations of a test they failed, despite failing to see that same bias in their own evaluations of that test.

Causes of the Bias Blind Spot

People's denial of their own bias likely has a motivational component—people are generally motivated to see themselves in a positive light, and being biased is generally seen as a shortcoming (e.g. Kunda, 1990). However, the existence of a bias blind spot is not fully explained by motivation. Indeed, in the Pronin et al. study, people did not claim to be less susceptible to other negative personal limitations, such as procrastination or fear of public speaking—if anything, they rated themselves as slightly *more* susceptible to these negative tendencies. The crucial difference between tendencies such as procrastination or fear of public speaking, and the biases people deny, is their relative cognitive availability: people are readily aware—and lament—their procrastination, whereas biases tend to operate unconsciously, leaving little trace of their occurrence. Cognitive accessibility is important because of the strategies people use when assessing bias in themselves: they introspect, searching for bias in their thought processes. This internal search yields little evidence of bias, because biases operate unconsciously. Although people have access to the *outputs* of biased thinking (e.g., a preference for a White job applicant over a more qualified Black applicant), they lack access to the biased *processes* that generated those outputs (Nisbett and Wilson 1977; Wilson and Nisbett 1978). In contrast, when assessing the bias of others, people rely on extrospection, examining others' behavior for evidence of bias, where it can often be found.

This asymmetric reliance on introspection versus extrospection when assessing bias is not accidental: People readily report relying on introspection more when evaluating bias in the self and relying on extrospection more when evaluating bias in others (Ehrlinger, Gilovich, and Ross 2005; Pronin and Kugler 2007). Moreover, people believe that introspection is more valuable than extrospection during self-evaluation, whereas they believe the opposite when making evaluations of others (Pronin and Kugler 2007). This belief is based on the assumed evidentiary value of the different information-seeking strategies—people think that their thoughts would be more diagnostic of bias than their behavior, motivating the use of introspection, whereas they think that the behavior of others would be more diagnostic of bias than the thoughts of others, motivating the use of extrospection (Pronin and Kugler 2007).

Consistent with these beliefs about evidentiary value, providing people access to the introspection of others has little effect on bias imputation. For example, Pronin and Kugler (2007) had one group of participants—*actors*—complete the same "better-than-average" task used in previous studies consisting of rating themselves relative to other students at their university on a variety of traits. These participants listed their thoughts as they completed the task, and then evaluated how biased they were in their self-ratings. As expected, these

participants' self-perceptions of bias were unrelated to the actual level of bias in their trait ratings. A second group of participants in this study—*observers*—assessed the amount of bias in the trait ratings of the actors, and were either given only actors' trait ratings, or the trait ratings along with the actors' self-reported thoughts. If observers relied on actors' thoughts when assessing their bias, then imputations of bias would differ depending on access or lack thereof to these thoughts. In reality, however, observers provided with actors' thoughts did not differ in their bias assessments from those who were not provided with actors' thoughts (which were both higher than the actors' self-assessments of bias, once again showing the bias blind spot). Observers' bias assessments did correlate with the actual level of bias in actors' behavior, however, suggesting that they were using behavioral evidence—extrospection—to evaluate bias. Thus, the bias blind spot is a problem of folk epistemology, arising from a conscious, yet flawed, belief in introspection as the best route to self-knowledge and extrospection as the best route to other-knowledge.

Breadth of the Bias Blind Spot

Blindness to one's own bias is a widespread problem. Children as young as seven say they are less biased than other children (Elashi and Mills 2015), and even highly intelligent people show a bias blind spot (West, Meserve, and Stanovich 2012). In fact, more intelligent people may actually have a *larger* bias blind spot, because, although they are accustomed to performing better on cognitive tasks, their cognitive sophistication does not protect them from implicit biases that arise outside of conscious awareness (West et al., 2012). Expertise also fails to shield people from the bias blind spot. For example, Neal and Brodsky (2016) interviewed board-certified forensic psychologists about potential bias (e.g., emotional connections to cases), and found that psychologists were more likely to say that other psychologists' judgments were vulnerable to bias than that their own judgments were. Moreover, all of the psychologists in the study asserted that introspection was an effective strategy for detecting bias in one's own judgments, thus revealing not only a bias blind spot, but an explicit endorsement of its underlying cause.

