

# The role of egocentrism and focalism in the emotion intensity bias

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Received 6 December 2004; revised 16 March 2006

Available online 23 June 2006

Communicated by Fabrigar

## Abstract

People sometimes judge their emotions, preferences, and attitudes to be more intense than those of other people. Two experiments tested whether this emotion intensity bias in direct comparisons results from two non-motivated cognitive processes—egocentrism and focalism. In Study 1, the intensity bias was found even when comparing a friend's preferences to peers. In Study 2, attention given to own versus other's preferences, and the referent of the comparison (self or others) were manipulated. Results indicated that attention to others reduced the bias, presumably by reducing egocentrism. Consistent with focalism, the bias also emerged when a friend was the target of comparison, and the bias was eliminated when the self was the referent rather than the target of comparison. In the discussion, we evaluate these accounts in light of some alternative explanations for the intensity bias.

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**Keywords:** Emotion intensity bias; Social judgment; Social comparison; Focalism; Egocentrism

In the social comparison and judgment literatures, consistent evidence has been found for an *emotion intensity bias*, whereby most people perceive their own subjective experiences to be more intense than those of other people. For example, when faced with the prospects of completing a particularly dull laboratory task, most college students assumed they would find the task to be more unpleasant than would their peers (McFarland & Miller, 1990). Patients diagnosed with phobias perceived their own symptoms to be more severe than those experienced by other phobic individuals (Suls, Wan, Barlow, & Heimberg, 1990). Princeton undergraduates, who were privately concerned about the binge drinking practices prevalent on their campus, believed they were personally more concerned than the average Princeton undergraduate was (Prentice & Miller, 1993; see also Suls & Green, 2003). After the September 11th terrorist attacks, most Americans assumed they were personally more distressed by the events than their fellow Americans were (NORC, 2001). This bias has been repeat-

edly demonstrated with diverse subject populations, occurs with respect to both positive and negative emotions, and thus appears to be a quite robust and replicable finding (Miller & McFarland, 1987; Sabini, Cosmas, Siepmann, & Stein, 1999; Van Boven, White, & Kruger, 2002).

In some studies, the bias is exhibited in direct comparative judgments, but in others the bias is shown in the difference between separate ratings of the self and ratings of others. As noted later, this methodological difference may have substantive implications. The present paper is concerned mainly with direct comparisons made between self and other people although results from separate ratings also will be reported.

Despite the wealth of evidence for the emotion intensity bias, however, less is known about the exact cognitive or motivational forces responsible. According to some motivational accounts, it can be self-enhancing at times to believe that one's emotions are socially distinctive (Campbell, 1986; Snyder & Fromkin, 1980), or at least to present oneself that way to others. Several non-motivated, cognitive explanations have also been proposed which attribute the emotion intensity bias to self-other information

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processing differences. One prominent non-motivated explanation emphasizes the different sources of information people have about their own and others' emotional states (Miller & McFarland, 1987; McFarland & Miller, 1990; Miller & Prentice, 1994; Prentice & Miller, 1993). Namely, people have direct introspective access to their own feelings but have only indirect access to other people's feelings via their overt behaviors, gestures, or facial expressions. Because other people's overt displays may mask the full intensity of their private feelings, those feelings may be underestimated. This means that comparisons between one's own internal feelings and other people's external expressions should result in the judgment that personal feelings are more intense and profound.

In this paper, we test hypotheses derived from two other explanations which have not yet been systematically explored with respect to this bias. One explanation, referred to as "egocentrism," assumes that when people directly compare themselves with others on some dimension, they think primarily about self-relevant information and give insufficient attention to information about others (Klar & Giladi, 1999; Kruger, 1999; see Chambers & Windschitl, 2004 for a review). For example, a student might recognize that he and his fellow students both have strong concerns about binge drinking in an absolute sense. Yet, when the student is asked to directly compare the degree of concern he and others feel (e.g., "Compared to other students, how concerned are you about binge drinking?"), he may think mostly about his own strong feelings and neglect to think sufficiently about others' feelings. This may be because self-relevant information tends to be more accessible in memory than information about others (Ross & Sicoly, 1979), because people are more certain about themselves than about others, or because people initially anchor their judgments on self-relevant information and insufficiently adjust to take into account information about others (Chapman & Johnson, 1999; Kruger, 1999). As a result of this attention imbalance, the person in this example may judge his concerns to be more intense than those felt by his peers—at least when he directly compares himself to others.<sup>1</sup>

