

Attributions of intergroup bias and outgroup homogeneity to ingroup and outgroup others

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Abstract

The research in this article explores the structure and content of attributed intergroup beliefs: to what extent do perceivers think others of their ingroup and their outgroup display intergroup evaluative bias and outgroup homogeneity? We report studies that address this question in ethnicity, gender, and nationality intergroup contexts. In all of these, we show that perceivers attribute to others more biased intergroup beliefs than they themselves espouse. Even when perceivers themselves do not show intergroup bias or outgroup homogeneity, they attribute such biases to others, both others from their ingroup and others from their outgroup. We argue that such attributed intergroup beliefs are fundamentally important to expectations concerning intergroup interaction. Copyright © 2005 John Wiley & Sons, Ltd.

As a German, you step off the plane in New York for the first time. How should you act? How will you be treated? Will Americans snub you or welcome you because you are German? As these thoughts go through your head you are clearly anxious. Your anxiety derives in part from the fact that you believe many Americans may dislike Germans and you are worried about how they will treat you.

Consider another scenario. You have just graduated from high school at the top of your class, where most of your classmates were, like you, African-American. You are off to a prestigious university where you know that your ethnic group will be a distinct minority on campus. How will you be treated? Will you find the majority of students on campus welcoming or hostile towards you because of your ethnicity? Even though you have demonstrated your capabilities in high school, you are anxious because you suspect that many on campus won't expect you to be very capable.

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Finally a third scenario: As a female, you excelled in electrical engineering in school and wound up with a very good job after graduation. But now you have just been passed up for a major promotion, unfairly in your eyes. You wonder whether this is due to gender discrimination on the part of your all-male supervisors. It occurs to you that being a female in a male engineering world may be more difficult than you thought.

Perhaps not surprisingly, there are literatures in social psychology that help us understand each of these scenarios. The first is one in which someone from one group will be in close contact with people from another group. The work of Stephan and Stephan (1985; see also Wilder, 1993) has made clear that such situations can arouse considerable anxiety because of uncertainty about the intergroup stereotypes and prejudices at play. The second scenario is one that has been extensively explored in the 'stereotype threat' literature (e.g. Spencer, Steele, & Quinn, 1999; Steele & Aronson, 1995), where minority group members underperform because of anxiety about the expectations that others have of them. And finally, there is a growing literature on the conditions under which personal failure experiences are attributed to prejudice and discrimination on the part of powerful others (e.g. Crocker, Voelkl, Testa, & Major, 1991; Crosby, 1984; Stangor, Swim, Van Allen, & Sechrist, 2002) and the consequences of such attributions.

There is an abundance of work in social psychology on stereotypes and intergroup bias or prejudice. Nearly all of this work has focused on the stereotypes or prejudices perceivers hold towards their own ingroups and outgroups. Yet, fundamental to each of the scenarios we have presented, and to the literatures that help us understand these, is an assumption that the stereotypes and prejudices that we attribute to others are crucially important to intergroup and interpersonal behavior. Just as important as one's *own* perceptions of what groups are like, are one's perceptions of how *others* perceive both the ingroup and the outgroup. As each of the scenarios make clear, stereotypic beliefs about one's ingroup attributed to the outgroup significantly impact behavioral and emotional responses to intergroup contact. If one expects outgroup members to have strong stereotypes and unfavorable attitudes towards one's own group, then intergroup contact and behavior are certainly likely to be strained.

Not only do one's perceptions of the outgroup's beliefs affect intergroup dynamics, but so too do perceptions of the ingroup's beliefs. Consider one additional scenario: In general you find ethnic humor, making jokes at the expense of particular minority groups, to be offensive. But one night you find yourself out with close friends and everyone begins telling ethnic jokes. Suddenly it seems all right to express fairly strong outgroup antipathies, since it seems that your friends are willing to do just that in the spirit of having a good time.

Again, there exists a social psychological literature suggesting that the stereotypes and intergroup attitudes that one attributes to one's ingroup have important normative consequences for one's own intergroup beliefs (Minard, 1952; Pettigrew, 1991). Believing that one's ingroup harbors relatively strong stereotypic beliefs about outgroup members can lead someone to endorse and express prejudices and stereotypes (Blanchard, Lilly, & Vaughn, 1991; Stangor, Sechrist, & Jost, 2001). And such expressions certainly have consequences for intergroup behavior.

Thus, we would suggest that attributed beliefs about social groups, be they attributed to the outgroup or to the ingroup, can in major ways affect intergroup and interpersonal behavior. Additionally, since all beliefs about social groups are comparative, the beliefs that one attributes to others (be they ingroup or outgroup members) about *their* outgroup necessarily make reference to the beliefs that one attributes to them about *their* ingroup. In other words, what one thinks the members of the outgroup believe about us is linked to what one thinks they believe about themselves. To understand what one thinks the members of our group believe about the outgroup, one has to understand what one thinks they believe about ourselves.

In characterizing attributed intergroup perceptions there are thus two dimensions to consider. The first is the group to whom the beliefs are attributed. There are beliefs attributed to the ingroup and

beliefs attributed to the outgroup. Additionally, of course, there are the perceiver's own beliefs. Second, we must consider the target group that is the object of these beliefs. The target group may either be the ingroup or the outgroup. This, then, gives rise to six different kinds of beliefs in intergroup situations that are likely to be consequential.

To clarify the terminology we will use in examining these six types of judgments, think back to the first scenario at the start of this article: the German stepping off the plane in New York. She attributed to Americans (*her* outgroup) beliefs about *their* outgroup (i.e. Germans, *her* ingroup). We will refer to such attributed beliefs as **outgroup-attributed exo-beliefs (OA-Exo)**. The **outgroup-attributed** part of this term means that these are beliefs attributed to the perceiver's outgroup. The **exo** part of this term means that they are attributed beliefs that the group is thought to hold about *their* outgroup, that is, the perceiver's ingroup.

Then there are **outgroup-attributed endo-beliefs (OA-Endo)**: What our German thinks Americans believe about themselves. In other words, these are beliefs attributed to Americans about *their* ingroup.

The third and fourth type of attributed beliefs are ingroup-attributed: **ingroup-attributed exo-beliefs (IA-Exo)** and **ingroup-attributed endo-beliefs (IA-Endo)**. The first of these refer to what our German thinks that other Germans (*her* ingroup) believe about Americans (*their* outgroup). And the second of these refer to what our German thinks that other Germans (*her* ingroup) believe about Germans (*their* ingroup).

Finally, we can compare these attributed beliefs to the perceiver's own beliefs. Thus **Own-Endo** are beliefs one holds about one's ingroup (what our German believes Germans are like), and **Own-Exo** are beliefs one holds about one's outgroup (what our German believes Americans are like).

These definitions, along with the accompanying examples, are summarized in Table 1.

As we have already made clear by the scenarios that we have used, attributed beliefs about social groups have indirectly become the focus of diverse lines of inquiry in social psychology. Yet throughout the literatures that bear on these scenarios, there has been surprisingly little systematic research that explores the nature of attributed beliefs about social groups. The one major exception to this statement is the work of Vorauer and her colleagues (Vorauer, Hunter, & Main, 2000; Vorauer, Main, & O'Connell, 1998), exploring the content and consequences of what they have called 'meta-stereotypes.' They define these as beliefs about one's ingroup attributed to outgroup members; in our

Table 1. Definition of stereotypic beliefs

		Who holds the belief?		
		Outgroup-attributed	Ingroup-attributed	Own
Which group is the target of the belief?	Endo (Beliefs about the believer's ingroup) <i>Example:</i> I am a German arriving in America	My outgroup's beliefs about themselves What I think Americans believe about Americans	My ingroup's beliefs about themselves What I think Germans believe about Germans	My beliefs about my ingroup What I believe about Germans
	Exo (Beliefs about the believer's outgroup) <i>Example:</i> I am a German arriving in America	My outgroup's beliefs about their outgroup What I think Americans believe about Germans	My ingroup's beliefs about their outgroup What I think Germans believe about Americans	My beliefs about my outgroup What I believe about Americans

terminology such meta-stereotypes are outgroup attributed exo-beliefs. To explore the content of such beliefs, Vorauer et al. (1998, Exp. 1) collected data from White Canadian participants who were asked to think about two target groups: Aboriginal Canadians and White Canadians. Some participants were asked to estimate the beliefs that Aboriginal Canadians held about both target groups (outgroup-attributed), while others were asked to estimate the beliefs that White Canadians held about both target groups (ingroup-attributed). More specifically, participants were given a list of 76 trait adjectives. In the case of participants who reported outgroup-attributed beliefs, they indicated for each trait 'according to the stereotype that exists in Native Indian society, about ___% of White Canadians (or Native Indians) possess this trait?' And in the case of participants who reported ingroup-attributed beliefs, parallel questions were asked about the stereotypes held about both target groups among White Canadians.

To examine the content of these outgroup-attributed and ingroup-attributed stereotypes, Vorauer et al. (1998) computed 'diagnostic ratios' (Martin, 1987; McCauley & Stitt, 1978; McCauley, Stitt, & Segal, 1980). In the case of the outgroup-attributed beliefs, the ratio divided the percentage estimate given for the White Canadian target group by the percentage estimate given for the Aboriginal Canadian target group. Thus values larger than 1 indicated that participants judged that Aboriginal Canadians believed the trait to be more prevalent among White Canadians than among Aboriginal Canadians, while values less than 1 indicated the reverse. In the case of ingroup-attributed beliefs, the ratio switched the numerator and denominator target groups. Accordingly, values larger than 1 indicated that participants judged that White Canadians believed the trait to be more prevalent among Aboriginal Canadians than among White Canadians, while values less than 1 indicated the reverse. From the point of view of our terminology, these two ratios examined exo-beliefs compared to endo-beliefs, separately for ingroup- and outgroup-attributed stereotypes.

