
The Personal/Group Discrimination Discrepancy: The Role of Informational Complexity

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The personal/group discrimination discrepancy (PGDD) refers to the tendency of disadvantaged group members to report higher levels of discrimination against their group in general than against themselves personally as members of that group. In two studies, the authors examined the cognitive mechanisms that underlie the PGDD. In Experiment 1, the authors demonstrated that the PGDD emerges from a divergence in the comparison standards on which personal and group judgments are made and that specifying that the same standards be used for both types of judgments eliminates or reduces the PGDD. In Experiment 2, the authors demonstrated that the magnitude of the PGDD was a function of the degree of informational complexity in the comparison targets. Implications for conceptualizations of the PGDD are discussed.

The label “personal/group discrimination discrepancy” (PGDD) has been used to describe the tendency of disadvantaged group members to report higher levels of discrimination directed at their group in general than at themselves personally as members of that group (Taylor, Wright, Moghaddam, & Lalonde, 1990). For example, when asked about gender discrimination, a woman might respond, “Yes, women are discriminated against, but I have not experienced much discrimination.” This phenomenon was first documented by Crosby (1982) in her studies of relative deprivation among working women in Boston. It has been demonstrated with a wide variety of disadvantaged groups, including employed women in the United States (Crosby, 1982, 1984); single mothers receiving government assistance in Canada (Olson, Roese, Meen, & Robertson, 1995); anglophone Quebecers (Taylor, Wong-Rieger, McKirnan, & Bercus-

son, 1982); middle-class and inner-city African Americans in Miami (Taylor, Wright, & Porter, 1994); South Asian and Haitian immigrant women in Montreal (Taylor et al., 1990); Blacks, Chinese, East Indians, and Pakistanis in Toronto (Dion & Kawakami, 1996); and the Inuit of Arctic Quebec (Taylor et al., 1994). Thus, this is a robust phenomenon that crosses gender, racial, economic, and educational boundaries.

Numerous mechanisms have been proposed to account for the PGDD (for reviews, see Olson & Hafer, 1996; Taylor et al., 1994). Currently, the explanation that is most widely offered is a motivational one: that individuals deny, or at least minimize, personal experiences with discrimination to justify inaction against the injustice or to maintain perceptions of control over their outcomes. This hypothesis was first forwarded by Crosby (1984), who noted that the working women who participated in her studies reported virtually no personal experience with discrimination. Crosby speculated that these women might have been motivated by their desire to avoid identifying and having to take action against the perpetrator of discrimination. Taylor and Dubé (1986) reasoned further that acknowledging discrimination would arouse cognitive dissonance in disadvantaged group members who feared recriminations arising from

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PSPB, Vol. 25 No. 11, November 1999 1430-1440
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any attempt to address the injustice; denial of the discrimination, in contrast, would allow these individuals to justify their inaction. More recently, Ruggiero and Taylor (1995, 1997) suggested that the tendency to minimize personal discrimination is motivated by disadvantaged group members' desire to believe in their ability to control their own outcomes rather than to acknowledge that their outcomes are controlled by powerful others.

Several cognitive accounts also have been proposed to explain the PGDD. These accounts suggest that the discrepancy arises from unconscious and unintended biases in information processing and that it cannot be explained solely in terms of respondents' desires to change their personal or group situation. For example, Taylor et al. (1990) speculated that individuals employ an additive strategy in response to questions about discrimination such that the number of personal experiences with discrimination is always exceeded by the total number of known experiences of all members of the referent group, including the self. They also suggested that people make use of the availability heuristic, in which personal experience with discrimination forms only a small portion of an individual's self-concept but group discrimination experiences account for a larger proportion of what is known about the group. To date, however, there has been no evidence for these accounts. (See Taylor, Ruggiero, & Louis, 1996, for evidence against the "additive strategy" account.)

Crosby and her colleagues also have examined cognitive information-processing accounts of perceived discrimination. Crosby, Clayton, Alksnis, and Hemker (1986), for example, examined the differences between the processing of information presented in case-by-case (piecemeal) versus aggregated forms. They reasoned that whenever two or more individuals differ in a number of features (e.g., job qualifications, social category) relevant to an outcome (e.g., hiring, promotion) in a given case, the social perceiver may be able to find multiple reasons to account for the outcome. However, when cases accumulate and are averaged, the different features tend to stabilize, allowing commonalities among cases to be identified and the most plausible explanation for the outcome to be generated. In an experiment testing this reasoning, male introductory psychology students examined information regarding the qualifications and salaries of male and female managers in an organization. This information was presented in either a piecemeal form (where information concerning different departments was presented sequentially) or an aggregate form (where all the information was presented simultaneously). In both cases, the information was constructed to indicate discrimination against the female managers. Results indicated that participants perceived greater discrimination against

women, and rated the probability and seriousness of this discrimination as greater, when the information was presented in an aggregated, compared to piecemeal, form.