"Focalism," a second explanation, refers to the idea that when two mutually exclusive hypotheses are evaluated together (as in a direct comparison), evidence favoring the "focal" hypothesis tends to receive disproportionately greater consideration than evidence favoring the "non-focal" hypothesis (Moore & Kim, 2003; see also Chambers & Windschitl, 2004). Applied to the context of social comparative judgments, the focalism account suggests that

greater consideration will be paid to evidence favoring the person(s) in the focal position of the comparative question than to the person(s) in the non-focal position. Because the self is typically designated in the focal position of the comparative question and the "average person" or "average other" is in the non-focal position in many social comparison studies (e.g., "*How concerned are you compared to other college students?*"), the self's subjective experiences receive greater weight. It then follows that when the self's subjective experience is strong, people will judge their own feelings to be stronger than those of others. In two experiments, hypotheses concerning the contributions of focalism and egocentrism to the emotion intensity bias in direct comparisons were tested.

### Experiment 1

According to the egocentrism account, if people tend to think predominately about the self when comparing, they should assume they like appealing stimuli—and dislike unappealing stimuli—more than the average person does (in response to "Compared to others, how much do you like X?"). Also, comparative judgments should primarily reflect the self's absolute preferences ("How much do you like X?"), more than preferences attributed to the average person ("How much does the average person like X?"). That is, comparative judgments should correlate more strongly with absolute self-ratings than with absolute-other ratings.

The focalism account suggests that even when the self is not involved in the comparison, and some other non-self entity (e.g., a friend) is designated as the focal target, an emotion intensity bias should be displayed with respect to that target (e.g., friend's preferences are judged more intense than others' preferences). This is because more attention should be given to the friend, in the focal position of the comparison, than to the average person in non-focal position. Furthermore, the comparison judgment should primarily reflect thoughts about the friend's absolute preferences (as indicated by the correlation between absolute-friend ratings and comparative judgments) than thoughts about the average person's absolute preference. Finally, both focalism and egocentrism should produce the intensity bias in direct comparisons without there necessarily being any differences between the absolute ratings for self (or friend) and the average person.

These ideas were tested in an experimental situation in which participants listened to sets of unappealing and appealing songs. In the "self-target" condition, after each song, participants made a direct comparison between the self and the average student's preferences, followed by ratings of the self's and average student's absolute preferences. In the "friend-target" condition, participants were asked to think about their best friend and judge their friend's and the average student's preferences for each song. Participants rated how their friend's feeling about each song com-

<sup>1</sup> Our theoretical account differs from the differential accessibility/perspective-difference view (Miller & McFarland, 1987) because the latter assumes that absolute judgments of self versus others would always be higher, or more extreme. In contrast, we assume that biases can appear in direct comparisons without there being corresponding differences between the separate absolute judgments of self and others.

pared to the average student's, followed by separate ratings of their friend's and the average student's absolute preferences.

### Method

#### Pre-test

A sample of University of Iowa students ( $N = 34$ ) were presented with brief clips of 20 songs. They rated their preference for each song on 1 (*strongly dislike*) to 10 (*strongly like*) scales. Based on their average ratings, the 3 most liked ( $M = 7.7$ ) and the 3 most disliked ( $M = 4.6$ ) songs were selected for use in the main study (see Appendix A).

#### Participants

Participants in the main study were University of Iowa students ( $N = 82$ ) who received credit towards a research exposure requirement.

#### Design and procedure

The design of the study was a 2 (song type: appealing or unappealing)  $\times$  2 (target: self or friend)  $\times$  2 (questionnaire version: target or average student first)  $\times$  2 (song order: 1 or 2) mixed design, with song type as a within-participants factor. Participants enlisted for a study on "judgments about preferences" in groups of between 1 and 6 persons. Upon arrival, participants were seated around the laboratory room and handed (by random assignment) either the "self-target" or the "friend-target" condition questionnaire. For those assigned to the friend-target condition, written instructions explained that participants should think about their best friend and write that person's initials in a space provided on the page. Instructions informed participants that ratings would concern their best friend's preferences. The experimenter then played short portions of 6 songs in one of two orders, with brief intervals between each song for participants to make their ratings. Once judgments had been made for all 6 songs, participants were debriefed and dismissed.

