

Self-Attention and the Egocentric Assumption of Shared Perspectives

ALLAN FENIGSTEIN

Kenyon College

AND

DOMINIC ABRAMS

University of Kent

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Five studies looked at the relationship between self-directed attention and the egocentric assumption that others think in the same way as the self. In each study, subjects were asked to make two different judgments, one based on their own reasoning and another indicating what they thought others would think. Self-attention was examined both as an experimental manipulation and as a dispositional variable. Each study found that as self-focus or public self-consciousness increased, so did the assumption of shared perspectives. Discussion focused on the relationship between self-focused attention and self-centered thought. © 1993

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Self-attention has been studied largely in terms of its effects on the individual's *own* thoughts and behaviors; it has been shown, for example, to make one's self-schema more accessible (e.g., Carver & Scheier, 1981) and to facilitate a comparison of personal behavior to relevant standards (e.g., Duval & Wicklund, 1972). These self-related processes, however, may also have implications for the perception of *others*, particularly with respect to the assumptions that are made about what others are thinking.

When attempting to conceptualize or take account of other's thoughts

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or behaviors, there is a common tendency to overestimate the degree to which others think or act in the same way as the self, a finding known as the false consensus effect (Marks & Miller, 1987; Mullen, Atkins, Champion, Edwards, Hardy, Story, & Vanderklok, 1985; Ross, Greene, & House, 1977). For example, those who favor capital punishment, compared to those in opposition, estimate a wider consensus for the death penalty among their peer group (Sherman, Chassin, Presson, & Agostinelli, 1984a). This assumption of consensus has often been explained in terms of either availability mechanisms or conformity pressures, both of which have been related to self-attention.

The availability explanation argues that because one's own thoughts or behaviors are easily imagined or recalled, relative to other alternatives (e.g., Markus, 1977; Markus, Smith, & Moreland, 1985), those same self-qualities are more likely to be attributed to or projected onto others, resulting in consensus estimates that are egocentrically biased (e.g., Orive, 1988; Ross *et al.*, 1977). Accordingly, as self-knowledge becomes more accessible, the intrusion of the self's thinking on judgments of others' thoughts may become even greater. Marks and Duval (1991), for example, found that consensus estimates for one's own choices were higher for persons who were asked to think about their preferred activity, compared to those who thought about a nonpreferred alternative. Similarly, self-directed attention, by making one's own preferences more accessible (e.g., Hull & Levy, 1979; Hull, Van Treuren, Ashford, Proppom, & Andrus, 1988), should also increase the extent to which judgments about others are self-generated (see Nisbett & Ross, 1980).

An alternative approach, emphasizing conformity, argues that when making consensual judgments, persons may first look to the social environment to identify a normative standard, and then derive their own position from that standard; as a result, a false consensus is created (e.g., Goethals, Allison, & Frost, 1979; Marks, Graham, & Hansen, 1992; Sherman, Presson, Chassin, Corty, & Olshavsky, 1983). This process may also be enhanced by self-attention, which has been shown to heighten sensitivity to the expectations of others and increase conformity to their views (e.g., Carver & Humphries, 1981; Froming & Carver, 1981).

Thus, the present research hypothesized that under self-attention conditions, when the self is more likely to be used as a basis for making judgments about others, or when the views of others are more likely to influence self-judgments, the assumption of agreement between one's own position and that of others' should be heightened.

STUDY 1

The first study examined the effect of self-attention, experimentally induced with the use of a videotape camera, on the perception of a false consensus. Subjects were first asked to judge the percentage of peers

adopting a particular position on each of several items and then were asked to provide their own position on those items. It was hypothesized that the camera would direct attention toward the self, and result in heightened estimates of peer consensus relative to a no camera control condition.

Method

Subjects. The subjects were 22 female and 18 male undergraduates from a large American university who participated individually in the research in order to earn extra credit in their introductory psychology course. Gender had no effect on the dependent measures.

