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Social Exclusion and Stereotyping: Why and When Exclusion Fosters Individuation of Others

Heather M. Claypool
Miami University

Michael J. Bernstein
Pennsylvania State University, Abington

Exclusion triggers a desire to re-capture connections with others. To facilitate this goal, excluded individuals typically process social information especially carefully. One implication of this is that exclusion may foster judgments of others that are reliant on a careful consideration of their idiosyncratic behaviors rather than on more superficial features. We predicted, therefore, that excluded individuals should individuate more and stereotype less than non-excluded individuals and that such effects should be in service of identifying appropriate re-affiliation candidates. In 3 replications of Experiment 1, excluded (compared to non-excluded) individuals rendered less stereotypic judgments of occupational and racial group members described with mildly or ambiguously counter-stereotypic information. Confirming such processes aid with re-affiliation, Experiments 2 and 3 showed that these effects occurred for social targets that represented reasonable sources of re-affiliation, but not for offensive social targets (i.e., Skinheads) or non-social agents. Experiment 4 underscored that excluded participants process presented social information more carefully (individuate), showing greater differentiation in judgments of highly stereotype-consistent and stereotype-inconsistent targets. Implications for the social exclusion literature are discussed.

Keywords: social exclusion, individuation, stereotyping, re-affiliation

Humans are "social animals," Aronson (1972) once wrote, and ample evidence supports this assertion. Humans readily form connections with other people and suffer profound emotional (e.g., Gerber & Wheeler, 2009), psychological (e.g., Williams, 2007), and even physical harm (e.g., Bernstein & Claypool, 2012b) when such connections are denied or broken. The establishment and maintenance of social relationships, it seems, is paramount (Baumeister & Leary, 1995). Not surprisingly, then, when individuals are deprived of social connections because they are rejected, ostracized, or excluded, a host of reactions are triggered (e.g., Baumeister, DeWall, Ciarocco, & Twenge, 2005; Carter-Sowell, Chen, & Williams, 2008; Knowles & Gardner, 2008; Twenge, Catanese, & Baumeister, 2003; Williams & Govan, 2005; see Williams, 2007, for a review).

Of all the ways one could respond to episodes of exclusion,[1] perhaps the most adaptive is to seek out and successfully form connections with others. Indeed, excluded individuals appear highly motivated to do just this, reporting a greater interest in working with others (vs. alone) on subsequent tasks and a heightened desire to join a social organization (Maner, DeWall, Baumeister, & Schaller, 2007). Moreover, excluded people nonconsciously mimic others (Lakin, Chartrand, & Arkin, 2008) and conform to others (Williams, Cheung, & Choi, 2000), and excluded women (though not men) work harder on group tasks (Williams & Sommer, 1997). These sorts of behavioral responses and re-affiliation motivations are undoubtedly adaptive and will aid excluded people in securing the social solace they seek.

However, excluded individuals should be judicious in selecting whom they approach for re-affiliation. Approaching just anyone who "happens to come along" might prove detrimental if that individual is uninterested in or actively opposed to such contact. A potential re-affiliation candidate who is, for example, quite rude may be uninterested in affiliating with anyone; a candidate who is in a rush might be open to affiliating but unable to do so at that moment in time; and an otherwise friendly and available candidate who simply does not like the excluded individual will likely rebuff any re-affiliative efforts from that person. If an excluded individual attempts an affiliation contact by, for instance, striking up a conversation with someone, and the target of this attempt does not reciprocate, he or she risks further exclusion that may only exacerbate feelings of social disconnection.

Fortunately, excluded individuals appear to possess a set of social-perceptual and social-cognitive skills that might aid in finding promising re-affiliation partners. Indeed, according to Pickett and Gardner (2005), when individuals find their current levels of

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Heather M. Claypool, Department of Psychology, Miami University; Michael J. Bernstein, Department of Psychological and Social Sciences, Pennsylvania State University, Abington.

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Correspondence concerning this article should be addressed to Heather M. Claypool, Department of Psychology, Miami University, 90 North Patterson Avenue, Oxford, OH 45056. E-mail: claypohm@miamioh.edu

[1] Rejection, exclusion, and ostracism are related but slightly different constructs. For the sake of consistency in this article, we use the term *exclusion* throughout when describing findings in the literature, our methods, and our results.

belongingness lacking (as might be the case following exclusionary experiences), the "social monitoring system" (SMS) activates. This system scans the environment for social cues and for social opportunities that can facilitate an increase in belonging. Numerous pieces of evidence support this perspective. For example, those who experience exclusion or have an especially high need to belong (compared to those who do not) have enhanced memory for social information (Gardner, Pickett, & Brewer, 2000) and become attuned to others' vocal tones (Pickett, Gardner, & Knowles, 2004).

Perhaps the most compelling evidence that excluded individuals can accurately leverage social-perceptual and cognitive skills in the search for promising re-affiliation candidates comes from work showing that excluded individuals can discriminate an important re-affiliative signal from a deceptive one. Namely, Bernstein, Young, Brown, Sacco, and Claypool (2008) asked participants to write about a time they felt excluded, included, or about mundane/trivial events. Participants were then shown brief videos of smiling others and were asked to discern which smiles were "real" and which were "fake." Because those displaying real smiles at a person are likely better re-affiliation candidates for that individual than those who display fake smiles (Brown & Moore, 2002), Bernstein et al. reasoned (consistent with the SMS perspective) that those who wrote about exclusion would be better at making this discrimination than those in the other two conditions. Indeed, their results confirmed this hypothesis (Bernstein et al., 2008). In follow-up work (Bernstein, Sacco, Brown, Young, & Claypool, 2010), individuals put through the same manipulation and shown the same videos were asked to rate how much they wanted to work with the smiling people. Though perceivers were not told that smile authenticity varied across the targets (as they were in the previously described study), all individuals reported wanting to work with the "real" smilers more than the "fake" smilers, but this difference was most pronounced among the excluded participants. Thus, the SMS and its supporting evidence portray socially excluded individuals as people who carefully examine social information and use it to make decisions about which targets to approach.

If indeed the socially excluded are especially skilled at and motivated to process social information about others, then this suggests an interesting and novel prediction—that those who are socially excluded may *individuate more* and *stereotype less* than those who are not excluded. Carefully encoding, considering, and using individuating information to form judgments of others, rather than relying on stereotypes, is cognitively demanding and occurs only with sufficient cognitive resources and motivation (e.g., Hamilton & Sherman, 1994). Though difficult, socially excluded individuals may typically possess high levels of motivation to pay close attention to others' individuating characteristics (rather than relying on easily accessible stereotypic knowledge), as having such information may help them discriminate between good and bad re-affiliation candidates.

Indeed, individuating information is likely considerably more diagnostic of a target's potential as a re-affiliation candidate than are the target's category-based stereotypic attributes. For example, though women (as a social group) are stereotyped to be warm and nurturing, and thus perhaps ideal re-affiliation candidates (Eagly & Mladinic, 1989), not all women, of course, have these features. If excluded individuals simply assume that a random female target is warm and friendly, but then have their re-affiliation efforts rebuffed by her, they would be no closer to re-establishing affiliation and might actually experience further alienation. On the other hand, some social groups are stereotyped in ways that might make them seem like non-ideal re-affiliation candidates, namely, those stereotyped as hostile (e.g., African Americans; Devine, 1989), cold/aloof (e.g., Asians; Lin, Kwan, Cheung, & Fiske, 2005), boring/dull (e.g., accountants; Bougen, 1994), or dishonest (e.g., salespeople; Babin, Boles, & Darden, 1995). If excluded individuals simply assume that such targets are poor re-affiliation prospects, they may "pass them over" and miss viable opportunities to make a social connection. If, though, excluded individuals process the individuating features of these targets, they might discover the targets are, contrary to the stereotypes, good re-affiliation possibilities.

Therefore, if individuating information is available about a re-affiliation candidate, excluded individuals might benefit from processing that information carefully to determine who is versus who is not an appropriate re-affiliation target. Our overarching goal in this work is to empirically investigate if socially excluded individuals (compared to non-excluded ones) typically individuate, rather than stereotype, others and if this individuation is in service of locating re-affiliation partners.

Theoretical Perspectives on a Possible Link Between Exclusion and Stereotyping and/or Individuation

To date, no work has directly examined the possibility that social exclusion might affect stereotype application, the use of stereotypic information as a basis for judging another person (e.g., Kunda & Spencer, 2003), or individuation, the use of a target's specific characteristics or attributes in forming a judgment (e.g., Neuberg & Fiske, 1987). Nevertheless, the theory offered by the Social Monitoring account (e.g., Pickett & Gardner, 2005) and its supporting evidence suggest that excluded individuals should be motivated and capable of paying attention to and judging others based on their idiosyncratic features. Because scrutinizing others as possible re-affiliation candidates is a top priority for the excluded, this perspective suggests that excluded individuals should individuate, rather than stereotype, targets. As sensible as this prediction appears from the Social Monitoring perspective, though, there are two lines of work in the exclusion literature that might point to the opposite prediction—that exclusion should encourage stereotyping and discourage individuation.

Social Exclusion and Cognitive Resources

The first concerns the finding that excluded individuals are incapable of engaging in careful, analytic thought (Baumeister, Twenge, & Nuss, 2002). In this work, individuals were first given a bogus personality test, which was allegedly analyzed by a computer program that then provided them feedback about their future lives. Those in the social exclusion condition received "future alone" feedback, alleging that their future lives would be devoid of social relationships. Those in the social inclusion condition received "future belonging" feedback, learning that their future lives would be filled with long-lasting and meaningful relationships. Finally, those in the "future misfortune" (control) condition learned of a future filled with physical mishaps. These studies

showed that those in the "future alone" condition performed worse on GRE-style analytical problems, a general IQ test, and a difficult reading-comprehension test than did those in the other conditions. Based on these findings, Baumeister et al. (2002) concluded that social exclusion interferes with its victims' abilities to engage in executive functioning. In essence, excluded individuals become unable to reason and think carefully.

Applied to the current work, these findings suggest that excluded individuals should stereotype more and individuate less. This is because research has consistently shown that individuating another person is cognitively demanding, whereas stereotyping is cognitively easy. Indeed, stereotype usage is particularly likely when individuals do not wish to use their cognitive resources (e.g., Neuberg & Fiske, 1987) or when they have limited cognitive resources at their disposal, because of distraction, time pressure, multi-tasking, or not being at their "peak" circadian rhythm (e.g., Bodenhausen, 1990; Bodenhausen & Lichtenstein, 1987; Gilbert & Hixon, 1991; Macrae, Milne, & Bodenhausen, 1994). In short, when individuals do not have copious cognitive capacity or the motivation to use it, they apply stereotypes in a quick, heuristic way, because extracting and using individuating information is too resource demanding. Therefore, if excluded individuals lack the motivation or ability to think carefully (Baumeister et al., 2002), then they should stereotype more than non-excluded individuals.