#### Dependent measures

Appendix A provides a complete list of the dependent measures in this study. In the self-target condition, the first rating made for each song was always the comparative judgment, followed by the absolute-self and absolute-average student ratings, with order of the latter two judgments counterbalanced across participants. In the friend-target condition, all aspects of the questionnaire were the same except the questions concerned the participant's best friend rather than the self.

#### Results and discussion

Comparative, absolute-target (self or friend), and absolute-average student ratings were aggregated for the sets of 3 appealing and 3 unappealing songs (see Table 1).

#### Direct comparative judgments

A first question was whether participants exhibited the emotion intensity bias in their comparative judgments, either when those judgments involved the self (implicating egocentrism), a best friend (implicating focalism), or both targets (implicating egocentrism and focalism). When the average comparative judgments were submitted to an ANOVA, only a significant main effect of song type emerged,  $F(1, 74) = 94.00$ ,  $p < .001$ , indicating the presence of an emotion intensity bias. Notably, the absence of a Song Type  $\times$  Target interaction,  $F < 1$ , indicates that the emotion intensity bias was just as strong whether people were comparing their own or their friend's preferences with those of the average student.

Looking at the means for each condition more closely, those participants who compared their personal and the average student's preferences assumed they liked the appealing songs more than the average student did,  $t(39) = 9.02$ ,  $p < .001$  (testing the average comparative response against the "0" or "same as average student" scale midpoint). They also assumed they disliked the unappealing songs more than the average student did, but this trend was non-significant,  $t(39) = -1.09$ , *ns*. A similar pattern of responses was observed when the comparisons concerned a friend's

Table 1  
Average comparative, absolute-target, and absolute-average student judgments as a function of target and song type conditions (Study 1)

Target and song type conditions	Judgment type					
	Comparative		Absolute-target		Absolute-average student	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>Self</i>						
Appealing songs	1.70*	1.20	7.47 <sub>a</sub>	1.60	6.43 <sub>b</sub>	1.35
Unappealing songs	-0.17	1.11	3.50 <sub>a</sub>	1.66	3.13 <sub>b</sub>	1.29
<i>Best friend</i>						
Appealing songs	1.10*	1.43	7.14 <sub>a</sub>	1.49	6.63 <sub>a</sub>	1.20
Unappealing songs	-0.51*	1.40	3.32 <sub>a</sub>	1.57	3.29 <sub>a</sub>	1.14

Note. Comparative preference ratings were made on a -5 to +5 scale with numbers above 0 indicating more liking and numbers below 0 indicating more disliking than average student. An asterisk indicates difference from 0 (or "same as average student"),  $p < .05$  by one-sample *t*-test. Absolute preference judgments for the target (self or best friend) and for the average student were made on a 0-10 scale with higher numbers indicating greater liking. Rows with different subscripts indicate differences between absolute judgments for target and average student significant at the .05 level.

preferences. A best friend was assumed to like the appealing songs,  $t(41)=5.00$ ,  $p<.001$ , and dislike the unappealing songs,  $t(41)=-2.48$ ,  $p<.05$ , more than the average student would.

#### *Relation between comparative and absolute judgments*

The egocentrism account assumes that people judge themselves to feel more intensely than others because they focus on the absolute intensity of their own preferences and neglect the absolute preferences of others. To test this prediction, comparative judgments for each song in the self-judgment condition were regressed on both absolute self- and other-judgments. Across the 6 songs, the pattern was quite consistent: in every case, absolute personal preferences predicted comparative judgments (average  $\beta=.97$ , all  $p$ 's  $<.05$ ) better than absolute preferences ascribed to the average student (average  $\beta=-.40$ , 5 of 6  $p$ 's  $<.05$ ). Thus, when participants were asked to compare their own and others' preferences, they apparently were thinking primarily about the absolute intensity of their personal preference (egocentrism).