Rutte, Diekmann, Polzer, Crosby, and Messick (1994) again examined the role of piecemeal versus aggregate information processing as well as the organization level of the discrimination (department vs. firm). In addition, they examined the influence of ordinal equity, which refers to the extent to which ranking by input (e.g., qualifications) and ranking by outcome (e.g., salaries) results in the same ordering of people. Ordinal inequity in the workplace occurs when those who are better qualified receive a lower salary than those who are less qualified. Furthermore, ordinal inequity can occur at the level of department or at the level of the overall firm. Male and female business students completed a study similar to the one conducted by Crosby et al. (1986), with the addition of information related to ordinal equity and organizational level. Results indicated that ordinal inequity at the conspicuous departmental level, compared to ordinal inequity at the inconspicuous firm level, led to greater perceived pay inequity. On estimates of the number of departments with pay inequity, this conspicuousness variable had greater impact when information was presented in a piecemeal, compared to an aggregate, form. Rutte et al. concluded that conspicuous discrimination (ordinal inequity at the departmental level) was easily detected but that inconspicuous discrimination (ordinal equity at the departmental level but inequity at the firm level) was more difficult to detect.

Although these studies did not directly examine reports of personal versus group discrimination, they do provide evidence that perceptions of discrimination have a cognitive component. Our goal was to further examine possible cognitive factors implicated in the PGDD. Specifically, we sought to determine the relationship between the emergence of the discrepancy and two other factors. First, we explored the implications of the notion that people spontaneously invoke different social comparison referents for different judgments of deprivation, such that they make intragroup comparisons when asked about personal discrimination but engage in intergroup comparisons when asked about group discrimination. This would lead to the prediction that people may feel relatively advantaged compared to other ingroup members but relatively disadvantaged compared to high status out-group members.

We also explored the possibility that the magnitude of the PGDD depends on the *informational complexity* in the comparison targets about which the judgments are made. We define informational complexity as the dimensionality and articulation of the relevant knowledge, in which dimensionality refers to the number of dimensions used to represent the information and

articulation refers to the number of distinctions made among these dimensions. High levels of informational complexity are characterized by greater individuation (or concreteness), greater amounts of detail, and relative completeness in the sense that the individual has information about many relevant dimensions and that the distinctions among those dimensions are well articulated. Low levels of informational complexity, in contrast, characterize information that is abstract, simplified, poorly elaborated, or incomplete. Highly complex (individuated) targets provide the individual with detailed information that either supports or contradicts a given judgment. In contrast, highly simplified (abstract) targets provide less information relevant to the judgment. We speculated that the PGDD emerges in part because the self is a highly complex and well-elaborated concept, whereas the group is often a highly simplified and poorly elaborated concept—especially given the very general and context-independent nature of the wording typically used to assess perceived group discrimination (e.g., “Women as a group are discriminated against because of their sex”).

This reasoning is supported by Crosby et al.’s (1986) analysis of piecemeal versus aggregate information processing. Information relevant to judgments of discrimination against the self would be encountered in a case-by-case form. According to Crosby et al., each of these individual instances would be characterized by attributional ambiguity (to borrow a term from Crocker & Major, 1989) in that factors other than discrimination may play a causal role in one’s outcomes. Instances of fairness—apparent or actual—would also be relevant to these judgments, further complicating the attributional process. Because these pieces of information are encountered in a sequential rather than simultaneous manner, they are difficult to aggregate. Thus, the common causal factor of discrimination is lost in the informational complexity of the knowledge that has accumulated about one’s experiences. Information relevant to judgments of group discrimination, in contrast, is likely to be encountered in an aggregate form (e.g., in media coverage; Taylor et al., 1996). This aggregation leads to less informational complexity in that irrelevant factors cancel themselves out and reliable causal factors become clearer.

To test our reasoning, we conducted two experiments. In the first experiment, female participants rated gender discrimination on the job at either the personal or group level, with either no specified referent, an in-group referent, or an out-group referent. We hypothesized that the PGDD would be replicated when no referent was specified but that it would be reduced when both personal and group judgments were made relative to the same referent group. In Experiment 2, female respon-

dents estimated the likelihood of discrimination for two of four targets (themselves, a female classmate, the average female student, or female students as a group). We hypothesized that a discrimination discrepancy would emerge when targets differed in the relative degrees of informational complexity but that no discrepancy would emerge when targets were similar in their relative degrees of informational complexity.

EXPERIMENT 1

The first experiment tested the idea that the tendency to affirm group deprivations while denying personal deprivation may emerge from a divergence in the comparison standards on which group and personal judgments are made. Several authors have pointed out that self-reported deprivation is often assessed in survey questionnaires via items that fail to specify a comparison or referent target (Martin, 1986; Zanna, Crosby, & Lowenstein, 1986). If spontaneously retrieved referents differ for personal versus group judgments, this difference might account for the discrepancy between these judgments. Specifically, when asked about personal deprivation, individuals may spontaneously compare to in-group members (e.g., employed single mothers may base judgments of satisfaction on comparisons with other single working mothers; see Major & Forcey, 1985). However, when judging deprivation at the group level, the most natural referent may be a salient out-group (e.g., these same women might compare their in-group to working men). The PGDD would then emerge to the extent that between-group comparisons reveal greater disparity than within-group comparisons. Stated slightly differently, individuals might see less to complain about when they describe their own satisfaction in terms of similar in-group members but may perceive far greater injustice at the group level because the most salient standard of comparison is a better-off out-group.

