

# Biases in Social Comparative Judgments: The Role of Nonmotivated Factors in Above-Average and Comparative-Optimism Effects

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Biases in social comparative judgments, such as those illustrated by above-average and comparative-optimism effects, are often regarded as products of motivated reasoning (e.g., self-enhancement). These effects, however, can also be produced by information-processing limitations or aspects of judgment processes that are not necessarily biased by motivational factors. In this article, the authors briefly review motivational accounts of biased comparative judgments, introduce a 3-stage model for understanding how people make comparative judgments, and then describe how various nonmotivational factors can influence the 3 stages of the comparative judgment process. Finally, the authors discuss several unresolved issues highlighted by their analysis, such as the interrelation between motivated and nonmotivated sources of bias and the influence of nonmotivated sources of bias on behavior.

Above-average effects and comparative-optimism effects are perhaps the two most robust and widely replicated phenomena from the literature on social comparative judgments. Research on these phenomena suggests that people have a pervasive tendency to believe they are better than others in a multitude of ways and that life's negative events are less likely to befall them than their peers. In demonstrations of the above-average effect, people have reported being more athletic, better organized, better drivers, better workers, better leaders, fairer, and more polite than others (see, e.g., Alicke, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995; College Board, 1976–1977; Goethals, Messick, & Allison, 1991; Heady & Wearing, 1987; Heine & Lehman, 1995; Messick, Bloom, Boldizar, & Samuelson, 1985; Svenson, 1981). In demonstrations of comparative-optimism effects (sometimes called *unrealistic-optimism effects*) people have reported being less susceptible to having a heart attack, being fired, attempting suicide, being unemployed, being the victim of crime, and having an unwanted pregnancy (see, e.g., Burger & Burns, 1988; D. M. Harris & Guten, 1979; Helweg-Larsen & Shepperd, 2001; Kirscht, Haefner, Kegeles, & Rosenstock, 1966; W. M. Klein & Weinstein, 1997; Perloff & Fetzer, 1986; Weinstein, 1980, 1984, 1987). Lists like these, which highlight some of the many impressive findings regarding above-average and comparative-optimism effects, can be found in many if not most textbooks of social psychology (e.g., Baron & Byrne, 2003; Lord, 1997; D. B. Myers, 2002). For first-time readers of these textbooks, we suspect that such lists naturally lead to conclusions about just how motivated people can be to believe good things about themselves.

Indeed, it is quite reasonable to suspect that above-average and comparative-optimism effects might be mediated by a motivation

for people to see themselves or depict themselves in the best possible light. There is a wealth of research demonstrating how motivations, such as a motivation for self-enhancement, can influence judgments and behaviors (for a discussion, see Kruglanski, 1996). Consistent with that research, the bulk of the explanations offered for above-average and comparative-optimism effects have in fact assumed that motivation is the ultimate source of the biased judgments (W. M. Klein & Kunda, 1993, 1994; W. M. Klein & Weinstein, 1997; Kunda, 1987; Middleton, Harris, & Surman, 1996; Regan, Snyder, & Kassin, 1995; S. E. Taylor & Brown, 1988; S. E. Taylor, Wayment, & Collins, 1993; Weinstein & Klein, 1996).

In this article, however, we focus on nonmotivated accounts for how biases in comparative judgments might produce above-average and comparative-optimism effects. These nonmotivated accounts locate the source of the biases within aspects of the judgment process and information-processing limitations rather than in self-enhancement motives or other related motives such as mood maintenance. Many of the mechanisms that are central to these accounts have been discussed in isolation in previous work, but the relations among these mechanisms have not been addressed. Our goal is to identify and describe possible biasing mechanisms within the context of a three-stage framework for how people make social comparative judgments. In addition to providing an organizational structure, this framework makes new distinctions among various nonmotivated sources of bias, and it summarizes available empirical evidence for each. Although we do not wish to suggest that motivational forces are irrelevant to above-average and comparative-optimism effects, we believe that this framework and the available empirical evidence make a strong case that nonmotivational mechanisms themselves can constitute a robust and sufficient source of bias in social comparative judgments.

In the following sections, we first briefly clarify some of the terms and methodologies that are discussed in this article. Second, we briefly review the motivated accounts that have been offered for above-average and comparative-optimism effects. Third, we discuss the rationale for looking beyond these motivated accounts

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and for attempting to locate and understand nonmotivated sources of bias in social comparative judgments. Fourth, we describe a three-stage model for how people make such judgments, and we discuss possible nonmotivated accounts of bias and locate them within the three-stage model. Fifth, we relate our framework to a recently proposed model of comparative judgments (Giladi & Klar, 2002). Finally, we highlight some of the many implications of our framework for future research and for understanding the influences of both motivational and nonmotivational processes in comparative-judgment biases.

### Terms and Methodologies

There are two primary methods of assessing people's judgments about their comparative status on a given ability, trait, or likelihood dimension. In the *direct method*, participants from a sample are asked to indicate how their standing on the dimension compares with that of others in the sample (e.g., How creative are you compared with your coworkers? Compared with the average college student, how likely are you to drop out?). In the *indirect method*, participants in the sample are asked to make an absolute judgment about themselves (e.g., How creative are you? How likely are you to drop out of college?), and they are asked to make an absolute judgment about others in the sample (e.g., How creative are your coworkers? How likely is the average college student to drop out of college?). In this indirect method, the difference between the two types of absolute judgments serve as an indirect measure of a person's perceived relative status on the dimension.

In studies using either the direct or indirect methods, it is rarely the case that researchers assess the true or actual standing of a respondent (e.g., the respondent's true ability or true vulnerability relative to others). Hence, determining whether any specific participant is overly optimistic is not possible; a person who claims to be relatively invulnerable to a negative event may or may not be relatively invulnerable. Nevertheless, the researchers can assess at a group level whether participants in their sample were generally overoptimistic. When the direct comparison method is used, the responses of participants should—if unbiased—center on an average response (e.g., "same as the average college student"), unless there is a substantial skew in the distribution. That is, the people who are in fact below average in the sample should report as such, whereas the people who are in fact above average in the sample should report as such. For similar reasons, when the indirect method is used, the difference score between the two types of absolute judgments should—if unbiased—center on zero. To the extent that the direct comparative judgments differ from "average" or indirect difference scores differ from zero, a systematic bias is present.

Although the direct method has tended to yield stronger evidence of systematic bias than has the indirect method, both methods have been used successfully to document above-average and comparative-optimism effects (Helweg-Larsen & Shepperd, 2001; Klar & Giladi, 1997). The framework we introduce in this article can be readily adapted to apply to both methods, as we describe later. However, our primary focus in this article is on how various mechanisms might produce biases in judgments made under the direct method. We frequently refer to these simply as *comparative judgments*, and we use this term, unless otherwise noted, to refer

to comparative judgments of various types (e.g., comparative trait, ability, and likelihood judgments).

### Motivational Accounts

Motivational accounts of the above-average and comparative-optimism effects postulate that some form of motivation, whether long term or situationally prompted, is the underlying biasing agent. A motivation commonly assumed to underlie above-average effects is self-enhancement, or a motivation to maintain a positive sense of self-esteem (Alicke, 1985; Brown, 1986; Campbell, 1986; Kunda, 1990; S. E. Taylor & Brown, 1988). For example, upon finding that participants reported desirable traits as more descriptive of themselves than of others (but the reverse for undesirable traits), Alicke (1985) concluded that participants were engaging in attempts to bolster their general self-concepts. He maintained that such favorable self-descriptions protect one's self-concept from specific and occasional unfavorable actions or events (e.g., receiving a low score on a test of social skills) that would otherwise be detrimental to the self-concept. A motivation commonly assumed to underlie comparative-optimism effects is the desire to adapt to or reduce fear and anxiety regarding undesirable events (Gerrard, Gibbons, & Warner, 1991; Hoorens, 1995; W. M. Klein & Weinstein, 1997; S. E. Taylor & Armor, 1996; S. E. Taylor et al., 1993; Weinstein, 1980). For example, individuals who smoke might be particularly motivated to reduce anxiety about lung cancer and might attempt to do so by biasing their beliefs about how vulnerable they are to lung cancer relative to other smokers. Regardless of the specific motivation, the key element of the motivational accounts that we discuss in this article is the supposition that biased comparative judgments underlying above-average and comparative-optimism effects are in the service of some self-relevant goal or motive and that without the goal or motive, the systematic biases would be substantially reduced or completely absent.

In addition to specifying underlying motivations for why people might construct favorably biased views of their comparative traits, abilities, or vulnerabilities, many motivational accounts specify some of the mediating processes by which these biased views are constructed. We categorize these accounts into four types, and we briefly review each of the four types below. This brief review of motivated accounts helps distinguish them from nonmotivated accounts that we introduce and discuss later in the article. It is worth emphasizing that although the motivated accounts may specify cognitive mechanisms that mediate judgments, each account assumes that the driving force behind the systematic biases revealed by the above-average and comparative-optimism effects is some form of self-serving motivation.

#### *The Better-Than-Average Heuristic*

One type of motivated account argues that individuals use a "better-than-average heuristic" in their comparative judgments (Alicke, 2000; Alicke et al., 1995). Alicke et al. (1995) argued that when individuals evaluate the self relative to others along a behavioral or trait dimension, they automatically infer that their dispositional qualities or ability levels exceed those of others without elaborately surveying their own and others' actual dispositional qualities and abilities. For traits and abilities on which the

individual has only minimal or insufficient self- and other-information, this better-than-average heuristic leads the individual to presume that he or she is nevertheless above average with regard to that trait or ability. In fact, some contend that the above-average effect occurs without specific comparisons with others (Alicke, 2000; Alicke, Vredenburg, Hiatt, & Govorun, 2001). Consistent with this view, the above-average effect has been found both when individuals are required to make a large number of comparative trait judgments in a short amount of time (Alicke, 1985) and when these judgments are made under cognitive load (Alicke et al., 1995). Each of these circumstances would likely inhibit one's ability to compare oneself against specific comparison targets.

Consistent with the better-than-average heuristic explanation, Codol (1975) found that individuals tend to believe they are more likely than their peers to uphold and conform to certain moral values. He also argued that individuals are motivated to view themselves as only slightly better than their peers. In this regard, he argued that others are not necessarily viewed derisively but that the self is viewed slightly more positively than others. As opposed to the view that individuals are primarily motivated to see others as inferior and to distinguish the self from those others (Brown, 1986), this "superior conformity" view allows that individuals regard others as similar to themselves on the dimension in consideration (and even that others are generally viewed positively) but that the self is nevertheless viewed as superior (for a discussion of related arguments, see Klar & Giladi, 1999; Krueger, 2000). Also consistent with a better-than-average heuristic explanation, Diener and Fujita (1997) found that individuals' absolute judgments of their own life satisfaction (i.e., How satisfied are you?) were positively related to their judgments of the comparison person's life satisfaction (i.e., How satisfied is the average person?), yet the self was rated as being more satisfied than the comparison person in direct comparative judgments (i.e., Compared with the average person, how satisfied are you?). Some have invoked the better-than-average heuristic to explain comparative-optimism effects. For example, Price, Pentecost, and Voth (2002) argued that individuals use a better-than-average heuristic when viewing their own likelihood of experiencing negative events as less than the referent group's likelihood but view their own likelihood of experiencing positive events as greater than the referent group's likelihood.

There is some evidence that is consistent with the view that individuals desire to believe their risk likelihood is less than that of other people. Rothman, Klein, and Weinstein (1996) provided participants with risk-likelihood rates for the average person that were above, below, or the same as the average person's actual risk likelihoods for the events. Participants then provided judgments about their own absolute likelihood of experiencing the events. Consistent with a better-than-average heuristic explanation, participants' judgments about their personal likelihood of experiencing negative events varied with changes in the fictitious risk-likelihood rates they were provided for the population, and their likelihood judgments tended to preserve their optimistic likelihood status (i.e., they believed they were slightly less likely than other people to experience undesirable events). This suggests that individuals modified their personal risk judgments so as to retain favorable comparative statuses. W. M. Klein and Kunda (1993) investigated how participants' estimates of their own frequency of engaging in various risk-increasing behaviors were affected by

information about the frequency that others engaged in those same risk-increasing behaviors. Consistent with a better-than-average heuristic account, participants who were provided with artificially low frequency information about others seemed to shift their frequency estimates downward, thus maintaining a better-than-average standing.

### *Distortions of Personal Characteristics*

A second type of motivated account posits that comparative-optimism effects represent unrealistic beliefs about the manner in which one's personal attributes and characteristics protect the self from experiencing negative events. One manifestation of these beliefs is a lack of acknowledgement of risk-increasing behaviors (or undesirable trait-related behaviors). According to this view, individuals hold idiosyncratic beliefs about how their own particular personal characteristics and health-related behaviors deter undesirable events and promote desirable events (Boney McCoy et al., 1992; W. M. Klein, 1996; W. M. Klein & Kunda, 1993; Kunda, 1987; see also Beauregard & Dunning, 2001; Dunning, Leuenberger, & Sherman, 1995; Greve & Wentura, 2003). As an example, young drivers who frequently speed may downplay the inherent risk of their driving practices, persuading themselves that speeding does not increase one's risk of being involved in an automobile accident. Consistent with this motivated account, college-aged participants did not readily admit to their own risk-increasing behaviors and personal characteristics even when their behaviors and characteristics placed them in danger of experiencing undesirable events (Weinstein, 1984). These beliefs about personal invulnerability to negative events are so strong that individuals are especially resistant to risk-likelihood information and debiasing interventions that contradict these beliefs (Weinstein & Klein, 1995). In fact, whereas individuals' risk-likelihood estimates are largely unaffected by information that would undermine their self-favoring likelihood beliefs, individuals hold even more self-favoring likelihood beliefs after receiving or recalling information portraying their unique risk-reducing characteristics (Gerrard et al., 1991).

In a second manifestation of these beliefs, individuals modify the perceived importance of their own risk-increasing or risk-reducing characteristics. As an example of this willful distortion of the importance of one's risk-relevant behaviors, W. M. Klein (1996; W. M. Klein & Kunda, 1993) found that individuals who reported frequently engaging in risk-increasing behaviors (at Time 2 of this study) were more likely to reduce the perceived importance of those behaviors (relative to their importance ratings for those behaviors measured at Time 1 of this study) compared with participants who reduced their perceived frequency of engaging in those risk-increasing behaviors. By modifying the perceived importance of their risk-increasing behaviors, individuals were able to persist in the belief that they were invincible to undesirable events, further promoting unrealistic optimism (see also Dunning, Perie, & Story, 1991, for related arguments concerning trait judgments).