The next question is whether there also was an intensity bias for their friend (as target) because participants thought primarily about the absolute intensity of their friend's preferences, as focalism would predict. In regression analyses similar to those described above, absolute preferences for friend predicted comparative judgments (average  $\beta=.90$ , all  $p$ 's  $<.05$ ) better than absolute preferences ascribed to the average student (average  $\beta=-.29$ , all  $p$ 's  $<.05$ ). Participants displayed an emotion intensity bias even for another person (a friend) who was in the focal position of the comparative question. Evidently, they did so because they gave more attention to the focal person's absolute preferences than to those of the non-focal entity (the average student) when making a direct comparison.

Earlier, we mentioned that an emotion intensity bias should emerge in direct comparative ratings even if the absolute preference ratings ascribed to the target (self or friend) and the referent group do not differ. This counter-intuitive prediction is suggested by both the egocentrism and focalism accounts, which state that the emotion intensity bias results from a narrowing of attention to one of the two entities in the direct comparison, not necessarily from any systematic differences in how the absolute preferences for target and referent group are perceived.  $T$ -tests were used to compare absolute target and absolute referent ratings (indicated by subscripts in Table 1, columns 4 and 6). In 2 of the 3 cases where a bias was observed in direct comparisons, the absolute ratings did not differ significantly. A more direct test used ANCOVA on the comparative ratings, fully controlling for the average difference in absolute target and average student ratings. Once again, a significant main effect of song type was found,  $F(1, 72) = 54.58$ ,  $p < .001$ , but not a significant Song Type  $\times$  Target interaction,  $F < 1$ . People displayed an emotion intensity bias for the self and friend in direct comparative judgments apart from any difference in how

intensely target (self or friend) and peers were presumed to feel in an absolute sense.<sup>2</sup>

## Experiment 2

In this study, we wished to replicate the emotion intensity bias with a different kind of stimuli. Participants made preference judgments about various appealing and unappealing persons, objects or concepts (e.g., "truthfulness," "Osama Bin Laden"). Unlike some of the songs in Study 1, these objects and concepts were both familiar and recognizable, so that participants should have had at least some familiarity with others' preferences thereby providing a more conservative test of the intensity bias.

Second, the egocentrism and focalism hypotheses were tested more directly. For egocentrism, we directly manipulated the amount of attention people gave to their own versus others' preferences prior to making a comparison. This was done by instructing one group of participants to think carefully about their personal preferences before making their judgments ("attention-on-self" condition), a second group to think carefully about the average student's preferences ("attention-on-others" condition), and a third group was given no special instructions ("baseline-control" condition). According to egocentrism, people ordinarily give greater thought to their personal feelings when comparing. Thus, the magnitude of the emotion intensity bias in comparative judgments should be greatest when people are explicitly told to focus on the self ("attention-on-self" condition) or when they are not given any explicit instructions ("baseline-control" condition); the bias should be reduced or eliminated when they are explicitly told to think about other people's preferences ("attention-on-others" condition).

Focalism was tested in a slightly different manner from Study 1. Instead of having people make comparative judgments about a friend, participants made judgments about the self, but the self was in non-focal position (i.e., referent) of the comparative question in one condition.

### *Method*

#### *Pre-test*

A separate sample of University of Iowa students ( $N = 30$ ) were presented with a list of objects, famous persons and concepts in a questionnaire. They rated their liking for each

<sup>2</sup> According to the perspective-difference and motivational accounts, comparative judgments should correspond nearly perfectly to the difference in absolute ratings (i.e., a person should believe he is comparatively more fearful than others only to the degree that he thinks his absolute fear level is higher than others' absolute fear level). We tested whether the target's absolute preferences predicted comparative responses beyond the perceived absolute difference between target and average student preferences. Collapsing across songs in Study 1, the average  $\beta$  values for absolute-target judgments and the difference scores by condition were, respectively: .49 (5 of 6  $p$ 's  $<.05$ ) and .39 (5 of 6  $p$ 's  $<.05$ ) in self-target, and .51 (all  $p$ 's  $<.05$ ) and .40 (all  $p$ 's  $<.05$ ) in friend-target. Notice that absolute-target judgments tended to be as predictive—or more predictive—than the difference scores, consistent with the egocentrism and focalism accounts but not the alternative explanations.

stimulus on 0 (*strongly dislike*) to 10 (*strongly like*) scales. The 5 most liked items (truthfulness, honest politicians, “The Simpsons,” freedom and democracy, and sleeping in on Saturday mornings; average  $M=8.4$ ) and the 5 most disliked items (Osama Bin Laden, nightmares, Kenny G, the home football team losing a game, and disobedient children; average  $M=1.9$ ) were chosen as the appealing and unappealing stimuli for use in the main study.

