

# Perception and misperception of bias in human judgment

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**Human judgment and decision making is distorted by an array of cognitive, perceptual and motivational biases. Recent evidence suggests that people tend to recognize (and even overestimate) the operation of bias in human judgment – except when that bias is their own. Aside from the general motive to self-enhance, two primary sources of this ‘bias blind spot’ have been identified. One involves people’s heavy weighting of introspective evidence when assessing their own bias, despite the tendency for bias to occur nonconsciously. The other involves people’s conviction that their perceptions directly reflect reality, and that those who see things differently are therefore biased. People’s tendency to deny their own bias, even while recognizing bias in others, reveals a profound shortcoming in self-awareness, with important consequences for interpersonal and intergroup conflict.**

## Introduction

People are not always accurate and objective at perceiving themselves, their circumstances and those around them. People’s perceptions can be biased by their beliefs, expectations and context, as well as by their needs, motives and desires [1–3]. Such biases have important consequences. They can compromise the quality of human judgment and decision making, and they can cause misunderstanding and conflict [4–7].

Accumulating research shows that people recognize the existence, and the impact, of many of the biases that affect human judgment and inference. However, they seem to lack recognition of the role that these same biases have in shaping their own judgments and inferences. Here, I describe recent evidence of a broad and pervasive tendency for people to see the existence and operation of bias much more in others than in themselves. In addition to reviewing evidence for this ‘blind spot’ in bias perception, I describe the psychological processes underlying it.

## Perceptions of bias in self versus others

### *Self-enhancement biases*

Perhaps the most well-known form of bias involves people’s inclination to see themselves in a positive light, even when the evidence suggests otherwise [8]. When people lack talent or ability, they tend not to notice [9]. They also tend to see their futures as overly rosy, to see their traits as overly positive, to take too much credit for successful

outcomes and to disregard evidence that threatens their self-esteem.

Despite the well-documented role of self-enhancement (or ego-protective) bias in human judgment, people rarely recognize their susceptibility to it. Although they rate themselves as ‘better than average’ on a wide range of traits and abilities, most people also claim that their overly positive self-views are objectively true [10,11]. Moreover, their unwarranted claims of objectivity persist even when they are informed about the prevalence of the bias and invited to acknowledge its influence [11]. In another example, people are biased to make themselves feel better after negative things happen to them (from heartbreaks to job rejections) but they are unaware of this ego-protective bias. Instead, they predict that these negative outcomes will leave them feeling bad far into the future [12,13].

People are not similarly resistant to detecting the influence of self-enhancement bias on others. They anticipate that their peers will make overly positive trait assessments [14]. They also expect others to make self-serving claims of responsibility [15]. Indeed, marital partners overestimate the degree to which their spouses will self-servingly take credit for good outcomes (such as resolving relationship conflicts) and deny credit for bad outcomes (such as breaking household items) [15].

In one experiment, participants assessed their own and a peer’s self-serving bias in a single situation. They took a purported test of social intelligence, and displayed the classic bias – those who were told they performed well claimed that the test was more valid than those who were told that they performed poorly. However, after being informed about the potential for bias in their claims, participants were more likely to acknowledge that possibility in their fellow participant than in themselves [11].

### *Self-interest biases*

Discussions of bias in public discourse often focus on concerns about the impact of self-interest on others’ judgments and actions. Indeed, it is a common assumption that human behavior is guided by people’s tendency to make judgments based on what best serves their self-interest (whether that interest is, for example, financial or political) [16].

Although people view self-interest as essential for motivating human behavior, they view it as a more crucial motivator of others than of themselves. They assume that people who work hard at their jobs are motivated by external incentives such as money, whereas they claim that they personally are motivated by internal incentives

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such as feeling a sense of accomplishment [17]. In another study [18], students predicted their own and their peers' likely contributions to an upcoming charity drive. They made unduly positive predictions about their own future generosity but not about that of their peers, suggesting that they were more prone to anticipate self-interest in others' behavior than in their own. Indeed, people sometimes overestimate the impact of others' susceptibility to self-interest. In other experiments, college students' plans to donate blood were unaffected by whether they would be paid, and their attitudes about a campus keg ban were unaffected by whether the ban would impact on their social life. However, in both cases, they assumed that their peers' actions and attitudes would be affected by self-interest [19].