Using this approach, Vorauer et al. (1998) catalogued particular traits that were more associated with outgroup-attributed exo-beliefs than outgroup-attributed endo-beliefs. Additionally, they showed that outgroup-attributed exo-beliefs tended to be more negatively valenced than ingroup-attributed endo-beliefs (where the common target group was White Canadians). And finally, they showed that more prejudiced participants seem to think that Aboriginal Canadians held more positive views of them than less prejudiced participants.

In subsequent studies, Vorauer et al. (1998) extended these results to show that participants attributed exo-beliefs to an individual Aboriginal Canadian with whom they expected to interact and these attributed beliefs were related to expectations about the quality of that interaction. Interestingly, while low prejudice participants attributed more negative exo-beliefs to outgroup members, they expected their interaction with a particular Aboriginal Canadian would go more smoothly. Additionally, later studies reported by Vorauer et al. (2000), examined how individual differences in the importance of social evaluation to the perceiver (e.g. public self-consciousness) were related to the activation of outgroup-attributed exo-beliefs.

Vorauer and her colleagues' work (1998; 2000) represents an impressive exploration of attributed intergroup beliefs (what they call meta-stereotypes), exploring both the content of a particular set of attributed beliefs and their antecedents and consequences. Yet, in terms of providing a general description of the content and structure of attributed intergroup beliefs, their results are limited in several ways. First, they are focused on a single group of participants (White Canadians) and a single set of target groups (White and Aboriginal Canadians). While outgroup-attributed exo-beliefs may in general be largely negative, all we really know is that White Canadians think that Aboriginal Canadians judge them negatively. Two extensions seem necessary if we are to have confidence in the generality of this conclusion beyond these particular groups. One would be to collect data from additional participant and target groups. And a second would be to use what we have called a 'full ingroup-outgroup design' (Judd & Park, 1993), in order to avoid the confounding of particular target

groups with ingroup–outgroup differences. A full ingroup–outgroup design is one in which participants include members of both groups and both target groups are rated by these participants.¹

A second limitation is that Vorauer and colleagues (1998; 2000) are largely concerned only with the valence or evaluative content of attributed intergroup beliefs (see also Krueger, 1996). While this component of group stereotypes is certainly crucial, it is also important to examine other components of attributed intergroup beliefs. Of particular interest here is the strength of attributed group stereotypes, typically conceptualized as perceived variability. Park and Judd (1990) argued that there are two components of perceived variability, stereotypicality and perceived dispersion, and both of these can be measured largely independent of stereotype valence. Stereotypicality concerns the extent to which one sees large differences between groups in their stereotypic attributes. Perceived dispersion focuses on the degree to which one perceives within-group variation in group-stereotypic attributes. Importantly, these two components figure prominently in social identity and self-categorization theoretical ideas about group stereotypes, where they make up the two components of what is known as the meta-contrast ratio (e.g. Turner, Hogg, Oakes, Reicher, & Wetherell, 1987).

In terms of ingroup–outgroup differences, it is well known that many group stereotypes manifest evaluative intergroup bias: ingroup stereotypes tend to be more positively valenced than outgroup stereotypes. It certainly seems reasonable, given the work of Vorauer and colleagues (1998; 2000), to expect that evaluative intergroup bias should be attributed to others, although differences may emerge as a function of whether those others are ingroups or outgroups. Perhaps we attribute more intergroup bias to outgroup members than to members of our own ingroup.

In terms of the two components of perceived variability, a commonly documented ingroup–outgroup difference is that outgroups are typically judged to be more stereotypic and less dispersed than ingroups, a finding that has come to be known as the outgroup homogeneity effect (Jones, Wood, & Quattrone, 1981; Judd & Park, 1988; Park & Judd, 1990; Park & Rothbart, 1982). Will outgroup homogeneity be attributed to others? Do we think that they regard their own ingroup as less stereotypic and more variable than they regard their outgroup? And should the extent of attributed outgroup homogeneity depend on whether attributions are made to the ingroup or the outgroup?

One additional issue figured prominently in designing our empirical exploration of attributed intergroup beliefs. Note that Vorauer et al. (1998; 2000) did not collect participants' own beliefs. By gathering own beliefs (about endo and exo evaluations, stereotypicality, and dispersion) as well as attributed beliefs from the same participants, it becomes possible to examine correlations of own and attributed beliefs in addition to documenting mean differences. Such correlations permit us to explore issues of social projection and false consensus (e.g. Mullen & Hu, 1988; Ross, Greene, & House, 1977): whether one's own intergroup beliefs are presumed to hold in the case of others to whom beliefs are attributed. Additionally, by examining correlations between own beliefs and those attributed to both ingroups and outgroups, we can examine the question of whether social projection is stronger in the case of ingroups than outgroups (Clement & Krueger, 2002; Krueger, 1996; Mullen, Dovidio, & Johnson, 1992).

Overview of the Current Studies

We report results on attributed group beliefs (and own beliefs) from three different datasets. The first dataset was gathered from representative samples of minority (African-American, Latino, and Asian-American) and

¹Vorauer and colleagues' (1998; 2000) designs are not full ingroup–outgroup designs because their participants were exclusively White Canadians. The absence of Aboriginal Canadian participants means that the ingroup versus outgroup distinction in their research is necessarily confounded with the specific target group distinction: White Canadian targets are for all participants the ingroup and Aboriginal Canadian targets are for all participants the outgroup. Had data been collected from Canadian Aboriginal participants, this would not be the case. See Brauer & Judd (2000).

majority white students at the University of Colorado at Boulder, USA. In this dataset, we only asked about outgroup-attributed beliefs (as well as own), and we only focused on evaluation and stereotypicality.

Our second dataset focuses on gender stereotypes. Here we gathered data about own, ingroup-attributed, and outgroup-attributed beliefs from samples of men and women. In addition to group liking and stereotypicality, we also assessed attributed group dispersion in this dataset. Gender represents an interesting intergroup case because of the unique nature of inter-gender relations. Prior work (Linville, Fischer, & Salovey, 1989; Park & Judd, 1990; Park & Rothbart, 1982) suggests that own gender beliefs generally do not manifest intergroup bias and only sometimes show evidence of outgroup homogeneity. It would be interesting indeed if attributed beliefs nevertheless show such differences.

Our final dataset focuses on nationality stereotypes. Here we gathered data from both French and American university students about their own beliefs about each other, and the beliefs about both target groups attributed to Americans and to the French.

In all three datasets, we are able to look at the degree to which attributed intergroup beliefs manifest both evaluative intergroup bias and outgroup homogeneity. And we are able to compare attributed intergroup beliefs to the perceiver's own intergroup beliefs. Across the three studies, then, our data permit a detailed look at attributed group stereotypes in a variety of intergroup contexts.

STUDY 1

In Study 1, we examined three different ethnic samples, Asian-Americans, Hispanics, and African-Americans, each paired with a white sample, and asked participants to tell us both about their own perceptions, as well as to predict the views of the outgroup (we did not include ingroup-attributed judgments in Study 1). We assessed perceptions on one evaluative measure (the perceived prevalence of positive versus negative attributes within each group), and one measure of variability, specifically, stereotypicality (the perceived prevalence of stereotypic versus counterstereotypic attributes among group members).

Method

Participants

All participants were undergraduate students at the University of Colorado. Simple random samples were drawn from the pool of freshman students of three ethnic groups, Asian-Americans (Study 1a, $n = 25$), Hispanic students (Study 1b, $n = 25$), and African-Americans (Study 1c, $n = 25$). Two Hispanic and two African-American students failed to complete all of the measures and were necessarily excluded from the analyses. Three separate samples of white freshmen were also randomly selected and paired with each of the three ethnic samples ($n = 25$ for Studies 1a, 1b, and 1c, respectively). Participants were paid \$10 for their participation.

Procedures

Participants completed a per cent estimation task twice, first expressing their own perceptions, and then predicting those of the outgroup. Specifically, participants were asked to consider 'White students who are in their freshman year at the University of Colorado' and to estimate the per cent that has or

would agree with each of eight different attributes or attitude statements. Participants completed their own ratings both for whites and for Asian-Americans (Study 1a), whites and Hispanics (Study 1b), and whites and African-Americans (Study 1c) as target groups. Next they were asked to make these same judgments but this time from the perspective of the typical outgroup member. For example, in Study 1a, white participants were asked to 'predict how the typical Asian-American student on campus would answer the questions you have just responded to.' For Study 1b and 1c, the perspective was of the typical Hispanic student and typical African-American student, respectively. All ethnic minority participants were asked to make the attributed ratings from the perspective of the typical white student. Again ratings were made for both whites and the respective ethnic minority group as target groups. The order of target groups within both the own and outgroup attributed judgments was counter-balanced across participants. Note that each participant made only these two sets of judgments. We did not ask participants in Study 1 to predict the judgments of ingroup members.