Procedure. The procedure was adapted from the Ross *et al.* (1977) second study. Subjects were presented with a list of 24 items, each containing a pair of mutually exclusive categories (A or B), such as "shy" or "not shy," "prefer brown bread" or "prefer white bread," and "frequently depressed" or "not frequently depressed." They were first asked to estimate the percentage of their peers who fit into each category and, following a brief delay, were then asked to categorize themselves with respect to each item. (This order of judgments maximizes the possibility of a false consensus effect, according to Mullen *et al.*, 1985). Half the subjects were told (in advance and with their consent) that the experiment would be videotaped (as part of a demonstration training film for psychology graduate students), and filled out the response sheets after the camera was turned on by the experimenter, who then left the room. For the control subjects, the camera was present, but the lens cap was left on and no mention was made of videotaping. Following completion of the items, subjects were debriefed. No subject voiced any knowledge of the hypothesis or suspicion concerning the procedure.

Results and Discussion

The false consensus effect predicts that subjects who categorize themselves as A will estimate the percentage¹ of peers in that category to be greater than subjects who place themselves in the alternative B category (cf. Ross *et al.*, 1977). (Estimates of consensus are presented in Table 1).² A two-between (camera or no camera \times own position: A or B) ANOVA on consensus estimates for position A was carried out separately for each item. The only consistently significant effects were for the position variable, indicating that the false consensus effect was quite robust: for the great majority of items, subjects who placed themselves in A, compared to those in B, estimated the percentage of other college students in A to be significantly greater (see the "overall FCE" column in Table 1).

¹ For all studies involving consensus estimates, the percentage figures were divided by 100 and arcsine transformed, but the results were not substantively different from those using untransformed data. Given that the percentages were subjective estimates rather than actual proportions, it seemed reasonable to present the untransformed results.

² Four of the original 24 items were excluded from the analysis because there were so few subjects adopting one of the positions that comparisons between conditions would not be meaningful. These items were also eliminated from the analysis because when a real consensus exists, as indicated by a significant majority of the subjects choosing one of the alternatives, the meaning of a false consensus is obscured (see Ross *et al.*, 1977).

TABLE 1
 MEAN ESTIMATES OF CONCENSUS (ON POSITION A) AS A FUNCTION OF SELF-CATEGORIZATION
 AND SELF-ATTENTION

Questionnaire item (Position A)	Self-focused attention						<i>F</i> value of over- all FCE)
	Low			High			
	Self-categorization: A	B	(<i>t</i> value of FCE)	A	B	(<i>t</i> value of FCE)	
Shy	42.8	35.0	(1.03)	49.0	34.3	(2.08)**	(4.30)**
Politically Liberal	65.6	48.6	(3.03)*	63.2	50.0	(3.05)*	(18.18)*
Support Women's Lib	65.6	53.2	(1.72)***	59.3	40.8	(1.85)**	(6.26)**
Prefer Brown Bread	39.4	47.5	(-1.33)	49.4	35.0	(2.28)**	(.51)
Prefer to be Alone	33.8	28.1	(.60)	32.0	18.0	(2.66)*	(3.69)**
Prefer City Life	68.6	63.1	(.67)	78.0	56.0	(3.05)*	(5.55)**
Prefer Basketball	39.3	25.0	(1.67)***	49.2	36.1	(1.67)***	(5.59)**
Prefer Italian Movies	44.4	45.5	(- .26)	52.7	44.4	(2.18)**	(1.82)
Difficult Temper	50.0	42.9	(.64)	52.8	31.4	(2.34)**	(5.63)**
Frequently Depressed	53.3	43.2	(.93)	46.3	29.7	(1.53)***	(2.97)***
Think About Dying	62.4	35.0	(2.39)**	74.9	27.3	(3.67)*	(18.89)*
Watch a Lot of TV	82.1	66.9	(1.76)**	76.7	56.4	(1.86)**	(6.53)**
Play Tennis Often	31.0	44.3	(-1.21)	41.3	29.4	(.91)	(.04)
Attend Religious Services	48.7	51.0	(.25)	45.0	43.9	(.13)	(.00)
Donate Blood	35.0	30.8	(0.00)	40.7	33.5	(.78)	(.56)
Phone Long Distance	79.0	65.0	(1.26)	75.4	57.5	(1.87)**	(4.96)**
Favor Death Penalty	52.5	30.6	(3.12)*	47.1	32.5	(1.73)***	(11.47)*
Oppose Nuclear Freeze	53.8	40.8	(1.20)	49.2	34.4	(1.72)***	(4.44)**
Support Abortion	66.5	49.5	(1.88)**	67.3	48.3	(2.52)**	(9.36)*
Oppose Legalized Marijuana	46.4	20.8	(2.16)**	42.9	25.6	(1.94)**	(8.33)*

* $p < .01$.