Assumptions of self-interest in others, combined with denials of it in the self, occur in settings where they can be costly. Physicians recognize that other doctors are susceptible to the biasing effects of gifts from pharmaceutical representatives but they think that they personally resist these effects [20]. In market settings, sellers perceive their wares as being objectively worthy of a higher price than do buyers, and both assume that any disagreement over price is a function of the greedy self-interest of the other side [21].

#### *Prejudice and group-based biases*

People's stereotypic beliefs about other groups, and their affiliations with their own ingroups, color their perceptions and judgments. People show subtle (and not so subtle) biases in how they perceive and treat members of stigmatized groups ranging from racial minorities to the overweight [8,22]. Even when differences between groups are minimal and trivial, people tend to favor ingroups over outgroups.

People generally believe that they are immune to group-based biases. They claim freedom from racial bias, and from gender bias, even in circumstances where they have shown these biases [22,23] – at times even showing these biases more strongly the more objective they claim to be [23]. When making judgments about who is 'right' in a conflict, people tend to side with the person who shares their ingroup identity but they again deny that bias [24]. People can also be blind to forms of group-based bias other than prejudice. For example, although people's political party affiliation can bias them towards adopting policy positions that defy their own values, people deny that influence on their positions. Notably, they do recognize that their peers succumb to the biasing effects of their own political party [25]. In general, people view others as being more biased than themselves by the ideology of their political ingroups [26,27].

#### *Other biases in prediction, assessment and estimation*

The tasks of prediction, assessment and estimation are common in everyday life. Unfortunately, cognitive biases compromising our efforts at these tasks are also common [1–3]. People are blind to the impact on themselves of these biases. For example, they are biased towards underpredicting how long they will take to complete work tasks (a 'planning fallacy') but they do not recognize this tendency

in themselves [28]. Similarly, people do not recognize the influence on themselves of the hindsight bias (i.e. the bias to judge historical facts as being more likely to have occurred after knowing that they occurred) [29]. Moreover, although people deny the effect of irrelevant but salient numerical anchors on their numerical estimates, they claim that others are not similarly immune to this bias [30].

As with the anchoring effect, one of the most well-known biases in social judgment also involves the unwarranted impact of salient information. It involves the tendency for people's impressions of others to be colored by salient situational factors [8,31]. People anticipate this bias in those around them but not in themselves. In several experiments, participants delivered speeches expressing an opinion that was assigned to them. They expected that a peer would assume this to be their true opinion, even though they knew that the peer was fully aware that it had been assigned to them [32–34]. Moreover, they expected that their peers would show this bias more than they expected that they themselves would show it [33].

#### *Direct demonstration of a bias blind spot*

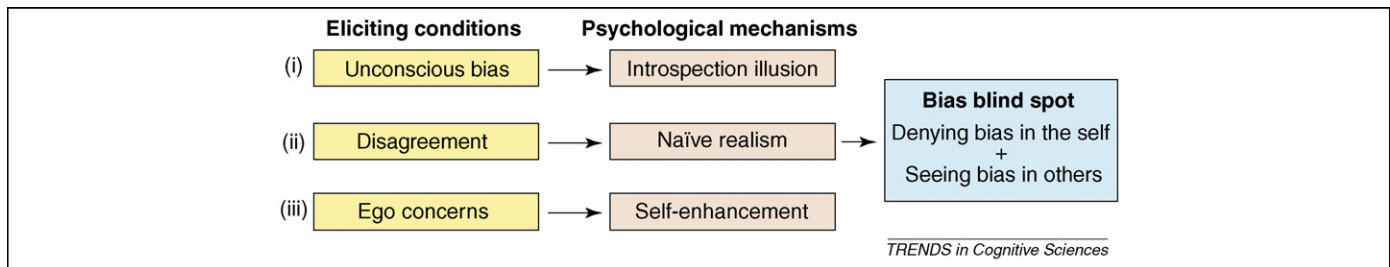
A final set of studies provides direct evidence for a bias blind spot [11]. Participants read descriptions of a range of biases (e.g. self-interest, dissonance reduction and biased assimilation) and assessed their relative susceptibility to each one. College students reported being less susceptible than the 'average American' to each bias, and they also reported less susceptibility than their peers in a seminar class. Moreover, travelers at an international airport reported showing the biases to a lesser extent than others at the airport that day.