### Participants

Participants in the main study were University of Iowa students ( $N=87$ ) who received credit towards a research exposure requirement.

### Procedure

The design of the study was a 2 (stimulus type: appealing or unappealing)  $\times$  4 (focusing condition: attention-on-self, attention-on-other, baseline-control, or other-focal)  $\times$  2 (questionnaire version: self or average student judgments first) factorial with stimulus type as a within-subjects variable. Participants were randomly assigned to one of four different types of questionnaires containing all of the manipulations and dependent measures. The “attention-on-self” condition booklet included a special cover page with instructions to “think carefully about your own preferences for the items before making your judgments,” while the “attention-on-others” condition booklet included a page with instructions to “think carefully about the average student’s preferences before making your judgments.” Participants in these conditions indicated their understanding of the instructions by marking their initials in a designated space (all did so).

Appendix B provides a complete list of the dependent measures and response scales. The first page of the questionnaire had instructions for participants to make com-

parative judgments for all 10 stimuli, which were randomly interspersed. Depending on questionnaire version, participants made either absolute-self or absolute-average student judgments next. Participants were debriefed and dismissed after completing the questionnaire.

### Results and discussion

First, comparative ratings in the other-focal condition were reverse scored to ease interpretation of the results. The comparative, absolute-self and absolute-average student responses were aggregated separately for the 5 appealing and 5 unappealing stimuli (see Table 2).

### Comparative judgments

As before, people’s ratings indicated they believed they liked the appealing things and disliked the unappealing ones more than their peers did. In an ANOVA of direct comparison ratings, a significant main effect of stimulus type emerged,  $F(1, 79) = 66.14$ ,  $p < .001$ , revealing that people judged their preferences for the appealing and unappealing stimuli to be socially distinctive. But the extent to which people perceived their preferences as different from others’ clearly depended on whose preferences they were focused on—their own or their peers—at the time they made their comparison ratings, as indicated by a significant Stimulus Type  $\times$  Focusing Condition interaction,  $F(3, 79) = 22.24$ ,  $p < .001$ .

To illustrate this interaction, the magnitude of the emotion intensity bias within each focusing condition (testing the average comparative response for each stimulus type against the “0” scale midpoint) was evaluated. Participants who were instructed to think about their own preferences showed a strong emotion intensity bias (attention-on-self condition: appealing stimuli:  $t(21) = 6.67$ ,  $p < .01$ , unappealing stimuli:  $t(21) = -5.43$ ,  $p < .001$ ), as did participants who were not

Table 2  
Average comparative, absolute-self, and absolute-average student judgments as a function of focusing and stimulus type conditions (Study 2)

Focusing and stimulus type conditions	Judgment type					
	Comparative		Absolute-self		Absolute-average student	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>Attention-on-self</i>						
Appealing stimuli	1.73*	1.22	8.08 <sub>a</sub>	0.98	7.69 <sub>a</sub>	1.02
Unappealing stimuli	-1.27*	1.10	2.62 <sub>a</sub>	1.30	2.71 <sub>a</sub>	1.25
<i>Attention-on-others</i>						
Appealing stimuli	0.65*	0.75	7.95 <sub>a</sub>	1.04	7.59 <sub>b</sub>	0.97
Unappealing stimuli	-0.43*	0.76	3.02 <sub>a</sub>	1.35	3.31 <sub>a</sub>	1.41
<i>Baseline-control</i>						
Appealing stimuli	2.19*	1.49	7.90 <sub>a</sub>	1.17	7.48 <sub>b</sub>	0.93
Unappealing stimuli	-1.37*	1.35	2.65 <sub>a</sub>	1.32	2.91 <sub>a</sub>	1.49
<i>Other-focal</i>						
Appealing stimuli	-0.34	1.33	8.30 <sub>a</sub>	0.84	8.02 <sub>a</sub>	0.77
Unappealing stimuli	0.47	1.14	2.55 <sub>a</sub>	1.42	2.34 <sub>a</sub>	1.06