A third manifestation of distortions of personal characteristics is exaggerated perceptions of one's own ability to control events (McKenna, 1993; see also Langer, 1975), or relatedly, the perception that others lack control over events (Hoorens & Smits, 2001). These exaggerated beliefs in the efficacy of one's own actions may

potentiate unrealistically optimistic beliefs for certain events, especially those events for which behavioral control is tenable (C. T. F. Klein & Helweg-Larsen, 2002). Weinstein (1984) argued that individuals are prone to be most unrealistically optimistic about events that involve genetic or behavioral influences rather than environmental circumstances. In the latter type of events, the individual is not capable of exerting behavioral control over the event. In a study involving broad segments of the population, Weinstein (1987; see also N. C. Higgins, St. Amand, & Poole, 1997) found that individuals tend to be most unrealistically optimistic about events that are preventable through personal intervention. Also, Hoorens and Buunk (1993) found a stronger unrealistic optimism bias among individuals with an internal locus of control (who believe that they are capable of controlling the occurrence of events) than among individuals with an external locus of control (who believe that they are incapable of controlling the occurrence of events). And W. M. Klein and Kunda (1994) have reported that individuals believe they are more capable than others of avoiding controllable undesirable events. So strong was this belief in the ability to control these undesirable events that participants in their study reported that they would rather face the possibility of experiencing controllable events with more severe outcomes than uncontrollable events with less severe outcomes. Some have even attributed unrealistic optimism to an illusion of control (McKenna, 1993; but see also P. Harris & Middleton, 1994).

### *Biased Views of Referent Group*

The motivated accounts already presented have emphasized the exclusively self-serving nature of comparative judgments and have focused on inflated self-assessments. However, other motivated accounts reflect the proposition that individuals generate or hold unfavorable or unflattering views of the referent group. When people hold unreasonably negative beliefs about the trait standing or risk likelihood of the "average person" or "average student," comparisons made with these unrealistic groups yield more positive judgments about the self (Brown, 1986).

Perloff and Fetzer (1986) linked comparative-optimism effects to an active downward comparison process. They suggested two reasons why comparisons with vague or ambiguous referent groups (such as the average person) are more likely to produce unrealistic optimism than are comparisons with individualized referents (such as a friend). First, comparisons with a vague referent group such as the average person permit the individual to activate the prototypical victim of the undesirable event in question. For example, when asked to appraise their likelihood of experiencing an automobile accident compared with the average person, individuals may activate stereotypes of typical car accident victims, such as juveniles or others particularly at risk for accidents, thereby increasing the favorability of their comparative judgments. Second, Perloff and Fetzer argued that individuals are motivated to view the risk likelihood of some individualized referents (such as a close friend) to be comparable with their own risk likelihood, because it is anxiety provoking to assume that those people are at risk for negative events.

Perloff and Fetzer (1986) found evidence that comparisons between the self and either the average person or the average student were indeed most likely to engender unrealistically optimistic likelihood judgments, whereas individuals were essentially

unbiased when comparing themselves with a close friend, a same-sex parent, or a sibling (i.e., participants did not rate their likelihood to be different from the likelihood of the target group). Consistent with the argument that individuals conceived of the risk likelihood of these various referents differently (rather than these referents influencing personal likelihood estimates), absolute ratings of risk were higher for the vague and ambiguous referents (e.g., average student) than for the more concrete individuated referents (e.g., close friend, sibling). However, absolute risk judgments for the self did not differ whether comparing with the average student, a sibling, or a close friend. Perloff and Fetzer also found that participants selectively recruited comparison targets that were especially vulnerable to the event in question. That is, for the event "develop a drinking problem," participants reported considering friends who were apt to develop such problems when answering the comparative likelihood question.

Additional evidence consistent with the biased-referent idea comes from various studies (see, e.g., Rothman et al., 1996; Van der Velde, Hooykaas, & van der Pligt, 1992; Van der Velde, van der Pligt, & Hooykaas, 1994; Weinstein, 1980). For example, Rothman et al. (1996) found evidence that unrealistic optimism may arise, not through inflated judgments of one's own ability to avoid undesirable events, but from exaggerated judgments of the average person's likelihood of experiencing those events. Also, Weinstein (1980) showed that for undesirable events, perceptions of event controllability (i.e., the extent to which individuals believed that actions could be taken to prevent the event from occurring to them) were positively related to a measure of victim prototype activation, and both of these variables were positively related to optimism in participants' comparative judgments. Weinstein (1980) argued that individuals recall examples of stereotypical victims for controllable, undesirable events, thereby lowering their comparative likelihood judgments for such events and buffering their self-concepts.

### *Person Positivity Bias and Similarity to Self*

Another related explanation that lies within the purview of the motivated accounts is what is referred to as the *person positivity bias*, or the tendency to hold favorable views of individuals but not social groups. Sears (1983) has argued that entities will be evaluated more positively to the extent that they resemble real and tangible human beings rather than nondistinct humans or aggregates of humans (such as social groups). Because individuated targets are perceived as similar to the self, individuals are presumed to instigate motivated processes in computing favorable trait and likelihood judgments for these targets. In a demonstration of the person positivity bias, Sears found that individual targets judged alone tended to be rated more positively than those same targets were evaluated when they were presented within a group.

Some have argued that biased comparative judgments may be understood as an outcome of the person positivity bias on the assumption that individual targets (whether the self or any other individualized target such as a friend or an acquaintance) will be viewed more favorably than the generalized referent group (such as the average student or the average person) they are compared with (Hoorens & Buunk, 1993; but see also Regan et al., 1995). That is, it has been argued that individuals are motivated to view the risk likelihood of an individuated target to be less than the risk



likelihood of the generalized referent group because individuated targets are more similar to the self than are generalized referent groups (Sears, 1983).

Alicke et al. (1995) have argued that comparisons with individuated targets, such as an acquaintance (as opposed to comparison with a generalized referent group, such as the average person) are likely to reduce biased comparative judgments because of the “favorability that is typically accorded to strangers” (p. 806). They have shown that the magnitude of biases in comparative judgments is a function of the level of individuation of the referent target. When the referent target is vague and ambiguous, such as the average student or average person, participants tended to exhibit the strongest bias in their comparative judgments (see also P. Harris & Middleton, 1994; Perloff & Fetzer, 1986; Whitley & Hern, 1991). Biased responses were reduced, although not entirely eliminated, when the referent target was highly individuated (e.g., another student shown in a videotape) or when the participants had personal contact with the referent target (e.g., the participant interviewed the other student instead of simply observing from another room). Suls, Lemos, and Stewart (2002) reported that participants in their study gave better than average comparative trait judgments for both the self and for a best friend (whom one should be motivated to view positively), a finding that is consistent with this motivated account (see also Brown, 1986). Furthermore, even when the referent is an individuated target, unrealistic optimism is decreased as the level of closeness (and perhaps liking) of the referent increases (P. Harris & Middleton, 1994; Perloff & Fetzer, 1986).

### Reasons for Looking Beyond the Motivated Accounts

As is evident from the above discussion, motivated accounts propose a variety of ways in which motivation might introduce bias in comparative judgments. However, we assert that it would be premature to conclude that motivational concerns are the exclusive or perhaps even the dominant sources of bias in above-average and comparative-optimism effects. There are three main reasons for entertaining this assertion. First, although individual studies have documented findings that are consistent with a given motivational account (for a discussion, see Shepperd, Carroll, Grace, & Terry, 2002), there seems to be a lack of consistent findings from studies that test what would appear to be key predictions from the motivated-bias perspective—namely, that negative mood states, anxiety about negative outcomes, and threats to self-esteem would tend to provoke an increased degree of self-serving bias in comparative judgments. Whereas positive mood states have been found in some studies to heighten unrealistic optimism, negative mood states have actually been found to decrease unrealistic optimism (Abele & Hermer, 1993; Salovey & Birnbaum, 1989; see Helweg-Larsen & Shepperd, 2001; Shepperd et al., 2002, for reviews). Further, whereas individuals might be expected to confront anxiety with self-favoring comparative judgments, anxiety has in fact been found to be negatively related to unrealistic optimism, both when measured as a dispositional characteristic (Dewberry, Ing, James, Nixon, & Richardson, 1990; Linville, Fischer, & Fischhoff, 1993) and when directly manipulated (Butler & Mathews, 1987; Dewberry & Richardson, 1990; Shepperd, Ouellette, & Fernandez, 1996; K. M. Taylor & Shepperd, 1998). Finally, we know of no studies in which self-esteem

threat—as a manipulated variable—was shown to increase bias in comparative judgments (although see L. B. Myers & Reynolds, 2000; Peeters, Czapinski, & Hoorens, 2001; Suls et al., 2002, for studies examining the relation between biases in comparative judgments and dispositional self-esteem). To be fair, the task of establishing that motivation is a key mediator of comparative bias is a difficult one, but we find it noteworthy that some of the most straightforward predictions of the motivated perspective have not found resounding support.<sup>1</sup>

A second reason for looking beyond the motivated accounts is that recent research has shown that people exhibit biases in their comparative estimates for individuals who are peripherally related to the self (Klar, 2002; Klar & Giladi, 1997; Klar, Medding, & Sarel, 1996). For example, in a study by Klar et al. (1996), nursing students were asked the likelihood that a randomly selected member of their group (another nursing student) would experience a variety of undesirable events relative to other members of their group. Participants gave favorable comparative likelihood judgments to the randomly selected person (e.g., reporting that the person was less likely to experience divorce than the other nursing students). Because of the random nature in which these group members were selected, it is unclear why participants would be motivated to assign them such favorable comparative likelihood judgments. From the perspective of the motivated accounts, it would seem that people should be motivated to give favorable comparative judgments only to those people about whom one has a vested interest in maintaining favorable beliefs, namely the self, friends, and members of one’s immediate group or family. Adding to this point, Giladi and Klar (2002) have shown that biases in comparative judgments extend even to randomly selected members of nonsocial object groups. For example, they showed that randomly selected songs from a set of favorable songs tend to be rated as more desirable than other members of that set of songs. Again, it is not clear why individuals should express such biases, given that they involve nonsocial objects about which a person would presumably have few self-serving motives or desires.

A third reason for looking beyond the motivated accounts is again related to recent empirical findings. Namely, there have been empirical demonstrations of below-average effects and comparative-pessimism effects, both of which would seem incongruent with motivational accounts (e.g., Chambers, Windschitl, & Suls, 2003; Klar et al., 1996; Kruger, 1999). Kruger (1999) found reliable below-average effects in participants’ comparative ability judgments for difficult tasks (see also Allison, Messick, & Goethals, 1989; Klar, 1995, as cited in Klar et al., 1996). Participants in Kruger’s study tended to rate their ability levels for difficult tasks (e.g., writing computer code) to be worse than the ability level of the average student, even though they did not view these difficult tasks as any less desirable or important than relatively less difficult tasks (e.g., riding a bicycle). Further, individuals asked to imagine that they had been stricken by various illnesses and severe undesirable events were comparatively pessimistic in their ability to

<sup>1</sup> Perhaps more precisely, we should conclude that there is only limited evidence that proximal motivational concerns (feeling bad, anxious, threatened within a particular setting) trigger motivationally biased responding in comparative judgments. Whether more distal motivational concerns are influential in comparative biases might be another matter.

cope with those illnesses and undesirable events (Blanton, Axson, McClive, & Price, 2001; see also Klar & Giladi, 1999). Individuals in the vicinity of the Chernobyl power plant were comparatively pessimistic about their likelihood of avoiding radiation illness (Dolinski, Gromski, & Zawisza, 1987; see also Burger & Palmer, 1992; Rutter, Quine, & Albery, 1998). Each of these findings seems incongruent with or unanticipated by accounts that treat motivation as the main source of comparative bias, and therefore they serve as justification for taking a close look at the possible nonmotivated accounts of bias.

### Nonmotivated Accounts of Biases in Comparative Judgments

The key element of the motivational accounts is the supposition that the biased comparative judgments underlying above-average and comparative-optimism effects are in the service of some self-relevant goal or motive. These motivated accounts can be distinguished from nonmotivated accounts, which posit that non-motivated cognitive mechanisms and properties of the judgment task itself are potentially sufficient causes of biased comparative judgments, including above-average and comparative-optimism effects. In other words, these explanations assert that biases can emerge from the manner in which trait and likelihood information for the self and others is represented and processed by the individual and do not assume that biased responses are designed to serve other purposes or goals of the individual, such as self-enhancement. Nevertheless, the resulting biases could at times have unintended self-enhancing consequences (Alicke, 1985).

Before describing the nonmotivated accounts and the sources of bias that they propose, we first describe a simple three-stage model of how people might go about making comparative judgments. This model is summarized in Figure 1. To illustrate the model, we start with a specific example of a person making a comparative likelihood judgment (although the model also applies to comparative ability and trait judgments and potentially to other types of social comparative judgments). Imagine that a person is asked, "Compared with the average college student, how likely are you to get a cold during the fall semester?" In the information-recruitment stage of our model, the individual retrieves—from memory or

from the immediate environment—information relevant to the target and the referent entities that were specified in the question. For example, the respondent might recall specific behaviors that might influence his or her own and the referent group's chances of contracting the common cold, such as occasions when the self or the average student comes into contact with other infected individuals. The respondent might also attempt to recall self-relevant and other-relevant information about colds in previous fall semesters. From a normative or prescriptive perspective, equal attention should be given to all relevant information about the target and referent entities, and the information that is recruited for the target and for the referent should be similarly diagnostic for the requested judgment. For example, if the individual recalls his or her own number of past occasions with a cold, the individual should also attempt to retrieve other people's number of past occasions with colds as well.