#### **Roots of the bias blind spot**

Biases are generally viewed as being undesirable. For this reason, it is tempting to assume that people's denials of bias reflect the well-documented self-enhancement motive [8,35]. Indeed, there is at least some evidence that people are more likely to acknowledge their susceptibility to biases that are less undesirable [11]. Although having a bias blind spot probably contributes to a generally positive view of the self, numerous research findings now make clear that the blind spot cannot be understood entirely in these terms. Its multiple sources are illustrated in Figure 1.

#### *Unconscious bias and an introspection illusion*

Much of human judgment and action is driven by nonconscious processes [36,37]. People can form impressions of others, pursue goals, adopt attitudes and regulate their emotions – all without awareness, effort or intention. Nevertheless, people often rely on conscious introspections when seeking self-understanding, even when the processes they seek to understand occurred nonconsciously [38,39]. As a result of this over-reliance on introspective information, people are often misled in their attempts at self-insight (Box 1). The tendency for people to overvalue their own introspections is referred to as an 'introspection illusion' [40–42]. This illusion contains the following key elements: (i) it occurs when people are considering their own



**Figure 1.** Sources of the bias blind spot. Divergent perceptions of bias derive from three sources: (i) the unconscious nature of bias, coupled with people's unwarranted faith in the value of their conscious introspections; (ii) disagreement, coupled with people's assumption that they see things as they are and that disagreements must therefore be due to distortions in others' perceptions; and (iii) ego-related needs, coupled with people's efforts to enhance their self-image to meet these needs.

(as opposed to other people's) introspections; (ii) it involves a trade-off between the consideration of introspective information (e.g. thoughts, feelings, motives) versus other information (e.g. behavioral information, naïve theories, population base rates); and (iii) it results not simply from plentiful access to introspective information (of the sort actors, but not observers, typically have) but from the perceived diagnostic value of that information.

The introspection illusion has been shown to account for people's denials of bias [10,40,41]. When people are influenced by bias, this influence typically occurs nonconsciously [43–45]. When people judge their personalities to be better than average, or offer numerical estimates that are influenced by irrelevant anchors, they generally do so without awareness or intent. Nevertheless, people give heavy weight to introspective information such as motives and intentions when assessing their bias. This comes at the expense of their considering other information – for example, their behavior (rather than their intentions). Whether assessing specific commissions of bias in the laboratory or providing more abstract assessments, people consider

internal information more for the self than for others, and they consider information deriving from external sources – such as observable behavior [41], population base rates [18] and naïve theories of bias [15,32] – more for others than for the self [18,41]. This tendency mediates the effect of judgment target (i.e. self versus other) on perceptions of bias [41]. Also consistent with the introspection illusion, people are more likely to deny their susceptibility to bias in situations where introspections are salient but unbiased [10], and they are more likely to make efforts to correct for bias when introspective evidence is particularly suggestive of bias [46]. Figure 2 depicts the impact of the introspection illusion on bias perception.

Of course, people have far more access to their own introspections than to others' introspections. And self-other differences in the weighting of introspective information are likely to reflect that. However, people's greater weighting of their own introspections is also due to their greater valuation of those introspections. Studies have shown that: (i) people report that internal information is a more valuable source of information about their own bias than others' bias; (ii) people show a bias blind spot even when they have detailed access to others' introspections; and (iii) people believe that an actor's bias is more aptly defined by introspective contents when that actor is themselves rather than someone else [41]. However, people are not doomed to overvalue their introspections forever. Educating people about the limited value of introspective evidence eliminates the bias blind spot [41], a finding that has potentially important implications for the problem of bias correction (Box 2).