Recent research has partly supported this reasoning. Olson et al. (1995, Experiment 2) assessed perceived deprivation among working women, examining both personal and group perceptions. On a within-participant basis, the referent was manipulated (comparisons were made with no clear referent specified, with a female referent, and with a male referent). The PGDD was replicated in that group discrimination was higher than personal discrimination when no referent was specified. Specifying a male referent elevated judgments of personal discrimination to a level significantly higher than when no referent was specified, and this level did not differ from group/no-referent judgments. This finding suggests that participants spontaneously compared themselves to other women when making personal judgments but were induced to modify those judgments in light of comparisons to men. This degree of modifica-

tion approximated the magnitude and direction of the PGDD and thus could perhaps account for it. However, the PGDD was reliable both within no-referent and male-referent contrasts. This pattern of results suggested that comparison processes could only partly account for the PGDD. That is, the PGDD was not completely erased by explicit specification of referent, suggesting that some other process must, perhaps in addition to comparison processes, contribute to its operation. However, the within-participant nature of these comparisons rendered interpretation problematic (e.g., the proximity of nearly identical questions differing only in referent might have encouraged participants to exaggerate—or minimize—response differences).

The first experiment was designed to test the comparison-based explanation of the PGDD using a between-participants design, thereby removing the interpretational difficulties of the Olson et al. (1995) experiment. Similar to that research, we also examined an ecologically valid sample of working women with objectively low incomes. Participants were retail employees working in the greater Chicago area who were approached at work during quiet business hours. They completed brief questionnaires assessing job discrimination at either the personal or group level. Orthogonal to this manipulation, participants made their judgments with no specified referent, with an in-group referent (i.e., other working women), or with an out-group referent (working men). We expected that the PGDD would be replicated in the no-referent condition (i.e., group discrimination would exceed personal discrimination) but that it would be erased in the in-group- and out-group-referent conditions. Also, if individuals rate personal discrimination by spontaneously comparing to their in-group, then there should be no difference in personal deprivation ratings between the no-referent and in-group-referent conditions. That is, if employed women evaluate their lot by spontaneously comparing to other, similar women, personal judgments should be the same when other women are and are not explicitly specified. Similarly, if group discrimination is derived from spontaneous retrieval of out-group standards, then there should be no difference in group ratings between the no-referent and out-group-referent conditions. That is, if employed women evaluate their group as a whole by spontaneously comparing to employed men, group judgments should be the same when men are and are not explicitly specified.

Method

PARTICIPANTS

Participants were 180 women working in retail sales occupations in the Chicago area. Participants were

approached on the job during business hours and requested to complete questionnaires concerning job satisfaction. Participants were randomly given one of six types of questionnaires based on the 2 (personal vs. group) \times 3 (no referent vs. in-group referent vs. out-group referent) factorial design.

Participants described their demographic characteristics by choosing from among five categories for age, education, and income. The modal category for age was 22 to 29 (32% of participants chose this category). The modal category for education was at least some college attendance (83% had attended or were currently attending a college or university). The modal income category was \$10,000 or less per year (29% of the sample).

MATERIALS

Each participant completed one of the six types of questionnaires created by the 2 \times 3 design. Each contained six primary dependent measures designed to assess discrimination in current employment. These items were intended to tap areas in which working women are often documented as being at a disadvantage, such as salary, chances of advancement, autonomy, and so forth.

For half of the participants, these six items focused on personal discrimination. The first item was a general measure of discontent: "Overall, I am discriminated against/treated unfairly on the job." The other five items targeted more specific aspects of job situations, and response bias was controlled for by the reversal of three of the items. The other items were: "My salary is fair for the work I do," "I am treated poorly by my boss/supervisor," "My chances for advancement are good," "I enjoy a lot of freedom at my job," and "I don't have very much authority or control over my job." All items were assessed using a 5-point scale ranging from *strongly agree* to *strongly disagree*.

For the other half of the sample, these same six items focused on discrimination at the group level. Items were reworded to pertain to the job situation of working women as a whole. For example, the first item read, "Overall, women are discriminated against/treated unfairly on the job."

The other between-participants manipulation was the specification of referent for each of the six items. The items listed above were all taken from the no-referent condition. That is, no standard of comparison was specified in these items. In the in-group-referent condition, participants were given the same statements, but these were appended with a specific comparison to women. For example, one item was, "My salary is fair for the work that I do, compared to women in general." In the out-group-referent condition, participants compared their current situation with that of men. The same item in this

condition was, "My salary is fair for the work that I do, compared to men in general." Thus, personal judgments were made with no referent, with a female referent, or with a male referent. Group judgments were made with no referent or with a male referent. A group comparison to the female in-group would have been nonsensical, but to maintain the integrity of the factorial design, the referent was working women 25 years ago. One such item read: "Overall, working women are discriminated against/treated unfairly on the job compared to 25 years ago." Given the improvements in women's employment experiences over this period of time, we expected that this referent would produce less reported discrimination than the group/no-referent condition; thus, the PGDD was not expected to occur in this in-group-referent condition.