Four of the eight attributes were positive in valence and four were negative. Similarly, four of the attributes were stereotypic of a particular target group and four were counterstereotypic. The attributes used with each sample appear in Table 2. These attributes were obtained from interviews with students of each ethnic group as well as whites. Attributes that were spontaneously mentioned with a high degree of frequency as characterizing the various groups were chosen for inclusion in Study 1.² Note

Table 2. Attributes for each of the three ethnic samples in studies 1a, 1b, and 1c

	Positive	Negative
Asian Americans (1a)		
Stereotypic	Have high SAT math scores Show respect for their parents	'My parents are emotionally reserved with their children' Are too serious about their studies
Counterstereotypic	Sociable 'I am seeking a broad, liberal college education rather than one that is technically oriented'	'I considered skiing opportunities an important factor in deciding to attend CU' Spend money frivolously
Hispanics (1b)		
Stereotypic	'I believe taking Ethnic Studies courses is an important part of a college education' Come from religious family background	Eligible for need-based aid Are likely to drop out of college
Counterstereotypic	Have at least one parent with a college degree Participate in campus social activities	'I considered skiing opportunities an important factor in deciding to attend CU' 'I have usually been given whatever material things I needed or wanted without having to work for them'
African-Americans (1c)		
Stereotypic	Are athletic Dance well	Grew up in a household in which their father was absent Financial support is from athletic scholarships
Counterstereotypic	Have at least one parent with a college degree Participate in campus social activities	'I considered skiing opportunities an important factor in deciding to attend CU' Spend money frivolously

²These attributes were selected to be stereotypic and counterstereotypic for these particular target groups (undergraduate ethnic groups at the University of Colorado), rather than for ethnic groups in general in the United States. For more information on procedures used to select these attributes and determine their stereotypicality and valence, see Judd et al. (1995).

that the attributes were chosen to be stereotypical and counterstereotypical of each group in a relative (not absolute) sense. That is, the attributes were seen as more prevalent in the group they were deemed stereotypic of than the other group. Our choice of attributes was confirmed by the mean ratings presented in the Results section.

These per cent estimates were used to compute measures of Own–Endo evaluation (mean rating of the ingroup across the four positive attributes minus the mean rating across the four negative attributes), Own–Exo evaluation (mean rating of the outgroup across the four positive attributes minus the mean rating across the four negative attributes), Outgroup Attributed (OA)–Endo evaluation (mean prediction of how the outgroup would rate itself across the four positive attributes minus the mean rating across the four negative attributes), Outgroup Attributed (OA)–Exo evaluation [mean prediction of how the outgroup would rate its outgroup (i.e. participants' ingroup) across the four positive attributes minus the mean rating across the four negative attributes]. Corresponding measures of perceived stereotypicality were computed using the mean rating on the four stereotypic items minus the mean rating on the four counterstereotypic items. Thus for evaluations, higher numbers indicate more positive views of a group, and for homogeneity, higher numbers indicate more stereotypic perceptions of the group.³

Results

For all three ethnic group samples, these two dependent variables (evaluation and stereotypicality) were analyzed as a function of the group being judged (Target Group: Endo ν Exo), whether they were own beliefs or beliefs attributed to the outgroup (Source: Own ν Outgroup-Attributed), and Participant Ethnicity (White ν Ethnic Minority). Thus the design was a $2 \times 2 \times 2$ with the first two factors manipulated within participants and the final factor varying between them.

For all three samples, and for both the evaluation and stereotypicality measures, there are three effects of primary interest for the purposes of this paper: the Target Group main effect, the Source main effect, and the Target Group by Source interaction. In the evaluation judgments, the Target Group main effect assesses whether, for example, the Endo judgments were more positive on average than the Exo judgments, a pattern consistent with intergroup bias. The source main effect would suggest that own beliefs are more or less positive than those attributed to others. The Target Group by Source interaction assesses whether, for example, intergroup bias was greater in the OA judgments than in Own judgments, suggesting that the outgroup was perceived as being more ethnocentric than oneself. Similarly, a Target Group main effect for the stereotypicality judgments would indicate, for example, that Endo judgments were less stereotypic than Exo judgments, a pattern consistent with outgroup homogeneity. A Source main effect for stereotypicality judgments would indicate whether Own views of the two groups are more or less stereotypic than OA views. The Target Group by Source interaction would indicate whether outgroup homogeneity was smaller in Own judgments than in OA judgments.

All effects involving Participant group (either its main effect or its interactions) are discussed in the footnotes. These effects are of less interest theoretically than those described earlier on which we will focus. Additionally, as we discuss in the footnotes, many of the interactions involving Participant group amount to effects attributable to the particular target categories that are being rated (see Brauer & Judd, 2000). As discussed earlier, our use of a full ingroup–outgroup design permits us to examine effects attributable to ingroups versus outgroups (or endo versus exo) that are unconfounded with less interesting effects due to particular target groups. Table 3 contains both the mean evaluation judgments

³The participants in Study 1c were the same as those in Study 1 of Judd et al. (1995) who completed both the first and second sessions of that study. The Own perception data were presented in the Judd et al. paper (Table 2, p. 465) for the purpose of establishing the reliability of the per cent estimate measure, but the Outgroup Attributed data were not presented in that paper.

Table 3. Mean own and outgroup attributed evaluations and stereotypicality for endo and exo targets by participant sample (Study 1—percentage estimates)

	Evaluations		Stereotypicality	
	Own	Outgroup attributed	Own	Outgroup attributed
1a: Asian-Americans				
<i>Target group</i>				
Endo	18.32 _b	20.00 _b	22.95 _b	11.89 _a
Exo	21.48 _b	11.25 _a	14.99 _a	42.42 _c
1b: Hispanics				
<i>Target group</i>				
Endo	14.79 _{b,c}	18.08 _c	22.65 _a	27.22 _a
Exo	14.21 _b	7.53 _a	22.87 _a	43.39 _b
1c: African-Americans				
<i>Target Group</i>				
Endo	18.59 _b	18.70 _b	27.08 _{a,b}	30.85 _b
Exo	14.92 _a	9.45 _a	25.19 _a	49.45 _c

Note: Within a given sample and dependent variable, means sharing the same subscript are not significantly different at $p < 0.05$.

and the mean stereotypicality judgments for all three samples. Note that all of the stereotypic means were positive, indicating that on average the stereotypic attributes were seen as more prevalent than the counterstereotypic attributes, confirming our choices of these. Positive attributes were also seen as more prevalent than negative, which is typically the case in social perception research.

Study 1a: Asian-Americans

Evaluation. First, the Target Group main effect was significant such that Endo ratings showed greater positivity than Exo, $F(1, 48) = 5.19$, $p < 0.03$, indicating intergroup bias on average across Own and OA ratings. There was also a Source main effect, such that Own beliefs were more positive towards both target groups than OA beliefs, $F(1, 48) = 9.06$, $p < 0.004$. Importantly, both effects were qualified by a Target Group by Source interaction, $F(1, 48) = 10.08$, $p < 0.003$. As is clear in Table 3, in Own ratings no intergroup bias was present, and in fact the means indicate a nonsignificant trend for more positive evaluations in the case of Exo than Endo ratings. In contrast, in the OA ratings, participants expected the outgroup to evaluate its ingroup much more positively than its outgroup. The Target Group by Source interaction reveals that the outgroup was perceived as being biased in its evaluations, even though participants' actual judgments (Own judgments) showed no evidence of intergroup bias.⁴

Variability. Study 1 included just a single measure of variability, specifically perceived stereotypicality. As in the evaluation measure, the Target main effect was significant, $F(1, 48) = 42.99$, $p < 0.001$. Consistent with expectations, on average Exo ratings showed greater stereotypicality than Endo, a pattern indicating outgroup homogeneity. The Source main effect was also significant, $F(1, 48) = 18.83$, $p < 0.001$. Own beliefs of both targets groups were less stereotypic than OA beliefs. The Target Group by Source interaction was also significant, $F(1, 48) = 53.83$, $p < 0.001$. As is clear in Table 3, Own ratings in fact show a pattern of *ingroup homogeneity* such that Endo ratings were significantly more stereotypic than Exo ratings. In contrast, in the OA judgments, strong outgroup

⁴The Participant Ethnicity main effect was also significant such that white participants gave more positive evaluations on average ($M = 20.8$) than Asian participants ($M = 14.5$), $F(1, 48) = 4.95$, $p < 0.04$.

Table 4. Correlations between own and outgroup attributed evaluations and stereotypicality for endo and exo targets (Study 1)

	Evaluations			Stereotypicality		
	Own-Exo	OA-Endo	OA-Exo	Own-Exo	OA-Endo	OA-Exo
1a: Asian-Americans						
Own-Endo	0.50***	0.22	<i>0.61***</i>	0.27*	0.02	<i>0.63***</i>
Own-Exo		<i>0.43***</i>	0.27*		<i>0.41***</i>	0.38***
OA-Endo			0.11			0.28**
1b: Hispanics						
Own-Endo	0.44***	0.53***	<i>0.65***</i>	0.15	0.05	<i>0.45***</i>
Own-Exo		<i>0.75***</i>	0.28*		<i>0.74***</i>	0.23
OA-Endo			0.31**			0.39***
1c: African-Americans						
Own-Endo	0.46***	0.47***	<i>0.35**</i>	0.21	-0.02	<i>0.28*</i>
Own-Exo		<i>0.67***</i>	0.19		<i>0.67***</i>	0.17
OA-Endo			0.07			0.29**

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

homogeneity was present. Thus, participants expected their outgroup members' to see their ingroup less stereotypically than their outgroup. Similar to the effects for intergroup bias, the stereotypicality measure showed attributed outgroup homogeneity in the absence of any actual outgroup homogeneity in Own ratings.⁵

Correlations. It is useful to ask to what extent Own and OA judgments were correlated with one another. For instance, if I see my outgroup negatively, I may believe that the outgroup will see its outgroup negatively as well (a strong positive correlation between Own-Exo and OA-Exo). Such a correlation might indicate that disliking of an outgroup is socially projected from oneself to outgroup members. We will refer to such a correlation as social projection at the level of the intergroup target category. Alternatively, social projection may operate at the level of the specific category: The more I like Asians, the more I believe that my outgroup likes Asians. In this case there should be a strong positive correlation whenever the category or specific group is constant, i.e. a strong correlation between Own-Endo and OA-Exo and between Own-Exo and OA-Endo. We will refer to such a correlation as social projection at the level of the specific category.