Consequences of the Bias Blind Spot

The ubiquity of the bias blind spot has serious practical consequences for evaluations of the self and others, including insistence on the objectivity of one's own judgments, dismissal of disagreement as a result of others' bias, and the exacerbation of conflict as a result of those perceptions. First, people's use of introspection to assess their personal bias can lead them to maintain confidence in their objectivity even while recognizing their exposure to possible opportunities for bias. For example, participants in a study by Hansen et al. (2014) evaluated the quality of paintings using either an explicitly biased or an explicitly objective judgment strategy. Before rating the quality of each painting, all participants were presented with the option of learning the identity of the artist. Participants in the *objective* condition were instructed not to choose to see the artist's identity, whereas participants in the *biased* condition were instructed to choose to see the artist's identity. Participants in the latter condition explicitly acknowledged that this was a biased judgmental strategy: they rated their strategy as substantially more biased than participants in the objective condition. After completing the painting judgment ask, and using their assigned strategy to do so, participants again rated the objectivity of their strategy, and participants in the biased condition again rated their strategy as less objective than participants in

the objective condition. Importantly, however, participants in the biased condition *did not* rate their performance as more biased than that of participants in the objective condition. Despite acknowledging the bias inherent in their judgment strategy, they maintained that their own judgments were objective; in fact, their confidence in their own objectivity *increased* after knowingly using the biased strategy

People's confidence in their objectivity after using a biased strategy stems from their use of introspection: when people examine their thoughts and motives for traces of bias, they find no evidence of bias. Moreover, because they know their strategy was biased, this lack of evidence is even more remarkable—it suggests that they have maintained objectivity in the face of biasing influences. Hence, people may feel even more confident in their objectivity after employing a biased judgment strategy than before employing it. This pattern of self-perceived objectivity as a result of introspection may explain the aforementioned confidence that forensic psychologists feel despite knowing that biases such as emotional connections to defendants could potentially influence their professional judgment. It also underlines the limitations of attempts to warn people about potentially biasing factors. For example, jurors exposed to biasing testimony and instructed to ignore it may feel they are preventing it from biasing their judgments while nonetheless being influenced. Similarly, journal reviewers may be confident that knowing the identity of a manuscript's author will not sway their conclusions, despite their vulnerability to, for example, favoring authors from prestigious universities. Reliance on introspection undermines people's ability to judge bias in themselves, leading them to maintain—and perhaps even gain—confidence in their objectivity as they interpret an absence of evidence of bias to indicate evidence of an absence of bias.

Introspection and the resulting bias blind spot can also cause people to dismiss disagreement; rather than taking disagreement seriously and reexamining their own views, they attribute it to the bias of others. In one study by Kennedy and Pronin (2008), for example, participants read a fictional article about the then-new president of Harvard that included a discussion of her views on affirmative action. Her views were presented as relatively moderate, and there was large variability in participants' own affirmative action opinions, resulting in varying levels of disagreement between participants and Harvard's president. After reading the article, participants rated their perception of how objective or biased the president was, and these ratings were shaped by whether they agreed or disagreed with her—the more they disagreed with her stance, the more they attributed her views to bias rather than careful reasoning. Kennedy and Pronin found the same pattern of results when manipulating disagreement, providing causal evidence that people respond to disagreement by attributing conflicting viewpoints to bias.

People react to disagreement by imputing bias to others in part because introspection reveals no evidence of bias in their own views; thus, the source of disagreement seems as though it cannot be one's own bias. The view of oneself as objective precedes disagreement, however. A central tenet of naïve realism is that people believe they see the world as it is. And so it goes, when others see things differently, people are left to infer that those others are either ignorant or misinformed—or biased (Ross and Ward 1995, 1996; see also Ichheiser 1949). Thus, folk epistemology devalues disagreement as largely a reflection of a disagreeing others' faults, whether it be their ignorance, misinformation, or—having ruled out those alternatives—their bias. And discounting disagreeing others as a potential source of information has negative implications for information acquisition and knowledge—Liberman et al. (2012), for example,

found that participants failed to incorporate the judgments of disagreeing others in an incentivized judgment task, and earned less money based on performance because they dismissed the informational value of opposing judgments.