** $p < .05$.

*** $p < .1$.

To examine whether the false consensus effect was enhanced by self-directed attention, individual items were subjected to a metaanalysis, involving a focused comparison of effect sizes (cf., Mullen & Smith, 1990) between the videocamera and control conditions. This analysis first computes two separate *t*-tests, comparing consensus estimates as a function of own position, for each item: one among the low self-attention group and the other among the high group (see the two "FCE" columns in Table 1). The focused comparison then provided a composite across items that contrasted the magnitude of the false consensus effect for the two groups of subjects. This analysis revealed a significantly larger effect in

the camera condition than in the no camera condition, $Z = 2.35$, $p < .01$; as predicted, self-attention increased subjects' assumptions that the attitudes, characteristics, and behavioral preferences of their peers were similar to their own. The analysis also suggested that the moderating effect of self-attention on the perception of a false consensus, identified when collapsing across items, was not due to a few unusual or unique items,³

STUDY 2

Whereas the first study investigated the effects of experimentally manipulated self-attention on the perception of an exaggerated consensus, the second study examined the role of dispositional self-consciousness, in an attempt to increase the plausibility and generalizability of a self-attention interpretation. Fenigstein, Scheier, and Buss (1975) conceptualized self-focused attention in terms of relatively stable personality tendencies, termed self-consciousness, and developed a scale to measure those dispositions. Factor analyses of the Self-Consciousness Scale yielded both private and public self-consciousness factors: Public self-consciousness is defined in terms of an awareness of the self as a social object to others, and a sensitivity to the (real or imagined) expectations of others (Fenigstein, 1979; Fenigstein *et al.*, 1975; Carver & Scheier, 1987); private self-consciousness is directed toward an awareness of the covert aspects of the self, such as inner thoughts and feelings. There is considerable evidence for the construct and discriminant validity of these factors (see Abrams, 1988; Carver & Scheier, 1981; Fenigstein, 1987), and both dimensions were examined in the present research. Study 2 also differed from the previous one in that items used for the assessment of perceived consensus were exclusively attitudinal.

Method

Subjects. The subjects were 32 female and 24 male undergraduates at a small American liberal arts college who participated individually in the research in order to earn extra credit

³ In addition to the between-subjects analysis reported in the text, the experimental hypotheses were also tested using a within-subjects analysis. Two mean consensus estimates on position A were generated for each subject: one collapsing across those items on which the subject's own choice was A; the other collapsing across items on which B was the subject's choice. Estimated percentage of peers choosing position A were analyzed using a one-between (camera or no camera), one-within (agreement or disagreement with own choice) MANOVA. The false consensus effect was again strong: Mean estimates of consensus for subjects' own position ($M = 54.9$) were significantly greater than estimates for the alternative position ($M = 40.3$), $F(1, 38) = 54.33$, $p < .001$. A significant interaction, $F(1, 38) = 8.62$, $p < .006$, confirmed that the videocamera moderated the false consensus effect: The tendency to perceive a greater consensus for one's own position, compared to the other position, was heightened by self-attention.

in their introductory psychology course. Gender had no significant effect on the dependent measures.

Procedure. Several weeks prior to the experiment, all subjects completed the Self-Consciousness Scale (Fenigstein *et al.*, 1975) as part of a battery of questionnaires. During the experiment, subjects were presented with a list of 20 attitudinal statements, such as "The basic nature of people is good rather than bad" or "The profits made by oil companies are justified by the risks involved," and were first asked to estimate (on a 0 to 100% scale) the percentage of their peers who they thought would agree with each statement. After a brief delay, subjects were presented with the identical list of statements and were asked to make a simple dichotomous choice, indicating whether they personally agreed or disagreed with each statement. Following completion of the items, subjects were debriefed. No subject voiced any knowledge of the hypothesis or suspicion concerning the procedure.