Table 4 contains the correlations between the four various types of judgments for each of the dependent variables (controlling for Participant Group). These correlations show a clear and strong pattern of social projection at the level of the specific category. The correlations are much larger when examining judgments holding the specific category constant (Own-Endo and OA-Exo; Own-Exo and OA-Endo; these are in italics) than when examining correlations where the intergroup target is held constant (Own-Endo and OA-Endo; Own-Exo and OA-Exo; these are in bold). This pattern suggests participants use their own views of a specific category or particular group to judge how an outgroup will see that same group.

Interestingly, a consequence of this social projection is that for both intergroup bias and outgroup homogeneity, Own and OA judgments are negatively correlated, so that the more ethnocentric I am,

⁵The Target Group by Source by Participant Ethnicity interaction was also significant, $F(1, 48) = 18.83$, $p < 0.001$. Basically, this interaction indicates that the finding of greater outgroup homogeneity in OA judgments than in Own (the Target Group by Source interaction) is larger among Asian participants than among white but significant for both. This interaction can be equivalently interpreted as a main effect of specific target categories: white targets, regardless of whether they were Endo or Exo groups, were judged more stereotypically than Asian targets.

the less ethnocentric I believe the outgroup is and so on. In this data set Own and OA intergroup bias were correlated ($r = -0.41$, $p < 0.01$), as were Own and OA outgroup homogeneity ($r = -0.41$, $p < 0.01$). These negative correlations are entirely a product of participants using their own perceptions to judge how others view specific categories (i.e. the more I rate my ingroup more positively than my outgroup, the more I think the outgroup will also rate my ingroup, i.e. their outgroup, more positively than my outgroup, i.e. their ingroup). Vorauer et al. (1998) obtained a similar result such that high prejudiced individuals expected the outgroup to be more positive in their views of the high prejudiced individual's ingroup than did low prejudiced individuals. That is, social projection occurred at the level of the specific category rather than at the intergroup target level, in which case high prejudiced individuals would have expected the greatest amount of bias in ratings of outgroup members.

Study 1b: Hispanics

Evaluation. The Target Group main effect was significant such that Endo ratings ($M = 16.44$) showed greater positivity than Exo ($M = 10.87$), $F(1, 46) = 27.84$, $p < 0.001$, indicating perceived intergroup bias on average across own and outgroup attributed ratings. Importantly, this effect was qualified by a Target Group by Source interaction, $F(1, 46) = 7.27$, $p < 0.01$ (see Table 3, Panel B). In Own ratings no intergroup bias was present. In contrast, in the OA ratings, participants predicted that the outgroup evaluates its own group much more positively than its outgroup. Thus as with the Asian-American-white sample, the outgroup was perceived to be biased in its evaluations even though participants' actual judgments (Own judgments) showed no evidence of intergroup bias.⁶

Variability. For the stereotypicality measure, the Target group main effect was significant, $F(1, 46) = 32.25$, $p < 0.001$. Consistent with expectations, on average, Exo ratings showed greater stereotypicality than Endo, a pattern indicating outgroup homogeneity. Additionally, there was a significant Source main effect such that the OA judgments showed greater stereotypicality than Own, $F(1, 46) = 35.91$, $p < 0.001$. Importantly, the Target Group by Source interaction was also significant, $F(1, 46) = 6.72$, $p < 0.02$ (see Table 3, Panel B). In fact, no outgroup homogeneity emerged in Own ratings, but in the OA judgments, strong attributed outgroup homogeneity was present. Thus when predicting the outgroup's perceptions, participants believed they would see their ingroup less stereotypically than their outgroup. Similar to the effects for intergroup bias, the stereotypicality measure showed attributed outgroup homogeneity in the absence of any actual outgroup homogeneity in Own ratings.⁷

Correlations. The middle panel of Table 4 shows that again, the greatest degree of social projection occurred at the level of the specific category (i.e. when the same category, such as Hispanics, was rated; the italicized correlations). Social projection was also present to some degree at the level of the intergroup target (correlations in bold), but in all cases the specific category correlations were larger. As with the Asian sample, this pattern of social projection to the specific category resulted in negative correlations for Own and OA judgments both for intergroup bias ($r = -0.49$, $p < 0.01$) and for outgroup homogeneity ($r = -0.66$, $p < 0.01$).

⁶The Participant Ethnicity main effect was significant such that white participants gave more positive evaluations on average ($M = 18.23$) than Hispanic participants ($M = 9.19$), $F(1, 46) = 11.14$, $p < 0.001$, as was the Source by Target by Participant Ethnicity interaction, $F(1, 46) = 7.97$, $p < 0.008$. This interaction in fact amounts to a main effect of the specific category being rated. On average, Hispanics ($M = 16.27$) were consistently rated more favorably than whites ($M = 11.15$).

⁷The Participant Ethnicity main effect was also significant, such that Hispanic participants gave more stereotypic ratings on average ($M = 33.52$) than white participants ($M = 25.04$), $F(1, 46) = 4.09$, $p < 0.05$.

Study 1c: African-Americans

Evaluation. The Target Group main effect was significant such that Endo ratings showed greater positivity than Exo, $F(1, 46) = 21.10$, $p < 0.001$, indicating perceived intergroup bias on average across own and outgroup attributed ratings. The Source main effect was also significant, indicating greater perceived positivity overall in Own perceptions than in OA perceptions, $F(1, 46) = 4.77$, $p < 0.04$. Unlike the Asian and Hispanic samples, the Target Group by Source interaction was not significant, $F(1, 46) = 1.57$, $p > 0.22$ (see Table 3, Panel C). Here, intergroup bias was present in both Own and OA judgments. Although somewhat larger in OA judgments than Own, the difference was not significant.⁸

Homogeneity. For the stereotypicality measure, the Target group main effect was significant, $F(1, 46) = 28.86$, $p < 0.001$. Consistent with expectations, on average, Exo ratings showed greater stereotypicality than Endo, a pattern indicating outgroup homogeneity. The Source main effect was also significant such that the OA judgments showed greater stereotypicality than Own, $F(1, 46) = 37.38$, $p < 0.001$. Importantly, the Target Group by Source interaction was also significant, $F(1, 46) = 11.94$, $p < 0.001$ (see Table 3, Panel C). In fact, no outgroup homogeneity was present in Own ratings, but in the OA judgments, strong attributed outgroup homogeneity was present. Thus when predicting the outgroup's perceptions, participants believed they would see their own group less stereotypically than their outgroup. As with the other two samples, the stereotypicality measure showed attributed outgroup homogeneity in the absence of any actual outgroup homogeneity in Own ratings.⁹

Correlations. The bottom panel of Table 4 shows that again, the greatest degree of social projection occurred at the level of the specific category (i.e. when the same category, such as African-Americans, was rated; the italicized values). Social projection was also present to some degree at the level of the intergroup target (values in bold), but in general the specific category correlations were larger. As with the other two samples, this pattern of social projection at the level of the specific category resulted in negative correlations for Own and OA judgments both for intergroup bias ($r = -0.34$, $p < 0.05$) and for outgroup homogeneity ($r = -0.56$, $p < 0.01$).

Discussion

At the mean level, clearly there were differences in participants' judgments as a function of whether they were reporting their own beliefs or they were attributing beliefs to the outgroup. Both for evaluations and homogeneity, although intergroup bias and outgroup homogeneity were almost entirely lacking in Own judgments (the one exception being intergroup bias in Own judgments for Study 1c), both were believed to be present and strong in the beliefs attributed to the outgroup. The pattern of results, be it for intergroup bias or outgroup homogeneity, was impressively consistent across the three samples. Perhaps the most profound implication of these findings is that even in intergroup situations where group members themselves do not manifest bias (for whatever reasons), they clearly expect that the outgroup will. This results in the view that although I personally express no

⁸Other effects included a Participant Ethnicity by Source interaction, $F(1, 46) = 8.57$, $p < 0.006$, such that the Source main effect was really only present for white participants (Own = 19.20, OA = 13.26), and not for African-American participants (Own = 13.72, OA = 14.86). Additionally, there was a three-way interaction between Source, Target, and Participant Ethnicity, $F(1, 46) = 15.77$, $p < 0.001$. This interaction is equivalent to a main effect of the specific category being rated. On average, African-Americans ($M = 19.21$) were consistently rated more favorably than whites ($M = 11.31$).

⁹The Participant Ethnicity main effect was also significant such that African-American participants gave more stereotypic ratings on average ($M = 41.45$) than white participants ($M = 24.81$), $F(1, 46) = 22.30$, $p < 0.001$.

biases toward the outgroup relative to the ingroup either in my evaluations or my perceptions of group diversity, I believe the outgroup is biased in both ways.

Clearly an issue to be considered in these results is whether the absence of intergroup bias and outgroup homogeneity in Own judgments is primarily due to self-presentational concerns (i.e. not wanting to appear prejudiced). Perhaps the difference between Own beliefs and outgroup-attributed ones comes from the fact that participants are unwilling to admit the same biases that they attribute to the outgroup. There are two avenues that we take in our subsequent studies to explore this possibility. First, in these studies we asked participants to report on ingroup-attributed beliefs as well as outgroup-attributed ones. One might expect that presentational concerns would also affect reports of ingroup biases, since participants may well want to attribute prejudice and outgroup homogeneity only to groups that they truly feel negatively about, i.e. not their own ingroups. Second, in our subsequent studies we used other target groups, namely gender and nationality defined groups, where concerns about appearing politically correct should be less potent.

STUDY 2

Our second study examined own and attributed intergroup beliefs among samples of men and women. As we suggested in the Introduction, gender-related attitudes tend to be rather ambivalent, and clear evidence of intergroup bias is rather rare (e.g. Glick & Fiske, 2001). Additionally, the literature is rather mixed on whether outgroup homogeneity is obtained with gender samples. On the one hand, Park and Rothbart (1982) and Park and Judd (1990) found small but significant differences in the direction of outgroup homogeneity. On the other hand, Linville, Fischer, and Salovey (1989) failed to find the effect.