Devaluing disagreement is not only problematic from a rational epistemic standpoint; it can also incite and escalate conflict, resulting in a bias-perception conflict spiral. Disagreement can lead to conflict, but not all disagreement follows such a negative path. One important catalyst that moves a disagreement between two parties toward conflict is uncooperative, competitive behavior toward the other side. As discussed earlier, Kennedy and Pronin (2008, 2012) showed that people react to disagreement by imputing bias to opposing parties. They also found, however, that imputing bias to opponents leads people to react more competitively and aggressively. To some extent, this latter reaction is understandable, and, in some cases, could be rational—a biased, unreasonable opponent is unlikely to respond well to cooperative conflict-reduction strategies, such that a more competitive response seems more effective. Importantly, though, people react more competitively not just in response to perceived bias but in response to mere *disagreement*, because they take the extra inferential step of attributing disagreement to bias. This response produces a conflict spiral, because people's uncooperative responses in the face of disagreement (and inferred bias) are then seen as aggressive and biased by the opposing party, producing a competitive response in return. Thus, imputation of bias in the face of disagreement risks inciting a conflict spiral that unnecessarily escalates a situation that could perhaps be resolved more cooperatively.

Reducing the Bias Blind Spot

Given the problems posed by the bias blind spot, a pressing question is: how can the bias blind spot be reduced? In this section, we highlight three potential strategies to help overcome the failure to see bias in oneself. One approach to reducing the bias blind spot is "exposure control" (Gilbert 2002; Wilson and Brekke 1994)—that is, trying to prevent bias from occurring in the first place by removing the presence of biasing influences. Double blind peer review, for example, attempts to remove the possible influence of author identity to prevent bias from taking place. This approach has strong merits; after all, the problem of bias blindness only exists when bias itself exists; thus, eliminating the opportunity to be biased also eliminates the problem of bias blindness. In many situations, however, it may be impossible or unfeasible to fully remove biasing influences, and thus other approaches are needed as well.

A tempting additional approach to reducing the bias blind spot would be to simply educate people about implicit biases, emphasizing that they are common, frequent, and can occur outside awareness. The ironic problem posed by the bias blind spot, however, is that it results from the failure to recognize bias in oneself; hence, educating about bias cannot alone reduce it. Indeed, people may well respond to education about biases by noting how frequently they see those around them display such tendencies, while still neglecting those same tendencies in themselves as a result of relying on introspection. Thus, the topic of education should not just be bias itself, but rather the limitations of introspection as a strategy to assess bias. Pronin and Kugler (2007) tested such an approach by giving one group of participants a (fabricated) article about the limits of introspection, which reviewed actual psychological research about how people are unable to detect their own bias by looking within. A second group of participants instead read an unrelated article about pollution. When participants then rated their own

susceptibility to a series of biases relative to the susceptibility of other undergraduates at their university, participants who read the pollution article displayed the classic bias blind spot, but participants who learned the flaws of introspection did not. Thus, education can reduce the bias blind spot if focused on the strategies people use to seek information about their own bias.

A third possible approach changes the focus from introspection to extrospection by encouraging people to focus on outward behavior. That is, instructing people to focus on the *appearance* of bias in their own behavior—rather than internal indicators of bias—can make people more likely to acknowledge the possibility of bias. When employees are asked to complete conflict of interest reports, the focus is often on disclosing anything that might *appear* biased. Even federal judges, who are expected to be beacons of objectivity, are required to recuse themselves from a federal case if a *reasonable person* might question their impartiality. These standards essentially ask people not to look inwards for evidence of objectivity, but rather to look outwards to how others might see them (though their views of what would look like bias may derive from internal standards rather than others' standards).

In summary, the bias blind spot is a consequential asymmetry in the perception of the self and others, and largely results from different information-seeking strategies. People readily notice bias in others by focusing on others' behavior and lay theories of bias, whereas they fail to notice it in themselves because they rely on introspection. Introspection, despite feeling like the most effective self-assessment strategy, is ineffective because people have little access to thought processes, preventing them from successfully detecting bias in themselves.