Results

Subject's own attitudinal responses were reasonably well distributed for each of the 20 statements, and neither public nor private self-consciousness had any effect on subject's own attitudes; thus data for all statements were included in the analysis. Estimates of the percentage of peers who were seen as espousing the same attitude as the subject constituted the dependent measure of perceived consensus. Thus, if the subject agreed with the attitudinal statement, the dependent measure was the percentage of peers estimated by the subject to agree with the statement; if the subject disagreed with the statement, the dependent measure was 100% minus the subject's peer estimate. A summary consensus estimate, obtained by collapsing across all 20 items, showed that, consistent with the false consensus effect, subjects significantly overestimated consensus for their view. Compared to a rational mean estimate of 50%, subjects assumed that 67% of their peers would agree with their own attitudes, $t(55) = 16.95$, $p < .001$. These summary estimates were then simultaneously regressed on both private and public self-consciousness scores. The overall main effect for self-consciousness was significant, $R^2(2, 53) = .153$, $F = 4.81$, $p < .02$. This effect, however, was almost entirely due to public self-consciousness, which had a significant Beta value of .399, $T = 3.04$, $p < .004$; the contribution of private self-consciousness (Beta = $-.032$) was nonsignificant.

Discussion

Study 2, by conceptually replicating the findings of the first study, using a dispositional measure of public self-consciousness rather than an experimental manipulation, offered converging evidence of a relationship between self-focus and the assumption of agreement with peers. As self-consciousness increased, so did the tendency to overestimate consensus for one's own attitude. Although causality could not be determined in this study because self-consciousness was an individual difference variable, the paradigmatic parallels with Study 1, in which self-attention was experimentally induced, make it reasonable to infer that similar causal se-

quences were operating in both studies. This study also revealed that the exaggeration of a consensus for one's own view was moderated by the public dimension of self-consciousness. To the extent that this false consensus provides a (psychological) source of social validation for one's own position (e.g., Holtz & Miller, 1985; Marks, Graham, & Hansen, 1992), it may be expected that persons who are attentive to the socially relevant aspects of the self would be especially likely to assume similarity between their own views and those of their peers.

STUDY 3

Previous research has consistently shown that false consensus effects tend to be stronger when the subject's own behavioral choice follows the estimate of consensus (as in the previous two studies) than when the sequence of judgments is reversed (Mullen *et al.*, 1985). This difference is consistent with both availability and conformity explanations. When the initial judgment involves personal choices, subjects may be forced to consider the opposing position, thus increasing its availability and raising estimates of consensus for the alternative position (e.g., Mullen & Hu, 1988). It may also be argued that conformity pressures are lessened when one's own opinion is generated first. In the absence of any expectation of having to make judgments about others, the existence of explicit social norms may be less salient than when subjects are first asked to judge their peers' position (see Mullen, Driskell, & Smith, 1989).

The present study tested the generality of self-consciousness as a moderator of the heightened consensus estimates by examining whether this moderation effect would be shown even when the sequence of judgments—own position first, followed by estimates of consensus—was expected to mitigate the perception of a false consensus. This study also differed from the previous ones in that attitudes about a salient social issue, namely AIDS, were examined.

Method

Subjects. The subjects were 14 male and 46 female undergraduates at a British university who participated in the research as part of a course requirement. The dependent measures were unrelated to gender.

Procedure. All subjects were given an extensive questionnaire, which was completed in a group setting. The first section of the questionnaire contained the Self-Consciousness Scale (Fenigstein *et al.*, 1975), together with a set of other instruments unrelated to the present research. The second section of the questionnaire contained measures relating to estimates of consensus. Subjects were presented with statements on a range of personal and political issues, including nine items dealing with the AIDS epidemic, and were asked to express the extent of their own agreement with each statement on an 8-point scale, ranging from "strongly disagree" to "strongly agree." On a separate page near the end of the questionnaire, after some filler materials, each of the AIDS items was presented again, but this time subjects were asked to write down their estimate (from 0 to 100%) of the percentage

of their peers who they thought would agree with each statement. No subject expressed any suspicion during the procedure.