In the absolute evaluation stage, the retrieved information for the target and referent is evaluated in terms of its diagnosticity and implications for absolute vulnerability to colds. For example, the respondent might conclude that because he or she had two colds in the last semester and just started working at a day care, where runny noses are common, he or she is likely to get several colds in the fall semester. The respondent might also think about how occupations of other students affect the average student's chances of getting a cold in the fall. From a normative perspective, equivalent information about the self and a referent group should have the same diagnostic value. Relatedly, the same standard used in determining one's absolute assessment for the self should also be used in determining one's absolute assessment for the referent group. For example, if a respondent believes that taking classes in crowded classroom buildings greatly increases his or her chances of getting a cold, then the respondent should also believe that, for other students who take classes in crowded classrooms, their chances of getting colds are also greatly increased.

Finally, in the comparative-judgment-formation stage, the respondent forms a comparative judgment as a response. There are at least three ways in which the key processes in this stage might be carried out. First, the respondent might compare his or her assessments of the absolute likelihood of the self getting a cold

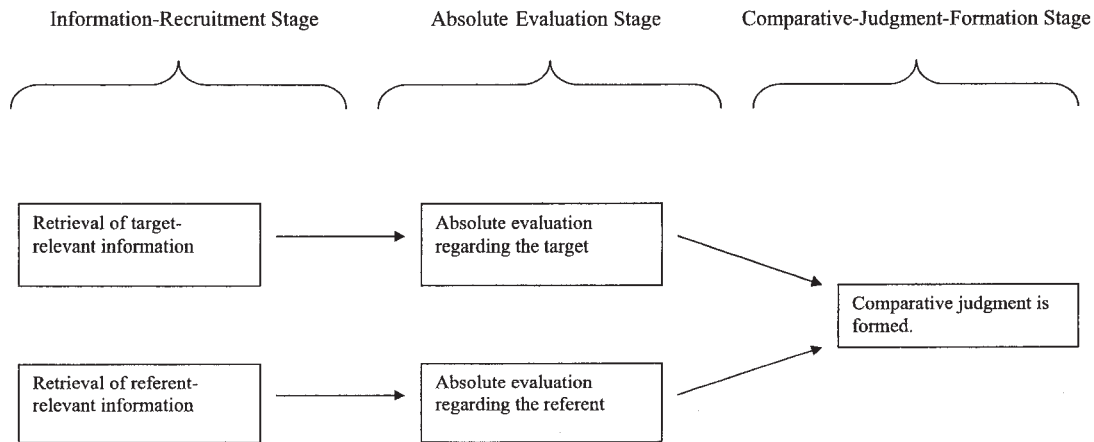


Figure 1. A three-stage model of processes mediating a direct comparative judgment.

versus the absolute likelihood of the average student getting a cold (“I’m extremely likely to get a cold in the fall semester and the average student is somewhat likely, so I’m slightly more likely than the average student to get a cold”). Second, the respondent might not think explicitly about absolute chances but instead compare the relevant risk factors to generate a comparative judgment (“I work in a day care, whereas the average college student doesn’t, so I’m more likely to get a cold”). Third, in an anchoring and adjustment process, the respondent might first think about his or her own absolute likelihood as a rough indication of comparative likelihood but then adjust his or her comparative response as thoughts about the average student’s absolute likelihood are considered. From a normative perspective, target-relevant considerations and referent-relevant considerations (about absolute likelihood or risk factors) should have equal weight in shaping the comparative likelihood judgment, regardless of which of the three processes are used to generate this judgment.

Although we believe our three-stage model identifies the main processes that people might execute when making a comparative judgment, we also suggest that people frequently fail to execute these processes in a normative or unbiased fashion. Several non-motivated sources of bias can lead to comparative judgments that underlie above-average or comparative-optimism effects. In the sections that follow, we provide an organized discussion of various nonmotivated accounts of comparative bias. Many but not all of these accounts have been at least partially supported in empirical studies.

We organize these accounts within a two-tiered scheme. In the upper tier, we describe three types of accounts rather than specific accounts. The three types of upper tier accounts are egocentrism, focalism, and generalized-group accounts. As we describe in more detail later, egocentrism accounts ultimately attribute an observed bias (e.g., a comparative-optimism effect) to differences in the representation or processing of self-relevant information and other-relevant information. Focalism accounts ultimately attribute an observed bias to differences in the processing of target-relevant information and referent-relevant information. Generalized-group accounts ultimately attribute an observed bias to differences in the representation or processing of information about a single entity (e.g., the self or a specific person) and information about a group or generalized representation of a group (e.g., the average student). In the lower tier, we describe several accounts that each focus on the potential role of a specific mechanism in mediating an observed comparative bias. For example, in our discussion of the selective accessibility account, we describe how differences in the

accessibility of information about the self and about another person specified in a comparative question (or about any two entities in a comparative question) could cause systematic biases in people’s responses to that question.

Hence, accounts in the upper tier are, in fact, higher level accounts that attribute a given bias to some characteristic of the entities specified in a comparative question (the self vs. another, the target vs. the referent, a single entity vs. a multiple or generalized entity). Accounts in the lower tier are, in fact, lower level accounts that explain how specific mechanisms (involving mental representations and/or processes) serve as proximal mediators of a given comparative bias. It is best to refer to the upper tier accounts as *types* of accounts because each type could potentially involve more than one mediating (lower tier) mechanism. Also, a given mechanism could play a key role in more than one type of upper tier account. For example, the differential accessibility of information could play a role in both an egocentrism account as well as a generalized-group account. Table 1 provides a list of all of the accounts discussed below. Table 1 also locates each of the accounts within the three-stage model that we have described.

## Upper Tier Accounts

### *Egocentrism Accounts*

The first accounts that we discuss, and those that have received the greatest amount of research attention, are the egocentrism accounts. Although the term *egocentrism* is sometimes used to refer to self-enhancing motives of an individual, the use and conceptualization of the term among judgment researchers has typically avoided the connotation of such self-enhancing motives (see, e.g., Chambers et al., 2003; Kruger, 1999; Ross & Sicoly, 1979). Within comparative-judgment contexts, the term *egocentrism account* has typically referred to the notion that thoughts about the self and about self-relevant information loom larger than thoughts about others and other-relevant information. The consequence of this egocentrism is that self-relevant information, relative to other-relevant information, has disproportionate weight in the judgment process (see, e.g., Kruger, 1999).

Our use of the term *egocentrism account* is slightly broader and refers to an entire class of accounts that explain comparative biases as resulting from differences in the representation or processing of self-relevant and other-relevant information. More specifically, some of these accounts assume that there is a disproportionate influence of self-relevant information that can be traced to differ-

Table 1

*Where the Upper Tier and Lower Tier Accounts Locate Various Sources of Bias Within the Three Stages of Making a Comparative Judgment*

Type of account	Information-recruitment stage	Absolute evaluation stage	Comparative-judgment-formation stage
Upper tier	Egocentrism accounts	Egocentrism accounts	Egocentrism accounts
	Focalism accounts	Generalized-group accounts	Focalism accounts
	Generalized-group accounts		Generalized-group accounts
Lower tier	Differential accessibility account	Idiosyncratic standards account	Differential confidence account
	Differential attention account	Differential standards account	Anchoring and insufficient adjustment account
	Case versus base-rate account	Regression-to-the-mean account	Differential attention account

*Note.* In this framework, the upper tier accounts appear in multiple stages, whereas lower tier accounts are more localized—each within one stage.

ences in the amount, quality, or accessibility of self- and other-relevant knowledge or to generally stable differences in the attention one pays to self- and other-relevant information. The ultimate consequence of these self–other differences is that responses to a comparative-judgment question (e.g., “How sociable am I relative to other psychology students?”) will largely reflect the individual’s absolute standing along a trait or likelihood dimension (“How social am I?”) and will not adequately reflect the absolute standing of the referent group along the dimension (“How sociable are most psychology students?”). Other egocentrism accounts assume that there are stable differences in the processing of self- and other-relevant information, ultimately producing biased absolute and comparative assessments.

The specific mechanisms that are described by egocentrism accounts could play a role in all three stages of our three-stage model. Regarding the information-recruitment stage, self-relevant information might be more accessible or available than equivalent forms of other-relevant information (Kuiper & Rogers, 1979; Markus, 1977; Rogers, Kuiper, & Kirker, 1977; Ross & Sicoly, 1979). When a student is asked to judge how athletic he or she is compared with a classmate, information about that student’s own athletic talent—relative to information about the classmate’s talents—might be retrieved in greater amounts and with greater perceived ease, which could ultimately bias assessments in the two subsequent stages of the model (see Schwarz et al., 1991). A closely related notion is that the student would first retrieve and consider evidence regarding his or her own athletic talent and only afterward attempt to retrieve and consider evidence about the classmate’s talent. Because the evidence retrieval regarding the classmate has second priority, there is a chance that it will be less exhaustive and turn up less supporting evidence for the idea that the classmate is athletic.<sup>2</sup>

Regarding the absolute evaluation stage, there may be differences across people in the behaviors and characteristics they use to define the trait or likelihood dimension, which could influence their absolute assessments for self and other people (see the *Idiosyncratic Standards Account* section). People may also select different standards or use different types of behavioral evidence when evaluating the self and other people, ultimately biasing their absolute assessments (see *Differential Standards Account*). People’s absolute evaluations for the self might also be less regressive than evaluations of others (see *Differential Confidence and Regression-to-the-Mean Accounts*).

Finally, regarding the comparative-judgment-formation stage, even if participants hold unbiased beliefs about their own and the referent’s absolute standing on a dimension, they may still base their comparative judgment primarily on their self-assessments. For example, students might, when asked for absolute judgments, report that they and their classmate are both athletic, but when asked for a comparative judgment, report that they are more athletic than their classmate. This may reflect a simple attentional bias toward self-relevant absolute evaluations when reporting a comparative evaluation. A related possibility is that the absolute judgment about oneself serves as an anchor for a comparative response and that adjustments from this anchor (based on considerations of the referent’s absolute standing) tend to be insufficient (see Kruger, 1999). Yet another possibility is that people hold more confidence in their self-assessments than in their assessments about others. As a result, they give more weight to the self-

assessments than to the other-assessments when making comparative judgments—a weighting pattern that could be justified on rational grounds (Chambers & Suls, 2004; Klayman & Burson, 2002; Windschitl, Kruger, & Simms, 2003).

Egocentrism accounts have been used to explain comparative-optimism effects. Weinstein (1980) contended that comparatively optimistic beliefs about avoiding undesirable life events (e.g., divorce) resulted from individuals’ consideration of their own risk-reducing behaviors and failure to consider that others in the referent group may engage in the same risk-reducing behaviors. He found evidence for this position when he asked participants to generate lists of behaviors they engaged in that reduced their personal likelihood of experiencing undesirable events and increased their personal likelihood of experiencing desirable events. These lists were then presented to a second group of participants to read prior to making their own comparative judgments for the same undesirable and desirable events. Weinstein (1980) found that unrealistic optimism was substantially reduced in this second group of participants, although the bias was not entirely eliminated. He argued that when the second group of participants was allowed to read the list of behaviors generated by the first group of participants, their attention shifted toward admitting the commonness of their risk-reducing or risk-increasing behaviors, debiasing their comparative judgments (see Dunning, Meyerowitz, & Holzberg, 1989, for related findings concerning trait judgments). He took this finding as support for the position that participants tend to egocentrically focus on their own personal likelihood for an event when making comparative likelihood judgments.

It remained unclear whether participants had reduced their comparative optimism after receiving this information because they initially failed to consider other people’s actual risk-reducing characteristics or because they initially lacked evidence as to other people’s actual risk-reducing characteristics. Weinstein and Lachendro (1982; see also Weinstein, 1980, 1983) examined each of these possibilities by providing participants with information concerning others’ risk likelihoods for events (a risk-information condition) or by focusing participants’ attention on others’ personal likelihoods without providing additional information (an attentional focus condition). Weinstein and Lachendro found that unrealistic optimism was reduced in both of these conditions relative to a control group, and participants’ comparative judgments did not differ between these two conditions. Because merely asking participants to focus their attention on others’ risk likelihoods was sufficient to reduce unrealistic optimism, Weinstein and Lachendro concluded that unrealistic optimism was an outcome of neglecting to consider likelihood information about others (i.e., risk-increasing or decreasing behaviors) when computing the comparative judgment.

A principal proposition of egocentrism accounts is that self-relevant information should be more strongly related to the com-

<sup>2</sup> We do not assume people will always fully complete one stage before executing operations from another. For example, it is possible that a person asked a comparative likelihood question would retrieve evidence relevant to him- or herself, then evaluate that evidence regarding its implications for his or her absolute likelihood of experiencing the event, then retrieve evidence relevant to the referent person (i.e., back to the information-recruitment stage), and so on.



parative judgment than should other-relevant information. Consistent with this proposition, Klar and Giladi (1999; see also Lykken & Tellegen, 1996) have found that individuals' base their comparative judgments of happiness largely on their own happiness levels. In their study, absolute judgments of self-contentment were strongly related to comparative judgments of contentment, whereas absolute judgments of other people's contentment were not. Related analyses in studies on comparative likelihood have recently found that absolute likelihood judgments for the self were more strongly related to comparative likelihood judgments than were absolute likelihood judgments made for others (Chambers et al., 2003; Eiser, Pahl, & Prins, 2001). In the domain of coping ability, Blanton et al. (2001) have found that individuals' absolute judgments of their own ability to cope with an undesirable event were more strongly related to their comparative coping judgments than were absolute judgments of others' ability to cope with the event. Each of these findings is consistent with an egocentrism account, which suggests that absolute judgments for the self should dominate the comparative judgment.

More direct evidence for the proposition that individuals give greater weight to self-relevant information than other-relevant information when forming comparative judgments comes from other studies. Kruger (1999) found that comparative ability judgments were more strongly related to absolute ability judgments for the self than for others. He also found that a cognitive load manipulation increased the size of the bias in participants' comparative judgments. The fact that the cognitive load manipulation had these effects suggests that participants were inhibited in their ability or motivation to fully consider the standing of other people on the dimension, a task that presumably requires some effort. And Windschitl et al. (2003) have recently found that participants' likelihood judgments about winning a trivia game against a competitor were largely determined by their estimates of how much they knew about the relevant trivia categories—not their estimates of how much their competitor knew about those categories. Furthermore, even when participants were asked explicitly about their competitors' likelihood of beating them in the trivia game, participants estimates of how much they knew about the relevant categories were still more influential than their estimates of how much their competitor knew.