The finding that social exclusion hampers careful thinking (Baumeister et al., 2002) seems quite contrary to our hypothesis that exclusion should encourage individuation and discourage stereotyping. However, one striking difference between this Baumeister et al. (2002) work and the findings supportive of the Social Monitoring account is that the former focuses on non-social information processing (e.g., solving analytical GRE problems), whereas the latter focuses on social information processing (e.g., discriminating real from fake smiles). In our view, this difference is crucial and may explain how both the findings of Baumeister et al. (2002) and our hypothesis could be true. Because exclusion leaves a victim vulnerable to emotional turmoil and even physical pain (Bernstein & Claypool, 2012b; Williams, 2007), one's cognitive resources should be girded to engage in *social* problem solving and thinking in an effort to recapture others' acceptance. On the other hand, an enhanced ability to (for example) solve algebra problems would seem of little utility following exclusion, as this would likely not help one successfully re-affiliate. In fact, if one is directing resources at social problem solving, this may leave insufficient resources for non-social deliberations, which may explain the deficits reported by Baumeister et al. (2002). Thus, despite the fact that excluded individuals appear unable to engage in careful *non-social thinking/reasoning*, we believe that they should be able to engage in careful *social thinking/reasoning*, resulting in greater individuation and less stereotyping of others.

Social Exclusion and Self-Esteem

A second line of work that may appear to predict a hypothesis opposite to ours concerns the literature on self-esteem threat and stereotype application. There are a number of findings illustrating that, when individuals experience a blow to self-esteem, they apply stereotypes to others as a means of self-esteem repair. For example, Sinclair and Kunda (1999, Experiment 1) asked participants to rate the competence (among other measures) of a Black or White manager who either criticized them (damaging their self-esteem) or praised them (bolstering their self-esteem). When their self-esteem was damaged, participants rated the Black manager as less competent than the White manager, but when self-views were fortified, no such difference was found. In a conceptually related study, Sinclair and Kunda (2000) showed that female instructors were judged as less competent than male instructors, but only for students who received a low (presumably self-esteem damaging) grade from them. For students who received a high grade, male and female instructors were judged equally well. Collectively, these findings illustrate that when individuals suffer a blow to self-esteem, they apply stereotypes to others, presumably to feel better about themselves.

These findings are highly relevant to the current work because social exclusion has been shown in numerous studies to reduce one's self-esteem (e.g., Bernstein et al., 2013; Williams et al., 2000; Zadro, Williams, & Richardson, 2004). Thus, based on these findings, social exclusion victims should apply stereotypes *more* than those who are not excluded, as the former should be experiencing reduced self-esteem.

However, it is important to consider *why* self-esteem threatened individuals often apply stereotypes. They do so, it has been argued, because disparaging others using stereotypes may be perceived as an effective means to satisfy an important goal—for example, to feel good about one's self. In their integrative review, Kunda and Spencer (2003) argued that motivated stereotype application varies based on its perceived ability to satisfy such goals. They stated,

> perceivers will be more likely to apply an activated group stereotype to a group member when stereotyping this person can further their comprehension and self-enhancement goals . . . [but] events that *decrease preoccupation with these goals* or *undercut the extent to which stereotyping can satisfy them* [emphasis added] may reduce stereotype application. (Kunda & Spencer, 2003, p. 532)

Thus, though excluded individuals experience reduced self-esteem, their primary goal following exclusion *is to secure re-affiliation with others* (Maner et al., 2007). Indiscriminately applying stereotypes to potential sources of re-affiliation will do little to achieve this goal and, in fact, may undermine it. Instead, carefully considering others' characteristics is likely a better strategy to determine who is (vs. who is not) a good candidate for re-affiliation, which is their most pressing goal. Moreover, successfully connecting with another person post exclusion should improve one's self-esteem (Williams, 2007), and, therefore, individuating may in this case actually be a more effective route to self-enhancement than is stereotyping. Thus, our hypothesis that exclusion should reduce stereotype application is actually quite consistent with Kunda and Spencer's (2003) framework.

Overview

In this work, we test the hypothesis that experiences of social exclusion result in reduced stereotyping and greater individuation and that this effect is in service of finding re-affiliation partners. In three replications of Experiment 1, participants will be assigned to exclusion or non-exclusion conditions and then read about one or more social targets. Each target will be accompanied by individuating information that is mildly or ambiguously counter-stereotypic. If, as we hypothesize, excluded individuals are motivated to carefully process the idiosyncratic features of others, they should rate these targets *lower* on stereotypic dimensions (than

will non-excluded individuals) because information contained in the descriptions will suggest that such stereotypic characterizations are untrue. Variations in these replications will examine whether the hypothesized effect generalizes across different types of stereotyped groups (both racial and occupational) and exclusion paradigms.

Experiments 2 and 3 directly examine whether the hypothesized relation between exclusion and individuation is moderated by re-affiliation considerations. In Experiment 2, excluded and non-excluded participants are exposed both to social targets (i.e., people) and to non-social targets (e.g., trees, furniture, etc.). Targets are described in ways that are mildly counter-stereotypic (or, in the case of the non-social objects, mildly counter-prototypic). Because other people can provide direct opportunities for social re-affiliation, whereas non-social agents (like trees) cannot, excluded individuals should individuate (and not stereotype) people, but they should show equal rates of "stereotyping" (prototyping) of non-social objects.

Moreover, among social targets there is likely variability in re-affiliation desirability. Though excluded people are highly motivated to seek re-affiliation, they may "pass" on the opportunity to pursue re-affiliation with targets that a priori are highly offensive or highly undesirable. Thus, if excluded people engage in less stereotyping and more individuation of others as a means to differentiate good re-affiliation candidates from bad ones, they should individuate only when the targets are reasonable sources of social contact but should be equally likely (as non-excluded individuals) to stereotype highly offensive targets. In Experiment 3, we test this hypothesis. Namely, excluded and non-excluded individuals are exposed to ambiguously hostile information. Some are told that such information accompanies an African American target, whereas others are told it accompanies a Neo-Nazi skinhead target (hostility is stereotypic of both targets). We predict that excluded participants will individuate the African American target (a target they should perceive as a reasonable source of re-affiliation) but will stereotype the skinhead (a target they should perceive as a highly offensive re-affiliation candidate).

Finally, in our fourth experiment, we examine whether excluded people (relative to non-excluded people) do indeed pay more careful attention to provided information about targets and make judgments based on that information, that is, whether they individuate more. In it, we manipulate the degree to which a target performs clearly stereotypic and counter-stereotypic behaviors. If perceivers are processing carefully, they should recognize that a target performing mostly stereotypic behaviors is, indeed, more stereotypic than one who is performing predominantly counter-stereotypic behaviors and judge the former as stereotype consistent and the latter as less so. In other words, there should be a difference in judgments between stereotype-consistent and stereotype-inconsistent targets. Given our framework, we expect that excluded participants will show the greatest differentiation in their judgments of these targets.

If supportive data are obtained in these studies, we will have illustrated a heretofore unknown outcome of social exclusion—that it encourages individuation and reduces stereotyping of others. These findings would further support the social monitoring system perspective and offer the first synthesis between the vast literatures on stereotyping and exclusion. Moreover, as a secondary point, these findings may help explain the seeming contradiction between the findings showing that socially excluded individuals are "dumb" (Baumeister et al., 2002) and those showing that they are socially "smart" (e.g., Bernstein et al., 2008, 2010).

Experiment 1

As just stated, the objective of Experiment 1 was to establish the impact of social exclusion on stereotyping/individuation. We conducted three separate studies to establish this impact, but because there are many procedural similarities among them, we present them here for brevity as Replications A, B, and C. We begin by explaining Replication A in some detail, and then we note variations in procedures where necessary for the subsequent replications.

Replication A

Method. Fifty-seven (41 female) introductory psychology students participated in exchange for course credit. After granting informed consent, they were randomly assigned to one of three social-experience conditions—exclusion, inclusion, or control (triviality). To manipulate social experience, participants initially wrote about an event from their own lives. Namely, they wrote about an experience of feeling "rejected or excluded," an experience of feeling "accepted or included," or about the mundane/trivial experiences from the "previous morning." Participants were encouraged to write for about 5 min and to recount the assigned experience in as much detail as possible. This task has been used successfully in previous research as a manipulation of social exclusion/inclusion (e.g., Bernstein et al., 2008; Maner et al., 2007).

Following this, participants completed measures of the "fundamental needs" of self-esteem, control, belonging, and meaningful existence, as a manipulation check, as previous research has consistently shown satisfaction of these needs to decrease as a result of social exclusion (e.g., Zadro et al., 2004). On these items, participants were to indicate how the events in their essay made them feel. The assessment included two items each to assess self-esteem (e.g., "I felt good about myself"), belongingness (e.g., "I felt like an outsider," reverse scored), control (e.g., "I felt powerful"), and meaningful existence (e.g., "I felt meaningless," reverse scored). Each need was assessed on a 5-point scale, where larger numbers indicated greater agreement with the item. Because exclusion often lowers mood (e.g., Gerber & Wheeler, 2009, though see DeWall & Baumeister, 2006), participants also rated separately how much they felt "happy" and "sad" during the event, on a 5-point scale, where larger numbers indicated greater felt intensity.

Following these manipulation checks, participants completed the primary measure, an impression formation (stereotyping) task, comprised of multiple trials (taken from Smith et al., 2006). On each, participants read a brief description of a target that began with a proclamation of the target's occupational title (e.g., "I am a hairdresser") and was followed by a description of the target's behaviors, some of which were designed to be mildly counter-stereotypic (e.g., "[My daughter] wanted me to fill her in on everything that happened during the 6 months she was away, but there wasn't anything of significance to tell her"; counter-stereotypic of the "talkative" hairdresser stereotype). After reading

a vignette, participants rated the degree to which the target possessed five randomly ordered traits—three that were stereotypic of that occupation (e.g., "talkative") and two that were fillers/stereotype-irrelevant (e.g., "seductive")—on 7-point scales, with larger numbers indicating greater agreement that the target possessed the trait. This paradigm allowed us to detect the degree to which participants were truly paying attention to (processing) the individuating behaviors of the targets. Because each target person was described in ways that were mildly counter-stereotypic, participants should, if attending to this information, rate the targets low on the stereotypic dimensions.

Across the vignettes/trials, participants read about several different occupational group members, including an accountant, computer programmer, hairdresser, lawyer, trucker, waitress, and so forth. Because each occupational group has different stereotypes, different stereotypic traits and different fillers accompanied each target. The order in which the targets were presented was randomized and different for each participant, and completion of the task was fully self-paced.