#### *Naïve realism and disagreement*

Another source of the bias blind spot involves the fact that others do not always see things the way we do. People are particularly likely to deny bias in themselves, whereas they will impute it to others, when those others have a different point of view [24,25,40,47,48]. US students who disagreed with the US President's decision to invade Iraq imputed more self-interest bias to him than did those who agreed with him [48]. Indeed, the more people disagree with us, the more we view them as biased. In the wake of 9/11, US students who considered a continuum of possible responses to terrorism perceived more bias in their fellow students the more those students' views diverged from their own [40]. In general, when issues are viewed as divisive, people tend to see those on the 'other side' as being more biased by ideology and personal experience

#### **Box 1. When introspection inhibits insight**

Accumulating research demonstrates an ironic tendency in human cognition. The rich access that people have to their internal thoughts, feelings, intentions and other mental contents sometimes causes them to make worse judgments about themselves, rather than better ones. This has been illustrated for numerous types of judgments:

##### **Goodness**

Our positive intentions can lead us to overestimate our future charitable behavior and our tendency to display positive traits [18,59].

##### **Well-being**

Our current feelings (of unhappiness, dislike or other intense emotions) can cause us to mispredict our future emotional states [12,13,60].

##### **Attitudes**

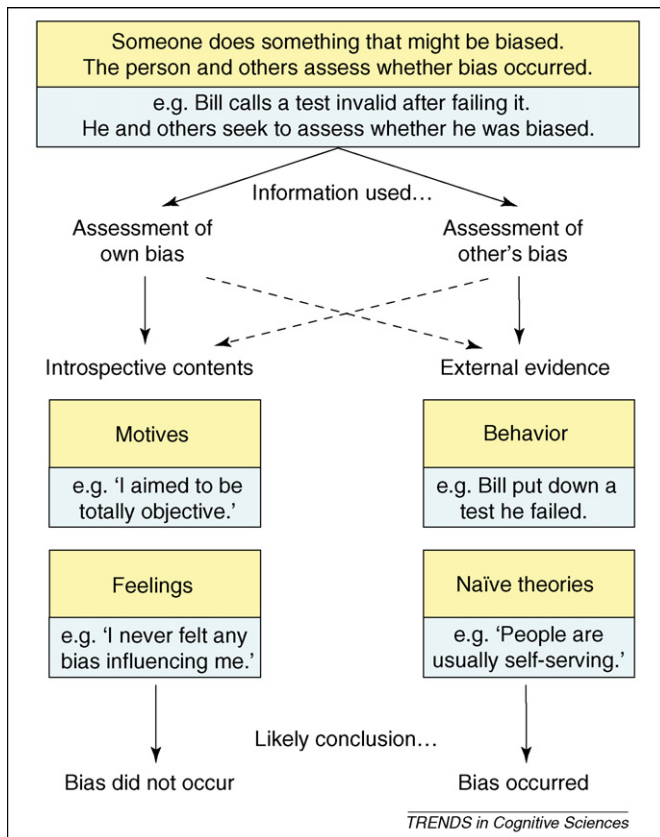
Our efforts to analyze carefully the reasons for our values and preferences can lead us to deviate from our true preferences and values [61–63].

##### **Causality**

Having thoughts about an event before it occurs can prompt us to think we caused it, even if such causation seems magical [64–66].

##### **Bias**

Our lack of biased motives can lead us to deny the influence of bias on our judgments, even when such bias has occurred [40,41].



**Figure 2.** The introspection illusion in perceptions of bias. Individuals rely on different information for assessing the possibility of bias in themselves versus in another person. Self-assessments give more weight to introspective information than do other-assessments. This difference in weighting results in self-assessments drawing fewer conclusions of bias than other-assessments (because biases generally elude introspective awareness).

than those on their own side [10,27,49]. When people recognize that their side has been influenced by factors such as personal experience, they view that influence as enlightening rather than biasing [10].

The tendency to perceive bias on the part of those who fail to share one's views stems in part from people's naïve realism [4,26,50]. People are naïve realists in the sense