PROCEDURE

Female employees at suburban shopping centers (e.g., malls and village centers) in the metropolitan Chicago area were approached by a female experimenter and asked to assist university researchers in a study of job satisfaction. Participants completed a brief, single-page questionnaire and were assured that their responses would be used solely for research purposes. To ensure anonymity, participants were provided with a folder that contained a manila envelope. After completing the questionnaire, each participant placed her survey in the envelope marked "Completed Questionnaires" and handed the folder to the experimenter. The purpose of the research was explained to those participants who desired to be debriefed. Participants were also given the opportunity to receive a written summary of the results of the experiment following its completion.

Results and Discussion

An overall summary measure of discrimination was created by summing the six individual items (Cronbach's $\alpha = .75$). Responses on reverse items were recoded, and higher scores on the summary scale indicated greater levels of perceived discrimination. Overall discrimination was then assessed using a 2 (focus: personal vs. group) \times 3 (referent: no-referent vs. in-group-referent vs. out-group-referent) analysis of variance (ANOVA). The PGDD was replicated, as expected: Participants gave higher overall ratings of group-based discrimination ($M = 2.99$, $SD = 0.72$) than of personal discrimination ($M = 2.42$, $SD = 0.67$), $F(1, 169) = 33.35$, $p < .001$, $f = 0.17$. The main effect for referent also was reliable, $F(2, 169) = 9.17$, $p < .001$, $f = 0.10$, as was the interaction between focus and referent, $F(2, 169) = 3.05$, $p < .05$, $f = 0.03$. To examine this interaction further, planned comparisons were performed. Cell means are presented in Figure 1.

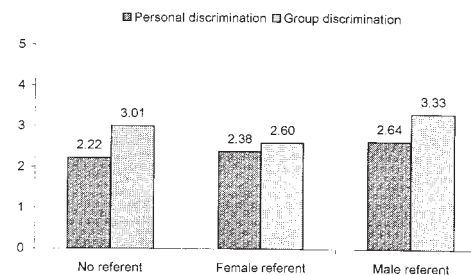


Figure 1 Ratings of discrimination as a function of focus and referent, Experiment 1.

We predicted that three patterns would emerge if the comparison mechanism contributed importantly to the PGDD. First, we expected that the discrepancy would emerge when comparing the personal and group judgments within the no-referent condition. This was indeed the case: In the no-referent condition, ratings of group discrimination ($M = 3.01$, $SD = 0.73$) were higher than ratings of personal discrimination ($M = 2.22$, $SD = 0.63$), $t(169) = 2.55$, $p < .01$.

Second, if participants in the no-referent condition spontaneously retrieved in-group comparison standards for personal judgments, such judgments should be identical when the in-group is explicitly specified but elevated when the out-group is specified. As expected, the first contrast was not significant ($M = 2.22$, $SD = 0.63$ vs. $M = 2.38$, $SD = 0.70$, respectively), $t(169) = .90$, *ns*, but the second contrast was reliable ($M = 2.22$, $SD = 0.63$ vs. $M = 2.64$, $SD = 0.66$, respectively), $t(169) = 2.38$, $p < .05$.

Third, if participants in the no-referent condition spontaneously retrieved an out-group referent when making group judgments, then such judgments should be identical to group judgments in the out-group-referent condition but should be lower when the referent is working women 25 years ago. Both contrasts confirmed our predictions. Group/no-referent judgments ($M = 3.01$, $SD = 0.73$) did not differ from group/out-group-referent judgments ($M = 3.33$, $SD = 0.70$), $t(169) = 1.73$, *ns*, suggesting that participants did spontaneously recruit an out-group referent when reporting group-level discrimination in the no-referent condition. Group/in-group-referent judgments ($M = 2.60$, $SD = 0.54$) were reliably lower than group/no-referent judgments ($M = 3.01$, $SD = 0.73$), $t(169) = 2.44$, $p < .05$.

However, one aspect of the pattern of data did not support the comparison explanation for the PGDD. If such a mechanism accounted completely for the PGDD, then we should have seen a robust PGDD in the no-referent condition only, with the effect eliminated

entirely when a referent (either in-group or out-group) was explicitly specified. The predicted pattern occurred in the in-group-referent condition, in which personal and group ratings did not differ reliably ($M = 2.38$, $SD = 0.70$ vs. $M = 2.60$, $SD = 0.54$, respectively), $t(169) = 1.33$, *ns*, but the PGDD remained reliable in the out-group-referent condition ($M = 2.64$, $SD = 0.66$ vs. $M = 3.33$, $SD = 0.70$, respectively), $t(169) = 3.92$, $p < .01$.

Although the present results generally supported the comparison explanation, one aspect indicated that comparison processes account only for part and not all of the PGDD variance. Specifically, the women in our sample still voiced greater discrimination at the group than the personal level even when they were explicitly focusing on employed men for both judgments. This finding suggests that other mechanisms operate in tandem with comparison-based processes.