Results

A preliminary principal-components factor analysis of own responses to the AIDS questions revealed that four items—each of which was concerned with a cautious/causal stance toward AIDS-related behavior—loaded significantly ($>.30$) on the first factor, which accounted for 25% of the variance in the full set of responses. These four items were then combined into a reasonably reliable ($\alpha = .70$) composite measure, which served as the basis for assessing perceived consensus.⁴

A summary consensus measure was obtained by computing the mean percentage of estimated peer agreement across the same four items which constituted the own-attitude composite index. Consistent with the false consensus effect, the own-attitude composite index was significantly correlated with the summary consensus measure, $r(50) = .58, p < .001$: as subject's own attitudes became more cautious, estimates of consensual agreement with that attitude increased.⁵

Neither public nor private self-consciousness were significantly related to own attitude ($r = .10, .12$, respectively) or to consensus estimates ($r = .045, -.074$, respectively). Consensus estimates were then regressed on self-consciousness, own attitude, and the product between them; it was expected that the moderating influence of self-consciousness would appear as a self-consciousness by own attitude interaction when predicting consensus estimates. The multiple regression yielded a significant overall main effect for own attitude and public self-consciousness, $R^2 = .124, F(2, 57) = 4.02, p < .03$; own attitude was also significantly related to consensus estimates, $r = .351, t = 2.81, p < .01$. The addition of the critical public self-consciousness by own attitude interaction term resulted in a significant increase in the magnitude of R^2 to $R^2 = .241$ ($F_{\text{change}}(1, 56) = 8.66, p < .005; F_{\text{equation}}(3, 56) = 5.93, p < .001$). Additional analyses indicated that private self-consciousness did not account for a significant amount of variance above the public self-consciousness interaction, regardless of whether private self-consciousness was entered as a

⁴ The five remaining AIDS-related items—which dealt with the severity of the epidemic and discrimination toward its victims—all tended to show considerable skew in the distribution of the subject's own responses, and thus were inappropriate for use in this analysis (see Footnote 2). In addition, the two remaining factors on which these five items loaded accounted for less than 8% of the total variance and had composite alphas of less than .40).

⁵ The existence of a correlation, however, does not necessarily entail a false consensus effect. If own attitudes and estimates all fall on one side of an issue, but differ only in extremity, no such effect can be said to exist. In the present study, however, subjects did differ in their attitude toward AIDS: those holding cautious attitudes estimated that 10.6% more of their peers would be cautious than was estimated by those holding casual attitudes, $F(1, 43) = 8.66, p < .006$.

simple covariate or as a covariate interaction (cf. Hull, Tedlie, & Lehn, 1992).

Discussion

Even when the sequence of judgments made it relatively difficult to obtain a false consensus effect, perceptions of consensus were still heightened as self-consciousness increased. Moreover, in line with findings from Study 2, the tendency to assume peer agreement with one's own view was again associated primarily with the *public* self-focus of attention. Subsidiary analyses served to further illustrate the moderating effects of self-consciousness on the exaggeration of a consensus for one's position. High and low public self-consciousness groups were created by selecting subjects who scored at least one point above or below the median. Among high self-conscious subjects, the relationship between own attitude and consensus estimates was very strong, $r(25) = .83$, $p < .001$, whereas it was nonsignificant among the low group, $r(25) = .16$; these correlations were significantly different from each other, $Z = 3.63$, $p < .001$.

STUDY 4

The next two studies served as a conceptual replication of the previous research by investigating the effects of self-attention, not on the assumption of peer consensus for one's own attitude or preference, but rather on the perceived convergence between one's own causal perspective and that of a single other. In this way, the following studies attempted to extend the relation between self-attention and false consensus thinking beyond attitudinal choices and into the realm of reasoning processes.

The question of shared causal perspectives has direct relevance to a fundamental tenet of attribution theory. The existence of different causal viewpoints on the part of actors and observers has been widely accepted (e.g., Jones & Nisbett, 1971; Nisbett & Ross, 1980). Actors tend to perceive their actions as caused by situational factors, whereas observers tend to attribute the very same behavior to the actor's disposition. However, do actors and observers recognize these differing causal perspectives? Also, with respect to the present research, how does self-attention affect assumptions about the other's causal reasoning?