Following completion of the stereotyping task, participants completed a brief demographics questionnaire, and then they were debriefed, thanked for their participation, and dismissed from the lab.

Results and discussion. To establish that the writing task manipulated feelings of social exclusion as desired, we averaged ratings on each sub-scale of the fundamental needs questionnaire, after appropriate reverse scoring, such that higher numbers indicated greater need satisfaction. Because the items were highly correlated ($\alpha = .93$), we averaged them together, a common practice in this literature (e.g., Young, Bernstein, & Claypool, 2009). This fundamental needs composite index was subjected to a one-way analysis of variance (ANOVA) and showed the typical significant effect, such that those who wrote about exclusion reported less satisfaction of these needs than did those who wrote about their previous morning (triviality), who themselves had less satisfaction of these needs than those who wrote about inclusion (see Table 1 for all descriptive and inferential statistics). In addition, we reverse scored participants' ratings of sadness and averaged them with reported happiness ($r = .75$) to form an overall index of mood. A one-way ANOVA on this index showed the same pattern as the fundamental needs, such that those who wrote about exclusion reported more negative mood than did those who wrote about their previous morning, who themselves had more negative mood than those who wrote about inclusion (see Table 1). Thus, the pattern of responses on both measures verified that our social experience manipulation was successful.

We next sought to examine our primary hypothesis that social exclusion would decrease stereotypic ratings. To do this, we averaged ratings on the stereotypic dimensions across all targets, such that higher numbers indicated greater stereotype-consistent perceptions. A contrast analysis comparing those in the exclusion condition to those in the other two (−2 exclusion, 1 inclusion, 1 control) on this index was significant, $t(54) = 2.14$, $p = .04$, showing that participants who wrote about exclusion ($M = 2.63$, $SD = 0.41$) rated the targets less stereotypically than those who wrote about inclusion ($M = 2.86$, $SD = 0.53$) or trivial events ($M = 3.02$, $SD = 0.59$). Moreover, there was no difference between the latter two conditions, $t(54) < 1$, $p = .33$. It is important to note that exclusion did not simply encourage participants to rate the targets lower on *all* dimensions. The same contrast analysis of the filler (stereotype-irrelevant) dimensions (averaged across all targets) showed statistically equivalent ratings across conditions, $p = .57$ ($M = 3.97, 4.03, 4.06$ for exclusion, inclusion, and control, respectively).

This evidence is fully consistent with our hypothesis that excluded people individuate, basing their impressions on the information presented, rather than on stereotypic assumptions of group-based features. However, might it be the case that excluded individuals are just "being nice," rating targets more favorably? Because many stereotypes are negative, excluded individuals might simply be reporting lower negative ratings, which equates to a more favorable impression. Perhaps rating others favorably is perceived as a sensible strategy that might gain the excluded re-affiliation opportunities. In essence, if an excluded person rates someone else favorably, perhaps that person will "return the favor," and treat him or her favorably as well.

Fortunately, our study affords a direct investigation of this possibility, because many of the social targets were judged on a mixture of positive and negative features. For example, two of the stereotypic traits the "hairdresser" target was rated on were "opin-

Table 1
Means (and Standard Deviations) of the Fundamental Needs and Mood as a Function of Social Experience Condition in Each Experiment

Experiment	Measure	Exclusion	Inclusion	Control	Inferential statistics
1A	Needs	2.06_a (0.66)	4.47_b (0.38)	3.59_c (0.75)	$F(2, 54) = 73.69$, $p < .001$
	Mood	1.89_a (0.76)	4.76_b (0.42)	3.34_c (1.21)	$F(2, 54) = 52.76$, $p < .001$
1B	Needs	2.72_a (0.94)	5.16_b (1.79)	4.76_b (1.13)	$F(2, 38) = 14.48$, $p < .001$
	Mood	3.13_a (0.81)	5.40_b (2.12)	4.67_b (1.67)	$F(2, 38) = 7.29$, $p = .002$
1C	Needs	3.27_a (1.12)	4.88_b (0.76)		$t(41) = 5.53$, $p < .001$
	Mood	4.38_a (1.38)	5.55_b (1.00)		$t(41) = 3.20$, $p = .003$
2	Needs	2.08_a (0.85)	4.05_b (0.77)	3.84_b (0.49)	$F(2, 65) = 51.25$, $p < .001$
	Mood	1.85_a (0.79)	4.39_b (0.72)	3.59_c (0.82)	$F(2, 65) = 62.71$, $p < .001$
3	Needs	2.95_a (1.04)	5.10_b (1.38)	4.92_b (1.11)	$F(2, 91) = 28.28$, $p < .001$
	Mood	2.88_a (1.36)	5.52_b (1.36)	5.09_b (1.55)	$F(2, 91) = 29.60$, $p < .001$
4	Needs	2.24_a (0.75)	4.46_b (0.43)	3.41_c (0.87)	$F(2, 119) = 99.27$, $p < .001$
	Mood	2.09_a (0.87)	4.74_b (0.50)	3.29_c (1.20)	$F(2, 119) = 87.90$, $p < .001$

Note. The F values and t values are for the main effects of Social Experience. Means that do not share a subscript in the same row differ significantly from each other at $p < .05$.

ionated," a negative feature, and "good listener," a positive feature. Thus, we created two composite stereotype indices, one that averaged ratings across the negative stereotype traits and one that averaged ratings across the positive stereotype traits. We determined which traits were positive and negative by comparing them against the ratings presented in Anderson's (1968) article, which presents valence ratings for 555 well-known social traits.[2] Thus, the negative stereotype index included traits like materialistic, greedy, uneducated, boring, and so forth, whereas the positive stereotype index included traits like intelligent, confident, friendly, hard-working, and so forth. We then conducted a 3 (Social Experience) × 2 (Stereotype Valence) mixed-model ANOVA on these indices.[3] If exclusion simply prompts more favorable ratings, excluded participants should rate targets lower on negative stereotypes and *higher* on positive ones, resulting in a significant interaction. This, though, was not the case, as the interaction between Social Experience and Stereotype Valence was not significant, $F(2, 54) = 1.89$, $p = .16$.

Though not significant, the p value on the interaction is somewhat small. Thus, we performed follow-up analyses examining each trait valence separately. On positive stereotypic traits there was an effect of Social Experience, $F(2, 54) = 4.23$, $p = .02$, wherein excluded participants rated targets *lower* on positive stereotypic features ($M = 2.82$, $SD = 0.37$) than did included ($M = 3.25$, $SD = 0.54$) or control ($M = 3.30$, $SD = 0.71$) participants. On negative stereotypic traits, there was much less definitive evidence of reduced stereotyping among the excluded ($M = 2.46$, $SD = 0.72$) compared to included ($M = 2.47$, $SD = 0.67$) or control ($M = 2.80$, $SD = 0.67$) participants, $F(2, 54) = 1.49$, $p = .23$. From these analyses, it seems that the excluded were not simply "being nice" and judging targets more favorably across the board. Instead, they appeared to render *less stereotypic assessments*. This effect, if anything, was most noticeable on the positive traits, the *opposite* of what would be predicted if they were simply rendering favorable judgments of others.

Finally, we conducted analyses to determine whether the impact of exclusion on stereotypic responses was mediated by mood. Because exclusion has been shown to worsen mood, as was true in this study, and because some negative affective states have been shown to produce stereotype-free responses (Bodenhausen, Sheppard, & Kramer, 1994), we felt it prudent to test this possibility. A multiple regression model that predicted stereotypic responses jointly from the Social Experience variable (dummy coded as 1 = exclusion, 0 = inclusion/control) and mood did show that the impact of social exclusion on stereotyping was less pronounced than when in a model alone ($p = .14$). This suggests that mood could be acting as a mediator. However, mood was not remotely close to predicting stereotypic responses in this model, $t(54) < 1$, $p = .99$. Moreover, a bootstrapping analysis (Preacher & Hayes, 2004; with 5,000 samples) examining the indirect effect of Social Experience on stereotypic responses via mood yielded a 95% confidence interval for the indirect effect that *did* contain zero (−.36, .42). Thus, these findings collectively confirm that mood did not mediate the effect.

Overall, then, this first replication showed that recalling an experience of exclusion reduced reliance on stereotypes in rendering judgments compared to non-exclusionary experiences. Those who wrote about exclusion judged mildly counter-stereotypic occupational targets as less stereotypic than those in the other two groups. This effect did not appear to be mediated by mood. This latter finding is not surprising to us, as mood has failed to mediate most consequences of exclusion, including its impact on non-social thinking/reasoning (Baumeister et al., 2002) and several others (e.g., Baumeister et al., 2005; Maner et al., 2007; Twenge et al., 2007). Moreover, conceptually, we believe it is a desire to seek and secure re-affiliation, not a decrease in mood, which prompts excluded individuals to judge others based on their idiosyncratic features and behaviors (to individuate them).

Replication B

Method. In a second study, we sought to establish that the effect of social exclusion on stereotyping was not limited to occupational stereotypes. To do this, we had 41 (27 female) White introductory psychology students, who participated in exchange for course credit, write about a personal experience of exclusion, inclusion, or triviality (as in the study just described). Following this, they completed fundamental needs and mood questionnaires, similar to those in Replication A. This time, though, there were four items to assess each need, five mood items (good, bad, angry, happy, sad), and responses were rendered on 1–7 (instead of 1–5) scales.

After completing these manipulation checks, participants engaged in an impression formation task, in which they saw a photograph of an African American male named "Jamal" accompanied by a description of his ambiguously hostile behaviors (taken from Srull & Wyer, 1979). This information was used because hostility is a common stereotype of African Americans (e.g., Devine, 1989). After reading about him, participants rated Jamal on four hostility-related traits (hostile, unfriendly, dislikable, considerate [reverse scored]) intermixed with five stereotype-unrelated traits (dependable, intelligent, interesting, narrow-minded, boring) on 11-point scales, with larger numbers indicating greater perceptions that "Jamal" possessed the trait. The traits were presented in a different random order for each participant, and participant responses were self-paced. Following completion of these trait ratings, participants completed a brief demographics questionnaire, and then were debriefed, thanked for their participation, and dismissed from the lab.

Results and discussion. To ensure that our manipulation was successful, we again averaged responses on the fundamental needs subscales in the same manner as in Replication A ($\alpha = .97$). As before, a one-way ANOVA on this index was significant, such that those who wrote about exclusion reported less satisfaction of these needs than did those who wrote about their previous morning or about inclusion, with the latter two groups not differing signifi-

[2] One of the stereotypic traits ("quiet") was rather neutral in valence, scoring very near the scale mid-point of desirability. Thus, it was not used in either the positive or the negative composite indices. Moreover, some traits used in our study did not appear in Anderson's (1968) list. In these cases, we used the closest trait synonyms from his list.