EXPERIMENT 2

In the second experiment, we evaluated the possibility that the discrepancy may be an example of the “better-than-average” effect, that is, the tendency to evaluate oneself more favorably than others (Alicke, Klotz, Breitenbecher, Yurak, & Vredenburg, 1995). Previous research has demonstrated that people maintain unrealistically positive images of themselves on both trait and behavior ratings. Moreover, research on the “illusion of unique invulnerability” (e.g., Perloff & Fetzer, 1986) and “unrealistic optimism” (e.g., Weinstein, 1980) (special cases of the better-than-average effect) indicates that people see themselves as less likely than average to experience negative events and more likely than average to experience positive events. (For a review of self-other biases, see Hoorens, 1993.)

The notion that the PGDD might be a special case of the better-than-average effect is supported by research conducted by Taylor and his colleagues (1990). Interestingly, the study was designed to discount one of the proposed cognitive explanations mentioned earlier, namely, that people rely on an additive “group-means-more” strategy when reporting their perceptions of discrimination. Participants were South Asian and Haitian immigrant women in Montreal who were asked about both discriminatory and privileged treatment on the basis of race, culture, newcomer status to Canada, and sex. Supporting their past research, Taylor et al. found that these women exhibited the typical PGDD, rating group experience with discrimination higher than personal experience with discrimination on all four measures. However, the opposite pattern emerged regarding privileged treatment on three measures. That is, these women reported more privileged treatment at the personal level than at the group level. Taylor concluded, as a result, that the discrepancy does not emerge from reli-

ance on an additive strategy.¹ More important for the present research, these results exactly parallel the results reported in studies of unrealistic optimism and the better-than-average effect.

The better-than-average effect has been demonstrated on trait ratings, behavior ratings, items relating to depression, judgments about the likelihood of conforming to social norms, and perceptions of risk for misfortune (see Alicke et al., 1995, for a review). The effect is exacerbated when people rate traits that are perceived as relatively controllable and when they can provide their own definitions of ambiguous trait dimensions. The effect is diminished when people are given information that indicates that the comparison target is no worse-off than themselves on the comparison dimension.

Several explanations for these patterns of findings have been cognitive in nature. Perloff and Fetzer (1986), for example, forwarded an “availability of information” interpretation to explain how the bias is diminished when the comparison other is familiar to the respondent. More recently, Alicke and colleagues (1995) refined this perspective and proposed an “individuation” explanation: Certain comparison others are more individuated—or in our terms, more informationally complex—in the sense that the individual has better-elaborated knowledge of them than of others. The more individuated the comparison other, then, the smaller the discrepancy between the respondent’s knowledge of the self and of the other and the smaller the bias. Alicke et al. reported eight studies in which participants were asked to compare themselves to either the average college student or to a specific student. Across the studies, they varied the degree of individuation in the specific target through instructions to rate “the person sitting next to you” or through the use of still photos, transcribed conversations, videotaped conversations, live interactions that the participant witnessed, or even live interactions that the participant engaged in. They also asked participants in some cases to make trait ratings and in other cases to make comparative risk judgments about the likelihood of experiencing particular life events. Alicke et al. demonstrated that individuation—of all of these types—led to a reduction in the better-than-average effect in all eight of the studies. Moreover, the assertion that the effect is not motivational in nature was supported by evidence that the effect persisted under conditions of cognitive load when motivational processes presumably would have been less likely to operate.

In terms of the informational complexity hypothesis, eliminating the PGDD would necessitate equating the degree of informational complexity in each of the comparison targets. In the typical assessment of perceived personal and group discrimination, the discrimination

discrepancy may emerge because of a discrepancy in the degrees of informational complexity inherent in the targets. First, the self, being highly individuated and well-elaborated in memory, provides information that would reduce one's own perceived vulnerability to discrimination (e.g., memories of subjectively fair or just experiences). In contrast, such information may not be available for judgments about the relatively simplified group, leading to higher estimates of group discrimination in general. (The direction of this effect may be exacerbated by media coverage of instances of discrimination against other in-group members; see Taylor et al., 1994.)

Note, however, that the results of Experiment 1 suggest that both the personal and group discrimination ratings are relative judgments involving targets that themselves differed in individuation. That is, ratings of personal discrimination are typically made relative to members of the in-group, whereas ratings of group discrimination are typically made relative to a salient out-group. To this point, we have discussed relative informational complexity between personal and group judgments. However, the results of Experiment 1 indicate that there are different degrees of informational complexity even within personal judgments and within group judgments.