If, as specified by the egocentrism account, individuals use self-relevant information more than other-relevant information in their comparative judgments, there may be occasions when the well-documented above-average and comparative-optimism effects reverse. That is, if people rely on self-relevant information to form these comparative judgments, they should make unfavorable comparative judgments when asked to rate themselves relative to others on abilities and tasks that are generally difficult (e.g., mathematical creativity, programming a computer). Likewise, people should give pessimistic comparative likelihood judgments for desirable events that are generally rare (e.g., meeting a celebrity) or for undesirable events that are generally common (e.g., receiving junk mail). In these types of instances, below-average and comparative-pessimism effects may be demonstrated.

This is exactly what was found in many of the studies mentioned above. In the Kruger (1999) study, participants tended to offer comparatively unfavorable ability judgments for exceedingly difficult ability domains (e.g., programming a computer); they rated themselves as "worse than average" for those ability domains. In

the Chambers et al. (2003) study, although participants were comparatively optimistic about undesirable events that are generally rare and about desirable events that are generally common, they were not comparatively optimistic for common undesirable events or rare desirable events, and they even expressed comparative pessimism for such events (see also Price et al., 2002; Weinstein, 1980, 1987). Similarly, Blanton et al. (2001) found that participants tended to estimate their ability to cope with especially severe and undesirable events as worse than the average person's ability to cope with those events. And Windschitl et al. (2003; see also Moore & Kim, 2003) found that participants gave overly pessimistic likelihood judgments about winning a competition when a shared adversity (i.e., a "shared circumstance" that impaired the performance of all competitors) was introduced in the competition. These findings of unfavorable comparative judgments cannot be accounted for by self-enhancing motivated accounts, which would presumably predict that individuals should tend to view themselves more positively than others and expect negative outcomes to affect others more than themselves.

### *Focalism Accounts*

Another potential source of bias in comparative judgments comes from *focalism*. Focalism, very broadly construed, is the idea that people sometimes focus too much on information that has been called to their attention and fail to adequately consider equally relevant information in the background (see, e.g., Schkade & Kahneman, 1998; T. D. Wilson, Wheatley, Meyers, Gilbert, & Axsom, 2000). In the present context, we use the term *focalism* to refer to the possibility that the *focal*, or *target*, entity that is specified by a comparative question tends to carry more weight in a comparative judgment than does the *referent* that is specified by the question (see Chambers & Suls, 2004; Chambers et al., 2003; Eiser et al., 2001; Moore & Kim, 2003; Windschitl et al., 2003).<sup>3</sup> Hence, like an egocentrism account, a focalism account would suggest that a student who is asked "Compared with your classmate, how athletic are you?" would overweight self-relevant information relative to the classmate-relevant information. However, according to the focalism account, this occurs because the self was specified as the target of the question and the classmate was specified as the referent—not because self-relevant information has a general tendency to differ from other-relevant information in terms of accessibility or salience.

We assume that focalism can operate at the information-recruitment stage of the model such that people who read a comparative question will initially be biased toward retrieving information relevant to the target entity rather than information relevant to the referent. However, focalism might also operate at the comparative-judgment-formation stage. That is, even if people's information recruitment is not influenced by the target and

<sup>3</sup> It is important to emphasize how we use the terms *target*, *focal*, and *referent*. We use the terms *target* and *focal* interchangeably. Both terms refer to the entity that the comparative-judgment question specifies as the to-be-judged entity. The term *referent* is used to refer to the entity against which the target, or focal, entity should be compared. For example, if asked "How attractive are you compared with the average person your age?," then the target/focal entity is you, and the referent is the average person your age.

referent specifications, they might nevertheless base their comparative judgment primarily on the absolute standing of the target and insufficiently weight the absolute standing of the referent.

When a comparative question specifies the self as a target and the other as a referent (e.g., Compared with your classmate, how athletic are you?), focalism and egocentrism both work in the same direction, causing self-relevant information to have more influence than other-relevant information. However, when the self is specified as a referent rather than a target (e.g., Compared with you, how athletic is your classmate?), focalism and egocentrism work in opposite directions. Findings from various studies that have manipulated whether the self appears as a target or referent in a comparative question lend support to the idea that focalism plays a biasing role in comparative judgments that is separable from the role of egocentrism. These studies have found that the magnitude and even direction of bias in people's comparative judgments can be reliably influenced by a manipulation of whether the self is in the target or referent position of the comparative judgment (e.g., Chambers & Suls, 2004; Chambers et al., 2003; Eiser et al., 2001; Hodges, Bruininks, & Ivy, 2002; Hoorens, 1995; Hoorens & Buunk, 1993; Moore & Kim, 2003; Otten & van der Pligt, 1996; Windschitl et al., 2003).

For example, Eiser et al. (2001) asked student participants a variety of questions including a comparative question about performance on a future exam. When the comparative question designated the self as the target and "other typical students" as the referent, comparative judgments were strongly biased (i.e., participants estimated that they would do much better than their classmates on the exam). Also, participants' responses to that comparative question were highly related to their estimates about their own absolute performance but were not significantly related to their estimates about the absolute performance of other typical students. When the comparative question designated other typical students as the target and the self as the referent, comparative judgments were less strongly biased, and participants' responses to the comparative question were significantly related to both their estimates of their own absolute performance and the absolute performance of other typical students. Similar findings come from a study by Chambers and Suls (2004), in which participants made comparative judgments about their own versus their coparticipant's preferences for various items, in addition to making absolute preference judgments about those items. Although the absolute judgments about the self's preferences always predicted comparative judgments better than the absolute judgments about the coparticipant's preferences (supporting a role for egocentrism), the degree to which absolute judgments about the coparticipant's preferences predicted comparative judgments increased when the coparticipant was in the focal position of the comparative question (supporting the role of focalism).

Finally, in a study involving a trivia competition, Windschitl et al. (2003) found that participants' assessments of their competitor's relevant category knowledge had a greater impact on responses to questions about their competitor's chances of beating them (competitor as target) than to questions about their own chances of beating their competitor (self as target). As mentioned earlier, Windschitl et al. (2003) found that participants' assessments of their competitor's category knowledge always had less impact than their assessments of their own category knowledge, which supports a role for egocentrism. However, the fact that the

influence of participants' assessments of their competitor's category knowledge changed as a function of whether the self or the competitor was designated as the target in the likelihood question also supports a role for focalism. In related work, Moore and Kim (2003) had people place bets on whether a randomly selected coparticipant (a target) would beat another randomly selected coparticipant (a referent) on a trivia quiz. Participants bet more when they thought the quiz was generally easy than when they thought the quiz was generally difficult. Apparently, participants were more focused on how the ease or difficulty of the quiz would affect the performance of the target than on how it would affect the performance of the referent. In this study, the influence of egocentrism was obviated by the fact that the self was not involved in the judgment.

### *Generalized-Group Accounts*

A third type of nonmotivated account argues that biases in comparative judgments may arise whenever a single entity (e.g., the self or a selected individual) is compared with a group or generalized representation of a group (e.g., other students, the average student). These types of accounts, which we call *generalized-group accounts*, could be relevant to all three stages of the three-stage model. Regarding the information-recruitment stage, when a person is asked to compare a single concrete entity (self, mother, the president) with a group or an abstraction from the group (others, the average parents, other politicians), evidence about the concrete entity may tend to come to mind more quickly, in greater amounts, and with less perceived effort than evidence about the group or abstraction—causing a bias at that first stage of the model. One reason for this speculation is that information about a specific person might be stored in a more schematic fashion that is more readily accessible than information about a group—especially one that is low in perceived cohesiveness (McConnell, Sherman, & Hamilton, 1994, 1997). Regarding the absolute evaluation stage, it may be especially difficult for a person to evaluate how retrieved information actually influences the absolute standing of the full group. For example, for a student respondent who is asked to judge his or her likelihood of getting a cold relative to the average student, it might be difficult to evaluate how the various occupations other students have influence the average student's chances of getting a cold. Finally, regarding the comparative-judgment-formation stage, even if people could execute Stages 1 and 2 in an unbiased fashion, they might nevertheless hold more confidence about their assessments of the single concrete entity than about their assessments of the group or generalized entity. As such, the former could be given more weight in the comparative-judgment process.

The generalized-group account makes two primary predictions. First, the magnitude of the bias in comparative judgments may depend on the size or generality of the referent group. Second, the magnitude of the bias in comparative judgments may differ in comparisons involving the average person or in comparisons involving a randomly selected member of the referent group (who should adequately serve as a proxy for the average person). The absolute judgment for a randomly selected individual from a referent group would be easier to compute than would the absolute judgment for a large and generalized referent group such as the

average person. Evidence has accumulated supporting both of these predictions.

With regard to the prediction that referent-group size should influence the magnitude of the bias in comparative judgments, Price (2001) had participants in his study read a list of medical risk factors for fictional company employees before making risk-likelihood judgments for those employees. He found that participants gave typical members of large groups higher risk-likelihood judgments than typical members of smaller groups. Presumably, the risk likelihood of a large referent group (such as a large company) would be more difficult for the individual to calculate than the risk likelihood for a smaller referent group (such as a small company), biasing risk-likelihood judgments. Also, research on judgments about individuals versus groups has shown that people make more extreme judgments about an individual than about a group even when the information underlying these judgments are equated (see, e.g., McConnell et al., 1997; Susskind, Maurer, Thakkar, Hamilton, & Sherman, 1999). If, as the findings of Price (2001) and Susskind et al. (1999) suggest, absolute evaluations can differ as a function of whether respondents are evaluating a single entity, a small group, or a large group, there is reason to speculate that comparative judgments could be affected by this bias.

Evidence for the second prediction has been found in the studies that have asked participants to make comparative judgments with a referent group that varied in level of individuation. For example, Alicke et al. (1995) had participants compare themselves along a number of dimensions with either the “average college student” or with another randomly selected student with whom the participant was not acquainted. Consistent with the generalized-group account, the magnitude of bias was stronger in comparative judgments when participants compared themselves with the average college student than with a single randomly selected student. It is important to note that the reduction in the magnitude of bias in comparative judgments in their studies was not attributable to motivated processes such as enhanced liking or similarity with the referent target (Alicke et al., 1995).

Other findings in which comparative judgments were made for a non-self-target (e.g., a friend, an acquaintance) also support the generalized-group account. Klar et al. (1996) found that participants rated randomly selected members from various social groups (e.g., nursing students, members of the Israeli Army) as having lower likelihoods of experiencing certain undesirable events relative to other members of their group. Klar and Giladi (1997) have also reported that randomly selected members from a well-liked social group were rated more favorably than the group they were selected from, and randomly selected members from a disliked social group were rated more unfavorably than the group they were selected from. For example, among their sample of Israeli students, a randomly selected member of Hamas (a Palestinian organization that has claimed responsibility for terrorist incidents in Israel) was rated as more dislikable than other members of Hamas. They found this even though participants were provided with only minimal individuating information about the randomly selected target person (e.g., the target person’s ID number).

These findings suggest that comparisons with a highly generalized referent group, such as the average student or the average person, are likely to instigate different comparative processes than comparisons with a single person, such as the self, an acquaint-

tance, or even a random peer. Although these findings have previously been interpreted as consistent with a person positivity bias, the finding that biases in comparative judgments were evident even when the participant possessed only minimal personal and individuating information about the target person (e.g., only their ID number) discounts this explanation. Also, the finding that comparative judgments for a randomly selected target from a disliked group (with little individuating information) tend to be rated more unfavorably than the group, and the finding of a group-size effect in such judgments are not consistent with motivated accounts. A person positivity account would presumably suggest that even members of a disliked group would be rated more favorably than the group, and motivational accounts make no distinction between large and small referent groups. Hence, the findings reviewed in this section are more consistent with generalized-group accounts.

### Lower Tier Accounts

At their broadest level of description, the three types of nonmotivated accounts discussed above (i.e., the upper tier accounts) are defined by where they locate the distal source of bias in a comparative judgment. The egocentrism accounts attribute bias to differences in the representation or processing of self- and other-relevant information, focalism accounts attribute bias to differences in the processing of target- and referent-relevant information, and generalized-group accounts attribute bias to differences in the representation or processing of information about single entities and multiple and/or generalized entities. In contrast, the lower tier accounts are defined by the specific mechanism that serves as the proximal source of bias in a comparative judgment. Many of these specific mechanisms have already been mentioned as the mediating mechanisms within the egocentrism, focalism, and generalized-group accounts. However, we discuss these specific mechanisms in more detail below. These mechanisms differ regarding which of the three stages of the judgment process they influence, as shown in Table 1.

#### *Differential Accessibility Account*

Whenever two entities are being compared on a given dimension, any difference in the accessibility of relevant trait or likelihood information about the two entities can lead to a biased comparative judgment. If, for example, supportive information about Entity A comes to mind with greater ease or in greater quantities than information about Entity B, then the absolute assessment formed about Entity A is likely to differ from the absolute assessment formed about Entity B (Entity A is likely to receive a higher assessment than is Entity B). Because the differential accessibility account argues that differential accessibility of information about the two entities in the comparative judgment leads to biases in absolute assessments, this account is best located within the information-recruitment stage of the three-stage model (see Table 1).

Trait and likelihood information about the self may ordinarily be more accessible from memory than information about other people. Markus (1977) has shown how self-schemas for trait dimensions facilitate the recall and prediction of trait-relevant behaviors. Relatedly, Kuiper and Rogers (1979) have shown that trait judg-

ments for the self are made more rapidly, easily, and confidently than trait judgments for another (unfamiliar) person, presumably because judgments about the self are more likely to involve the operation of a well-defined schema than are judgments about another person. Therefore, it seems reasonable to assume that differential accessibility might play a mediating role in some of the above-average and comparative-optimism effects that are generally attributable to egocentrism (effects attributable to self–other differences). It might also be the case that differential accessibility plays a role in the above-average and comparative-optimism effects that fall within the purview of the generalized-group accounts. Prentice (1990) has provided empirical evidence that differences in self–other person judgments might not be due to the self–other distinction per se but to the distinction between the amount or representation of information about familiar versus unfamiliar entities. If we assume that groups (e.g., other students, the average student) tend to be less familiar than specific individuals, then we would also expect that information about groups will tend to be less readily accessible than information about specific individuals.