[3] This ANOVA yielded a non-theoretically interesting main effect of Stereotype Valence, $F(1, 54) = 36.54$, $p < .001$, with participants rating targets, overall, higher on the positive features ($M = 3.12$) than on the negative ones ($M = 2.58$). The theoretically predicted main effect of Social Experience just missed conventional levels of significance in this analysis, $F(2, 54) = 2.87$, $p = .065$. Collapsing across Stereotype Valence, excluded participants ($M = 2.64$) rated targets less stereotypically than did included ($M = 2.86$) or control participants ($M = 3.05$).

cantly (see Table 1). In addition, we reverse scored participants' ratings of feeling bad, angry, and sad and averaged them with reported feelings of goodness and happiness ($\alpha = .92$) to form an overall index of mood. A one-way ANOVA on this index showed the same pattern as the fundamental needs, such that those who wrote about exclusion reported more negative mood than did those who wrote about their previous morning or inclusion, with the latter two conditions not differing (see Table 1). Thus, the pattern of responses on both measures verified that our social experience manipulation was successful.

We next examined our main variable of interest, stereotypic (hostility-related) perceptions of "Jamal." To do this, we averaged the hostility-related items ($\alpha = .72$) and subjected this index to a contrast analysis comparing those in the exclusion condition to those in the other two (−2 exclusion, 1 inclusion, 1 control). As in Replication A, this contrast was significant, $t(38) = 2.20$, $p = .03$. Participants who wrote about exclusion ($M = 7.18$, $SD = 1.77$) rated Jamal as less hostile than those who wrote about inclusion ($M = 8.18$, $SD = 1.45$) or trivial events ($M = 8.55$, $SD = 1.66$). Moreover, there was no difference between the latter two conditions, $t(38) < 1$, $p = .58$.

We conducted the same analysis on the filler (non-hostility-related) traits. We averaged these ratings, after appropriate reverse scoring, such that higher numbers indicated more negative ratings. If excluded participants are individuating targets, and forming judgments based on the provided information, no effect should be found on these traits because the information presented about the target was unrelated to these dimensions. Consistent with this idea, no effect of Social Experience was found on the filler traits, $t(38) < 1$, $p = .38$, with mean ratings of 7.28, 7.58, and 7.76 for exclusion, inclusion, and triviality, respectively. These findings also add further evidence to our contention that our primary findings reflect less stereotyping and greater individuation, not a simple process of just judging targets more favorably. Because the filler traits were clearly valenced, if the excluded participants simply wanted to "be nice" and judge the target positively, then we would have seen an effect of Social Experience on these filler traits. Instead, though, this did not occur.

Finally, we conducted analyses to determine whether the impact of exclusion on stereotypic responses was mediated by mood. A multiple regression model that predicted stereotypic responses jointly from the Social Experience variable (dummy coded as in Replication A) and mood showed that the impact of social exclusion on stereotyping was still significant ($p = .05$). Moreover, mood was not remotely close to predicting stereotypic responses in this model, $t(38) < 1$, $p = .91$. Finally, a bootstrapping analysis (with 5,000 samples) examining the indirect effect of Social Experience on stereotypic responses via mood yielded a 95% confidence interval for the indirect effect that *did* contain zero (−.73, .43). Thus, as in Replication A, no evidence for mediation was found.

In sum, exclusion appeared to decrease stereotypic ratings compared to non-exclusionary conditions, an effect not mediated by mood. Importantly, not only do these findings replicate those previously reported, but they also show that the effect generalizes beyond occupational groups to a common race-based stereotype.

Replication C

Method. In this replication, we sought to establish (1) that the effect of exclusion on stereotype application would generalize to another exclusion paradigm and (2) that this effect is not simply the result of social desirability. Though never demonstrated empirically, one might hypothesize that social exclusion raises impression management and social desirability concerns (see Gardner, Pickett, Jefferis, & Knowles, 2005, for a suggestion that the SMS might aid with impression management). If this is true, not using stereotypes may simply represent one means of appearing more socially desirable. We do not believe social desirability is driving our primary effect, but we thought it prudent to demonstrate this empirically.

Forty-three (26 female) non-Hispanic undergraduates participated in this study for course credit. After providing consent, participants were randomly assigned to one level of the Social Experience manipulation (using the "Atimia" paradigm; see Wirth, Zimmerman, Turchan, & Bernstein, 2013). In this paradigm, participants were told they were going to play an online game with other participants at the same university via a local intranet. Participants were told the point of the game was to work as a team to solve word puzzles. The game involved the Remote Associates Test (RAT; see Mednick, 1962), in which individuals were shown a series of three words (e.g., duck, fold, play) and asked what fourth word would link them (e.g., bill). On each round of the game, one of the players was given a set of three words and was asked to respond with what he or she believed was the fourth word. Upon entering a response, he or she selected one of the other two individuals as the next person to play. Unbeknownst to participants, the other two "players" were actually computer-controlled confederates who either included the participant (picking the participant 50% of the time) or excluded the participant (each selecting the participant once at the start of the game and then excluding him/her from the game for the remaining 25 rounds). Thus, this game is conceptually similar to that of Cyberball (e.g., Williams et al., 2000), a commonly used exclusion paradigm, in which a participant either consistently receives (inclusion) or almost never receives (exclusion) a virtual ball-toss from two other "players" (actually computer agents).

Following this game, all participants completed the same fundamental needs and mood measures used in Replication B. Moreover, they also completed Crowne and Marlowe's (1960) 33-item Social Desirability Scale, indicating whether a series of attitudes/behaviors was true or false of them personally. Example items include, "No matter who I'm talking to, I'm always a good listener," "I have never intensely disliked anyone," and "There have been occasions when I felt like smashing things."

All participants next read a court case, the purported purpose of which was to determine how people make decisions in a jury situation. The case involved an ambiguous physical confrontation between two men at a bar (adapted from Bodenhausen, 1990) in which both guilt-implying evidence (e.g., "The victim and the defendant were observed quarrelling by other bar patrons earlier in the evening") and guilt-exonerating evidence (e.g., "No bruises or cuts were found on the defendant as evidence that he had been in a struggle") were provided, along with some filler information. On a between-subjects basis, some participants were told the defendant/perpetrator was named "Robert Johnson" (a stereotypically White name), whereas others were told the defendant was "Carlos Ramirez" (a stereotypically Hispanic name). Participants rendered judgments about the likelihood of the defendant's guilt on an 11-point scale (with larger numbers indicating greater guilt). Prior

research has shown that Hispanics are typically stereotyped as "criminals," more so than Whites (e.g., Bodenhausen & Lichtenstein, 1987), resulting in greater perceptions of guilt for the former. If exclusion lessens reliance on stereotypes, then this pattern should occur only for included individuals and should be reduced or eliminated for those who are excluded.

Following the rendering of guilt judgments, all participants completed a demographic questionnaire and then were thoroughly debriefed, thanked for their time, and dismissed.

Results and discussion. We first combined scores on the fundamental needs subscales to form an overall index ($\alpha = .90$). It was subjected to an independent samples *t*-test comparing exclusion and inclusion conditions.[4] This analysis was significant, showing that excluded participants had less satisfaction of these needs than did those who were included. The same analysis on mood ($\alpha = .86$) showed the identical effect: Those who were excluded in the game reported less positive mood than did those who were included (see Table 1). These findings confirmed that our Social Experience manipulation was successful.

We next turned to our primary question of whether excluded participants would be less likely to apply stereotypes than included participants. We hypothesized that socially included individuals would evince the common stereotyping effect (finding "Carlos Ramirez" guiltier than "Robert Johnson"), but that the same effect would be less true (or not true at all) for socially excluded individuals. Supportive of this conjecture, a 2 (Social Experience: Exclusion, Inclusion) × 2 (Defendant Name: Robert, Carlos) between-subjects ANOVA revealed the significant, predicted interaction, $F(1, 39) = 4.00$, $p = .05$. As shown in Figure 1, among included participants, Carlos was perceived as guiltier than Robert, $F(1, 39) = 6.73$, $p = .01$, but guilt ratings were equal in the exclusion condition, $F(1, 39) < 1$, $p > .78$. Moreover, guilt perceptions of Robert did not vary across Social Experience condition, $F(1, 39) < 1$, $p > .81$, but Carlos, the target likely to be stereotyped as guilty in this context, was judged as less guilty following exclusion versus inclusion, $F(1, 39) = 5.68$, $p = .02$. Thus, these findings support the hypothesis that excluded people were less likely to apply stereotypes than were included people.

We next examined whether the reduced rate of stereotyping in the exclusion (vs. the inclusion) condition was simply the result of socially desirable responding. That is, we wanted to examine whether exclusion increased desires to appear more socially desirable and whether such a desire resulted in less stereotype-consistent responses. To examine this possibility, we focused our analyses on the "Carlos" conditions, as this is where excluded and included participants rendered different guilt ratings. We began by examining whether Social Experience impacted socially desirable responding. A simple *t*-test comparing Social Experience conditions was significant, $t(15) = 2.50$, $p = .03$, such that excluded participants evinced *lower* levels of socially desirable responding ($M = 14.88$, $SD = 3.14$) than did included participants ($M = 19.44$, $SD = 4.25$). Furthermore, a multiple regression model that predicted stereotypic (guilt) responses jointly from the Social Experience variable and social desirability showed that the impact of social exclusion on stereotyping was marginally significant ($p = .06$) and that social desirability was not remotely close to predicting stereotypic (guilt) responses in this model, $t(14) < 1$, $p = .95$. Moreover, a bootstrapping analysis (with 5,000 samples) examining the indirect effect of Social Experience on guilt ratings via social desirability yielded a 95% confidence interval for the indirect effect that *did* contain zero (−1.03, 1.49). Thus, these findings collectively confirm that social desirability did not mediate the effect. Moreover, mood also did not appear to mediate this effect.[5]

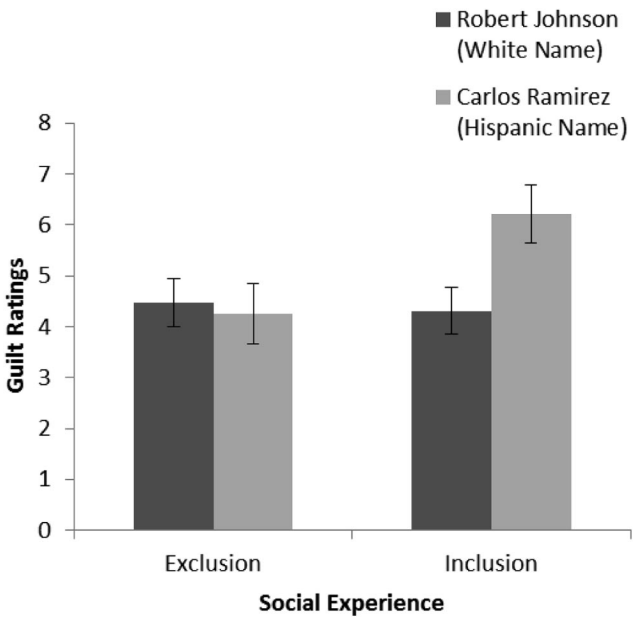

Figure 1. Impressions of guilt as a function of social experience (inclusion, exclusion) and target type (White target, Hispanic target). Error bars represent the standard error of the mean.