Note. Comparative preference ratings were made on a -5 to +5 scale with numbers above 0 indicating more liking and numbers below 0 indicating more disliking than average student. An asterisk indicates difference from 0 (or “same” as average student),  $p < .05$  by one-sample *t*-test. Absolute preference judgments for the self and for the average student were made on a 0–10 scale with higher numbers indicating greater liking. Rows with different subscripts indicate differences between absolute judgments for self and average student significant at the .05 level.

given special instructions (baseline-control condition: appealing stimuli:  $t(20)=6.72, p<.001$ , unappealing stimuli:  $t(20)=-4.67, p<.001$ ). In contrast, the bias was much weaker among those who were asked to think about other people's preferences, although it was still significant (attention-on-others condition: appealing stimuli:  $t(21)=4.07, p<.01$ , unappealing stimuli:  $t(21)=-2.71, p<.05$ ). In contrasts across conditions, the magnitude of the bias was stronger in the attention-on-self condition than it was in the attention-on-others condition (appealing stimuli:  $t(42)=3.52, p<.001$ , unappealing stimuli,  $t(42)=-2.94, p<.01$ ). Importantly, the magnitude of the bias in the attention-on-self and baseline-control conditions did not differ significantly (appealing stimuli:  $t(41)=1.12, p>.05$ , unappealing stimuli,  $t<1$ ).

Several points are noteworthy. The emotion intensity bias was exhibited when people were not given any explicit instructions about whom to give special attention. This bolsters the idea that when people are asked to compare, their default mode is to think egocentrically about themselves and the intensity of their personal feeling. Also supporting this idea is that participants given no instructions and participants told to focus on the self displayed a similar level of bias. Second, the bias was substantially weaker when people were instructed to think carefully about others' preferences. Presumably, by challenging the natural inclination to think egocentrically, participants recognized more that their preferences were not so divergent from the mainstream. This induction appears to have been only partially successful in overcoming egocentric thinking, however, as even these participants persisted in exhibiting some degree of the bias.

In the other-focal condition, where the self was in the non-focal position of the comparative question, there was no indication of the intensity bias (appealing stimuli:  $t(21)=-1.19, p>.10$ , unappealing stimuli:  $t(21)=1.95, p=.06$ ). By contrast, baseline-control participants showed a stronger emotion intensity bias (appealing stimuli:  $t(41)=5.87, p<.001$ , unappealing stimuli:  $t(41)=-4.86, p<.001$ ). This serves as additional evidence that focalism contributes to the emotion intensity bias. Simply shifting the focus of the comparison question influenced people's judgments about the relative intensity of their personal preferences. When other people's preferences were focal, participants appeared to have thought more extensively about other people and subsequently judged their own and others' preferences to be similarly intense. An important point, however, is that people did not show a reverse intensity bias (i.e., see other people's preferences as more intense than their own) in this condition, as they should have done if focalism were solely operating. This suggests that people were still reasoning somewhat egocentrically. Taken together, these findings suggest that egocentrism and focalism work in tandem to produce the emotion intensity bias.

#### *Relation between comparative and absolute judgments*

To assess whether the attention manipulations influenced the weight given to own versus others' preferences, we conducted a series of regression analyses similar to those

in Study 1. Collapsing across stimuli, the average self and average student beta values by condition were: .55 (6 of 8  $p$ 's <.05) and  $-.10$  (all  $ns$ ) in attention-on-self, .77 (8 of 10  $p$ 's <.05) and  $-.50$  (4 of 10  $p$ 's <.05) in attention-on-others, .64 (6 of 10  $p$ 's <.05) and  $-.24$  (1 of 10  $p$ 's <.05) in baseline-control, and .45 (6 of 10  $p$ 's <.05) and  $-.45$  (5 of 10  $p$ 's <.05) in other-focal. Overall, more weight was given to personal preferences than to peers' preferences in the comparison. Of special note, the weighting of peers' preferences was substantially greater in the attention-on-other and other-focal conditions, precisely those conditions where the intensity bias was the smallest. Thus, asking people to think carefully about others' preferences or making other people's preferences focal had the same effect: more attention was given to other people's preferences resulting in a diminished emotion intensity bias, consistent with egocentrism and focalism.