Although we suggest that individuals will usually be more likely to possess schemas for familiar and individualized entities than for unfamiliar and generalized entities, occasionally individuals may possess schemas about unfamiliar and generalized entities as well, as when people hold negative or positive stereotypes about certain social groups. In such cases, comparative judgments involving these entities may be biased by the schema or stereotype-consistent information recalled about that entity. For example, when asked to compare one's own likelihood of experiencing a traffic accident with the likelihood of "most teenagers" (a stereotypically risk-prone social group), the schema for this group may elicit thoughts about traffic accidents involving teenagers, ultimately making the comparative judgment more optimistic than it should be.

Several studies have found evidence that is broadly consistent with the differential accessibility account. For example, the fact that individuals are generally less biased when comparing themselves with a close and familiar referent (such as a best friend) than when comparing themselves with a more distant and unfamiliar referent (such as the average student; see Alicke et al., 1995; Perloff & Fetzer, 1986) could be construed as consistent with differential accessibility. As suggested above, information relevant to a close and familiar referent tends to be more accessible from memory than information relevant to a more distant and unfamiliar referent. This same point might also explain why individuals exhibit judgment biases when comparing a best friend (or other close and familiar entity) with a generalized referent (Brown, 1986; Klar et al., 1996; Suls et al., 2002). The studies summarized earlier showing that prior experience with an event increases one's comparative likelihood judgments for the event (N. C. Higgins et al., 1997; McKenna & Albery, 2001; Weinstein, 1980, 1984, 1987) can also be accounted for by differential accessibility by assuming that one's own prior and recent experiences with an event would be highly accessible in memory and thus exert a large influence on absolute assessments for the self.

Also, a number of studies have examined the influence of positive or negative mood states on comparative likelihood judgments (see Helweg-Larsen & Shepperd, 2001, for a review). The differential accessibility account would suggest that comparative likelihood judgments are likely to be more favorable to the self as

self-favoring likelihood information increases in accessibility. Gilligan and Bower (1983) argued that positive mood states should facilitate the accessibility of positive cognitions and memories, whereas negative mood states should facilitate the accessibility of negative cognitions and memories. Consistent with the argument that mood states facilitate the retrieval of mood-congruent information, numerous studies have shown that positive mood states (both situationally induced and measured as an individual difference) increase comparative optimism, whereas negative mood states and anxiety tend to decrease comparative optimism (Abele & Hermer, 1993; Alloy & Ahrens, 1987; Butler & Mathews, 1987; Salovey & Birnbaum, 1989).

### *Differential Attention Account*

An account that is somewhat related to differential accessibility is the differential attention account. This account assumes that a respondent can give unequal attention to the two entities within a comparative-judgment question. One consequence of this unequal attention is that evidence recruitment for one entity might be more extensive than evidence recruitment for the other, which could ultimately result in a biased comparative judgment. More specifically, if two entities differ in salience, evidence recruitment for the high-salience entity might begin before evidence recruitment for the low-salience entity. If people were fully exhaustive in their evidence searches, this temporal priority of a high-salience entity would not matter. However, when people conduct only a truncated evidence search (as we assume they frequently do), the temporal priority given to the search for evidence for the high-salience entity will ensure that, on average, respondents retrieve more evidence relevant to the high-salience entity than to the low-salience entity. In a case in which both entities are generally and equally high on the dimension being judged, then the fact that more evidence is recruited regarding the high-salience entity could result in that entity being judged as comparatively higher than the low-salience entity.

There are many situations in which one entity in a comparative question is more salient or draws more attention than another. In our discussion of the egocentrism accounts, we alluded to the possibility that people tend to direct more attention to themselves and to self-related information than to others and other-related information. Hence, differential attention might be a key mechanism for comparative biases attributable to egocentrism (see, e.g., Chambers et al., 2003; Kruger, 1999; Weinstein & Lachendro, 1982; Windschitl et al., 2003). A generalized-group account might also suggest that a concrete single entity (e.g., the student who sits to your left) will tend to be more immediately salient than will a group (e.g., other students in the class) or an abstract representation regarding the group (e.g., the average student in the class). Hence, differential attention might be a key mechanism for comparative biases that have been explained through generalized-group accounts (e.g., Klar, 2002; Klar & Giladi, 1997). Differential attention may also be the key mediator in focalism accounts, if one assumes that designating an entity as focal inevitably draws immediate attention to that entity. Finally, there are a variety of characteristics—some rather superficial—that could make one entity more salient than another (see Fiske & Taylor, 1991). For example, if a person was asked to compare the oratory skills of two speakers (with one being more physically attractive than the other),



the more physically attractive speaker might draw more attention and ultimately be judged as a better orator, even if both speakers are equally excellent.

### *Case Versus Base-Rate Information Account*

When forming absolute assessments about either of the two entities included in a comparative question (e.g., self and average person), individuals may rely on separate sources of information to form these assessments. Specifically, when forming absolute assessments about any single or familiar entity (e.g., the self, a friend, a well-known group of friends), individuals may rely on behavioral or attribute information particular to that entity that is diagnostic of the trait or likelihood judgment dimension. However, when forming absolute assessments about any large or unfamiliar entity (e.g., the average student, the average person, a randomly selected individual from a group), individuals might rely on prevalence or frequency information about the trait or event in the general population. The absolute assessments that are formed for the two entities may differ because of the differences in the types of information (i.e., case versus base rate) used in forming absolute assessments about these two entities (Epley & Dunning, 2000; Klar et al., 1996; Reeves & Lockhart, 1993). These biased absolute assessments for self and for referent group might ultimately result in biased comparative judgments.

For example, when comparing the likelihood that one's friend and the average person would win an award for artwork, the individual may consider behaviors or characteristics of the friend that are diagnostic of the likelihood of winning that award when forming an absolute likelihood assessment for the friend, such as the fact that the friend has a classic art style. However, the person may rely on prevalence information about the general frequency of people winning the award when forming an absolute likelihood assessment for the average person, such as the fact that very few people win that award. This may be true even when the average person displays the same behaviors and characteristics as the friend, such as the fact that many people have a classic art style. A high absolute likelihood assessment may be made for the friend (because of attribute information about this entity), whereas a low absolute assessment may be made for the average person (because of event prevalence information about this entity), resulting in a biased comparative judgment in which the friend is judged more likely than the average person to win the award. Case versus base-rate information may similarly bias comparative trait judgments (e.g., shyness): When forming absolute trait assessments for single entities, individuals may use behaviors or characteristics diagnostic of that trait, whereas when forming absolute trait assessments for large and ambiguous entities, individuals may use information about the prevalence of the trait in the population.

The case versus base-rate information account predicts that people's absolute assessments about a single or familiar entity (e.g., the self, a best friend, a group of close friends) should be based on—and therefore empirically related to—specific behaviors or characteristics possessed by that entity. However, little or no relation should be found between absolute assessments about a generalized entity (e.g., the average person) and specific behaviors or characteristics possessed by that entity. Instead, absolute assessments about generalized or unfamiliar entities are likely to be

based on the perceived prevalence of the relevant trait or event in the population.

Klar et al. (1996) have reported evidence that is compatible with predictions of the case versus base-rate information account. Klar et al. had participants compare the likelihood of a single-other person experiencing a series of undesirable events with the likelihood of the average peer at their university. They found that participants tended to give lower comparative judgments for the single-other person than for the average peer for controllable future events. However, they found that participants tended to be unbiased in their comparative judgments for the single-other person for uncontrollable events and for controllable everyday events (i.e., they judged the likelihood of the single-other person to be approximately equal to the likelihood of the average peer). For controllable events, Klar et al. argued that participants focused on the risk-reducing behaviors or characteristics of the single-other person allowing him or her to prevent the occurrence of the event (resulting in low comparative judgments for those events). However, for uncontrollable events, they argued that participants recognized that the risk-reducing behaviors and characteristics of the single-other person would be ineffective in preventing the occurrence of the undesirable event. In these circumstances, participants relied on the same event prevalence information used in forming likelihood judgments for the average peer to form a likelihood judgment for the single-other person (resulting in higher comparative judgments for those types of events). In another study, Klar et al. showed that event controllability similarly biased comparative likelihood judgments involving the self or a randomly selected peer as targets, suggesting that comparative judgments involving the self as a target and comparative judgments involving a single-other person as a target both operate through similar case versus base-rate reasoning processes.

Supplementing these findings, Klar et al. (1996) also asked participants to describe the information they used in forming their likelihood judgments and offered them the actual frequency of the event when forming their comparative judgments. Consistent with the case versus base-rate information account, participants reported using prevalence information to a greater extent when forming likelihood judgments for the referent group than when forming likelihood judgments about the self or another individualized target (although they used this information for the self and other individualized target for uncontrollable events, as predicted by this account). Participants also expressed a stronger desire to obtain event prevalence information when forming likelihood judgments about the referent group than when forming likelihood judgments about either the self or for the single-other person.

In addition, Epley and Dunning (2000) found that participants used case and base-rate information differently when comparing their own likelihood of engaging in various helping behaviors with the likelihood of the average student at their university. These judgments were particularly susceptible to the use of case versus base-rate information because they involved comparisons between the self (an individual entity for whom case information should be invoked) and the average student at their university (a large and diffuse entity for whom event base-rate information should be invoked). They found that participants highly exaggerated their own likelihood of engaging in the helping behaviors (but were relatively accurate in their likelihood judgments about the average peer helping) and that these biased likelihood judgments were

linked to the types of information that they used. Specifically, they found that participants' estimates about the likelihood of the average student engaging in helping behaviors were influenced by a manipulation of the prevalence of helping behaviors in the population, but participants' estimates about the likelihood of the self engaging in helping behaviors were not influenced by this same event prevalence manipulation. Adding to this argument, participants' estimates that an individuated peer would donate were excessively high, and these estimates were not affected by the same manipulation of helping-behavior prevalence.

Together, these studies suggest that individuals may form judgments about single and familiar entities according to the unique behaviors or characteristics possessed by these entities while forming judgments about generalized and unfamiliar entities according to frequency information about the incidence of a trait or event in the population. This suggests that the use of case versus base-rate information is most relevant to the egocentrism and generalized-group accounts.

### *Idiosyncratic Standards Account*

How friendly are you? When you were asked this question, did you think about how frequently you compliment others? Did you think about how often you perform favors for your friends? Or did you perhaps think about how approachable you make yourself to other people? As this example illustrates, there are a multitude of ways that a person could define the trait "friendly." To form accurate and unbiased comparative judgments, there should be consensus across individuals about what behaviors or characteristics they use to define the trait or likelihood dimension. For example, if Person A and Person B are both asked to make a comparative judgment about their likelihood of being involved in an automobile accident, both people should consider the same behaviors or characteristics (e.g., their past driving record) that would place them at risk for having an accident. Bias may be introduced into the comparative judgment to the extent that Person A and Person B consider different types of behaviors or characteristics when assessing their own and others' likelihood. For instance, Person A might consider the fact that he or she (relative to other people) has a very good driving record and thus is at low comparative risk, whereas Person B may consider the fact that he or she (relative to other people) drives in relatively remote areas free of traffic and thus is at low comparative risk. As a consequence of using idiosyncratic behaviors and characteristics to define their risk status, both people may be apt to view their vulnerability as less than that of others, producing comparative optimism.

Dunning and colleagues (Dunning et al., 1995, 1989; Dunning & McElwee, 1995; Hayes & Dunning, 1997; see also Kunda, 1987) have shown in an extensive line of research that individuals construe trait dimensions idiosyncratically, defining these dimensions according to their own behaviors and characteristics. For example, people hold different conceptions about the trait "dominant": Some people define this trait in terms of leadership and assertiveness (e.g., "a person who is willing to command the team through tough times"), whereas others define this trait in terms of rudeness or aggressiveness (e.g., "a person who pushes to the front of the line"). As a consequence of people using idiosyncratic definitions to define their own and others' "dominance," bias is

introduced when these people's comparative judgments are aggregated.

People are especially likely to use idiosyncratic trait definitions to the extent that the trait dimension is highly ambiguous, which Dunning and colleagues have argued allows individuals to flexibly define the trait according to their own behaviors and characteristics (Dunning et al., 1989, 1991; see also Suls et al., 2002). Individuals then use these idiosyncratic trait definitions when judging others, sometimes in ways that produce self-favoring comparative trait judgments (Beauregard & Dunning, 1998, 2001; Dunning & Cohen, 1992; Dunning & McElwee, 1995; Dunning et al., 1991; McElwee, Dunning, Tan, & Hollman, 2001; Story & Dunning, 1998).

It is important to note that although Dunning and colleagues have argued that idiosyncratic trait definitions often serve self-enhancement motives (allowing people to define a dimension in ways that lead them to favorable conclusions about their own standing), such idiosyncrasies in trait definitions need not be motivated and occasionally produce self-deflating assessments. For example, to the extent that the definition of an undesirable trait (e.g., shyness) is ambiguous, people see more of their own behaviors as encompassed by that trait and give themselves higher ratings on that trait—clearly a self-deflating response pattern (Dunning et al., 1989).

Part of the reason people may be apt to use idiosyncratic trait (or likelihood) definitions may be due to a deficit in knowledge and familiarity about the traits, behaviors, or characteristics by which one's actual standing on the dimension is determined. In studies of self-appraisals of performance, Kruger and Dunning (1999) found that individuals scoring low in a performance domain vastly overestimated their true ability level in that domain. In their study, individuals in the bottom quartile of a test of grammar estimated their ability level to be above the 50th percentile. Kruger and Dunning tied this deficit to a lack of the skills on the part of these individuals to accurately discriminate between poor and good performance and to recognize features of the task discriminating between good and poor performance. Essentially, low-performing participants were construing their performance (and their comparative standing) according to their own idiosyncratic definitions of the performance dimension.

When they improved participants' skills in a domain, Kruger and Dunning (1999) found that participants became more calibrated in their judgments of their comparative ability levels (i.e., they accurately recognized their own poor ability level). This also suggests that individuals high in some performance domain could adequately recognize their own ability level and the ability level of others, and so these individuals may be more likely to accurately estimate their comparative ability level. Consequently, when the comparative ability judgments of low-performing individuals (who overestimate their comparative ability level) are combined with the comparative ability judgments of high-performing individuals (who accurately estimate their comparative ability level), the average comparative ability judgment across individuals tends to be better than average.