In sum, findings from this replication further suggest that social exclusion reduces reliance on stereotypes. This effect was not mediated by mood, as shown previously, and also was not mediated by socially desirable responding. Collectively, the findings across the three replications of Experiment 1 suggest that excluded individuals form judgments of others that are less reliant on stereotypic labels and more reliant on their idiosyncratic, individuating behaviors than do non-excluded individuals. And, importantly, these findings replicate across multiple types of social targets. Excluded individuals individuate more (and stereotype less) than do others, and this is true for both a set of occupational groups and for race-based (African American, Hispanic) judg-

[4] The full design of this experiment was a 2 (Social Experience: Exclusion, Inclusion) × 2 (Defendant Name: Robert, Carlos). However, assessment of mood and fundamental needs came before participants read the court case, which is where the Defendant Name manipulation occurred. Therefore, because the Defendant Name manipulation came after measurement of these dependent measures, they were analyzed simply using independent samples *t*-tests, comparing inclusion and exclusion conditions.

[5] A multiple regression model that predicted guilt responses jointly from the dummy-coded Social Experience variable and mood did show that the impact of social exclusion on guilt was less pronounced than when in a model alone ($p = .10$). However, mood was not remotely close to predicting guilt in this model, $t(14) < 1$, $p = .96$. Moreover, a bootstrapping analysis (with 5,000 samples) examining the indirect effect of Social Experience on guilt responses via mood yielded a 95% confidence interval for the indirect effect that did contain zero (−1.42, 2.99). Thus, these findings collectively confirm that mood did not mediate the effect.

ments. Moreover, these findings occurred when exclusion was manipulated by asking participants to recall an autobiographical instance of exclusion and when participants were actively excluded from a game. These robust findings are consistent with the notion that excluded individuals pay close attention to social information that may aid with the identification of appropriate re-affiliation partners.

Experiment 2

Though we have preliminary evidence that exclusion prompts individuation and reduces stereotyping, we have yet to illustrate that these effects are in service of securing re-affiliation. This next study is a first attempt to provide such evidence. If our reasoning is correct, then the type of target excluded individuals encounter should matter a great deal. Namely, if the target cannot (or is highly limited in its ability to) provide affiliation, then excluded individuals should have no reason to individuate it. One such type of target is a non-social entity, like a piece of furniture, a tree, a tool, and so forth. Though excluded individuals might anthropomorphize such objects and, in turn, glean some sense of connection with them (see Epley, Akalis, Waytz, & Cacioppo, 2008), other people are likely better sources of social re-affiliation than are non-human objects. Therefore, excluded individuals should be inclined to individuate *social* targets because doing so aids in finding new affiliation partners; the same careful thinking about *non-social* targets, however, will not serve this purpose. Experiment 2 tests this hypothesis.

This experiment also affords the opportunity to compare directly excluded individuals' processing of social and non-social information. As noted in the introduction, work by Baumeister et al. (2002) showed that excluded individuals perform poorly (in comparison to non-excluded individuals) on cognitively demanding tasks such as GRE-style problems, suggesting that they are not capable of careful thought. We argued that excluded individuals may, on the contrary, be quite capable of careful thinking, but only do so in socially relevant circumstances. If the hypothesized pattern of results is obtained in this experiment, it will provide direct evidence of this supposition.

Method

Sixty-eight (45 female) introductory psychology students participated in exchange for course credit. After providing informed consent, they were randomly assigned to write an autobiographic essay about inclusion, exclusion, or triviality, as in Experiment 1, Replications A and B. Following this, all participants completed the same mood and fundamental needs surveys used in Replication A.

Next, participants completed a modified version of Smith et al.'s (2006) stereotyping task used in Replication A. On some trials, participants read about social targets, as in the original task. As described previously, these vignettes portrayed a target with an occupational label and various behaviors, some of which were mildly counter-stereotypic. The participants subsequently rated the target on a set of stereotype-consistent dimensions, on 1–7 scales, with larger numbers indicating greater trait ascription.

On other trials, participants read about non-social targets, along with some information that was mildly counter-prototypic. An example item was as follows:

> In the distance is a tree. It was recently planted and can provide a cooling shade to nearby animals and insects. It stands next to a house, near the back porch. The owners of the house are very happy to have it. They also have a garden and a pond.

Subsequently, participants judged the likelihood (on 1–7 scales) that the item (e.g., tree) possessed three prototypic features (e.g., "This tree has green leaves"), one of which was unlikely given the passage's content (e.g., "This tree is over 10 feet tall," unlikely because the tree was "recently planted"). These non-social vignettes were composed by the authors in collaboration with an undergraduate research assistant, and they, along with the prototypic features, appear in the Appendix.

In total, participants completed 20 trials, nine of which depicted social entities (the same occupational groups used in Experiment 1, Replication A), and 11 of which depicted non-social objects (cell phone, chair, garden, jewelry box, knife, pig, printer, pumpkin, table, tree, and vehicle). The social and non-social trials were fully intermixed and were presented in a different random order for each participant. After completing these trials, participants reported some demographic characteristics and then were debriefed, thanked for their time, and dismissed.

Results and Discussion

Before examining our primary hypothesis, we again wanted to verify that our manipulation of Social Experience was successful (see Table 1). The fundamental needs index ($\alpha = .93$) was subjected to a one-way ANOVA, which was significant, showing that excluded participants had less satisfaction of these needs than did included or control participants, with the latter two not differing. The same ANOVA on mood ($r = .62$) was also significant, showing that excluded participants felt the worst, included participants felt the best, and control participants fell in the middle, and all groups were significantly different from each other. These findings suggest that the manipulation was successful.

Turning to our primary question, we hypothesized that excluded participants would rate the *social* targets less stereotypically, but would rate the *non-social* targets equally "stereotypically," compared to the non-excluded. To examine this prediction, we first averaged the stereotypic trait ratings across all the social targets and subjected this to a contrast analysis comparing those in the exclusion condition to those in the other two (−2 exclusion, 1 inclusion, 1 control). This contrast was significant, $t(65) = 2.05$, $p = .04$, showing that participants who wrote about exclusion ($M = 2.65$, $SD = 0.44$) rated the targets less stereotypically than those who wrote about inclusion ($M = 2.95$, $SD = 0.54$) or trivial events ($M = 2.86$, $SD = 0.50$). A follow-up contrast comparing the inclusion and control conditions was not significant, $t(65) < 1$, $p = .54$. These findings fully replicate those in Experiment 1 (Replication A); excluded participants individuate other people more and stereotype less than those in non-exclusion conditions. As in Experiment 1 (Replication A), we again examined stereotype valence as a factor to determine whether excluded participants were simply "being nice" and judging the social targets lower only on negatively valenced traits. Again, though, there was no evidence of this. A 3 (Social Experience) × 2 (Stereotype Valence)

mixed-model ANOVA yielded no hint of an interaction, $F(2, 65) < 1$, $p = .87$.[6]

We next averaged the prototypic ratings across all the non-social targets. This average was subjected to the same contrast analysis previously described, comparing exclusion to the other two conditions. Consistent with expectations, this analysis was *not* significant, $t(65) < 1$, $p = .46$, suggesting that excluded participants "stereotyped" (prototyped) non-social entities ($M = 4.96$, $SD = 0.50$) as much as those in included ($M = 5.05$, $SD = 0.34$) or control conditions ($M = 5.03$, $SD = 0.46$). For each non-social target, there was one judged characteristic that was particularly unlikely to be true given the information provided about the object. We next averaged just these key features across the non-social targets and subjected it to the same contrast, and it, too, was non-significant, $t(65) = 1.21$, $p = .23$. On these key attributes, those that should have been rated as low in likelihood if scrutinizing the information, excluded participants ($M = 3.13$, $SD = 0.69$) provided equivalent judgments as those in the inclusion ($M = 3.41$, $SD = 0.81$) and control conditions ($M = 3.36$, $SD = 0.91$).

Thus, exclusion encourages deep social, but not non-social, information processing. In other words, excluded persons individuate (rather than stereotype) other social entities, presumably because doing so will facilitate finding good re-affiliation partners. However, excluded individuals do not "individuate" non-social entities, as, indeed, thinking carefully about chairs and trees would do little to secure re-affiliation. Also, as in the previous studies, the impact of exclusion on social individuation was not mediated by mood.[7]

Experiment 3

Consistent with our reasoning, the previous study supports the claim that exclusion leads to careful analysis of targets only when doing so serves the goal of re-affiliation, as there is no social benefit to be had from carefully processing non-social agents. Even among social targets, however, there is likely variability in their perceived desirability as sources of re-affiliation, which also should impact individuation proclivities. Indeed, some individuals have known, objective features that are highly offensive or even repulsive (e.g., they are sexual predators or child abusers) that would, for most individuals, make the prospect of affiliation with them wholly undesirable. Therefore, we hypothesize that if perceivers encounter a social target with whom they a priori *do not wish to affiliate*, excluded individuals should stereotype them at equivalent rates as do non-excluded individuals. In short, if exclusion triggers individuation to help people arrive at diagnostic views of others' re-affiliation potential and the excluded have decided a priori that a target is not wanted for re-affiliation, this should strip them of their motivation to individuate. Under such circumstances, excluded people should stereotype just like everyone else. Experiment 3 examines this hypothesis. If supported, these findings would further bolster the notion that exclusion triggers greater individuation (and less stereotyping) in service of finding and securing re-affiliation.

Method

Ninety-four (55 female) non-African American introductory psychology students participated in exchange for course credit. After granting consent, they engaged in an experiment that was methodologically quite similar to Experiment 1, Replication B. Namely, participants first wrote an autobiographic essay about triviality, inclusion, or exclusion for roughly 5 min. After this, they completed the same fundamental needs and mood items used in Replication B.