The Sometimes Problem With Looking at Behavior: Pluralistic Ignorance and the Deviance Assumption

Although people do not have introspective access to their thought processes, people do have introspective access to the contents of their thoughts, as Nisbett and Wilson famously pointed out in their 1977 paper. Thus, introspection is not as problematic when people seek self-knowledge that is consciously available in thought contents. On the other hand, although extrospection is sometimes helpful in the detection of bias in others—because bias can leave behavioral traces even when its tracks are covered in consciousness—extrospection can also be problematic. It can lead to information-acquisition problems of its own when the behavior of others is incorrectly assumed to reflect their internal thoughts, feelings, knowledge, and experiences.

Perhaps the best known case of when extrospection yields inferior information to introspection is what Floyd Allport (1924) termed *pluralistic ignorance* (see also Prentice and Miller 1994, 1996). Pluralistic ignorance occurs when people mistakenly believe that an unpopular social norm is widely endorsed by the group. The phenomenon arises as a consequence of the fact that social information must often be indirectly acquired through the observation of others' behavior (and this is particularly true when people seek information about the group rather than an individual). This route to knowledge can be problematic, though, when people's public behavior fails to accurately represent their private opinions. In those cases, extrospection (i.e., relying on observable behavior) can lead to drastically incorrect conclusions about social norms, resulting in pluralistic ignorance.

In a classic study, Prentice and Miller (1993) surveyed Princeton University undergraduates about their level of comfort with the drinking habits of Princeton students, as well as how comfortable they thought the average Princeton student was. Most participants reported that they were much less comfortable with campus drinking habits than the average Princeton student, such that the *actual* average level of comfort with drinking habits was much lower than the *perceived* level of comfort. Thus, participants mistakenly believed they differed from their peers and perceived an unpopular norm—heavy drinking—as popular. Prentice and Miller's research demonstrates that people can fail to acquire important social knowledge. Indeed, norms are important drivers of behavior, either because people want to fit in and therefore conform to perceived norms, or because people use norms as information about how they should behave. It is precisely the tendency to conform to norms, however, that creates the potential for pluralistic ignorance—people want to fit in, and thus they publicly act in accordance with what they perceive as normative. As a result, most people outwardly act in accordance with the perceived norm, despite not privately endorsing it. When people seek to learn about collective opinions through extrospection, the behavioral evidence they encounter suggests that others endorse the unpopular norm.

That participants knowingly misrepresent their private views in public but nonetheless use others' public behavior to infer those others' private views highlights a pitfall of relying on extrospection for others—people seek information through others' behavior even while knowing that their own behavior is not dispositive of the internal motives that are guiding that behavior. Similar to the way that relying on introspection to assess one's own bias induces a bias blind spot, relying on extrospection to assess others' internal states can create a deviance assumption or "normalcy blind spot," whereby people are blind to the extent to which they are similar to others—that is, "normal."

Relying on introspection can create the false impression that one is deviant or abnormal, in a socially undesirable way, particularly because public behavior—the evidence on which extrospection draws—often conceals negatives and showcases positives. For example, Jordan et al. (2011) found that people erroneously thought they experienced more negative emotions than others, despite also recognizing that they are more likely to conceal negative emotions and display positive ones. Indeed, the extent to which peers reported concealing negative emotions predicted the degree to which individuals thought they experienced abnormally high levels of negative emotions. Moreover, participants who underestimated others' negative emotional experiences to a greater extent experienced more loneliness and decreased subjective well-being. Thus, people's blindness to their emotional normalcy created a false impression of being worse off than those around them.

In a related study, Cheek and Pronin (2018) found that 225 adults in a Mechanical Turk sample believed that even when they were knowingly putting on a happy face at a party despite not actually enjoying a party, their peers' happy faces were more likely to reflect actual enjoyment. Specifically, participants were told to imagine the following situation:

> You are at a work-related party on a Friday night, and everyone is milling around with a glass of wine in their hand. During a casual conversation with various party-goers, someone asks the group of you if they are enjoying themselves. You are exhausted and just want to go home. Nonetheless, fear of seeming like you're no fun prevents you from

> answering honestly. You happily nod your head yes and have another sip of wine. You notice that everyone else is smiling happily too. Why do you think everyone is smiling happily in response to the question?