In sum, the idiosyncratic standards account posits that differences in how people define the relevant standards for a trait or other dimension can drive biases in absolute judgments (and ultimately comparative judgments). Because the account focuses on the definition of standards for an absolute judgment, we locate

this account at the absolute evaluation stage of the model. Further, we suspect that people are most likely to use idiosyncratic standards in their comparative judgments to the extent that they possess individuating information about one of the entities specified in the judgment question. Therefore, we argue that the use of idiosyncratic standards is most relevant to the egocentrism and generalized-group accounts.

### *Differential Standards Account*

The idiosyncratic standards account proposes that there are differences across people in the standards they use to form self- and other-assessments: Some people may define their own and other people's athleticism according to the amount they and others jog, whereas other people may define their own and other people's athleticism according to the amount they and others play basketball. Another form of bias is introduced in absolute assessments when an individual uses entirely different standards when evaluating the self versus when evaluating other people (Chambers, 2004b). We use the term *differential standards account* to refer to this latter form of bias.

There are two ways that differential standards may be used when forming judgments about the self rather than judgments about others. First, a person may use one type of behavioral evidence when forming a self-judgment and another type of behavioral evidence when forming a judgment about others. As an illustration, a woman who is asked to judge how "moral" she is may think about whether she is more or less moral now than she was in the past. However, when this same person is asked to judge how moral her acquaintance or some other person is, she may instead think about whether her acquaintance is more or less moral than other people. Thus, the person would be using two different standards when judging her own and another person's morality, using her past standing as a standard when making a judgment about the self, but using social comparative standing as a standard when making a judgment about another person. If one supposes that the woman in this example judged herself to be "highly moral" because she is more moral now than in the past but judged the acquaintance to be only "somewhat moral" because the acquaintance is only slightly more moral than other people, one can see how this person would ultimately form a biased comparative judgment about her morality.

Chambers (2004b) has shown that people's judgments about their own and other people's academic ability are made using separate standards. In his study, college-aged students either made judgments about their own academic ability or judgments about their best friend's academic ability. In addition, participants made ratings about their own or their best friend's standing on several measures of academic performance (i.e., their own and their best friend's current, past, anticipated future, and ideal grade point averages and their beliefs about the average student's grade point average). Among other findings, participants' judgments about a best friend's academic ability were strongly related to their perceptions of their best friend's social comparative standing (i.e., how they believed their best friend compared academically with the average student), whereas participants' judgments about their own academic abilities were much less strongly related to their perceptions of their own social comparative standing (i.e., how

they believed they compared academically with the average student).

There are several reasons why people would use different types of behavioral evidence as standards when judging the self and others, as the examples above illustrate. When making a judgment about the self for some trait or likelihood dimension, personal information about the self, such as one's past performance or behaviors, one's aspirations and ideals, one's intentions, and one's expectancies about future performances may all be at the forefront of one's thoughts (see E. T. Higgins, 1987; Kruger & Gilovich, 2004; McGuire & McGuire, 1986; A. E. Wilson & Ross, 2000). With or without their awareness, these personal beliefs may color people's self-assessments and thus serve as standards when evaluating the self (e.g., "My tennis game will improve very much in the future, so I am a good tennis player"). Judgments about other persons or people, on the other hand, would likely be made without reference to those people's past performance, intentions, aspirations or ideals, or expected future performance. Instead, judgments about other people may be made according to relatively impersonal processes, such as deducing the amount of trait-related behaviors they exhibit. Consistent with this notion, Kruger and Gilovich (2004) recently found that people credit themselves for their intentions when judging their own traits (e.g., "I attempt to be friendly with others, therefore I am a friendly person") but do not credit other people for their intentions when judging those people's traits (e.g., "It doesn't matter how hard my neighbor tries to be friendly, he is just an unfriendly person!"). It appears that participants were using intentions as a standard when judging their own traits, but not when judging other people's traits.

The second way in which differential standards may be applied when making judgments about the self and other people is when an individual uses the same type of behavioral evidence in both judgments, albeit with different behavioral criterion or thresholds. For example, imagine a man who is asked to judge his own and a classmate's performance on a course exam. This person may judge his own performance on the test according to one criterion (e.g., "Receiving a score of 80% correct would mean that I am a good student"), yet judge the classmate's performance on the test according to another criterion (e.g., "Receiving a score above 90% correct would mean that my classmate is a good student"). Incidentally, if this person and the classmate happen to receive an identical exam score, he may judge his own performance and ability as being superior to the classmate's. Thus, the use of separate behavioral criterion would bias absolute assessments for self and other people, which might then result in biased comparative judgments.

Chambers (2004b) has speculated on reasons to believe that people would use different behavioral criterion when judging the self and other people. For one, people may recognize the impediments and constraints on their own performance and behaviors (e.g., "I was kept up all night by noisy neighbors, so an 80% wouldn't be so bad") but not those placed on other people's performance and behaviors (e.g., "My classmate doesn't look like he was encumbered by his neighbors last night"). Second, people may adopt different behavioral criterion as a function of their goals, aspirations, or ideals. For example, well-practiced athletes might judge themselves according to an especially high criterion (e.g., "I currently run 6 miles a day, which isn't good because I should be running 9 miles"), while judging others according to a

lower criterion (e.g., “My friend can run 2 miles a day, which is good because that’s more than the average person runs”). Also, as with the use of different behavioral evidence, people’s past and expected future performance (among other factors) might prompt them to use separate behavioral criteria when judging themselves and other people.

We conceive the use of differential standards as affecting people’s absolute assessments concerning self and other people, and so we believe their use operates at the absolute evaluation stage of the comparative-judgment process. Because separate standards are likely to be used when comparing self with others and perhaps when comparing a familiar, individuated target with a less familiar referent group, we argue that the use of differential standards is relevant to the egocentrism and generalized group accounts. The use of differential standards, like the other lower tier accounts, may enable either self-favoring or self-deflating comparative judgments depending on the particular absolute assessments that are formed for the two entities in the judgment.

### *Differential Confidence and Regression-to-the-Mean Accounts*

As already noted, individuals occasionally have more information and familiarity with one of the two entities being compared. Such differences could lead to differences in the confidence with which one makes assessments about the two entities. It seems reasonable to suspect that individuals would be more confident in making assessments about entities they hold much information about, such as the self or a best friend, than in making assessments about entities they hold much less information about, such as an acquaintance or the average person. This difference in confidence may be a basis for differentially weighting the assessments of the two entities that are compared when formulating a comparative judgment.

Chambers (2004a) has found preliminary evidence that differences in confidence in judgments for the self and for the referent influence the size of the bias in the comparative judgment. In his study, participants were asked to compare their own preferences and a fellow participant’s preferences for highly undesirable and desirable objects. Participants exhibited a bias in their comparative preference judgments whereby they assumed that their own preferences for the objects were stronger than the fellow participant’s preferences (e.g., believing that they disliked the undesirable objects and liked the desirable objects more than the fellow participant did). In addition, participants were asked to rate their confidence in their estimates of their own preferences and the fellow participant’s preferences for the objects. Chambers (2004a) found that participants who tended to be much more confident about their estimates of their own preferences than about their estimates of the fellow participant’s preferences also tended to exhibit the strongest bias in their comparative-preference judgments. This finding suggests that confidence differences might play a mediating role in some comparative biases. However, it is also important to note that although controlling for confidence differences in the Chambers (2004a) study reduced the size of the observed comparative bias, the bias remained robust even after confidence differences were fully controlled. This suggests that confidence differences may have played a contributing role in mediating the biases, but they did not serve as a full (i.e., necessary) mediator.

The differential confidence account should be distinguished from a related idea that involves regression to the mean. As stated thus far, the differential confidence account suggests that the absolute assessments about the two entities being compared are unbiased. Consider a case in which people are asked to compare themselves against others on bicycle-riding ability. The differential confidence account assumes that the respondents would generally assess themselves as good and others as good too, but because the former assessment is more confidently held than the latter, respondents would weight that assessment heavily and ultimately give a comparative judgment that suggests they are better than others. A regression-to-the-mean account suggests that comparative biases can be traced back to differences in the absolute assessments about the two entities being compared. Consider again the case in which people are asked to compare themselves against others on bicycle-riding ability. The regression-to-the-mean account assumes that the respondents would generally assess themselves as good at riding bicycles, but because they are less informed about others’ riding abilities, their absolute assessments about others’ riding abilities would be closer to the mean value. Assuming that these absolute assessments for the self and others are used to make a comparative judgment, the end result is that the respondents, on average, would tend to rate themselves as better bicycle riders than others.

Unlike the other accounts that we have discussed, the differential confidence account and regression-to-the-mean account could be characterized as describing rationally based processes (Klayman & Burson, 2002; Moore & Small, 2004; Windschitl et al., 2003). That is, if a person has more reliable information about one entity than a second entity, it might be quite sensible for the person to give his or her confident assessment about the first entity more weight than his or her less confident assessment about the second entity when formulating a comparative judgment about the two. Similarly, it might be quite sensible to make a less extreme absolute assessment about the second entity than about the first. Both of these sets of processes—although rational for a given respondent—could ultimately yield comparative judgments that constitute above-average or comparative-optimism effects when analyzed at a group level.

Although the regression-to-the-mean account is theoretically plausible and seems likely to play a contributing role in many comparative-bias effects, empirical findings do not suggest that it plays a major role. Consider, for example, the differential findings for absolute knowledge judgments and comparative knowledge judgments in the experiments of Windschitl et al. (2003). When participants were asked to make comparative judgments about their own versus their competitor’s knowledge for various trivia categories (see Experiment 3), participants reported that they knew more than their competitor on easy trivia categories (e.g., television sitcoms) and less than their competitor on difficult categories (e.g., ancient civilizations). If these biases were produced because people’s assessments of their competitor’s knowledge were regressive relative to their assessments of their own knowledge, then the same type of biases should also be observed for absolute knowledge judgments. However, biases for absolute judgments (i.e., calculated with the indirect comparison method) were either non-significant or exceedingly small relative to those observed for direct comparative judgments (see Experiments 4 and 5). Analogous work on comparative optimism has yielded similar conclu-



sions. Chambers et al. (2003) found that people's comparative likelihood judgments for events tended to be higher for events that are generally frequent than for events that are generally rare (regardless of the desirability of the event). Separate absolute judgments made for the self and for others revealed, however, that people did not assess the absolute likelihood of high (low) frequency events as significantly higher (lower) for the self than for others. Hence, the regression-to-the-mean explanation seems to have limited relevance in explaining the major effects in these two studies (i.e., Chambers et al., 2003; Windschitl et al., 2003; but see Moore & Small, 2004).

Finally, although differential confidence might be a rational basis for some cases of above-average and comparative-optimism effects, there are some cases of these effects that are clearly not mediated by differential confidence. More specifically, because people might have more confidence about self-assessments than other-assessments, and perhaps more confidence about single-entity assessments than about assessments regarding a group, it is plausible that some biases attributed to an egocentrism account or a generalized-group account could be mediated by differential confidence. However, there seems to be no reason to expect that people would have a systematic tendency to have more confidence about assessments of a target (as defined by the comparative question) than assessments of a referent. Hence, differential confidence does not serve as a plausible mediator for biases or portions of biases explained by a focalism account (see, e.g., Chambers et al., 2003; Moore & Kim, 2003; Suls, Krizan, Chambers, & Mortensen, 2003; Windschitl et al., 2003).<sup>4</sup>

#### *Anchoring and Insufficient Adjustment Account*

How kind are you compared with your coworkers? The anchoring and insufficient adjustment account suggests that you first assess how kind you are (see Kruger, 1999). Perhaps you think about several kind things you have done recently and you evaluate yourself as "very kind." This absolute evaluation serves as an anchor for judging your comparative standing. Because you have seen your coworkers do some kind things, you know you need to adjust your initial comparative judgment in a way that reflects the absolute standing of your coworkers. However, like other instances in which people's judgmental adjustments are insufficient (Epley & Gilovich, 2001; Quattrone, 1982; Tversky & Kahneman, 1974), your adjustments fall short of what they need to be—leaving you to conclude that you are more kind than your coworkers (even if you are only average).

As illustrated by the above example, anchoring and insufficient adjustment could serve as a key mediator of comparative biases that arise through egocentrism. As Kruger (1999) argued, people may have a tendency to use their own skills or characteristics as an anchor from which they make adjustments when forming a comparative judgment. Anchoring might also be a key mediator of biases that can be attributed to the focalism or generalized-group accounts (see Klar & Giladi, 1997; Kruger, 1999). Specifically, people might tend to anchor on any target in a comparative question and adjust upon considering qualities of the referent. This might be especially likely when the target is a single entity but the referent is a group or generalized representation of one.

Although we find the notion of anchoring and insufficient adjustment a plausible one, further research is needed to establish

direct evidence for the role of insufficient adjustment in producing comparative bias. Kruger (1999) argued that the adjustment process requires effort. He demonstrated that putting people under a cognitive load while they rated themselves relative to others on various skills (e.g., reading, riding a unicycle) caused above- and below-average effects to increase. This finding is consistent with the notion that cognitive load reduced the amount of adjustment participants made from their personal anchor. However, this finding could also be explained by differential accessibility processes—without reference to a true adjustment process. It could be that the cognitive load has almost no effect on the spontaneous retrieval of self-relevant information (spontaneous because of its chronically accessible status) but a strong inhibiting effect on the recruitment of information about others, which is normally less accessible and requires effort for retrieval. That is, perhaps the cognitive load simply exacerbates the differential accessibility of self- and other-relevant information.

#### *Summary of the Nonmotivated Accounts*

As described in the above sections, there are numerous ways in which mechanisms that are not biased by self-enhancing motivations can nonetheless yield above-average and comparative-optimism effects. We presented a two-tiered framework for organizing the accounts that describe the relevant nonmotivated mechanisms. The upper tier accounts—which are actually types of accounts rather than specific accounts—differ from each other in terms of where they locate the ultimate or distal source of the comparative bias. Egocentrism accounts attribute a bias to differences in the representation or processing of self- and other-relevant information, focalism accounts attribute a bias to differences in the processing of target- and referent-relevant information, and generalized-group accounts attribute a bias to differences in the representation or processing of information about a single entity or generalized group. Lower tier accounts describe how specific mechanisms can serve as proximal mediators of a given comparative bias. The mechanisms in some lower tier accounts can serve as proximal mediators in more than one of the upper tier accounts. For example, anchoring and insufficient adjustment could play a role in any of the upper tier accounts.