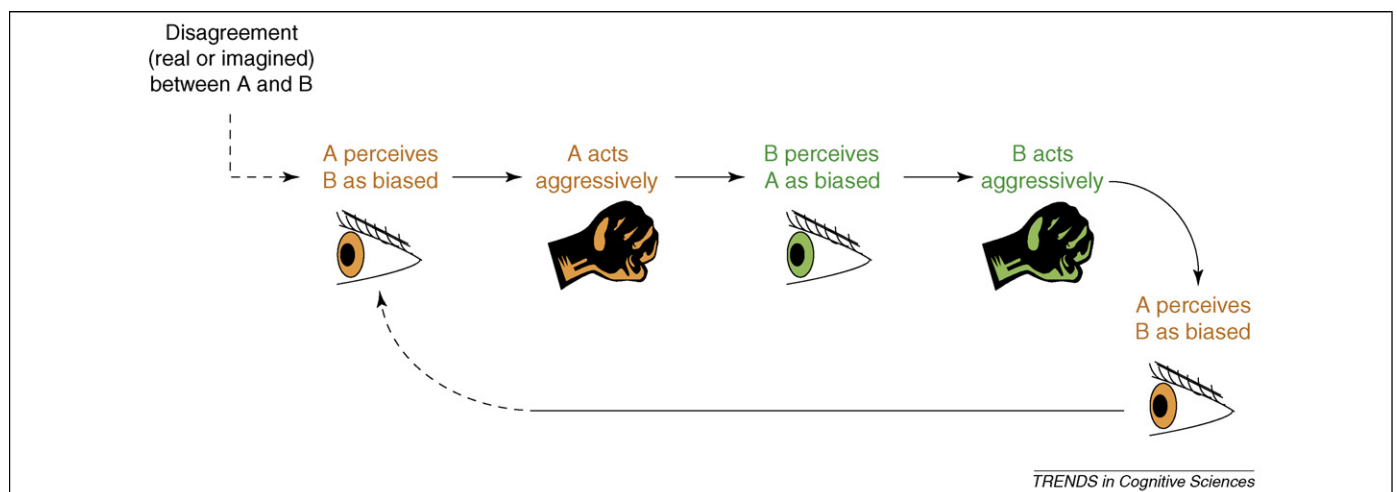
## Box 2. Bias blindness and bias correction

Biases can compromise human judgment in harmful ways. Therefore, people should be highly motivated to correct for them. However, efforts at bias correction are complicated by the fact that people generally are unaware of their bias commissions. Moreover, they generally assume that if they were biased, they would be aware of it.

Not surprisingly, then, experimental manipulations forewarning people to avoid the effects of various biases have achieved only limited success [11,24,30,67–69]. The evidence reviewed here suggests that forewarning is likely to succeed when people understand not only the effects of the bias in question (e.g. they know that it causes responses to be more self-serving, or more similar to an irrelevant anchor), but also when they understand that these effects occur without conscious awareness. Indeed, recent evidence shows that educating people about the fallibility of introspective evidence liberates them from the usual bias blind spot [41]. An important question for future research is whether such 'introspective education' not only leads people to recognize their susceptibility to biases, but also leads them to engage in efforts to correct for these biases.

that they generally assume that they see the world as it is in 'objective reality'. This belief begets the assumption that other objective perceivers will share one's views about oneself and the world [15,21]. Thus, if a person assumes that their position on the latest welfare reform bill derives solely from an objective analysis of the qualities of that bill, then they are likely to assume that any other person capable of objective analysis will share that position. When other people do not share one's views, one is prompted to question whether these others lack essential information and, having ruled out that possibility, one is led to conclude that these others must be biased [26,40]. Thus, upon learning that one's support of the welfare bill is not shared by a colleague, even though they have heard the same 'facts' as oneself, one is likely to assume that the other person's position is warped by the effects of political ideology, naked self-interest or some other bias.

Naïve realism provides a particularly useful framework for understanding why people see others as biased in the context of disagreement. Perceptions of bias in the context of disagreement are important because of their role in turning disagreements into conflicts.



**Figure 3.** The bias-perception conflict spiral. Parties who experience disagreement or conflict view each other as biased. These perceptions of bias, in turn, induce conflicting parties to take actions that escalate the conflict. These actions then buttress the conflicting parties' inclination to view each other as biased, thereby inducing them to take additional conflict-escalating actions, as the spiral continues.