In the present study, subjects first imagined an encounter between themselves and a friend and were then asked to make causal judgments about the event. Just as false consensus studies look at the relationship between the subject's own position and the position assumed to be held by peers, this study asked subjects to make causal attributions for a given behavior and also to indicate the attributions that the friend would make. The relation between these two judgments provided a measure of the extent to which subjects perceived the other's causal reasoning as similar to their own. Self-attention, manipulated in this study with the use of a

mirror, was expected to heighten the belief that the friend shared the same causal perspective as the subject; in comparison, subjects in the no mirror condition were expected to indicate more of a difference between their own and their friend's judgments of causal responsibility.

Method

Subjects. The subjects were 28 male and 28 female undergraduates from a small American liberal arts college who participated individually in the research in order to earn extra credit in their introductory psychology course. Subjects were randomly distributed into experimental conditions. Preliminary analyses failed to yield any significant effects for gender, and this variable was subsequently ignored.

Procedure. The experiment was described as being interested in the ways in which people explain behavior. Subjects were shown a 7-point attributional scale ranging from "dispositional causes" to "situational causes," and were given a brief description of the meaning of each of those anchor points. Dispositional causes included personal traits or characteristics of the actor; situational causes were described in terms of the circumstances and stimuli (including other persons) in the actor's situation. Subjects were then asked to imagine a scenario in which a same-sex friend was angry with them and were asked two critical questions contained in separate questionnaires. The first question asked: "What would *your friend* think is the most important reason why she/he is angry with you?"; the second asked: "What do *you* think is the most important reason why your friend is angry with you?" Subjects responded to each item using the previously described attributional scale. Half the subjects completed the experiment while seated at a table facing a large wall mirror; for the other subjects, the mirror was covered by a curtain. The presence of the mirror was not mentioned, but a sign on it indicated that the mirror was being used in another study. Following the last task, subjects were questioned about their perceptions of the study, and the nature of the research was described. No subject voiced any suspicion or accurate knowledge of the experimental hypothesis.

Results and Discussion

The extent to which subjects assumed a shared causal perspective was referenced by the correlation between the self's causal judgment and that assumed for the other. In the mirror condition, this measure was very significant, $r(28) = .61$, $p < .01$: as subjects' attributions became more situational, so too did those assumed for the friend. The correlation in the no mirror condition was nonsignificant, $r(28) = .16$; the difference between these correlations was marginally significant, $Z = 1.61$, $p < .08$. An additional measure of assumed agreement between one's own causal thinking and that of the friend was derived by calculating the absolute difference between the subject's two attributional responses. These differences were significantly smaller in the mirror condition ($M = 1.12$) than in the no mirror condition ($M = 1.98$), $F(1, 55) = 5.67$, $p < .02$. Consistent with the previous studies in this series, the present study again found that self-focus heightened the perceived convergence between one's own thinking and that of another, this time with respect to causal reasoning processes.

STUDY 5

Whereas Study 4 looked at causal perspectives with respect to another person's behavior, the present study examined causal perspectives on the subject's own behavior. Previous research has shown that self-attention heightens self-attributions of causal responsibility (e.g., Duval & Wicklund, 1973; Fenigstein & Levine, 1984; Ross & Sicoly, 1979). If, as argued, self-focus heightens the assumption that another's thinking is similar to one's own, then subjects made self-aware should be more likely to assume that others see them as causally responsible for events.

This notion was explored in the context of an experimental paradigm developed by Duval and Wicklund (1973), in which subjects imagine different events involving both the self and another person, and are then asked to make causal attributions for the outcome. In the present research, prior to offering their own causal judgments, subjects were first asked to indicate how they thought the other person in the scenario would make attributions of responsibility. The primary dependent measure was the discrepancy between one's own attributions and those assumed for the other. Public and private self-consciousness, assessed as individual difference variables in this study, were both examined as potential moderators of the perception of shared causal viewpoints.

Method

Subjects. The subjects were 22 female and 18 male introductory psychology students at a large American university who participated individually in the research in order to earn extra course credit. Preliminary analyses found no significant effects for gender. Several weeks prior to the experiment, all subjects had completed the Self-Consciousness Scale (Fenigstein *et al.*, 1975) as part of a battery of questionnaires.