#### Giladi and Klar's (2002) LOGE Model

In a recent article, Giladi and Klar (2002) described a local-comparisons-general-standards (LOGE) approach for understanding comparative biases. They argued that when people are asked to compare one member of a group (regardless of whether the member is a person, object, or concept) with the other members of the

<sup>4</sup> Another issue is whether differential confidence causes people to intentionally weight knowledge of one entity more than knowledge of the other. Even when differential confidence might be an important mediator of comparative biases attributed to egocentrism, there is some reason to question whether this reflects a strategic decision to differentially weight self- and other-assessments. If an above-average effect was caused by intentionally implemented differential weighting, then the effect would presumably get smaller when a respondent is put under a cognitive load. However, Kruger (1999) found that above- and below-average effects were magnified under cognitive load.

group, people “fail to use the normatively appropriate local (group) standard and are infelicitously affected by a more general standard” (p. 538). For example, if people are asked to judge the pleasantness of one soap relative to a group of five other soaps, they will evaluate the target soap against a hybrid standard—one that is partly a function of the soaps in the specified group and partly a function of soaps in general. The intrusive effect of the general standard can cause what Klar (2002) has called a *nonselective superiority bias* (the tendency to judge members of a positive group to be superior to other members of the same group) and a *nonselective inferiority bias* (the tendency to judge members of a negative group to be inferior to other members of the same group). For example, judgments about how members of a group of pleasant soaps compare with the full group might center on “more pleasant than the average of the others in the group” because any individual soap would be generally high in pleasantness and would be compared with a standard that is partly based on soaps in general (which would be moderate in pleasantness). For the same reason, judgments about how members of a group of unpleasant soaps compare with the full group might center on “less pleasant than the average of the others in the group.” Giladi and Klar provided several demonstrations of nonselective superiority and inferiority biases with nonsocial stimuli (e.g., soaps, songs).

How does the LOGE model relate to the framework presented in this article? A foundational assumption of the LOGE model is that when people are asked to judge a target member of a group relative to its other members, they do not give adequate consideration to the other members. Instead of fully and exclusively comparing the target member with the other members, they partially compare the target member with a general standard, resulting in nonselective superiority and inferiority biases. Hence, the LOGE model provides a useful conceptualization for how the inadequate consideration of a local standard and the encroachment of a global standard can influence comparative judgments. As such, the LOGE model could be likened to a specific type of focalism account, one that assumes that for any comparative judgment question, the target receives full consideration but the referent(s) do not receive full consideration because the target is compared with a hybrid standard that is part local and part general (rather than fully local).<sup>5</sup>

The LOGE model itself, however, cannot address many of the issues we have raised in the present article. Our framework seeks to organize the many possible biasing influences on comparative judgments. We note that egocentrism, focalism, and generalized-group accounts are conceptually distinct. We also describe the more proximal mediating mechanisms in a way that LOGE does not. For example, the LOGE model does not address how mechanisms such as differential accessibility and differential confidence might separately bias comparative judgments.

Finally, given that Giladi and Klar (2002) provided several demonstrations of nonselective superiority and inferiority biases with nonsocial stimuli, this raises the possibility that the classic above-average effect is a special case of a more general judgment bias—that is, a special case of the nonselective superiority bias. In part, we agree with this characterization. However, there are reasons to treat the above-average effect as much more than merely a special case of the bias. Indeed, the egocentrism accounts, which apply to instances in which people are judging themselves relative to others, includes biased processes that are not relevant to situations in which people are judging one object relative to others. For

example, the idea that self-relevant information is more accessible than other-relevant information is relevant to the above-average effect but not to the nonselective superiority bias when it involves nonsocial stimuli. Additional research is needed to determine exactly when nonmotivated cases of above-average and comparative-optimism effects constitute cases of egocentrism rather than some general form of a nonselective superiority bias. To date, no studies of above-average or comparative-optimism effects have fully isolated the nonmotivated effects of egocentrism from the mechanisms included in the focalism and generalized-group accounts (but see Chambers & Suls, 2004; Windschitl et al., 2003).<sup>6</sup> Although we strongly suspect that attempts to isolate and find specific evidence for egocentrism would produce confirmatory findings, this suspicion is crying out for empirical tests. Provided such tests are forthcoming in the literature, they would further verify that above-average and comparative-optimism effects are not merely instances of a general nonselective superiority bias.

#### Nonmotivated Accounts and Biases in Absolute Judgments—The Indirect Method

Earlier we described an important distinction between direct comparative judgments (when respondents are asked to compare X to Y) and indirect comparative judgments (when an investigator compares respondents' judgments about X to their judgments about Y). Thus far, we have focused our discussion on nonmotivated accounts for biases in direct comparative judgments, but it is also important to address the question of whether these accounts are also relevant to explaining biases in indirect comparative judgments. We suggest that, although some of the accounts we have discussed could apply to both the direct and indirect methods, many do not apply to the indirect method.

First, all focalism accounts are irrelevant for the indirect method. As already described, focalism accounts assume that asking about a target entity (e.g., Entity A) causes target-relevant information to receive more weight than information about the referent (e.g., Entity B) that is specified in the comparative question (How good is Entity A relative to Entity B?). However, when an indirect method is applied, respondents are asked absolute questions in which there is a target entity but no referent (e.g., How good is Entity A? How good is Entity B?). Therefore, because both entities have equal status—serving as a target in one question but not the other—there is no reason to assume that there is any differential attention or weighting of the evidence for the two entities.

<sup>5</sup> The LOGE model might have some difficulty in explaining the nature of the hybrid standard in cases in which an optimistic bias is observed when people are asked to compare themselves or some target with the average person. When the referent of the comparison question is the average person it would seem as though the local standard and global standard are identical.

<sup>6</sup> Windschitl et al. (2003, Experiment 4) isolated the biasing role of egocentrism in judgments about the likelihood of winning a competition. Similarly, Chambers and Suls (2004) isolated the biasing role of egocentrism in comparative judgments about preferences for objects. However, these experiments were not, strictly speaking, experiments about above-average or comparative-optimism effects.

Second, some forms of the egocentrism and generalized-group accounts also do not apply to comparative biases as measured by an indirect method. More specifically, any accounts (including some of the egocentrism and generalized-group accounts) that treat differential attention, differential confidence, or insufficient adjustment as key mediators would not be readily applicable to comparative biases as measured by an indirect method. The differential attention account assumes, at least implicitly, that attention spent on one entity (e.g., the self) precludes attention spent on the other entity (e.g., the other) in a comparative judgment. However, presumably when the self and the other are asked about in separate questions—as is the case in the indirect method—full attention is always given to the target of an absolute question regardless of whether the target is the self or the other. The differential confidence account assumes that assessments of one entity are given more weight in a comparative judgment than are assessments of another entity because the former assessment is made with more confidence than the latter. However, when the assessments are made separately and a researcher applies an indirect method of comparison, strategic weighting based on confidence becomes irrelevant because one absolute judgment (e.g., about the self) is simply subtracted from another absolute judgment (about the other). Finally, the anchoring and insufficient adjustment account is irrelevant because there is no reason for a respondent to actively adjust his or her absolute assessment of one entity as a function of his or her absolute assessment of another entity.

Aside from the focalism accounts and the accounts that treat differential attention, differential confidence, and insufficient adjustment as key mediators, the other accounts might be relevant to explaining above-average and comparative-optimism effects that are detected with the indirect methods. Consider, for example, an egocentrism account that assumes that differential accessibility is a key mediator. If people are asked how helpful they are, many instances of helpful behavior might be readily accessible, thereby leading to responses signaling high helpfulness. When asked how helpful others are, instances of others' helpful behavior might be somewhat accessible, which could lead to responses that signal somewhat less helpfulness. As another example, consider the case versus base-rate account. If commuters are asked how likely they are to be in a car accident on freeways, they might think about all the things they do to avoid accidents, yielding "low-likelihood" responses. However, when asked how likely the average commuter is to be in a car accident on freeways, they might think about the high frequency of freeway accidents reported on the radio or television news, thereby yielding "high-likelihood" responses. In summary, some but not all of the nonmotivated accounts discussed in this article apply to both the direct and the indirect methods of assessing bias in comparative judgments.

### Summary and Future Directions

Our goal in this article was to present a framework for understanding the nonmotivated biases that produce above-average and comparative-optimism effects. Although motivated-bias accounts might explain some instances of above-average and comparative-optimism effects, a full understanding of these effects requires that the nonmotivated sources of biases be thoroughly examined. Our framework included a three-stage model of how people go about

making a comparative judgment. First, a respondent retrieves—from memory or from the immediate environment—information relevant to the entities specified in the comparative question (e.g., the self and a referent group). Second, the respondent assesses the implications of that information for his or her own and the referent's absolute standing on the relevant dimension. And third, the respondent formulates a response for the comparative scale. Our framework also includes a two-tiered organization for understanding the various accounts of how biases are introduced into the comparative judgment. Accounts in the upper tier (egocentrism, focalism, and generalized groups) describe the distal source of the biases. Accounts in the lower tier describe the specific mechanisms that are proximal mediators of biased responses (e.g., differential accessibility, idiosyncratic standards). Although our framework provides an aid for conceptualizing the various possible sources of bias in a comparative judgment, this framework also highlights a number of issues that are ripe for initial or further investigation.

### *The Relative Impacts of the Various Nonmotivated Biases*

First, although there is reason to suspect that all three types of upper tier accounts can play a role in comparative biases, there is actually quite limited research that separately validates any one form of bias. Specifically, we know of no published work on above-average or comparative-optimism effects that has fully isolated the independent influence of egocentrism or that has fully isolated the independent influence of generalized-group mechanisms (although some studies of these effects have isolated focalism; see, e.g., Chambers et al., 2003; Eiser et al., 2001; Hoorens, 1995; Otten & van der Pligt, 1996).<sup>7</sup> Furthermore, there has been no research that has investigated the relative impacts that the various nonmotivated biases tend to have on common types of comparative judgments (which is distinct from simply isolating and demonstrating that a given bias can play a role). For example, there is no research that allows us to even approximately say whether focalism effects tend to be greater than egocentrism effects under Circumstances X, Y, and Z. The same can be said for the specific mechanisms mentioned in the lower tier accounts. For example, it is not clear whether or when differential confidence might be a more substantial source of bias than are mechanisms like differential accessibility and use of case versus base-rate information. In short, research to date has not effectively isolated many of the mechanisms as we have described them in our

<sup>7</sup> In a study by Alicke et al. (1995), participants were less comparatively optimistic when comparing their likelihood of experiencing various negative events with a single randomly selected coparticipant than with the average student at their university. Because the former type of comparison involved a single individuated referent and the latter type of comparison involved a large generalized group, this study may be interpreted as isolating the influence of the generalized-group mechanisms. However, we note that participants in Alicke et al.'s (1995) study were provided with some individuating information (e.g., a photograph or interview scripts) about the randomly selected coparticipant. Therefore, although the results of this study are certainly consistent with the generalized-group account, the study cannot be regarded as purely isolating that account. Optimally, a study isolating that account would have participants compare themselves with either a single randomly selected individual from a group (with minimal individuating information) or a generalized representation of the group (e.g., the average student).



framework. Although we suspect most if not all of the mechanisms can play a contributing role in comparative biases, there are many “whether” and “when” questions that deserve empirical attention.

### *Direct Versus Indirect Methods*

A second issue that is highlighted by the current framework concerns the distinctions between the direct and indirect methods of assessing comparative biases. Previous research has typically found that the direct method yields greater evidence of bias than does the indirect method (see, e.g., Chambers & Suls, 2004; Chambers et al., 2003; Giladi & Klar, 2002; Helweg-Larsen & Shepperd, 2001; Klar & Giladi, 1997, 1999; Klar et al., 1996; Price et al., 2002; Windschitl et al., 2003, Experiment 3). The framework we propose provides some explanation for why this tends to be the case. As mentioned above, many of the nonmotivated sources of bias that influence judgments in the direct method presumably do not systematically influence the judgments in the indirect method. For example, focalism, which is likely to be a main source of bias in the direct method, is irrelevant to the indirect method because the two absolute questions in the indirect method both have one target entity and no referent entity. Another example mentioned earlier involves the differential confidence account, which assumes that bias emerges at the comparative-judgment-formation stage of the model, rather than earlier in the information-recruitment or absolute evaluation stages. Thus, even when a person’s absolute assessments regarding self and others are unbiased (e.g., “I am an athletic person” and “My best friend is an athletic person”), the person may nevertheless form a biased judgment by overweighting self-assessments at the comparative-judgment-formation stage (e.g., “I am more athletic than my best friend”).

Consider the case of the Klar and Giladi (1999) study, in which participants made both absolute assessments concerning their own and their peers’ general level of happiness, as well as direct comparative assessments about their own versus their peers’ happiness. The authors found that participants did not rate themselves as being any happier than their peers in absolute terms (i.e., indirect method) but rated themselves as being happier than their peers in comparative terms (i.e., direct method). This discrepancy can be explained by our model by noting that several mechanisms operating at the comparative-judgment-formation stage (e.g., differential attention, differential confidence) would introduce bias into participants’ comparative assessments of happiness but would not affect their absolute assessments of happiness for the self and for their peers. Further supporting this contention is the fact that participants’ absolute assessments of happiness for the self more strongly predicted their comparative assessments than did their absolute assessments about their peers’ happiness. Evidently, participants were giving more weight to their own than to their peers’ happiness when making direct comparative assessments, as the mechanisms operating at the comparative-judgment-formation stage of our model would specify. Future research that uses both a direct and indirect method to assess bias, and at the same time uses various process measures (e.g., reaction times), might reveal important insights as to which types of specific mechanisms play the key mediational roles in biasing judgments within the direct and indirect methods (see, e.g., Price et al., 2002).