Participants then rated how likely it was that the other guests were enjoying the party and how likely it was that the other guests were smiling to give off a good impression on scales from 1 to 7, with higher numbers indicating greater likelihood. Even though they knew their own smile was merely a mask, participants thought it was much more likely that others were smiling out of genuine enjoyment ($M = 5.29$, $SD = 1.31$) than that others were pretending to enjoy the party ($M = 3.96$, $SD = 1.67$), $t(224) = 7.65$, $p < .001$, $d = .51$ (see Figure 3). Thus, people interpreted the behavior of others as honestly reflecting inner states, despite their introspective knowledge that belied their own smiles. Extrospection as a means to understand others' thoughts and feelings is only valuable insofar as behavior provides a reasonable proxy for inner states, and reliance on extrospection to learn about others' inner states may be so valued that people do not apply their knowledge of its limitations in even relatively transparent cases.

Figure 3: Beliefs about Informativeness of Extrospective Evidence in a Pluralistic Ignorance Situation

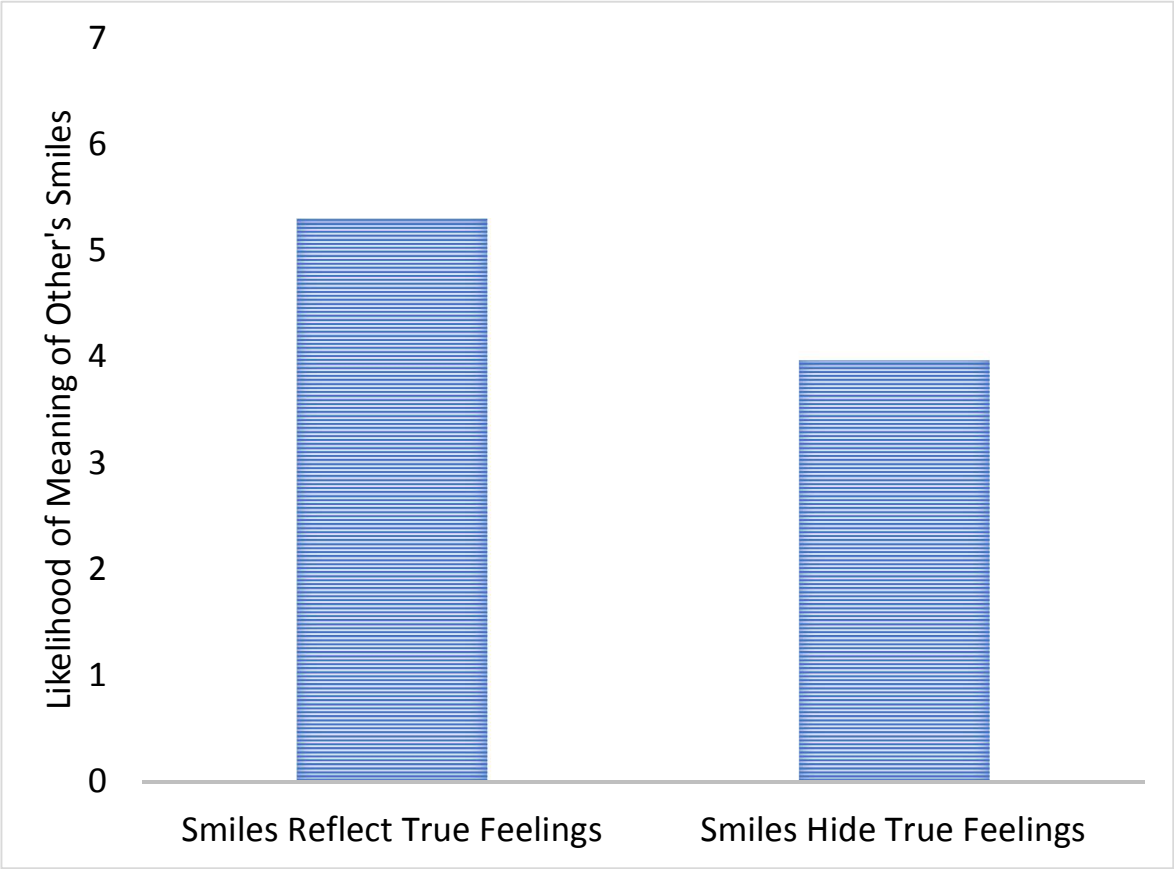

Figure Note. Participants thought it was more likely that others' smiles reflected their true feelings, despite knowing that their own smiles hid their true feelings.