Given the consistency of the results from Study 1, we wanted to see whether similar patterns would be obtained in the case of gender defined target groups. That is, even though participants might be reluctant to display intergroup bias and outgroup homogeneity in their own gender beliefs, might they nevertheless attribute to others both intergroup bias and outgroup homogeneity?

In addition to extending the findings of Study 1 to gender-defined groups, in Study 2 we were able to examine a number of issues that could not be examined with the data of Study 1. First, we asked participants to report on ingroup-attributed beliefs (IA) as well as outgroup-attributed ones (OA). This permitted us to explore whether attributed intergroup bias and attributed outgroup homogeneity would be found for ingroup as well as outgroup sources. Additionally, the correlational results from Study 1 suggested that social projection occurred in the case of intergroup beliefs attributed to the outgroup. By incorporating beliefs attributed to the ingroup in this second study, we can also compare the relative magnitude of social projection to the ingroup to that for the outgroup. Finally, in Study 2 we incorporated questions that asked about within-group similarity both for own and attributed beliefs, thus permitting us to examine attributed beliefs about dispersion as well as stereotypicality.

Method

Participants

Participants were 92 undergraduate students at the University of Colorado who participated in the study in exchange for extra credit in their Introductory Psychology course. Of these, half were female and half male.

Procedure

Participants completed a questionnaire that assessed all measures. They first answered questions that assessed their own beliefs about the two genders. As in Study 1, they rated each gender target group on eight attributes that varied in their stereotypicality for one or the other gender group and in their valence. The two masculine positive attributes were *self-reliant* and *strong*; the two masculine negative were *aggressive* and *cold*; the two feminine positive were *warm* and *nurturing*; and the two feminine negative were *dependent* and *gossipy*. In Study 1 these ratings were done with 100-point percentage estimation questions. Here they were done on 9-point rating scales with endpoints labeled 'not at all characteristic' and 'very characteristic' of the specific target gender group the participant was rating. From these questions, as in Study 1, we computed an evaluation score for each target group, taking the difference between the ratings on the positively valenced attributes and the ratings on the negatively valenced ones. We also computed a stereotypicality score for each target group, taking the difference between ratings on the attributes that were stereotypic of that target group minus the ratings on the counterstereotypic ones.

After these attribute ratings, participants completed two questions to assess within-group dispersion, one for each gender target group. These questions asked 'to what extent do you see men (women) in general as being very different from each other or very similar to each other?' Ratings were done on 9-point scales with higher number indicating greater within-group similarity.

After participants completed their own beliefs measures, they completed the same measures once for ingroup-attributed beliefs and once for outgroup-attributed beliefs. In each case, they were asked to respond to each of the questions (both attribute ratings and similarity judgments) as they thought that 'most men (women) in general in the United States would respond to them.'

Across participants the order of the two target groups was counterbalanced. Additionally, the order of the IA and OA questions were counterbalanced. The questions on Own stereotypes preceded either of the sets of attributed questions.

Results

The means for all three measures (evaluation, stereotypicality, and similarity) are given in Table 5. Recall that the first two are differences between ratings on 9-point scales, either between those for positive and negative attributes or between stereotypic and counterstereotypic attributes.

Each dependent variable was analyzed as a function of Target Group (Endo ν Exo), Source (Own ν Ingroup-Attributed ν Outgroup-Attributed), and Participant Gender (Male ν Female). Thus the design was a $2 \times 3 \times 2$ with the first two factors manipulated within participants and the last factor varying between them. Planned single degree of freedom contrasts for the second factor (and their interactions with the others) were conducted comparing: 1) Own with both IA and OA beliefs; and 2) IA beliefs

Table 5. Own and attributed gender evaluations, stereotypicality, and similarity (Study 2–9-point scale judgments)

Target group	Evaluations			Stereotypicality			Similarity		
	Own	Ingroup attributed	Outgroup attributed	Own	Ingroup attributed	Outgroup attributed	Own	Ingroup attributed	Outgroup attributed
Endo	0.83 _b	1.32 _c	1.65 _c	2.19 _a	2.45 _b	2.15 _a	4.71 _a	5.25 _b	5.10 _{ab}
Exo	0.80 _b	0.41 _a	0.40 _a	2.27 _{ab}	2.81 _c	2.83 _c	4.71 _a	6.04 _c	5.98 _c

Note: Within a given dependent variable, means sharing the same subscript are not significantly different at $p < 0.05$.

with OA beliefs. As before, all significant effects involving Participant Gender are reported in the footnotes.

Evaluation

There emerged a significant Target Group main effect, such that more positive evaluations were given for Endo targets than for Exo targets, $F(1, 90) = 46.07$, $p < 0.001$. Importantly, this pattern of intergroup bias was qualified by a Source by Target Group interaction, $F(2, 180) = 10.44$, $p < 0.001$. When the single degree of freedom interactions were tested, the degree to which evaluations differed between Endo and Exo target groups was smaller for Own than for attributed evaluations, $F(1, 90) = 24.39$, $p < 0.001$, but did not differ between the IA and OA evaluations. Further simple tests of the Target Group main effect within each level of Source revealed no difference in the case of Own evaluations, and significant differences both for IA and OA evaluations, as indicated by the subscripts to the means in Table 5.

In sum, while participants did not themselves evaluate the two target groups differently, they attributed intergroup bias to others, both others who were in their gender ingroup and others in their gender outgroup. Importantly, the degree to which they attributed intergroup bias to others did not depend on whether the attributions were to ingroup others or outgroup others.¹⁰

Stereotypicality

The analysis of the stereotypicality scores revealed a Target Group main effect, $F(1, 90) = 19.48$, $p < 0.001$, a Source main effect, $F(2, 180) = 6.45$, $p < 0.005$, and an interaction between these two factors, $F(2, 180) = 3.01$, $p < 0.055$. On average, across all three sources, the means are consistent with outgroup homogeneity: more stereotypic judgments were given for Exo than Endo groups. The Source main effect is due to the contrast between Own and attributed stereotypes, $F(1, 90) = 13.05$, $p < 0.001$. Participants on average thought that others, be they ingroup or outgroup others, had more stereotypic views of both men and women than they themselves had. The interaction between the Source and Target Group factors, and subsequent tests of the single degree of freedom interaction contrasts, revealed that outgroup homogeneity was significantly stronger in the case of the two attributed stereotypes than in the case of Own beliefs, $F(1, 90) = 5.34$, $p < 0.03$, while its strength did not differ significantly between IA and OA stereotypes, $F(1, 90) = 1.42$, $p > 0.20$. As the subscripts to the means in Table 5 show, for Own stereotypes, there was no evidence of outgroup homogeneity, while the simple Target Group difference was significant for IA and OA beliefs.¹¹

Similarity

The analysis of the within-group similarity ratings yielded a main effect of Target Group, $F(1, 90) = 11.37$, $p < 0.002$, a main effect of Source, $F(2, 180) = 18.24$, $p < 0.001$, and a significant

¹⁰The analysis also revealed a significant triple interaction between Source, Target Group, and Participant Gender, $F(2, 180) = 6.55$, $p < 0.002$, which was entirely due to the single degree of freedom interaction between Own and attributed source, Target Group, and Participant Gender. The tendency to see greater intergroup bias in attributed beliefs than in Own beliefs was particularly strong if participants were male.

¹¹Also significant in this analysis was a Source by Participant Gender interaction, $F(2, 180) = 30.96$; $p < 0.001$: the tendency to attribute greater stereotypicality to others' judgments compared to Own was particularly true for female participants. Additionally the Target Group by Participant Gender interaction was significant, $F(1, 90) = 10.69$; $p < 0.002$: collapsing across source, the magnitude of outgroup homogeneity in own and attributed stereotypes was greater on the part of male participants than female ones.

interaction between these two factors, $F(2, 180) = 3.76, p < 0.03$. The Target Group main effect is again in the direction of outgroup homogeneity: on average across the three sources, there is greater judged similarity in Exo than Endo ratings. The Source main effect is entirely due to the fact that in Own stereotypes, participants report less within-group similarity than in attributed stereotypes, $F(1, 90) = 35.89, p < 0.001$. There is no source difference for the comparison between IA and OA judgments. The Source by Target Group interaction is solely due to the interaction between the Own versus other attributed source difference and Target Group, $F(1, 90) = 8.28, p < 0.006$. As was the case for the stereotypicality measure, outgroup homogeneity is manifested in both IA and OA stereotypes, but Own stereotypes show no target group difference in perceived within-group similarity. As the subscripts to the means in Table 5 show, the simple Target Group difference is not significant for Own stereotypes, but it is significant for both IA and OA stereotypes. Again, the magnitude of outgroup homogeneity in these similarity ratings does not vary between IA and OA stereotypes, $F(1, 90) = 0.07, p > 0.50$.¹²

Correlations

To examine projection of intergroup beliefs to ingroup and outgroup members, we examined the correlations between Own Endo and Exo beliefs, IA Endo and Exo beliefs, and OA Endo and Exo beliefs (controlling for Participant Gender). And we did this for each of our three measures: evaluation, stereotypicality, and similarity. The resulting correlations are presented in Table 6.

The first correlation matrix in Table 6 involves correlations between evaluation scores. If participants project their own evaluations onto others, then the correlations between Own evaluations and attributed evaluations (contained in the top two rows of the matrix) should be substantial. As can be seen, a number of them are large and significant, indicating social projection to both the ingroup and the outgroup. Contrary to conclusions from the prior social projection literature (e.g. Clement & Krueger, 2002; Krueger, 1996; Mullen, Dovidio, & Johnson, 1992), there is no clear evidence in these correlations to suggest greater social projection to ingroups than to outgroups.