### *The Ultimate Consequences of Nonmotivational Sources of Bias*

A third issue that deserves attention is whether and when comparative biases detected with the direct method can also be detected with other types of judgments, with decisions, or with behaviors. As alluded to in the above paragraph, the direct method can, at times, yield significant comparative biases even when the indirect method does not (see, e.g., Chambers & Suls, 2004; Chambers et al., 2003; Eiser et al., 2001; Giladi & Klar, 2002; Klar & Giladi, 1997; Klar et al., 1996; Kruger, 1999; Windschitl et al., 2003, Experiment 3), which raises the question of whether the direct or indirect method better reflects a person’s internal representations. Also, the present framework’s emphasis on motivationally neutral sources of bias might lead some readers to wonder whether the above-average and comparative-optimism effects detected with the direct method reflect anything more than judgment-specific biases. One could argue that perhaps above-average and comparative-optimism beliefs (along with below-average and comparative-pessimism beliefs) exist only when a researcher asks a respondent to provide a comparative judgment, because the source of these biases are introduced only within the judgment process itself. For example, Kruger (1999) demonstrated that people tend to judge themselves as below average at playing chess, presumably because of a nonmotivated bias (e.g., they focus on how hard is it for them to play chess and fail to adequately focus on how hard it is for others). Does this mean that people—even those who are not explicitly asked to make this comparative judgment—will act as though they believe they are worse than others at playing chess?

Recent research provides some initial answers to such questions. A series of studies investigating people’s absolute optimism about the possibility of winning competitions (which depends on how one compares with one’s competitors) has shown that both egocentrism and focalism influence people’s optimism (Windschitl et al., 2003). These studies documented *shared-circumstance effects*, in which people’s optimism about winning increases when a shared benefit (a circumstance that generally helps the absolute performance of competitors) is introduced and decreases when a shared adversity (a circumstance that generally hurts the absolute performance of competitors) is introduced. Furthermore, this research demonstrated that the biases extended to actual behavior. In a study in which participants played poker, participants bet more chips on games in which wild cards were active rather than inactive, presumably because they were egocentrically focused on how possible wild cards might help them produce a winning poker hand—failing to adequately consider that wild cards can also help their opponents (Windschitl et al., 2003).

In a related study demonstrating how focalism can influence behavior, Moore and Kim (2003) found that participants bet more money that one randomly selected person (the focal person) would beat another randomly selected person when the competition involved an apparently easy quiz than when it involved an apparently difficult quiz. Participants were overly focused on how the focal person would perform on the quiz (they assumed the focal person would perform well on an easy quiz) and inadequately considered how the other nonfocal person would perform (they failed to appreciate that the other person would also do well). Moore and Cain (2003) took this link even further to explain why



there are greater rates of entrepreneurial entry into industries that are perceived as simple rather than industries that are perceived as more difficult. The findings from all of these studies (Moore & Cain, 2003; Moore & Kim, 2003; Windschitl et al., 2003) suggest that the nonmotivated biases discussed in this article have implications beyond the responses to the specific direct comparison questions that are typically used to study them. Nevertheless, more work could be done to investigate the implications of these biases for other types of decisions and behaviors.

It is perhaps worth clarifying that the research we are advocating for is distinct from research that demonstrates that comparative judgments per se predict behavior (e.g., Burger & Burns, 1988; Davidson & Prkachin, 1997; Larwood, 1978; Radcliffe & Klein, 2002). Specifically, we are calling for research that specifically links the nonmotivated types of biases we discussed to decisions and behaviors. Comparative judgments themselves can reflect a mix of participants' true comparative standing relative to others, as well as the influence of motivation, random error, and systematic nonmotivated bias. Hence, the unique predictive role of nonmotivated bias cannot be gleaned from merely examining relations between comparative judgments and behavior.

#### *The Interrelations and Impacts of Motivated and Nonmotivated Forms of Bias*

Fourth, there are, of course, a host of research questions about how motivated biases can influence comparative judgments, many of which have already been addressed (see, e.g., W. M. Klein & Weinstein, 1997; Shepperd et al., 2002). However, given the general focus of this article, we emphasize open issues concerning the interrelation between motivated and nonmotivated biases in comparative judgments. A preliminary issue concerns the relative influence of motivational versus nonmotivational biases. Addressing such an issue is complex, and we know of no study that has systematically compared the roles of motivated and nonmotivated forms of bias. As such, it would be inadvisable to suggest that nonmotivated sources of biases are stronger than motivated sources. Furthermore, the relative influences of the two types of biases are likely to shift dramatically depending on, among other things, the particular types of judgments being asked. Nevertheless, work that roughly gauges their relative influences within the parameters of a well-defined judgment context might produce informative findings. Given the lack of such research, we can only conclude that both motivational and nonmotivational sources of bias should be considered sufficient but not necessary for producing above-average and comparative-optimism effects.

It seems reasonable to assume that motivated and nonmotivated processes operate in a complex and dynamic fashion to produce bias. Research investigating their possible interplay might benefit from the present framework. For example, a motivationally relevant event—such as failing at an important task—might have two distinct but nonexclusive consequences. It might trigger a self-enhancement motive, and it might cause the person to become more self-focused (i.e., egocentrically biased). The self-enhancement motive might push the individual to make generally favorable comparative judgments, whereas the enhanced egocentrism might exacerbate a tendency to make above-average judgments for easy domains but below-average judgments for hard domains (see Beauregard & Dunning, 1998; Dunning et al., 1995).

We also think future research should examine how nonmotivated biases in social comparative judgments have consequences that turn out to be motivationally relevant. For example, imagine that people living in a wooded area are asked how likely they are, relative to their neighbors, to get an insect-transmitted disease. For nonmotivated reasons (e.g., egocentrically focusing on their own recent mosquito bites and tick discoveries), they might conclude that they are more at risk than their neighbors. This biased conclusion about social comparative risk status—even though it is nonmotivationally based—might be a relatively strong motivator for the respondents to obtain and use insect repellent. As W. M. Klein (1997) has demonstrated, it is often one's social comparison status rather than one's absolute status that drives behavior and affective reactions (see also W. M. Klein & Weinstein, 1997).

#### *Accuracy and Bias: Who and How*

Finally, we suggest that there is a great deal of work to be done to understand the separate roles of accuracy and bias in comparative judgments. A closely related issue is whether an egocentric bias actually constitutes a quite reasonable response strategy in some situations. As mentioned earlier, any comparative judgment can reflect a mix of a respondent's true comparative standing relative to others, motivational bias, random error, and systematic nonmotivated bias. Although it might seem sensible to assume that the responses of people who exhibit a systematic nonmotivated bias (i.e., use an egocentric perspective) are bound to be less accurate than the responses of people who do not exhibit the bias, this might not always be the case (see Krueger & Funder, in press). The bias is measured as a mean deviation (e.g., the above-average effect is demonstrated when respondents' mean response is "above average"), whereas the accuracy would be measured as a correlation between judgments and actual standings (see, e.g., Radcliffe & Klein, 2002). It is possible that in cases in which people have little information about others, basing a comparative judgment on the standing of the self will tend to produce more accurate responses than basing a comparative judgment on the presumed difference between the standing of the self and the standing of others. Although some work has been done on this topic (Klayman & Burson, 2002), the empirical questions of whether and when an egocentric bias might produce relatively accurate responses are highly complex ones that deserve further investigation. Of the three upper tier accounts of bias, focalism most clearly constitutes a bias that would not be positively associated with accuracy and therefore can be considered a nonrational form of bias (see Windschitl et al., 2003).

There is also much to be learned from research that examines how a person's true absolute standing is related to the amount of nonmotivated bias they exhibit. Are the main effects that constitute above-average effects and comparative-optimism effects being driven by only a subset of the sample of respondents (e.g., only the respondents who are actually low on the relevant dimension)? Recent research has provided initial answers to questions of this type, but many related issues remain open (e.g., Epley & Dunning, 2000; Kruger & Dunning, 1999). One related question is whether and how people in applied settings learn through experience to avoid some of the nonmotivated biases that can affect comparative judgments. For example, do realtors perpetually tend to view the houses they are selling in high-income neighborhoods as compar-

actively better than others in those neighborhoods and view houses they are selling in low-income neighborhoods as worse than others in those neighborhoods?<sup>8</sup> If not, what led them to avoid the various nonmotivated biases that could have affected them?

### *Conclusions, Or What We Should Not Conclude*

Before providing a big-picture conclusion to this article, we wish to sound explicit warnings about four false conclusions that might be seductively lingering in the minds of some readers.

1. *Above-average effects and comparative-optimism effects are dead.* We have discussed how recent research has shown that the same nonmotivational biases that can produce above-average and comparative-optimism effects can also produce below-average and comparative-pessimism effects (e.g., Chambers et al., 2003; Kruger, 1999). These types of findings might lead some people to view above-average and comparative-optimism effects as less interesting because they are less global than once thought. However, we think the research on below-average and comparative-pessimism effects should add to the interest in the optimistic versions of these effects. Just as psychologists interested in the influence of group discussions once had to transition from thinking about “risky shifts” (emphasizing movement to one end of a continuum) to thinking about “group polarization” (emphasizing movement to either end of a continuum; Moscovici & Zavalloni, 1969), researchers interested in “optimistic biases” need to appreciate potential for the opposite forms of the above-average and comparative-optimism effects.

2. *Above-average effects and comparative-optimism effects are not motivated biases.* Our argument is that nonmotivated biases can be sufficient sources of bias for producing above-average or comparative-optimism effects. As mentioned earlier, this does not mean that motivated biases cannot also serve as sufficient sources of bias for such effects. Demonstrating, for example, that comparative biases influence judgments about nonsocial stimuli (e.g., Giladi & Klar, 2002) does not necessarily preclude the possibility that self-serving motivations can play a important role in comparative judgments regarding the self. Indeed, there are some empirical findings that are difficult to reconcile with our nonmotivated accounts and that seem more amenable to a motivated-bias explanation (e.g., Alicke et al., 2001; W. M. Klein & Kunda, 1993; Rothman et al., 1996).

3. *Participants who are asked to make a comparative judgment ignore the instructions to compare.* This conclusion is overly simplistic, to the point of being misleading. Many of the nonmotivated accounts we have discussed suggest that when people (e.g., students) are asked to rate themselves relative to a referent group (e.g., the average student), they underweight or fail to give adequate attention to that referent group. However, this is distinct from saying that they disregard or fail to follow the instructions within a comparative question. In fact, several of the nonmotivated accounts we have described suggest that people are making explicit comparisons with a referent group, albeit in a biased fashion (e.g., the case versus base-rate information and idiosyncratic standards accounts). We suspect that participants intend to give and believe they are giving comparative judgments when asked to do so. Furthermore, the fact that egocentrism, focalism, and generalized-group biases influence behaviors indicates that these biases do not merely reflect a failure to follow an instruction in a

comparative-judgment question; they reflect something fundamental about the way in which people generally make a comparative judgment.

4. *People are not interested in social comparisons.* If, as Festinger (1954) claimed, people make social comparative judgments when objective standards are not available, why wouldn't people's judgments be sensitive to the referent mentioned in a comparison question? First, we note that nonmotivated accounts do not suggest that people are completely insensitive to comparison standards, merely that they are not fully sensitive to them. For example, respondents asked to judge their ballet dancing skills relative to their spouse's skills might think for several minutes about both their own and their spouse's awkward ballet dancing skills. However, if for whatever reason (e.g., differential confidence) self-assessments are given somewhat more weight in the final judgment, a below-average effect would be observed. Second, we caution the reader not to confuse interest in social comparative information with participants' judgments about and use of that information. The fact that egocentrism suggests that people use other-relevant information slightly less than self-relevant information when making a comparative judgment really says little about people's interest in that other-relevant information.

We hope it is clear that these four conclusions are false ones that lead to dead ends. Instead of yielding a firm set of conclusions about how comparative biases operate, this article identifies and organizes some of the new possibilities for understanding comparative biases. We have described a framework for conceptualizing a variety of nonmotivated sources of comparative bias—sources that are distinct from those offered in motivational accounts of bias. This framework explicitly links above-average effects and comparative-optimism effects as sharing potential causes, and it identifies the connection that these effects have to other recently defined phenomena such as preference biases (Chambers & Suls, 2004), shared-circumstance effects (Windschitl et al., 2003), and nonselective superiority biases involving nonsocial stimuli (Giladi & Klar, 2002). Finally, although we focused primarily on the nonmotivational aspects of bias in this article, we believe that the general framework we outlined could also be useful for conceptualizing when and how motivated considerations bias the key cognitive processes mediating many types of social comparative judgments.

<sup>8</sup> See Prieto and Price (2002) for research on slightly different questions about realtor judgments.

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### New Editors Appointed, 2006–2011

The Publications and Communications Board of the American Psychological Association announces the appointment of seven new editors for 6-year terms beginning in 2006. As of January 1, 2005, manuscripts should be directed as follows:

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- *Journal of Abnormal Psychology* ([www.apa.org/journals/abn.html](http://www.apa.org/journals/abn.html)), **David Watson, PhD**, Department of Psychology, University of Iowa, Iowa City, IA 52242-1407.
- *Journal of Comparative Psychology* ([www.apa.org/journals/com.html](http://www.apa.org/journals/com.html)), **Gordon M. Burghardt, PhD**, Department of Psychology or Department of Ecology & Evolutionary Biology, University of Tennessee, Knoxville, TN 37996.
- *Journal of Counseling Psychology* ([www.apa.org/journals/cou.html](http://www.apa.org/journals/cou.html)), **Brent S. Mallinckrodt, PhD**, Department of Educational, School, and Counseling Psychology, 16 Hill Hall, University of Missouri, Columbia, MO 65211.
- *Journal of Experimental Psychology: Human Perception and Performance* ([www.apa.org/journals/xhp.html](http://www.apa.org/journals/xhp.html)), **Glyn W. Humphreys, PhD**, Behavioural Brain Sciences Centre, School of Psychology, University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom.
- *Journal of Personality and Social Psychology: Attitudes and Social Cognition* section ([www.apa.org/journals/psp.html](http://www.apa.org/journals/psp.html)), **Charles M. Judd, PhD**, Department of Psychology, University of Colorado, Boulder, CO 80309-0345.
- *Rehabilitation Psychology* ([www.apa.org/journals/rep.html](http://www.apa.org/journals/rep.html)), **Timothy R. Elliott, PhD**, Department of Psychology, 415 Campbell Hall, 1300 University Boulevard, University of Alabama, Birmingham, AL 35294-1170.

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