Pluralistic ignorance and the normalcy blind spot pose problems for the collective as well as individuals. Unpopular norms will survive due to pluralistic ignorance, leading people to conform to them long after they are endorsed by few. Kugler and Darley (2012), for instance, found that people tend to overestimate others' agreement with and support for current drug enforcement policies, presumably because public outcry against those policies has been limited. Public behavior that misrepresents private views can impact policies and laws in addition to individual behavior by leading those in power to misunderstand public opinion.

Reducing Pluralistic Ignorance and the Normalcy Blind Spot

The normalcy blind spot results from both the fact that people misrepresent their internal states in public and the fact that people use extrospection to assess others' internal states. Thus, one strategy to reduce pluralistic ignorance and the normalcy blind spot is to educate people about others' actual private views and experiences. Making private information known and available can decrease the deviance assumption and also reduce pluralistic ignorance. For example, communicating rates of college students' seeking treatment for depression and anxiety, or of their experiencing discomfort with casual sex on campus, may help reduce individual students' feeling that they are alone in having anxiety or depression, or that they are uniquely uncomfortable with casual sex. In the political realm, exposing citizens to the results of opinion polls can provide a novel source of information that is more accurate than extrospection.

An alternative strategy is to educate people about the limits of extrospection as a means to assess others' true inner states (and, consequently, as a means to draw conclusions about one's own deviance). This approach parallels the strategy of reducing the bias blind spot by educating people about the limits of introspection (e.g., Pronin and Kugler 2007). For example, Schroeder and Prentice (1998) found that undergraduates assigned to participate in a discussion of pluralistic ignorance reported less drinking several months later relative to undergraduates assigned to a control discussion. Thus, pluralistic ignorance and the normalcy blind spot can be addressed either by attempted to provide a better source of evidence of others' inner states or by attempting to expose the limits of relying on extrospection to seek out evidence of others' inner states.

Perceptions of Bias in the "Post-Truth" Era

Psychological and philosophical approaches to understanding how people gain knowledge—and how they *should* gain knowledge—about the social world are perhaps more important than ever as we find ourselves in the "post-truth" era. Ample research has found that people view their own perceptions as reflecting objective reality while they readily impute bias to those who disagree with them. Armed with this psychological tendency, people can discount disagreements as the result of other people's bias or ignorance, rather than take disagreements seriously as an opportunity to learn new information, update beliefs, and achieve better understanding and mutual cooperation.

Indeed, journalists, academics, and cultural commentators alike have decried the recent ascendance of unfounded beliefs, "fake news," and "alternative facts" in modern politics (e.g., Davies 2016; Davis 2018; d'Ancona 2017; Manjoo 2008; McIntire 2018; Rabin-Havt and Media Matters for America 2016). One broad theme in reflections on the post-truth era is an apparent disregard for veracity—a motivated denial of facts in favor of other, more appealing "alternative" ones. As psychology has long recognized, motivation can shape how people seek out information and the conclusions they draw from it (e.g., Ditto and Lopez 1992; Dunning, Meyerowitz, and Holzberg 1989; Kunda 1987), and as the Internet facilitates access to a seemingly infinite number of potential information sources, it is easier than ever to create an ideological bubble that confirms one's worldviews to the detriment of a broader understanding of reality. But even beyond motivated distortion of the truth, the research reviewed in this chapter underlines social and cognitive limitations in the search for social information, rooted in the introspection illusion.

We *cannot* expect people to gain introspective access to the biases that distort their perceptions, and to see the action of those processes bending their perceptions away from "objective reality" and towards an alternative one. Those distorting processes happen nonconsciously, thereby affording people an undue confidence in their own objectivity and correctness. We also *cannot* expect people to gain an appreciation for others' grasp on objectivity reality. After all, those others lack that grasp as much as we do—and we therefore are correct in claiming that others are biased (even if we are incorrect about the amount of their bias). These things are unreasonable to expect. What we can strive for, however, as people who value a fair and just society characterized by harmony rather than strife, is to entertain the possibility that we too are biased. We can strive to look at our own behaviors when we look at those of others, and when those behaviors seem like signs of bias in others, we can acknowledge that the same behaviors in ourselves may similarly signal bias. Our internal, introspective worlds can be rich, beautiful, and revealing. But relying on them while judging others from the outside can also be a costly divergence.

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