At this point, participants completed the main dependent measure—an impression formation task of a target who engaged in ambiguously hostile actions. On a between-subjects basis, we varied the picture accompanying this description. In one case, just like in Replication B, the photo depicted an African American man named "Jamal." Unless participants are high in anti-Black prejudice, this target should seem to them like a reasonable source of re-affiliation and should therefore trigger low rates of stereotyping following exclusion (as the findings of Replication B confirm). In the other case, the picture depicted a White man named "Jakob," described as a Neo-Nazi skinhead. A definitional feature of such individuals is that they purport the superiority of their own race and actively seek the downfall of other groups, often times spewing "hate speech." We assumed that for most participants such a target would be viewed as highly offensive and as an inappropriate candidate for re-affiliation.

Importantly, this logic about the skinhead target might, at first blush, seem inconsistent with the findings of Gonsalkorale and Williams (2007), who showed that exclusion in Cyberball from KKK members (who are quite akin to skinheads) was just as hurtful (lowering mood and satisfaction of fundamental needs) as exclusion from ingroup members. If exclusion by the KKK hurts, then might this imply that people do actually view them (and skinheads) as legitimate sources of re-affiliation? We believe the answer is no, because multiple findings suggest that humans' initial emotional reactions to exclusion are painful no matter what the circumstance. Indeed, Williams's (2007) temporal model argues that exclusion triggers a "reflexive," negative reaction that is painful and likely not moderated by many (or any) factors. This initial "sting" of exclusion is adaptive because it alerts us to the possibility that we are about to lose (or have already lost) a social connection and that we need to adjust our behavior to re-secure inclusion. Therefore, any hint of exclusion should hurt. The KKK findings, as well as those showing that humans feel just as bad

[6] This analysis yielded an uninteresting main effect of Valence, such that targets were judged higher on positive than on negative traits, $F(1, 65) = 43.07$, $p < .001$. Also, though there was no interaction between Valence and Social Experience, we did examine the effect of Social Experience separately for the positive and negative stereotypic traits. In neither case was there a significant effect of Social Experience, but the pattern of means in both cases was identical to the overall pattern observed (that collapsed across Valence). Namely, on both positive and negative traits, stereotypic judgments were descriptively lower in the exclusion condition compared to the other two, which were quite similar to one another.

[7] A multiple regression model that predicted the social stereotypic responses jointly from the Social Experience variable (dummy coded as 1 = exclusion, 0 = inclusion/control) and mood did show that the impact of social exclusion on social stereotyping was less pronounced than when in a model alone ($p = .11$). However, mood was not remotely close to predicting stereotypic responses in this model, $t(65) < 1$, $p = .69$. Moreover, a bootstrapping analysis (with 5,000 samples) examining the indirect effect of Social Experience on social stereotypic responses via mood yielded a 95% confidence interval for the indirect effect that did contain zero (−.24, .36). Thus, these findings collectively confirm that mood did not mediate the effect.

when they know they are being excluded by a programmed computer as they do when they believe they are being excluded by other people (Zadro et al., 2004), support this contention. However, just because humans may respond uniformly to exclusion in terms of their emotional and need-based responses does not mean that their other reactions will also be invariable. Williams's (2007) temporal model suggests that humans also have "reflective" reactions post exclusion that are indeed moderated by circumstances. Thus, though exclusion of almost any variety (whether by computer or hated outgroup member) might always hurt emotionally, research shows that the excluded can and do respond quite differently on other behavioral measures depending on the circumstances of that exclusion (van Beest & Williams, 2006). Thus, though people might be hurt by being excluded by a hated person (like a skinhead) or a computer program, that does not mean that they would consider a hated person or a computer program to be a promising source of re-affiliation, nor does it suggest that excluded people would process information about them the same as they would better re-affiliation prospects.

After reading about "Jamal" (the African American target) or "Jakob" (the skinhead target), participants rated him on the same set of hostility-related and unrelated traits (used in Experiment 1, Replication B). After rendering these ratings, participants completed a brief demographic survey, were debriefed, thanked for their participation, and dismissed.

Results and Discussion

To examine if our manipulation was successful (see Table 1), the fundamental needs ($\alpha = .94$) were subjected to a one-way ANOVA,[8] which showed that those who wrote about exclusion reported less satisfaction of these needs than did those who wrote about their previous morning or about inclusion, with the latter two groups not differing significantly. In addition, a one-way ANOVA on the mood items ($\alpha = .91$) showed the same pattern as the fundamental needs, such that those who wrote about exclusion reported more negative mood than did those who wrote about their previous morning or inclusion, with the latter two conditions not differing. Thus, the pattern of responses on both measures verified that our social experience manipulation was successful.

We next examined our main variable of interest, stereotypic (hostility-related) perceptions of the targets. As a reminder, we predicted that excluded participants would refrain from stereotyping "Jamal," who, for most perceivers, should be perceived as a reasonable candidate for re-affiliation. However, we also predicted that excluded individuals would stereotype "Jakob," the skinhead, as he should not be seen as a reasonable affiliation partner. To test this prediction, we averaged the hostility-related scores (after appropriate reverse scoring, $\alpha = .50$) and subjected this average to a 3 (Social Experience: Exclusion, Inclusion, Control) $\times$ 2 (Target: African American, Skinhead) between-subjects ANOVA.[9] This analysis yielded two effects. First, as one would hope, there was a main effect of Target, $F(1, 88) = 11.96$, $p = .001$, such that the Skinhead ($M = 8.45$, $SD = 1.68$) was rated as more hostile than the African American target ($M = 7.28$, $SD = 1.53$).

Of more theoretical importance, the analysis also yielded a significant Social Experience $\times$ Target interaction, $F(2, 88) = 6.32$, $p = .003$. As shown in Figure 2, excluded participants rated "Jamal" less stereotypically than those in the other two conditions [confirmed with a -2 (exclusion), 1 (inclusion), 1 (control) contrast, $t(60) = 2.25$, $p = .03$]. This replicates precisely the findings shown in Experiment 1, Replication B. On the other hand, excluded participants not only failed to individuate "Jakob," but they actually reported greater hostility judgments of him than those in the other two conditions [-2 (exclusion), 1 (inclusion), 1 (control) contrast, $t(28) = 2.64$, $p = .01$].[10]

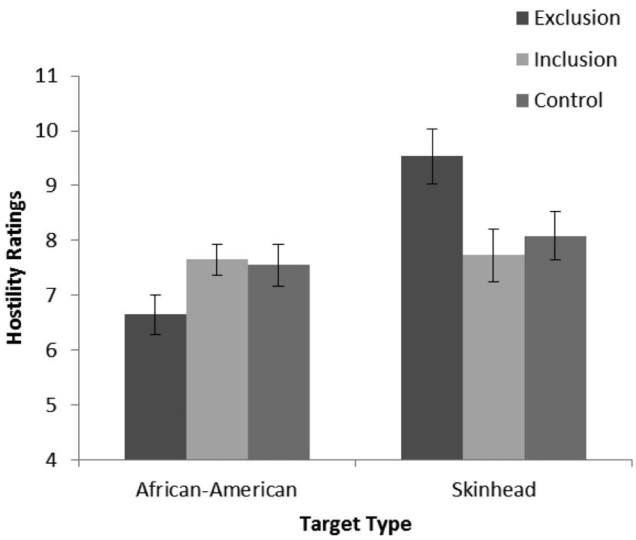

Figure 2. Hostility ratings as a function of social experience (inclusion, exclusion, control) and target type (African American target, Skinhead target). Error bars represent the standard error of the mean.

[8] The full design of this experiment was a 3 (Social Experience: Exclusion, Inclusion, Control) $\times$ 2 (Target: African American, Skinhead). However, assessment of mood and fundamental needs came before participants encountered the targets (before the Target manipulation), and thus these measures were analyzed simply using one-way ANOVAs with the Social Experience factor.

[9] The reliability of this measure was somewhat low ($\alpha = .50$), which is surprising because the reliability of the same measure when used in Experiment 1 (Replication B) was noticeably higher ($\alpha = .72$). Importantly, low reliability in measurement actually makes it more difficult to find significant effects, "but does not increase the probability of Type I error (rejecting a null hypothesis that is true; i.e., obtaining 'spuriously significant results')" (Zuckerman, Hodgins, Zuckerman, & Rosenthal, 1993, p. 53; see also Cohen & Cohen, 1983). Therefore, the somewhat low reliability of this measure does not harm the integrity (or call into question the interpretability) of the significant effects obtained in this analysis.

[10] The *df*s differ noticeably in the contrast analyses of the Skinhead and African American target conditions. The reason for this is because the number of participants run in the latter condition was sizably more than in the former. This unbalanced sample size resulted from two primary issues. First, a computer glitch resulted in the loss of some responses, and, just by chance, a disproportionate amount of the lost data came from the "Skinhead" condition. Second, the research assistants who were running the study initially misunderstood the experimental protocol and inadvertently ran all participants (for a time) only in the "African American" condition. Though unbalanced sample sizes are not typically deliberately sought, their presence does not usually harm the integrity of inferential statistics, assuming that the attrition from one set of conditions is unrelated to the treatment itself. Here, the attrition in some cells was due to factors unrelated to the conditions themselves (computer and experimenter error). Thus, one can still run and interpret an ANOVA in this context, so long as Type III sums of squares are examined (see Maxwell & Delaney, 2000).

We next examined how participants judged the target on the filler (non-stereotypic) dimensions. Because the target's behavior had no direct bearing on these dimensions, we expected no difference across the Social Experience conditions. Responses on the filler items were combined, after appropriate reverse scoring, such that higher numbers indicated more negative judgments. This index was subjected to a 3 (Social Experience: Exclusion, Inclusion, Control) × 2 (Target: African American, Skinhead) between-subjects ANOVA. Not surprisingly, there was a main effect of Target, $F(1, 88) = 4.64$, $p = .03$, such that the Skinhead target was judged more negatively ($M = 7.95$, $SD = 1.10$) than was the African American target ($M = 7.34$, $SD = 1.34$). However, as anticipated, there was no effect of Social Experience, $F(2, 88) < 1$, $p = .57$, nor an interaction between Social Experience and Target, $F(2, 88) = 1.28$, $p = .28$.

As in previous experiments, we again conducted analyses to determine whether our primary finding was mediated by mood. To do this, we focused the analyses on the African American conditions, as this is where exclusion resulted in lower stereotypic judgments. A multiple regression model that predicted stereotypic (hostile) responses jointly from the dummy-coded Social Experience variable and mood showed that the impact of social exclusion on stereotyping was still significant ($p = .04$) and that mood was not remotely close to predicting stereotypic responses in this model, $t(60) < 1$, $p = .53$. Moreover, a bootstrapping analysis (with 5,000 samples) examining the indirect effect of Social Experience on hostility ratings via mood yielded a 95% confidence interval for the indirect effect that *did* contain zero (−.55, .83). Thus, these findings confirm that mood did not mediate the effect.