In the first study, the pattern of correlations suggested that social projection was based more on the specific category (i.e. beliefs about males versus females) rather than on the intergroup target (i.e. beliefs about Endo and Exo-groups). In the case of OA beliefs, these can be teased apart (because the specific category that is their Endo-group is my Exo-group). In Table 6, correlations that are italicized hold constant the specific category; those that are in bold hold constant the intergroup target. As in Study 1, it appears that the basis for social projection in intergroup evaluative beliefs is more at the level of the specific target group than at the level of the intergroup target: If I tend to show more positivity towards a specific gender, then I tend to think others do as well, regardless of whether that specific gender is their ingroup or their outgroup.

The correlations for stereotypicality show similar patterns. First, again there is substantial social projection both to IA and OA beliefs. And there is little evidence that projection in the former case is larger than in the latter. Turning to the basis of that projection, the correlations between Own and OA are clearly larger if they involve the same specific category than if they involve the same intergroup target.

¹²Also significant in the analysis of these similarity ratings was the Source by Target Group by Participant Gender interaction, $F(2, 180) = 9.25; p < 0.001$, and this interaction was entirely due to the single degree of freedom triple interaction between IA versus OA Source by Target by Participant Gender, $F(1, 90) = 16.77; p < 0.001$. For male participants, OA stereotypes showed greater evidence of outgroup homogeneity than IA stereotypes, whereas for female participants this was reversed. The interaction can be equivalently interpreted as the tendency to attribute to others the perception that males are more similar to each other than are females.

Table 6. Correlations between own beliefs, ingroup-attributed beliefs, and outgroup-attributed beliefs Study 2

Evaluation correlations					
	Own-Exo	IA-Endo	IA-Exo	OA-Endo	OA-Exo
Own-Endo	-0.06	0.22**	0.03	0.14	<i>0.36***</i>
Own-Exo		0.09	0.37***	<i>0.25**</i>	0.01
IA-Endo			-0.09	0.34***	0.24**
IA-Exo				0.26**	-0.06
OA-Endo					-0.12
Stereotypicality correlations					
	Own-Exo	IA-Endo	IA-Exo	OA-Endo	OA-Exo
Own-Endo	0.31***	0.63***	0.39***	0.23**	<i>0.44***</i>
Own-Exo		0.40***	0.48***	<i>0.37***</i>	0.17
IA-Endo			0.45***	0.19*	0.50***
IA-Exo				0.46***	0.47***
OA-Endo					0.41***
Similarity correlations					
	Own-Exo	IA-Endo	IA-Exo	OA-Endo	OA-Exo
Own-Endo	0.28**	0.42***	0.31***	0.16	<i>0.22**</i>
Own-Exo		0.34***	0.24**	<i>0.05</i>	0.43***
IA-Endo			0.23**	0.17	0.11
IA-Exo				0.22**	0.35***
OA-Endo					-0.07

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

The final correlation matrix in Table 6 contains those for the within-group similarity judgments. Perhaps here, for the first time, there is a suggestion of greater projection in the case of IA than OA judgments. And, interestingly, there is no longer any clear evidence that projection in the case of similarity judgments are based more on the specific category (correlations italicized) than on the intergroup target (correlations in bold).

Discussion

In many respects, these gender data replicate the results from the ethnic groups found in Study 1. As in Study 1, there was no evidence in these data of intergroup bias in self-reports of valenced attributes in the two groups (i.e. Own evaluations). However, when attributing beliefs to either ingroup or outgroup members, the data suggest that participants believe that others evaluate their ingroup members more positively than their outgroup members. Similarly, Own beliefs show no evidence of outgroup homogeneity, either in perceived stereotypicality or in perceived dispersion. But substantial outgroup homogeneity, on both measures, is found in attributed stereotypes, both IA and OA. Somewhat surprisingly, the degree of intergroup bias and outgroup homogeneity attributed to others does not seem to depend on whether those beliefs are attributed to the ingroup or to the outgroup. There is no evidence to suggest that we think that our outgroup is any more prejudiced or has stronger stereotypes than our ingroup.

The correlations we report show consistent evidence of social projection of intergroup beliefs. Importantly, in these data there is little to suggest that projection is any stronger in the case of IA than OA beliefs. As in Study 1, social projection for those measures that derived from rating the groups on attributes (i.e. evaluation and stereotypicality) seemed to be based primarily on projection of beliefs about specific social categories (i.e. males and females) rather than beliefs about Endo-groups and Exo-groups. This did not seem to be the case, however, for projection of perceived similarity.

STUDY 3

Our third study focuses on nationality groups. We conducted this study because we wanted to explore attributed intergroup beliefs in a context where political correctness and social desirability concerns would be less likely to operate. Additionally, we wanted groups where the degree of interdependence and contact was considerably less than that between ethnicity and (certainly) gender. In the earlier two studies we found almost no evidence for intergroup bias or outgroup homogeneity in Own beliefs. In this third study, by focusing on nationality, we hoped to examine whether attributed intergroup beliefs would continue to differ from own beliefs, even when own beliefs manifested intergroup bias and outgroup homogeneity.

We chose two nationality groups that seemed sufficiently salient to each other, namely American and French. The study was conducted using the same general structure as Study 2 with one exception. This time, we also included a global measure of group evaluation, rather than only one based on attribute ratings.

Our predictions were that we would find evidence for intergroup bias and outgroup homogeneity not only in the IA and OA beliefs but also in participants' own beliefs. However, we expected these to be greater in IA and OA beliefs than in Own beliefs. As for projection, we expected to replicate earlier findings that there is projection, both to the ingroup and to outgroup.

Method

Participants

A total of 65 American students and 75 French students took part in the study. The American students were freshmen and sophomores enrolled at the University of Colorado at Boulder who completed the questionnaire in exchange for experimental credit. The data were collected in two group sessions. The French students were psychology students enrolled at the University of Grenoble, France, who also completed the questionnaire in exchange for experimental credit. Their data were collected during three group sessions involving between 20 and 30 students. Importantly, these data were collected prior to the conflict between France and the United States surrounding the war in Iraq.

Procedure

Participants were given a questionnaire that contained all the instructions along with the dependent measures. First they were asked to provide their own perceptions of the ingroup, i.e. their Own-Endo beliefs, and of the outgroup, i.e. their Own-Exo beliefs. Next they answered questions regarding ingroup-attributed and outgroup-attributed beliefs about their ingroup (IA-Endo and OA-Endo) and their outgroup (IA-Exo and OA-Endo). The order of the ingroup attributed and outgroup attributed questions was counterbalanced. Also, the order of the target group was counterbalanced within each section.

Dependent measures

The first section of the questionnaire concerned participants' own views about the two groups. Starting with the ingroup (Own–Endo), the first two items tapped participants' global evaluation of the ingroup. Participants were asked the extent to which they generally had positive versus negative thoughts about the ingroup on a 9-point scale ranging from 1 (= very negative) to 9 (= very positive). They also indicated the extent to which they generally liked versus disliked most members of the ingroup on a 9-point scale ranging from 1 (= dislike a lot) to 9 (= like a lot). Next, participants indicated whether they saw big differences among members of the ingroup or whether they saw the members of the ingroup as being similar to each other on a 9-point scale ranging from 1 (= very different) to 9 (= very similar).

The following page presented participants with a series of 16 personality traits and asked them to indicate the extent to which they thought that each of these traits were characteristic of the ingroup on a 9-point scale ranging from 1 (= not at all characteristic) to 9 (= very characteristic). The list of characteristics was based on a pretest conducted on both American and French students. The list included four positive traits that were stereotypic of the Americans and counter-stereotypic of the French (i.e. hardworking, welcoming, innovative, sociable), four positive traits that were stereotypic of the French and counter-stereotypic of the Americans (i.e. sophisticated, romantic, gourmet, elegant), four negative traits that were stereotypic of the Americans and counter-stereotypic of the French (i.e. wasteful, uncultured, always in a hurry, egocentric), and four negative traits that were stereotypic of the French and counter-stereotypic of the Americans (i.e. rude, undisciplined, unclean, lazy). Participants completed these same measures for the outgroup target.

These two sets of ratings were completed twice more, once predicting the views of ingroup members regarding both Americans and the French, and once predicting the views of outgroup members regarding both Americans and the French.

Obviously two different versions of the questionnaire were used, one in English for the American participants and one in French for the French participants.

Results

The data were analyzed as a function of Target Group (Endo ν Exo), Source (Own ν IA ν OA), and Participant Nationality (American ν French). This resulted in a $2 \times 3 \times 2$ mixed-design ANOVA with the first two factors varying within participants and the last between them. We used the same two planned single degree of freedom contrasts as before for the second factor (and their interactions with the others), comparing Own beliefs with other-attributed beliefs on the one hand and IA with OA beliefs on the other. Our dependent measures were participants' liking of the two groups on a feature-based measure of evaluation as well as on a global measure of evaluation and their perception of the variability of the groups on a feature-based stereotypicality measure as well as on a global measure of similarity. Table 7 contains the means for all four measures as a function of the Target Group and Source.

Feature-based Evaluations

To compute a feature-based evaluation of the two target groups, we relied on the 16 trait ratings and, for each source and each target, subtracted the ratings given on the eight negative traits from those given on the eight positive traits. Confirming the presence of intergroup bias, the Target Group main

Table 7. Own and attributed evaluations, stereotypicality, and similarity (Study 3)

Target group	Feature-based evaluations			Global evaluations			Stereotypicality			Similarity		
	Own	Ingroup attributed	Outgroup attributed	Own	Ingroup attributed	Outgroup attributed	Own	Ingroup attributed	Outgroup attributed	Own	Ingroup attributed	Outgroup attributed
Endo	0.81 _c	2.05 _d	3.10 _e	6.16 _c	6.48 _d	7.15 _e	0.97 _b	0.77 _a	0.80 _{ab}	3.88 _a	4.41 _b	4.69 _{bc}
Exo	0.60 _c	0.31 _b	-0.43 _a	5.12 _b	4.38 _a	4.49 _a	1.60 _d	1.71 _d	1.16 _c	5.03 _c	6.03 _d	6.30 _e

Note: Within a given dependent variable, means sharing the same subscript are not significantly different at $p < 0.05$.

effect was significant, $F(1, 136) = 244.51, p < 0.001$, such that on average Endo ratings were more positive than Exo. The Source main effect was also significant, $F(2, 136) = 30.38, p < 0.001$. Planned contrasts revealed that Own judgments were less positive on average than attributed judgments, $F(1, 136) = 55.91, p < 0.001$, and the positivity of OA views tended to be greater than that of IA views, $F(1, 136) = 3.31, p < 0.08$.