A final question was whether the attention manipulations influenced comparative judgments by changing participants' perceptions of their personal and their peers' absolute preferences. As in Study 1,  $t$ -tests were calculated to compare absolute target and absolute referent ratings (see Table 2, columns 4 and 6). In only 2 of 6 cases were there significant differences in absolute ratings when there was a significant bias in the direct comparison rating. As in Study 1, we submitted direct comparative ratings to an ANCOVA, controlling for the difference between absolute self and average student preference ratings. A significant stimulus type main effect,  $F(1,77)=49.70, p<.001$ , suggests that regardless of any differences in how own and others' absolute preferences were perceived, participants still viewed their own preferences to be relatively more intense than the average students'. A Stimulus Type  $\times$  Focusing Condition interaction,  $F(3,77)=25.10, p<.001$ , suggests that the attention manipulations affected the degree of bias in comparative judgments independent of any effect they may have had on the separate absolute judgments.<sup>3</sup>

#### *Order of rating effects: Partial replication*

Given that comparative ratings were always made prior to absolute ratings in both studies, we wanted to determine whether the order of judgment might have been responsible for the observed emotion intensity bias in comparative ratings. In a separate sample of 60 participants, a partial replication of the control condition used in Study 2 was

<sup>3</sup> Collapsing across stimulus in Study 2, the average beta values for absolute-self judgments and the difference scores by condition were, respectively: .43 (5 of 10  $p$ 's <.05) and .15 (all  $ns$ ) in attention-on-self, .23 (1 of 10  $p$ 's <.05) and .43 (4 of 10  $p$ 's <.05) in attention-on-other, .41 (3 of 10  $p$ 's <.05) and .21 (1 of 10  $p$ 's <.05) in baseline-control, and  $-.10$  (all  $ns$ ) and .50 (5 of 10  $p$ 's <.05) in other-focal. As in Study 1, absolute-target judgments tended to be more predictive than the difference scores, contrary to motivational or perspective-differences accounts of the intensity bias. It is also noteworthy that the relative impact of the difference scores changed as a function of the focusing instructions in Study 2, such that people became more sensitive to how their own and others' preferences differed in absolute terms when they were induced to carefully consider others' preferences.

conducted which varied the order of absolute and comparative judgments. Among those who made comparative ratings first, we observed the usual preference bias (appealing stimuli:  $M = 1.62$ ,  $t(29) = 7.30$ ,  $p < .001$ , unappealing stimuli:  $M = -1.51$ ,  $t(27) = -10.75$ ,  $p < .001$ ). The intensity bias also was replicated among those who made their absolute ratings first (appealing stimuli:  $M = 0.49$ ,  $t(29) = 2.41$ ,  $p = .01$ , unappealing stimuli:  $M = -0.41$ ,  $t(26) = -2.05$ ,  $p = .05$ ).

The bias, however, was significantly weaker among participants who made their absolute ratings first,  $F(1, 53) = 29.28$ ,  $p < .001$  for the interaction. One explanation is that participants were more focused on the average student's preferences when they made their comparative ratings so the tendency to think egocentrically was somewhat inhibited. Further supporting this argument, in the replication, there were no differences between absolute self and average student ratings, in either order condition and for either appealing or unappealing stimuli,  $t$ 's  $< 1$ . The main point, however, is that the bias was manifested regardless of the order in which participants made their ratings.

## General discussion

Nearly everyone in our studies believed they cherish good things (e.g., truthfulness, popular comedy shows) and dislike bad things (e.g., Osama Bin Laden, a loss by the home football team) more than everyone else does. The major objective of the research was to explicate the role of egocentrism and focalism as causes of this bias. As evidence for egocentrism, personal absolute preferences figured more prominently in direct comparisons than did absolute preferences ascribed to others (Studies 1 and 2). Moreover, asking people to carefully consider others' preferences reduced the emotion intensity bias in direct comparisons (Study 2).