Overall, we predicted that excluded individuals should individuate "Jamal," rating him as less aggressive/hostile than would included or control participants, which was confirmed. Moreover, we expected excluded participants to stereotype (rather than individuate) "Jakob," perceiving him as equally aggressive/hostile as those in the non-exclusionary conditions. In fact, not only did excluded individuals fail to individuate the skinhead, as expected, but they appeared to stereotype him more than those in the other two conditions. Thus, consistent with our expectations, excluded individuals only individuated those they likely perceived as reasonable re-affiliative targets. Though we did not predict that excluded participants would stereotype the skinhead more than others, this pattern of findings makes some sense, in retrospect, a topic we return to in the General Discussion.

Experiment 4

The results of the first three experiments are consistent with our hypothesis that exclusion encourages individuation and reduces stereotyping, assuming the target is one with whom the perceiver might reasonably wish to re-affiliate. If a perceiver is individuating, this means that he or she is paying attention to the provided information about a target and is forming an impression based on that information. Thus, when targets are described in ways that are fully or somewhat counter-stereotypic in nature, as was true in the previous experiments, excluded individuals (more so than non-excluded ones) should notice this and rate targets lower on stereotypic dimensions.

Importantly, then, if excluded people are individuating, this means they should be quite sensitive to the actual information presented about targets. Indeed, if one target behaves in ways that are highly stereotypic, and another behaves in ways that are highly counter-stereotypic, someone who is paying attention to and processing these behaviors should notice this difference and rate the former as much more stereotypic than the latter. Our position is that excluded people (relative to non-excluded ones) should be especially motivated to engage in careful processing of others (assuming they are considered possible re-affiliation candidates) and should show this pattern. Thus, to underscore that excluded perceivers (more so than others) process the information presented about targets and arrive at impressions based on that provided information, this next study presents targets that are described either in predominantly counter-stereotypic or stereotype-consistent ways. Because excluded participants should carefully process this information, they should rate these targets quite differently: The counter-stereotypic target should be rated low, and the stereotype-consistent one should be rated high on stereotypic traits. That is, excluded participants' judgments should reflect the presented information about targets. This is the essence of individuation. Non-excluded participants, though, will not process information about social targets as carefully and will either show much less differentiation between these targets or perhaps none at all.

Method

One-hundred twenty-two (76 female) non-African American introductory psychology students participated in exchange for course credit. After granting consent, they engaged in an experiment that was methodologically similar to Experiment 1, Replications A and B. Namely, participants first wrote an autobiographic essay about triviality, inclusion, or exclusion for roughly 5 min. After this, they completed the same fundamental needs and mood items used in Replication A.

Next, participants were instructed that they would be forming an impression of another individual. Specifically they were told,

> In the next task, we are interested in how you form impressions of others. In a recent large-scale study, researchers interviewed several individuals and entered their answers to various questions into a large database. In this study, the computer will randomly select one person from this database and present to you some information about this person. Your task will be to read about this person and form an impression of him or her.

After a brief pause, the computer announced that it had selected a target named "Jamal," described as a 25-year-old male. Beneath this information was an alleged picture of him, which showed an African American male with a neutral facial expression.

Participants were then informed that they would learn about some behaviors Jamal had performed. Each behavior was displayed onscreen for 6 s, one at a time. Participants were told to read these behaviors and try to form an impression of Jamal. At this point, participants saw 24 behaviors one at a time, presented in a random order (taken from Sherman, Lee, Bessenoff, & Frost, 1998; Sherman, Stroessner, Conrey, & Azam, 2005).[11] In the stereotype-inconsistent (SI) condition, eight of these behaviors were kind (counter-stereotypic of African American males; e.g., "Offered his umbrella to a lady waiting at the bus stop"), 12 were neutral (e.g., "Bought a new shirt"), and four were hostile (stereo-

[11] We would like to thank Jeffrey Sherman for graciously providing us with these behavioral descriptions.

typic of African American males; e.g., "Insulted the old woman"). Thus, of his meaningful behaviors, most (on a 2-to-1 ratio) were counter-stereotypic. In the stereotype-consistent (SC) condition, eight of the behaviors were hostile, 12 were neutral, and four were kind. Thus, here, of the target's meaningful behaviors, most were stereotype consistent. The procedure of this impression-formation task closely follows that of Sherman et al. (2005). As these authors noted, if participants are individuating, that is, forming impressions based on the target's actual behaviors, the target described in the SI condition should be judged less stereotypically than the one described in the SC condition. For those individuating to a lesser degree, this difference should be less pronounced.

After reading all 24 behaviors, participants rated Jamal on the same hostility-related traits and filler traits used in Experiment 1, Replication B, and answered some basic demographic questions. Upon completion of all items, participants were thanked for their participation, debriefed, and dismissed.

Results and Discussion

To examine if our manipulation was successful (see Table 1), we conducted a one-way ANOVA on the fundamental-needs index ($\alpha = .91$),[12] which was significant, showing that those who wrote about exclusion reported less satisfaction of these needs than did those who wrote about their previous morning (triviality), who themselves had less satisfaction of these needs than those who wrote about inclusion. In addition, a one-way ANOVA on the mood items ($r = .63$) showed the same pattern as the fundamental needs. Thus, the pattern of responses on both measures verified that our Social Experience manipulation was successful.

We next examined our main variable of interest, stereotypic (hostility-related) perceptions of the targets. As a reminder, we predicted that excluded individuals should rate the SI target as noticeably less stereotypic than the SC target, precisely because they are processing the provided information. However, included and control participants should show less differentiation in their ratings of the two targets or might actually rate them equally. To test this prediction, we averaged the hostility-related scores (after appropriate reverse scoring, $\alpha = .80$) and subjected this average to a 3 (Social Experience: Exclusion, Inclusion, Control) $\times$ 2 (Target: SI, SC) between-subjects ANOVA. Not surprisingly, there was a main effect of Target, such that targets described with mostly SI (kind) behaviors ($M = 4.25$, $SD = 1.47$) were rated as less hostile/stereotypic than those described with mostly SC (hostile) behaviors ($M = 6.70$, $SD = 1.38$), $F(1, 116) = 93.77$, $p < .001$.

In addition, there was also the predicted Social Experience $\times$ Target interaction, $F(2, 116) = 3.13$, $p = .048$. As shown in Figure 3, all participants rated the SC target as more hostile than the SI one, but this effect was more pronounced for the excluded participants. This confirms our contention that excluded participants, more so than non-excluded ones, process the information about targets carefully and arrive at judgments that better reflect those targets' actual behaviors. Again, as in previous studies, there was no evidence that this effect was mediated by mood.[13]

We next examined how participants judged the target on the filler (non-stereotypic) dimensions. Because the target's behavior had no direct bearing on these ratings, we expected no difference across the Social Experience conditions. Responses on the filler

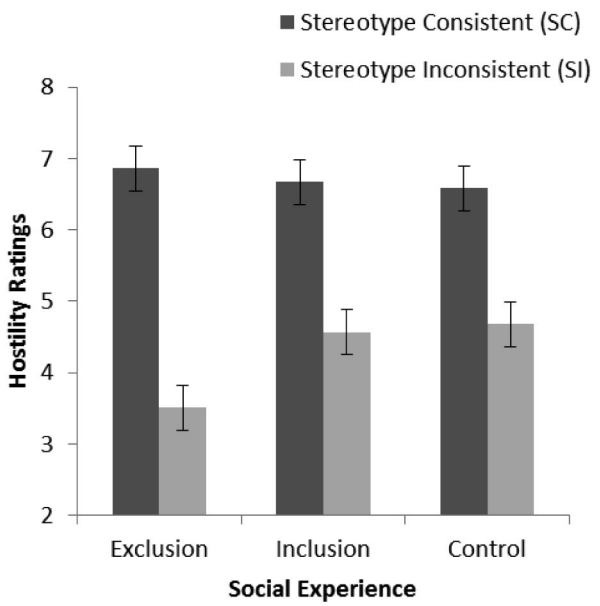

Figure 3. Hostility ratings as a function of social experience (inclusion, exclusion, control) and target type (stereotype consistent target, stereotype inconsistent target). Error bars represent the standard error of the mean.

items were combined, after appropriate reverse scoring, such that higher numbers indicated more negative judgments. This index was subjected to a 3 (Social Experience: Exclusion, Inclusion, Control) $\times$ 2 (Target: SI, SC) between-subjects ANOVA. Not surprisingly, there was a main effect of Target, $F(1, 116) = 16.78$, $p < .001$, such that targets described with mostly hostile behaviors were judged more negatively ($M = 6.04$, $SD = 1.43$) than were targets described with mostly kind behaviors ($M = 5.01$, $SD = 1.33$). However, as anticipated, there was no effect of Social Experience, $F(2, 116) < 1$, $p = .61$, nor an interaction between Social Experience and Target, $F(2, 116) < 1$, $p = .41$.

[12] One of the items used to measure the fundamental need of belonging, "I felt like an outsider" (reverse scored), surprisingly did not correlate well with the other fundamental-needs items. The alpha of the fundamental needs scale with the "outsider" item included was .47, but removal of this item increased it to .91. Thus, the analyses reported in text and the means reported in Table 1 reflect a composite fundamental-needs index that omits this one item. Importantly, the pattern of findings on the manipulation check analyses using fundamental needs is identical when using an index that includes all items.

[13] In the SC condition, those in the excluded condition rated the target as more hostile than those in the other two conditions as predicted, but this difference was not significant. In the SI condition, excluded participants, as expected, rated the target as less hostile than those in the other two [contrast -2 (exclusion), 1 (inclusion), 1 (control), $t(57) = 2.86$, $p = .006$]. Because only in this latter condition was there a significant impact of Social Experience, we focused our mediational analyses on these cells of the design. A multiple regression model that predicted the hostility responses jointly from the dummy-coded Social Experience variable and mood did show that the impact of social exclusion on hostility was less pronounced than when in a model alone ($p = .08$). However, mood was not remotely close to predicting hostility in this model, $t(57) < 1$, $p = .69$. Moreover, a bootstrapping analysis (with 5,000 samples) examining the indirect effect of Social Experience on hostility via mood yielded a 95% confidence interval for the indirect effect that did contain zero ($-.94, .62$). Thus, these findings collectively confirm that mood did not mediate the effect.

General Discussion

Whether it involves being "dumped" by a romantic partner, being picked last for a team, being ignored during a meeting, or being left "out of the loop" at work, we have all experienced episodes of social rejection, exclusion, or ostracism in one form or another. Indeed, Williams (2001) estimated that the typical person experiences thousands of such episodes over the course of a lifetime. One means of coping with these situations is to seek out and secure re-affiliation from others. This objective, we contend, may be facilitated by the careful processing of others' idiosyncratic features, which may elucidate who in the environment is a good re-affiliation candidate and who is not.