Importantly, the predicted Target Group by Source interaction effect was significant, $F(2, 272) = 94.18, p < 0.001$. The single degree of freedom contrasts showed that more intergroup bias was present in the attributed judgments than in Own beliefs, $F(1, 136) = 153.05, p < 0.001$. Additionally, participants ascribed more intergroup bias to the outgroup than to the ingroup, $F(1, 136) = 48.76, p < 0.001$. Also, as can be seen in Table 7, the Endo ratings were more positive than Exo in all cases except Own beliefs.¹³

Global Evaluations

We averaged participants' ratings on the two global evaluation questions to compute an index of global liking for each target group. Again, the Target Group main effect was significant, $F(1, 136) = 337.52, p < 0.001$, providing strong evidence for the presence of intergroup bias. The Source main effect was significant as well, $F(2, 136) = 8.84, p < 0.001$. Planned contrasts showed that there was no difference between the Own and attributed beliefs, $F(1, 136) = 0.02, ns$. In contrast, IA evaluations showed lower overall liking than OA evaluations, $F(1, 136) = 19.31, p < 0.001$.

More importantly, the Target Group by Source interaction effect was significant, $F(2, 272) = 49.60, p < 0.001$. The single degree of freedom contrasts revealed greater perceived intergroup bias in the attributed than in Own evaluations, $F(1, 136) = 89.58, p < 0.001$. Moreover, as with the feature-based evaluations, participants thought OA beliefs manifested more intergroup bias than IA beliefs, $F(1, 136) = 11.13, p < 0.002$.

Further inspection of the means reveals that the Endo target was liked more than the Exo target for all three sources. Thus intergroup bias was present for all three sets of judgments, but it was smallest in Own ratings, and largest in the OA perceptions.¹⁴

Stereotypicality

Stereotypicality was computed by subtracting the ratings on the eight counter-stereotypic traits from those on the eight stereotypical traits. The Target Group main effect was significant, $F(1, 136) = 151.28, p < 0.001$, such that the Endo ratings showed less stereotypicality than the Exo ratings on average, consistent with outgroup homogeneity. The Source main effect was also

¹³Additional effects of lesser interest included the Source by Participant Nationality interaction, $F(2, 272) = 45.06, p < 0.001$: Own evaluations were less positive than attributed ones especially for French participants and evaluations attributed to Americans were more positive than those attributed to the French. And the triple interaction among Target Group, Source, and Participant Nationality was significant, $F(2, 272) = 96.07, p < 0.001$: This amounts to a main effect due to the specific target group, with French nationality targets being given higher evaluations than American nationality targets.

¹⁴Effects of lesser interest included a Participant Nationality main effect, $F(1, 136) = 30.14, p < 0.001$, a Participant Nationality by Source interaction, $F(2, 272) = 40.53, p < 0.001$, a Participant Nationality by Target interaction, $F(1, 136) = 13.50, p < 0.001$, and a triple interaction between all three factors, $F(2, 272) = 19.38, p < 0.001$. On average, American participants gave higher global evaluation ratings. And this difference was greater in Own evaluations than in attributed ones. The ratings provided by American participants also showed on average more intergroup bias, but this difference was especially pronounced in the beliefs attributed to others rather than in Own evaluations. Finally, the triple interaction suggests a Target nationality main effect in attributed evaluations: The French were seen to be liked better than the Americans on average.

significant, $F(2, 136) = 14.93$, $p < 0.0001$. Planned contrast indicated that Own beliefs demonstrated significantly more stereotypicality than attributed beliefs, $F(1, 136) = 10.27$, $p < 0.002$. Moreover, OA judgments were less stereotypic than IA judgments, $F(1, 136) = 20.07$, $p < 0.0001$.

These main effects were qualified by a significant Target Group by Source interaction effect, $F(2, 272) = 30.27$, $p < 0.001$. The direction of this interaction, however, was surprising, given the results we have reported previously. Own beliefs showed no more outgroup homogeneity than did beliefs attributed to others, $F(1, 136) = 0.03$, *ns*. There was, however, more outgroup homogeneity in IA than in OA beliefs, $F(1, 136) = 10.45$, $p < 0.002$.

The means presented in Table 7 show Exo ratings were significantly more stereotypic than Endo ratings for all three sources of judgments, a pattern consistent with outgroup homogeneity. However, unlike the previous two studies, this difference was smallest for the OA judgments.¹⁵

Similarity

For the similarity ratings, the Target Group main effect was significant, $F(1, 137) = 87.94$, $p < 0.001$, such that Exo groups were judged to be more similar than Endo groups, consistent with outgroup homogeneity. The Source main effect was also significant, $F(2, 137) = 33.12$, $p < 0.001$. Planned contrasts showed that the similarity ratings were lower in attributed beliefs than in Own beliefs, $F(1, 137) = 50.24$, $p < 0.001$, and that, in turn, similarity was greater in the OA beliefs than in the IA beliefs, $F(1, 137) = 6.98$, $p < 0.01$.

The Target Group by Source interaction was marginally significant, $F(2, 274) = 2.41$, $p < 0.10$. Follow-up contrasts showed that, as expected, there was greater outgroup homogeneity in the attributed beliefs than in Own beliefs, $F(1, 137) = 4.09$, $p < 0.05$. The IA beliefs did not differ from the OA beliefs, $F(1, 137) < 1$, *ns*.

As can be seen in Table 7, the means show that participants not only saw less within-group similarity in the ingroup than in the outgroup but also expected the same pattern when predicting perceptions of the ingroup and outgroup. Outgroup homogeneity was present for all three sources and was significantly stronger in attributed beliefs than in Own beliefs.¹⁶

Correlations

Within each of our four measures, feature-based evaluation, global evaluation, stereotypicality (also based on features), and global similarity, we computed correlations among Own, IA, and OA Endo and

¹⁵Effects of lesser interest included a Participant Nationality main effect, $F(1, 136) = 3.96$, $p < 0.05$, a Participant Nationality by Source interaction, $F(2, 272) = 30.27$, $p < 0.001$, a Participant Nationality by Target interaction, $F(1, 136) = 60.75$, $p < 0.001$, and a triple interaction between all three factors, $F(2, 272) = 88.91$, $p < 0.001$. American participants reported more stereotypic views than French participants. In the case of attributed beliefs, more stereotypic views were found for the IA than the OA beliefs for American participants, but the reverse for French participants. This is equivalent to the conclusion that stronger stereotypes were attributed to Americans than to the French by both participant groups. The Participant Nationality by Target interaction derived from the fact that French participant ratings showed more outgroup homogeneity than American participant ratings. Finally the triple interaction amounts to an effect of the specific target category being rated: when Americans were the targets, stronger stereotypes were reported (both in Own and attributed) than when the French were the targets.

¹⁶Effects of lesser interest included a Participant Nationality main effect, $F(1, 136) = 6.20$, $p < 0.02$, a Participant nationality by Source interaction, $F(2, 136) = 3.16$, $p < 0.05$, and a triple interaction among Participant Nationality, Source, and Target Group, $F(2, 272) = 16.13$, $p < 0.0001$. On average, American participants reported higher similarity than did French participants. This difference was particularly true for Own beliefs. It was less pronounced in the case of attributed beliefs. And finally, the triple interaction can again be interpreted as a main effect due to the particular target category being rated: higher similarity ratings were given when the target category was the French than when the target category was Americans.

Table 8. Correlations between own beliefs, ingroup-attributed beliefs, and outgroup-attributed beliefs Study 3

	Feature based evaluation correlations				
	Own-Exo	IA-Endo	IA-Exo	OA-Endo	OA-Exo
Own-Endo	0.06	0.30***	0.14	0.26***	0.29***
Own-Exo		0.08	0.46***	0.18**	0.13
IA-Endo			-0.08	0.40***	0.17**
IA-Exo				0.14	0.23***
OA-Endo					-0.17**

	Global evaluation correlations				
	Own-Exo	IA-Endo	IA-Exo	OA-Endo	OA-Exo
Own-Endo	0.33***	0.38***	0.15*	0.12	0.19**
Own-Exo		0.08	0.48***	0.02	0.39***
IA-Endo			0.14	0.36***	0.06
IA-Exo				0.03	0.39***
OA-Endo					0.00

	Stereotypicality correlations				
	Own-Exo	IA-Endo	IA-Exo	OA-Endo	OA-Exo
Own-Endo	0.33***	0.42***	0.31***	0.19**	0.49***
Own-Exo		0.15*	0.63***	0.53***	0.22**
IA-Endo			0.18**	0.01	0.47***
IA-Exo				0.56***	0.28***
OA-Endo					0.15*

	Similarity correlations				
	Own-Exo	IA-Endo	IA-Exo	OA-Endo	OA-Exo
Own-Endo	0.38***	0.30***	0.12	0.27***	0.12
Own-Exo		0.12	0.20**	0.21**	0.22**
IA-Endo			0.03	0.51***	0.07
IA-Exo				-0.07	0.42***
OA-Endo					-0.07

* $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

Exo judgments, controlling for Participant Nationality. The resulting four correlation matrices are reported in Table 8.