In support of the operation of focalism, *any* person's preferences may be judged to be socially distinctive, as long as that person's preferences are the focal point in the comparison (Study 1). Perhaps more convincingly, if the *self* is not the focal point of the comparison, people do not view their own preferences to be socially distinctive (Study 2). Also, the focalism and egocentrism accounts suggest that the emotion intensity bias will be more pronounced in direct comparisons of subjective experience. In support of this contention, the bias persisted even after controlling for any differences in how the target and referent groups' preferences were perceived in absolute terms (Studies 1 and 2).<sup>4</sup>

One question is how well other explanations would account for these findings. A strict motivational account, which assumes that people derive satisfaction from believing their preferences are socially unique, has difficulty

explaining the effects of the attention manipulation on comparative judgments in Study 2. From a motivational perspective, it is unclear why people would be less motivated to believe their preferences were distinctive when they are explicitly told to focus on others' preferences, or when other people's preferences were focal in the comparative question. The perspective-difference explanation (e.g., Miller & McFarland, 1987), which posits that the emotion intensity bias results from asymmetries in how people learn about their own and others' emotional states, suffers similar problems. Specifically, the quality of information people possessed about their own and others' preferences was held constant in the present studies, but manipulations of the extent to which others' preferences were considered—a manipulation of egocentrism—affected the bias in comparative judgments (but not the difference in their absolute judgments).

Finally, neither the motivational nor the perspective-difference accounts readily explain why the bias was more prominent in direct preference comparisons than in separate estimates of self and others' absolute preferences. For both the motivational and perspective-difference accounts, the bias should be roughly comparable across both judgment formats. Only the egocentrism and focalism accounts, which assume that information about the self or focal person is overweighted in the comparison, parsimoniously explain all of these findings. Thus, although motivation and perspective-differences may certainly contribute to some instances of emotion intensity bias, the present results suggest that egocentrism and focalism constitute sufficient (if not necessary) causes of the bias.

## Appendix A. Stimuli for study 1

### *Appealing songs:*

“Ant’s marching” by Dave Mathew’s Band, “How you remind me” by Nickelback, and “Why do you build me up, Buttercup?” by The Foundations.

### *Unappealing songs:*

“What’s new, pussycat?” by Tom Jones, “Spice up your life” by the Spice Girls, and “Girl you know it’s true” by Milli Vanilli.

### *A.1. Dependent measures for Study 1*

#### Self-target condition

*Comparative judgment:* “Compared to the average UI student, how much do you like or dislike [song #]?”  $-5 = I$  dislike the song much more than the average student does,  $+5 = I$  like the song much more than the average student does.

*Absolute-self judgment:* “How much do you like or dislike [song #]?”  $0 =$  strongly dislike,  $10 =$  strongly like.

*Absolute-average student judgment:* “How much would the average student like or dislike [song #]?”  $0 =$  strongly dislike,  $10 =$  strongly like.

<sup>4</sup> In another study, we manipulated the type of reference group (i.e., average student, close friend, or acquaintance) with which participants compared their preferences. The emotion intensity bias was observed across all three types of referent groups.

### Friend-target condition

*Comparative judgment:* “Compared to the average UI student, how much does your friend like or dislike [song #]?”  $-5 = \text{He/She dislikes the song much more than the average student does}$ ,  $+5 = \text{He/She likes the song much more than the average student does}$ .

*Absolute-friend judgment:* “How much does your friend like or dislike [song #]?”  $0 = \text{strongly dislike}$ ,  $10 = \text{strongly like}$ .

*Absolute-average student judgment:* “How much would the average student like or dislike [song #]?”  $0 = \text{strongly dislike}$ ,  $10 = \text{strongly like}$ .

## Appendix B

### B.1. Dependent measures for Study 2

Comparative judgment for all conditions except “other-focal” condition: “Compared to the average UI student, how much do you like or dislike [item]?”  $-5 = \text{I dislike this person/concept more than the average UI student does}$ ,  $+5 = \text{I like this person/concept more than the average UI student does}$ .

Comparative judgment for the “other-focal” condition: “Compared to you, how much does the average UI student like or dislike [item]?”  $-5 = \text{the average UI student dislikes this person/concept more than I do}$ ,  $+5 = \text{the average UI student likes this person/concept more than I do}$ .

*Absolute-self judgment:* “How much do you like or dislike [item]?”  $0 = \text{strongly dislike}$ ,  $10 = \text{strongly like}$ .

*Absolute-average student judgment:* “How much would the average student like or dislike [item]?”  $0 = \text{strongly dislike}$ ,  $10 = \text{strongly like}$ .

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