This rationale may suggest a reason for the Experiment 1 finding that specification of the comparison referent did not reliably eliminate the emergence of the discrepancy in the male-referent condition. First, we argue that the self is characterized by the greatest degree of informational complexity in that it possesses a rich store of knowledge and memories of personal experiences. We argue further that, for women, the male out-group is characterized by the least degree of informational complexity because it excludes the self (see Smith & Henry, 1996). Finally, the female in-group is characterized by an intermediate degree of informational complexity because it includes the self but also abstract others. Recall that, in the male-referent condition, the discrepancy occurred despite higher ratings of personal discrimination relative to the no-referent condition. The cause for this unexpected finding may be the relative informational complexity in the personal and group judgments. More specifically, the personal discrimination rating involved a comparison between the self and men as a group, which should have produced low estimates of relative discrimination because the self is highly complex but the referent "men as a group" is quite simplified. The group discrimination rating involved a comparison between women as a group and men as a group. The target "women as a group" is more informationally complex than the referent "men as a group" because "women as a group" includes the self. However, when estimating the relative likelihood of discrimination for

the self versus women as a group, the target of "women as a group" continues to be less informationally complex than the self. Thus, relative estimates of discrimination were larger in the group than in the personal condition, producing the PGDD despite the explicit specification of the same out-group referent in each case.

Of course, the preceding analysis of the PGDD is largely speculative and, thus, requires an empirical test, which we conducted in Experiment 2. As a preliminary examination of the plausibility of our hypothesis, however, we conducted a pilot test. First, 28 undergraduates provided ratings of personal and group discrimination and indicated the comparison referent that they used for each judgment. Supporting the reasoning for the first experiment, 21 participants (75%) reported different comparison referents for personal and group discrimination ratings. We also coded the pairs of referents in terms of their relative information complexity. Of the 28 participants, 17 (61%) provided referent pairs whose relative informational complexity related to the PGDD in the predicted manner: In 12 cases (43%), the discrepancy emerged and the higher rating of discrimination was associated with the less complex referent; in 5 cases (18%), the discrepancy did not emerge but the spontaneously chosen referents also did not differ in their informational complexity. Only 5 participants (18%) provided referent pairs in which the higher ratings of discrimination were associated with the more complex referent, and in only 2 cases (7%) did the discrepancy emerge despite the use of the same target for personal and group judgments. Thus, 17 of the 24 cases provided support for the informational complexity hypothesis, and a test of proportion indicated that this pattern was reliable ($z = 2.06$, $p < .05$, two-tailed). (Four participants provided referent pairs that could not be coded in a straightforward manner.)

Second, we attempted to independently assess the perceived informational complexity of the self compared to the average group member and the group as a whole. The same participants, after some intervening tasks, estimated how detailed their knowledge was of each target, how confidently they could predict the behavior of each target, and how easily they could imagine each target. These ratings were averaged and the analysis indicated, as predicted, that participants attributed greater complexity to the self ($M = 9.37$ on a scale from 0 to 10) than to both the average group member ($M = 4.49$, $q = 11.53$, $p < .01$) and to the group as a whole ($M = 4.80$, $q = 10.81$, $p < .01$), who did not differ in their perceived complexity ($q = 0.72$, *ns*), overall $F(2, 62) = 38.59$, $p < .001$.

These tests provided some preliminary support for the informational complexity hypothesis and provided a basis for a second experiment. The second experiment

adapted procedures from the research of Alicke and his colleagues (1995), which suggests that the magnitude of the better-than-average effect depends on the degree of individuation (or, alternately, the informational complexity) in the comparison: Whereas the self is seen as less vulnerable to negative life events relative to the average group member (a concrete-abstract comparison), this bias is eliminated when the self is compared to a specific group member (a concrete-concrete comparison) such that the specific referent is seen as equally invulnerable. Moreover, the self is seen as more likely to experience positive life events when the target of comparison is the average group member but not when the target is a specific other.

Female participants estimated the vulnerability of themselves, a specific female student, the average female student, and female students as a group to discrimination. These estimates permitted the investigation of the hypothesis that the PGDD, as an example of the more general better-than-average effect, is a function of the level of informational complexity in the comparison.

Likelihood estimates for the self and three other targets were intended to permit the assessment of six discrimination discrepancies: self-specific other, self-average other, self-group, specific other-average other, specific other-group, and average other-group. We predicted that if the PGDD is, in fact, a function of the relative degree of informational complexity of the comparison targets, then targets at the same level of complexity should yield nonsignificant discrimination discrepancies. That is, both the concrete-concrete comparison of self-specific other and the abstract-abstract comparison of average other-group were expected to yield no significant differences in the perceived likelihood of discrimination. In contrast, the remaining four concrete-abstract comparisons were expected to yield significant discrepancies, as found in previous research.

Method

PARTICIPANTS

Participants were 94 female introductory psychology students at the University of Western Ontario who participated for course credit. The mean age was 21.35 years.

PROCEDURE

Participants completed the experiment as part of a larger testing session. For the purpose of this experiment, participants completed two questionnaires in which they estimated the likelihood of experiencing 10 life events (5 positive and 5 negative) for two of four possible targets: themselves, a specific same-sex classmate (concrete comparison), the average student of their sex (individual abstract comparison), and students of their

sex as a group (group abstract comparison).² Participants estimated the likelihood of all 10 events for one target, then the second. All estimates were made along 11-point scales from 0 (*not at all likely*) to 10 (*extremely likely*). Immediately after completing these questionnaires, participants were fully debriefed regarding the experimental hypotheses.