Our main hypothesis was that our participants would manifest social projection in their answers. As can be seen from the presence of the many positive and significant correlations between Own and attributed beliefs in these matrices, this is clearly the case. Second, as in Study 2, there is no consistent evidence that the social projection correlations are larger in the case of IA beliefs than they are in the case of OA beliefs. Although some of the correlations between Own and attributed beliefs are larger for IA than OA, the pattern is far from consistent.

Next, we wanted to better understand the basis for social projection, i.e. whether social projection is operating at the level of the specific category or at the level of the intergroup target. In Study 1, we found strong evidence for specific category social projection. Study 2 replicated this pattern except in the case of the similarity measure. Recall that these two bases for social projection can only be teased apart when examining correlations between Own and OA beliefs (because the specific target group

that is my Exo group is their Endo group). In all matrices, those correlations that are based on specific target groups (French and Americans) are italicized, while those based on the same intergroup targets (Exo and Endo) are in bold.

In the case of correlations involving feature-based evaluations (the first matrix of Table 8) there is a tendency for the projection correlations based on specific categories (i.e. nationality groups) to be larger than those based on intergroup targets (i.e. endo and exo groups). In the case of the global evaluations (the second matrix), this pattern is reversed. In the case of stereotypicality ratings (matrix three), the specific category correlations are clearly higher than those based on intergroup targets. Finally, in the case of global similarity ratings (matrix four), the intergroup target correlations are somewhat higher than the specific category correlations. It would appear that social projection is based primarily on the specific target categories when judgments consist of rating those categories on specific features (i.e. feature-based evaluations and stereotypicality). In the case of more global judgments, however, there is a tendency for social projection to be more strongly based on intergroup targets (i.e. Endo versus Exo groups).

Discussion

In one very significant way, the results from this nationality study are different from those reported in the earlier two studies. In the earlier studies, involving ethnicity and gender, own beliefs showed neither intergroup bias nor outgroup homogeneity. With nationality, however, both effects were found (although only global evaluations showed own intergroup bias). Participants in this context seemed willing to express ingroup favoritism and outgroup homogeneity. Yet, in spite of this difference, the pattern of results for attributed beliefs was quite consistent with those reported in the earlier two studies. That is, with one exception (stereotypicality) intergroup bias and outgroup homogeneity attributed both to other ingroup members and to outgroup members were stronger than those expressed in own beliefs. Again, others show more intergroup bias and outgroup homogeneity than I do, even in a context where I am willing to manifest both.

The social projection results in this study are consistent with those reported earlier and they allow us to better understand some of the earlier differences. That is, like the earlier studies, there was substantial evidence for social projection of own beliefs onto others. Importantly the extent to which this was true did not seem to depend very much on whether projection was to other ingroup members or to outgroup members. As in the earlier studies, projection seemed to occur largely at the level of the specific category (here, the nationality group) for both feature-based evaluation and stereotypicality measures. However, for the global ratings of evaluation and similarity, it seemed that the basis for social projection was more the intergroup target (endo versus exo groups) rather than specific nationality categories.

GENERAL DISCUSSION

We began this research with the observation that intergroup beliefs that we attribute to others (both others in our ingroup and those in our outgroup) figure prominently in many literatures in social psychology and yet have been relatively understudied. They figure prominently because in fact the beliefs that we expect others to hold about our group (and about themselves) color intergroup interactions in important ways, as illustrated by the scenarios we gave at the very start of this article.

The one systematic attempt to explore attributed group stereotypes is the impressive line of work conducted by Vorauer and her colleagues (1998; 2000) which has extensively documented the content, correlates, and consequences of the stereotypes White Canadians attribute to their own group and to Aboriginal Canadians. The work that we conducted was primarily designed to extend the generality of our knowledge about attributed stereotypes in several important ways. First, we wanted to explore facets of attributed stereotypes in addition to their valence (see also Krueger, 1996). More specifically, we wanted to examine whether outgroup homogeneity, both in stereotypicality and dispersion judgments would be attributed to others. Second, we wanted to use a number of different target groups and full ingroup–outgroup designs in order to substantially increase our ability to broadly characterize attributed intergroup beliefs. Finally, we wanted to gather own beliefs, ingroup-attributed beliefs, and outgroup-attributed beliefs all from the same participants so that we could examine issues of social projection.

It seems to us that the primary message from the data we have presented is quite clear: In general and regardless of the context, both ingroup and outgroup others are judged to manifest both intergroup bias and outgroup homogeneity. This is true both when own beliefs show neither effect (in the case of ethnicity and gender) and when own beliefs show both effects (in the case of nationality). And regardless of whether own beliefs show these effects, it was consistently the case that greater intergroup bias and outgroup homogeneity were attributed to others than were found in own beliefs. In only two out of 13 possible Target Group by Source interactions tested was this difference not found (the Evaluative measure in Study 1c and the Stereotypicality measure in Study 3). In all of the other tests of this difference, the Target Group by Source interactions were significant and in the same direction: others are more biased than am I.

An important issue is how to portray the ‘own’ beliefs. That is, to what extent do social desirability concerns operate when people report their own beliefs? Certainly individuals are likely motivated to appear unbiased, particularly in the case of ethnicity and gender. It was for exactly this reason that in Study 3 we used groups where we believed participants would feel less pressure to give unbiased responses, but even here own judgments consistently showed less evaluative bias and less stereotypicality than other attributed judgments. Interestingly, in this study, bias was present in the own global evaluations so that participants expressed greater warmth toward the ingroup than outgroup. This rating is by far the most transparent judgment included in our measures. Most of the measures required participants to judge the group’s standing on various attribute dimensions and measures of evaluative bias and stereotypicality were derived from these. It is much more difficult to consciously adopt an ‘unbiased strategy’ on such derivative measures. But it is quite obvious that the thermometer measure is asking for a simple judgment of liking for the ingroup and outgroup, and yet it is here that participants were willing to express ingroup bias, albeit of a smaller magnitude than in the attributed judgments. The point is, if the pattern of results reported in these studies derives from a simple strategy of seeing the self in a positive light, then one would expect a lack of expressed own bias on what is clearly the most blatant measure, and yet this did not occur.

Interestingly, participants attributed roughly equal bias to ingroup and outgroup members. Only in Study 3, where we observed intergroup evaluative bias in the own judgments, was ingroup attributed evaluative bias significantly less than outgroup attributed bias on both the feature based and global evaluation measures. It remains to be seen whether there are systematic conditions under which the magnitude of bias and stereotypicality attributed to the ingroup differs from that to the outgroup.

The correlations which we computed in each study also told quite a consistent story: there was social projection of both group evaluation and homogeneity to others, and the magnitude of this did not seem to depend on whether group beliefs were being attributed to the ingroup or to the outgroup. Own beliefs and others beliefs (be they ingroup or outgroup others) were consistently positively

correlated. However, there were differences in the bases of social projection that seemed to depend on the nature of the measure. In the case of dependent variables computed from feature-rating tasks (i.e. rating target groups on attributes or features and then computing either evaluative or stereotypic differences), it seemed that social projection occurred more strongly at the level of the specific categories that were rated (mean $r=0.45$) rather than at the intergroup level (mean $r=0.14$). This makes sense because the judgments regard the prevalence of particular attributes. If I rated women as quite *nurturing* but not very *self-reliant*, so too I attributed to others (be they ingroup or outgroup others) the belief that women tend to be quite *nurturing* but not very *self-reliant*. On the other hand, for more global ratings, such as how much I like women in general or how similar I see them to one another, social projection was slightly stronger at the level of the intergroup target (mean $r=0.25$) than at the level of the specific category (mean $r=0.22$). So if I said I liked my outgroup relatively less than my ingroup, then I attributed to others less relative global liking of *their* outgroup.

It seems to us that these results have a number of theoretical and practical implications that merit attention. First, and most importantly, it would seem that the relatively biased intergroup beliefs that I attribute to others are likely to negatively impact anticipated and actual intergroup interactions. While I may not see myself as particularly biased, I attribute to others, both in my ingroup and my outgroup, biased beliefs. So when I anticipate my ingroup and outgroup interacting, it seems likely that I anticipate that those interactions will be contentious and even hostile. On the other hand, I can perfectly well imagine that I personally might approach intergroup interactions more benignly.

Insko, Schopler and colleagues (e.g. Insko & Schopler, 1998; Schopler, Insko, Graetz, Drigotas, Smith, & Dahl, 1993) have nicely shown that anticipated interactions between groups are generally seen to be more competitive and hostile than interactions between individuals. Part of this discontinuity may be due to the fact that when I think about my ingroup and outgroup interacting, it is the attributed biased beliefs that are relevant. However, when I think about individuals interacting, I think about myself as representative and I see myself as not particularly biased.

A generalization of this result would be that perhaps when I think about myself in intergroup situations, I think things will go fairly smoothly, but I believe that others in my ingroup are more biased than I and I believe that members of the outgroup are more hostile than I, so I might expect more contentious intergroup interactions whenever I am not one of the individuals participating. There may well be a 'me' versus 'other' discontinuity as well as an individual versus group discontinuity.

In conclusion, we would argue that attributed intergroup beliefs are of fundamental importance if we want to understand intergroup interaction. Of course, in the present paper all we have done is to examine those attributed beliefs. We have yet to explore their implications for intergroup interaction. However, our consistent demonstration of attributed intergroup bias and outgroup homogeneity seems to suggest that these attributed beliefs are likely to start intergroup interactions on the wrong foot whenever they are brought to mind. I expect them to be biased against us and I expect us to be biased against them. I see myself as not particularly biased. So I believe that when I meet members of the outgroup, things could go reasonably well. But whenever 'we' and 'they' get together, I know there is bias all around and things will deteriorate.

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