Procedure. The experimenter read 10 different hypothetical scenarios (taken from Duval and Wicklund, 1973, and presented in fixed order) to the subject, who was asked to imagine him or herself and another person in each of the scenarios presented. Five of the scenes involved positive outcomes (e.g., "you've purchased a horse and hired a jockey to ride the horse in a major race. The horse wins") and 5 involved negative outcomes (e.g., "just as you pull out behind a bus that's been stopped for several minutes, the bus begins to move and your vehicles collide"). Each scenario was sufficiently ambiguous so that responsibility for the outcome could be attributed to either the subject or the other person in the situation. Following each description, subjects were asked to indicate how much *the other person* in the scenarios would attribute responsibility to the subject, on a scale of 0 to 100%. The scenarios were then reread in the same order and following each one, subjects this time were asked to indicate how much responsibility *they* would attribute to themselves, on a scale of 0 to 100%. After their last response, subjects were debriefed about the nature and purposes of the experiment.

Results

Following Study 4, the assumption of similarity was operationalized in terms of the absolute difference between the subject's two self-attributive responses (one for the self and one assumed for the other). Pre-

liminary analyses indicated that the effects of outcome valence on this dependent measure were not significant, and so a summary absolute difference score was calculated by collapsing across all 10 scenarios. This summary score was then simultaneously regressed on both private and public self-consciousness scores. The overall main effect for self-consciousness was significant, $R^2(1, 38) = .176$, $F = 8.16$, $p < .007$. However, only public self-consciousness was a significant contributor to this effect, $Beta = -.420$, $T = 2.86$, $p < .007$; the effect for private self-consciousness was nonsignificant. That is, as public self-consciousness increased, the assumed differences between one's own causal judgments and those of the other decreased.

Discussion

This final study conceptually replicated Study 4 in several ways. The previous experiment looked at causal judgments concerning another's behavior; Study 5 examined judgments about one's own responsibility for an event. In Study 4, self-attention was manipulated by the presence of a mirror, whereas the present study looked at self-attention as an individual difference variable. Consistent with other studies in this series, exaggeration of the extent to which others think like the self was associated primarily with *public* self-consciousness.

Although causality could not be determined in this correlational study, given the similarity in paradigms and findings with the previous study, both reason and parsimony suggest an analogous causal relationship between self-consciousness and the assumption of shared causal perspectives. Thus in both studies, it may be argued that self-attention heightened the assumption that others and the self are like-minded.

GENERAL DISCUSSION

Empirical Findings

Five studies demonstrated that self-attention heightened the egocentric assumption that others think and act in ways that are similar to oneself. The first three studies looked at this relationship in the context of the false consensus effect, i.e., the tendency to overestimate the amount of peer consensus for one's own personal attitudes or behavioral preferences. The last two studies examined the perceived correspondence between one's own judgments of causality for events and the assumed judgments of another individual. Although the assessment of shared causal perspectives in the latter two studies involved a novel measure, it was conceptually and operationally related to the well-established false consensus measures used in the earlier studies. That all five studies yielded similar findings offers confirmatory evidence for the validity of this "attribution comparison" measure. In each study, self-attention, whether

experimentally induced using a videocamera (Study 1) or a mirror (Study 4), or measured as a dispositional tendency (Studies 2, 3, and 5), was associated with an increased belief that others were in agreement with one's own position, indicating that this relationship is robust and replicable across different subject populations, different experimental situations, and different sources of self-attention.

Public and Private Self-Attention

Attention to the public or socially perceived aspects of self appeared to be especially relevant to the assumption of shared perspectives. Those studies using dispositional measures of self-attention unambiguously pointed to the importance of public, but not private, self-consciousness in this research. Although the studies using experimental manipulations were indeterminate with respect to the form of self-attention involved, the consistency of effects across all five investigations suggests that public self-focus was operating in those studies as well. This assumption is consistent with the argument that the specific effects of self-focusing manipulations are largely dependent on which self-aspect is most salient in the situation (e.g., Carver & Scheier, 1978; Kernis, Grannemann, Richie, & Hart, 1988; Webb, Marsh, Schneiderman, & Davis, 1989). For example, although mirrors have often been associated with private self-consciousness, Fenigstein (1979) found that when interpersonal issues were made salient, the effects of a mirror paralleled those of public self-consciousness. Similarly, in the present research, where people were asked to imagine others' thoughts, it is reasonable to assume that mirrors had the effect of increasing awareness of the public self.