Likelihood estimates. Of the 10 life events, 9 (5 positive and 4 negative) were selected because past research has demonstrated that they evoke an optimistic bias in college students (e.g., Weinstein, 1980) and were used as filler items to distract participants from the true purpose of the experiment. The final event—being discriminated against on the basis of sex—constituted the focus of the experiment and permitted the testing of hypotheses regarding the PGDD.

Results and Discussion

As in past studies, the discrepancy was calculated as the difference between the two relevant comparisons. A multivariate analysis of variance (MANOVA) was conducted to determine whether the magnitude of the 10 likelihood discrepancies varied as a function of the comparison targets. The analysis yielded a reliable multivariate main effect for comparison, $F(50, 465) = 2.12, p < .001, f = 0.19$. Of importance, the univariate analyses also revealed a reliable main effect for comparison on judgments of the perceived likelihood of discrimination, $F(5, 98) = 3.32, p < .008, f = 0.15$.

Our primary hypothesis was that greater discrepancies would emerge for comparisons involving targets at different levels of informational complexity relative to comparisons involving targets at similar levels of complexity. To investigate this, we next combined the four different comparisons (self-average other, self-group, specific other-average other, and specific other-group) into one group and the two similar comparisons (self-specific other, average other-group) into another. Planned contrasts revealed that, as hypothesized, the magnitude of the discrimination discrepancy was reliably larger in the different comparisons ($M = 0.81, SD = 1.50$) than in the similar comparisons ($M = -0.09, SD = 1.49$), $t(63) = 2.86, p < .006$.

Finally, because we made hypotheses about the reliability of each of the six discrimination discrepancies, we conducted further planned comparisons to assess whether the components of each discrepancy differed significantly from each other. The pattern of data provided support for the hypotheses. As Figure 2 indicates, when both targets in the comparison were relatively similar in informational complexity (i.e., the self-specific other comparison and the average other-group comparison), the discrimination discrepancy did not emerge: Ratings of discrimination against the self ($M = 4.45, SD =$

2.06) did not differ from ratings of discrimination against a specific female classmate ($M = 4.45$, $SD = 1.57$), $t(19) = 0$, *ns*; similarly, ratings of discrimination against the average female student ($M = 5.62$, $SD = 1.33$) did not differ from ratings of discrimination against female students as a group ($M = 5.38$, $SD = 1.45$), $t(12) = .54$, *ns*. Both of these patterns were predicted.

In contrast, the discrimination discrepancy did emerge for three of the four concrete-abstract comparisons in which the targets were relatively dissimilar in informational complexity. Participants reported greater discrimination directed at female students as a group ($M = 5.93$, $SD = 1.14$) than at themselves personally ($M = 4.71$, $SD = 1.98$), $t(13) = 2.52$, $p < .05$, and greater discrimination directed at the average female student ($M = 5.29$, $SD = 1.65$) than at themselves personally ($M = 4.92$, $SD = 1.53$), $t(23) = 2.39$, $p < .03$, replicating the typical PGDD. Participants also reported greater discrimination against female students as a group ($M = 5.59$, $SD = 1.37$) than against a specific female classmate ($M = 4.06$, $SD = 1.89$), $t(16) = 4.08$, $p < .001$, as predicted. The predicted discrepancy for the specific other-average other comparison, however, was not reliable, $t(16) = .86$, *ns*, although the means were in the predicted direction ($M = 3.82$, $SD = 2.01$ for the specific other and $M = 4.18$, $SD = 1.81$ for the average other).

The second experiment thus provided support for the notion that the PGDD is at least partially cognitive in nature. That is, we demonstrated that the magnitude of the discrepancy varies as a function of the relative levels of informational complexity in the comparison targets. When comparisons were made between targets with different degrees of informational complexity, the traditional PGDD emerged. However, when comparisons were made between targets that were similarly complex, the discrepancy disappeared.

GENERAL DISCUSSION

The genesis of our research derived from the repeated finding that individuals, regardless of objective economic or social deprivation, often report greater perceived discrimination against their in-group than against themselves personally as members of that group (e.g., Crosby, 1984; Crosby, Pufall, Snyder, O'Connell, & Whalen, 1989; Dion, 1986; Dion & Kawakami, 1996; Dubé & Guimond, 1986; Moghaddam, Stolkin, & Hutcheson, 1997; Olson et al., 1995; Ruggiero & Taylor, 1995, 1997; Taylor & Dubé, 1986; Taylor et al., 1990, 1994, 1996). If the sample of such individuals is representative of the group as a whole, then these perceptions represent a statistical impossibility and some psychological mechanism must be at work to create the bias. The purpose of the research reported in this article was to provide evidence that the psychological mechanisms

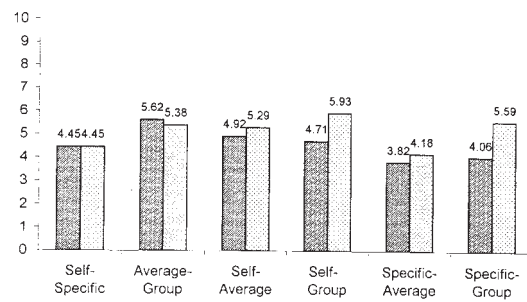


Figure 2 Perceived likelihood of discrimination as a function of target individuation, Experiment 2.

underlying the bias are, at least in part, cognitive in nature. To that end, we conducted two experiments designed to investigate the relation between the PGDD and two variables: the choice of comparison referent and the informational complexity of the targets.