### Box 3. Questions for future research

- Sometimes the 'bias blind spot' is primarily caused by people's unwarranted denials of their own biases, whereas at other times it is more attributable to people's overestimations of others' bias. What determines when each of these causes is prominent?
- People place undue weight on their introspections as a source of self-understanding. What are the causes of people's unwarranted faith in their own introspections?
- In cases where bias occurs nonconsciously, is it possible to convince people that they have been biased?
- Bias is but one of a host of influences that can operate nonconsciously. Other such influences include automatic prejudice, implicit social influence, and simple behavioral priming. Do people detect the operation of these influences more in others than the self?
- Educating people about the shortcomings of introspection (and about the importance of nonconscious processes) reduces their denials of personal bias. Does it also induce them to engage in efforts to correct for these biases?
- Conflicts escalate when adversaries perceive each other as biased. What are the implications of this for designing effective tools for conflict resolution?

### Conflict and the bias blind spot

It has long been observed that conflicts follow a downward spiral, whereby both sides aggress against each other, while adhering to the belief that their own actions are merely a 'defensive response' to the 'offenses' of the other side [51,52]. A classic example of this spiral involves the ongoing Arab–Israeli conflict. The acts of aggression from each side invariably seem to follow some preceding aggressive act committed by the other side, and also seem invariably to precede yet another aggressive act from that other side. I would argue that perceptions of bias on the part of one's adversaries (but not oneself) are a crucial mediator of this classic spiral (Figure 3).

The presence of conflict and disagreement (or even perceived disagreement) induces people to perceive their adversaries as biased [10,24,40,47,48]. Thus, perceptions of bias are found in most conflict situations. These perceptions, in turn, make people more inclined to take conflict-escalating actions against their adversaries. In one series of experiments, people were led to perceive members of a group they disagreed with (i.e. suicide terrorists) as either biased in their decision-making processes, or objective. Those induced to see terrorists as biased advocated addressing them using bombs and ground strikes, whereas those induced to see terrorists as objective advocated negotiation and diplomacy [53]. In another study, exposing partisans in the affirmative action debate to the true responses of their adversaries, rather than exposing them to their presumptions suggestive of ideological bias, led these partisans to be more interested in the possibility of negotiation [54].

New evidence shows that when people perceive others as biased, they actually respond with more competitive and conflictual action. When actors focus on the potential for others to succumb to self-interest bias in a commons dilemma, they themselves act more selfishly [55]. In my laboratory, we recently found that when people perceive their opponent in a negotiation as biased, they take a more competitive stance towards that opponent – even when that stance is costly for themselves (with M. Kugler,

unpublished), and that when people perceive their opponent in an issue-based conflict as biased, they address that opponent more conflictually and aggressively, which, in turn, elicits a similar response from their opponent (with K. Kennedy, unpublished).

Taken together, this research depicts the role of bias perception in perpetuating the conflict spiral. Disagreement and conflict induce people to perceive their adversaries as biased, which, in turn, induces them to take actions that escalate conflict, as the spiral continues.

### Concluding thoughts

The past several decades of research have unveiled a host of biases in human judgment. These biases have received much attention because of their potential for compromising human decision making and exacerbating misunderstanding among people and groups. As discussed earlier, there is evidence of a widespread tendency for people to detect these biases more readily in others than in themselves (see Box 3 for Questions for future research).

Any exploration of people's perceptions of bias necessarily entails some conceptualization of the meaning of bias. The studies reviewed here have generally conceptualized biases as influences that cause judgments to depart from some objective standard or to violate some normative criterion. In some cases, the relevant biases were conceptualized more subjectively, as unwanted 'contaminants' of human judgment [45]. It is worth noting that although there are different research perspectives on whether most biases actually do elicit suboptimal judgment or whether they are somehow rational and functional [3,56,57], the present review concerns not so much the nature or prevalence of bias itself, as it does lay people's perceptions of what they themselves would characterize as bias.

Such perceptions of bias differ between the self and others, not simply because of self-serving motives, but also because of people's unwarranted reliance on their introspections for assessing personal bias, and because of their assumption that their own perceptions directly reflect 'objective reality'. These psychological mechanisms prevent people from recognizing their own biases but do not similarly blind them to others' biases. Although such an asymmetry might seem desirable at first blush (after all, psychological health has been linked to holding 'positive illusions' about the self [58]), its consequences are serious. Failing to recognize our own biases prevents us from working to correct them. Imputing bias to others but not ourselves serves to escalate conflict and deter its resolution.

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