Why is public, but not private, self-attention related to the assumption that others think in the same way as the self? One possibility may be that public self-attention is explicitly defined in terms of social awareness, i.e., a sensitivity to others' thoughts about the self (Carver & Scheier, 1987; Fenigstein, 1979; Fenigstein *et al.*, 1975; Sheldon & Johnson, 1993). Private self-attention, on the other hand, involves little awareness or recognition of the thoughts of others (e.g., Carver & Scheier, 1981; Froming & Carver, 1981). To the extent that perceiving others as being in agreement represents an attempt to validate one's own position by invoking the views of others (e.g., Holtz & Miller, 1985; Sherman, Presson, & Chassin, 1984b), attention to the public aspects of the self may be especially germane.

It should be noted that although public self-attention involves an awareness of oneself as a social object to others, that does not necessarily imply accurate knowledge of others' thoughts. Instead, the present research suggests that persons who are publicly self-focused tend to be egocentrically biased, i.e., biased by their own thinking, in the inferences they make about the thoughts of others (see Sandelands & Stablein, 1986).

Thus, it may be argued that public self-consciousness involves both a focus on oneself as an object to *others*, as well as a heightening of the salience of one's *own* thoughts.

Process

The present series of studies offered repeated demonstrations of the moderating effect of self-attention on the assumption of consensus for one's own position. However, the process underlying that effect has not been identified. There are at least two possibilities that are consistent with the present findings: As self-attention heightens the accessibility of one's own thoughts (e.g., Agatstein & Buchanan, 1984) those thoughts may be more likely to be projected onto others (cf. Nisbett & Ross, 1980); alternatively, persons may be more likely to bring their own views in line with those of others as a result of self-attention (cf. Froming & Carver, 1981; Marks & Miller, 1987).

Although no direct measures of projection or conformity were taken, some results may be relevant to the question of mediating processes. In particular, the design of Study 3 allowed for a more thorough investigation of the relationship between normative influences and consensus estimates. Although no norm was made explicit in that study, there were two possible social norms to which subjects may have been responding: 63% of the subjects expressed personally cautious attitudes, indicating a moderately cautious *statistical* norm; and a more causal, *stereotypical* norm (e.g., Hepburn & Locksley, 1983) was indicated by the finding that subjects estimated, on average, that only 44% of their peers would endorse a cautious stance.⁶

If conformity were operating as a mediating mechanism, it would be expected that public self-consciousness would be related to the expression of views more in line with either the empirical cautious or the assumed casual positions of their peers. As already reported, however, public self-consciousness did not correlate with either personal attitudes or estimates of consensus. More consistent with the evidence is the argument that, in the absence of explicit normative information, the relationship between self-consciousness and the assumption of similarity with others was based on the available information about one's own, rather than others', attitudes. It must be emphasized that the present data do not contradict previous findings which show that public self-consciousness is related to conformity, nor does it invalidate the role of conformity in mediating the

⁶ This discrepancy, between a cautious personal attitude and the assumption that others were more casual, was consistent with previous research on the perception of both AIDS-related behavior (Abrams, Abraham, Spears, & Marks, 1989) and alcohol abuse (Prentice & Miller, 1993) and does not preclude the possibility of a false consensus, i.e., that own position and estimate of consensus were correlated.

false consensus effect. However, the research does suggest that in the absence of veridical social information or identifiable social norms, high public self-conscious persons are still likely to assume what may be a nonexistent social consensus for their own position, in effect, self-generating a norm and deluding themselves into thinking they are acting normatively.

Conclusion

Together with previous self-attention studies on self-related processes, the present research on the perception of others argues for an extensive relationship between self-attention and self-centered cognitive biases. In general, it may be suggested that self-attention, by rendering the self more cognitively accessible, facilitates and broadens the self's role in the processing of social information, making it more likely that others will be perceived in terms that are relevant to the self. For example, self-directed attention heightens the paranoid assumption that the self is the target of others' thoughts and behavior (Fenigstein, 1984; Fenigstein & Vanable, 1992); it also influences the extent to which others are judged along self-relevant dimensions (e.g., Higgins, King, & Mavin, 1982; Markus & Smith, 1981). Finally, the present research showed that, as a function of self-focused attention, persons were likely to assume that their own thoughts and behaviors were shared by others.

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