In the first experiment, we tested and found some support for the idea that the effect emerges from a divergence in the comparison standards on which personal and group judgments are based. We reasoned that when people are asked to report on perceived discrimination in the absence of any explicit standards of comparison, they would spontaneously recruit in-group referents when describing discrimination at the personal level but would recruit out-group referents when describing discrimination at the group level, resulting in a discrepancy between judgments of personal and group discrimination. We hypothesized, further, that if the referents were explicitly specified, such that both personal and group judgments were based on the same referent, the discrepancy would disappear. Indeed, when no referent was specified, working women in our sample exhibited the typical PGDD; however, when working women were asked to compare themselves and women as a group with women 25 years ago, there was no discrepancy between reports of personal and group discrimination.

However, the women in our sample still reported greater discrimination against their group than against themselves personally when they were explicitly focusing on employed men for both judgments. To account for the robustness of the discrepancy under this condition, we proposed that the magnitude of the discrepancy varies as a function of the relative informational complexity in the comparison targets. When female students made comparisons between targets with different degrees of informational complexity (e.g., when comparing themselves to the average female student or another specific female student to female students as a group) the tradi-

tional PGDD emerged. In contrast, when female students made comparisons between targets with similar degrees of informational complexity (e.g., when comparing themselves to another specific female student or the average female student to female students as a group) the discrepancy disappeared.

We suggest that, taken together, our findings provide support for the notion that the PGDD is at least partly cognitive in nature. We have shown that providing cues that increase the informational complexity of the comparisons—whether in the form of explicit comparison referents or in the form of target concreteness—affects reports of both personal and group discrimination, with concomitant changes in the magnitude of the relevant discrepancies. In some cases, these cues may even eliminate the discrepancy. If the emergence of the discrepancy is motivated only by a desire to deny personal experience with discrimination, then changing the nature of the question should not affect the discrepancy because it should not affect the motivation. Nonetheless, we have demonstrated repeatedly that it does influence the discrepancy, suggesting that the role of motivational processes, at the very least, is constrained by the cognitive processes underlying the phenomenon.

To be sure, our findings cannot be used to discount entirely the role of motivational factors in causing the emergence of the PGDD. Moreover, our findings are unable to clearly address the cognition-motivation relation as it applies to the discrepancy. In a review of self-other biases, of which the PGDD may be an example, Hoorens (1993) observes that most biases of this type are self-enhancing and notes that “if self-related biases were caused by non-motivated cognitive errors, then one would expect about as many instances of self-deprecating as of self-flattering biases” (p. 124; see also Weinstein, 1980). Perhaps, following from Hoorens’s discussion, self-enhancing or self-protective motivations constitute the “why” of self-other biases, whereas cognitive processes in terms of encoding and recall constitute the “how.” That is, the motivation to assert control over one’s outcomes (e.g., Ruggiero & Taylor, 1995, 1997) or to avoid taking action against injustice (e.g., Crosby, 1984) may lead individuals to interpret—and thus encode and later recall—instances of discrimination in less threatening ways. Similarly, the motivation to protest injustice against one’s group (e.g., Taylor et al., 1994) may lead individuals to interpret ambiguous behaviors as affronts to the group, with concomitant effects on encoding and subsequent recall. The synergistic relation between motivational and cognitive causes of the PGDD remains to be explored.

In addition to providing evidence for two cognitive mechanisms (comparison referents and informational complexity) that may underlie the PGDD, our findings

have at least two further implications. First, they emphasize the importance of specifying comparison referents or providing appropriate contextual cues in self-report questionnaires. Reported discrimination was found to vary significantly as a function of specifying different standards of comparison and different comparison targets against whom discrimination might be perpetrated. Researchers may obtain less ambiguous findings by ensuring that the intended referent or setting is specified explicitly within the questions asked. Second, these findings direct future attention to the pitfalls of restricted social comparison by members of objectively deprived groups. For example, immigrant women in garment sweatshops may conclude that their situation is not so bad if their social comparisons are restricted to other such mistreated employees. By limiting their comparisons, such women and members of disadvantaged groups are, in a sense, setting themselves up to expect less than they deserve.

NOTES

1. Note that this pattern of findings contradicts the pattern recently reported by Moghaddam, Stolkin, and Hutcheson (1997).
2. Alicke, Klotz, Breitenbecher, Yurak, and Vredenburg’s (1995) study employed a design that allowed participants to make direct comparisons, that is, they were asked to estimate the likelihood of experiencing an event compared to another person. We chose to use indirect comparisons, however, because that is the way in which the personal/group discrimination discrepancy (PGDD) is typically assessed. The better-than-average effect also has been assessed in this way in previous research.

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Received December 31, 1997

Revision accepted August 17, 1998