Consistent with this logic, six experiments showed that excluded individuals render less stereotypic judgments, relying more on individuating information, than do non-excluded individuals. These findings replicated across stereotyped groups (both occupational and racial) and exclusion paradigms. Moreover, in Experiment 4, all participants rated a clearly stereotypic target as more stereotypic than one who was mostly counter-stereotypic, but this effect was most pronounced among the excluded, suggesting that they pay more attention to targets and individuate more. Furthermore, though exclusion reduced mood in this work, and some negative mood states have been shown to enhance analytic processing (e.g., Moons & Mackie, 2007; Schwarz, 1990) and reduce reliance on stereotypes (Bodenhausen et al., 1994), mood did not mediate any of these findings. Thus, exclusion discouraged stereotype application, but this did not appear to be just another example of negative moods reducing stereotyping.

To the contrary, we believe that what drives people to individuate (rather than stereotype) after exclusion is a desire to find appropriate re-affiliation partners. As such, excluded individuals should reduce their stereotyping in situations when they encounter reasonable sources of social replenishment, but not in cases where the targets are unable to provide or are not wanted to provide a social connection. Consistent with this reasoning, excluded participants individuated social targets but "stereotyped" (prototyped) non-social agents. Moreover, they individuated an African American target, but stereotyped (even at levels greater than included and control participants) a skinhead, a target assumed to be highly offensive and undesirable to most individuals.

At a theoretical level, this research further supports and expands the social monitoring system's (SMS's) account of social exclusion (e.g., Pickett & Gardner, 2005). Previous findings in support of this perspective have illustrated that excluded individuals become attuned to various sources of social information, showing enhanced memory for social information about others (e.g., Hess & Pickett, 2010), a facilitated ability to spot a smile in an array of faces (DeWall, Maner, & Rouby, 2009), and an ability to accurately discriminate real from fake smiles (e.g., Bernstein et al., 2008). In this work, excluded individuals appeared to form and render impressions of others that were less reliant on their category-based traits and more accurately reflective of their idiosyncratic behaviors. This finding suggests that excluded individuals, more so than non-excluded ones, process the particular behaviors of others and use them to render judgments. Thus, like previous findings, this work supports the overarching premise of the SMS that excluded individuals scan for and process social information carefully, in an effort to replenish belongingness.

Moreover, this work provides a nuanced understanding of how socially excluded individuals use their precious cognitive resources. Though previous work has asserted that excluded individuals become unable or unwilling to use these resources (Baumeister et al., 2002), we argue that this effect emerged because that work focused solely on non-social processing (e.g., solving GRE problems). We believe, and indeed our data show, that the socially excluded can and will use their cognitive capabilities if doing so furthers their re-affiliative efforts. Indeed, we speculate that excluded individuals given complex cognitive tasks similar to those used by Baumeister et al. (2002) would perform well, and perhaps even better than non-excluded individuals, if those complex tasks were framed socially. For example, a GRE-style analytical problem might ask perceivers to deduce how objects are arrayed in a space after being provided a subset of information about some of those objects. If the task was about deducing where certain people sat at a table (a social task), as opposed to (for example) deducing how books were arrayed on a shelf (a non-social task), excluded participants might show exemplary performance in the former case but subpar performance in the latter.

Though we feel this work makes many contributions, like all research, it has some limitations, which we view as opportunities for further investigation. For example, we found that excluded participants rated a skinhead target *even more* stereotypically than non-excluded participants, and this was not predicted a priori. Nevertheless, we feel that these findings may be consistent with the Social Monitoring perspective. This theory argues that when one's levels of belongingness are too low, one scans the environment for social cues and for social opportunities that can facilitate an increase in belonging. One consequence of this may be that excluded individuals are especially likely to notice and encode others' category memberships, as these memberships are an important type of social information. Indeed, recent work illustrates that excluded individuals show greater perceptual acuity in differentiating social category memberships (i.e., distinguishing happy from sad faces; Black from White faces) than do non-excluded individuals (Sacco, Wirth, Hugenberg, Chen, & Williams, 2011). Therefore, based on these findings, we might speculate that category-based stereotypes are highly available and accessible for excluded individuals, perhaps even at rates that surpass non-excluded perceivers.

Numerous findings (e.g., Neuberg & Fiske, 1987) have illustrated that category-based stereotypes can exert a default impact on impressions, but, at times, one may be motivated to engage in careful, piecemeal processing of a target's idiosyncratic characteristics, leading to an impression based more on individuating information than on the basis of the stereotype itself. Excluded individuals should typically be motivated to engage in such careful processing, as this is a means to identify appropriate re-affiliation candidates. Thus, when the excluded encounter a target described with individuating information who is a reasonable source of re-affiliation, their judgments of that target should be dominated more by individuating information than by the target's stereotypes (leading to reduced reliance on

stereotypes in judgments, as we found in many of our current experiments).

However, excluded individuals do have ready access and, based on the findings of Sacco et al. (2011), perhaps even greater access to category-based information. Thus, if they encounter a target with whom they do not wish to affiliate, as in the case of a skinhead or some other highly offensive target, they will *not* be motivated to engage in careful piecemeal processing, leaving them only with the target's category membership and its associated stereotypes on which to base a judgment. If indeed their attunement to social categories is greater than non-excluded individuals (see Sacco et al., 2011) this might, interestingly, result in their applying and using stereotypes at even greater rates than non-excluded perceivers in these cases. This process might explain what occurred in our Experiment 3, in which excluded individuals appeared to stereotype skinheads even more than other participants.

Another interesting implication of this line of reasoning is that excluded individuals might show greater stereotyping of others in cases where no individuating information is available. If, for instance, an excluded perceiver saw just a photo of a target (whose membership in some stereotyped group was visually discernable, as is typically the case with race, gender, and age) with no behavioral or trait information provided, he or she would again be left only with the category and stereotype on which to base an impression. And, again, because the excluded seem more highly attuned to category distinctions than the non-excluded, stereotype salience might be pronounced for them, leading to greater usage of stereotypes in judgments. These provocative ideas await further empirical testing.

Related to this issue, the current work focused exclusively on stereotype application—the use of stereotypes in judging social targets—but future work might fruitfully examine whether exclusion has any impact on stereotype activation—the increased accessibility of a group stereotype upon mere encounter with a group member (e.g., Krieglmeyer & Sherman, 2012; Kunda & Spencer, 2003). Imagine conducting a study in which people view a social target who is a reasonable prospect for re-affiliation, presented along with his or her counter-stereotypic behaviors. Suppose that both stereotype application measures, such as the ones used here, as well as stereotype activation measures (e.g., reaction times to stereotype-relevant words in a lexical decision task) were assessed. One fascinating possibility, as just described, is that because the excluded are so highly attuned to others' category memberships, they might simultaneously show quite high rates of stereotype activation, but also be unlikely to apply stereotypes (relative to non-excluded people).

Another limitation of this work is that it primarily used the same exclusion paradigm across studies—the autobiographical writing task. Though Experiment 1, Replication C used a Cyberball-like exclusion task and found the same predicted results, future work might further investigate stereotyping/individuation in other commonly used exclusion paradigms to determine whether all forms of social exclusion produce outcomes similar to ours. Such examinations seem especially prudent in light of recent evidence showing that different exclusion paradigms do, at times, produce opposing outcomes (e.g., Bernstein & Claypool, 2012a, 2012b).

No other work to date has examined exclusion's impact on stereotyping, and therefore there is no direct evidence to suggest that paradigm would moderate the impact of exclusion on individuation/stereotyping. Interestingly, though, DeWall, Twenge, Gitter, and Baumeister (2009) showed in multiple studies that a future forecast of poor relationships or loneliness triggers a "hostile cognitive bias," resulting in these individuals perceiving the ambiguously hostile actions of others as more aggressive than those who received a future forecast of good relationships. In three of the current experiments, participants were asked to interpret and judge the hostility of someone engaged in ambiguously (Experiments 1B and 3) or outright (Experiment 4) hostile behaviors. Based on the findings of DeWall, Twenge, et al. (2009), one might have expected excluded individuals (relative to non-excluded ones) to view those targets as more hostile. Except in the case when the target was a skinhead (Experiment 3) or performed mostly hostile behaviors (Experiment 4), we, of course, found the opposite outcome. If a forecast of future exclusion, loneliness, or subpar relationships does trigger a hostile mindset, it is possible that groups stereotyped as hostile might not be individuated following such an exclusion experience. Or, more broadly, it could be that forecasting exclusion (rather than experiencing it) triggers different affective or cognitive processes that might encourage (rather than discourage) stereotyping on all traits. Such speculation seems feasible given recent findings that future-life exclusion can differ from other types, and this possibility warrants empirical consideration.

Yet another limitation of this work is that it focused solely on stereotype application but ignored the many downstream consequences of stereotyping. It would be beneficial to determine whether exclusion has an impact on those outcomes as well. For example, individuals are often discriminated against because of commonly held stereotypes about their groups. A woman, for instance, might be less likely to be hired as an engineer (than a man) because of the common belief (stereotype) that women are poor in the STEM fields. If excluded individuals individuate more and rely less on stereotypic beliefs, might they also be less inclined to show these discriminatory behaviors when vetting the credentials of male and female applicants? Again, future work should examine these possibilities.

Moreover, none of the studies in this work examined the role of anticipated interaction. In all the studies reported here, participants likely did not expect to meet the targets they read about. Yet, despite this, they tended to process information about those targets carefully. At first blush, this might seem peculiar and not consistent with the SMS perspective, which argues that those with thwarted belongingness needs scan the environment for social cues and opportunities. Would not this system be sensitive to whether an interaction is imminent? Though this line of reasoning is sensible, it is important to note that many other social-cognitive and social-processing outcomes associated with exclusion also seem to have occurred under situations in which meeting targets was unlikely. For example, Bernstein et al. (2008) showed that excluded participants could better discriminate real from fake smiles, but participants were never told that they would be meeting any of those targets. Similarly, DeWall, Maner, and Rouby (2009) showed that excluded participants located smiling faces in an array faster than did non-excluded individuals; yet, again, there was no explicit mention that these targets would ever be encountered in real life. Moreover, Gardner et al. (2000) showed that excluded participants had greater memory for social information than did non-excluded participants, again, even when no explicit mention of a

future interaction with the source of that social information was offered.

We speculate that the tendency to experience exclusion and then individuate is well practiced. Over the course of a lifetime, individuals experience several instances of exclusion (Williams, 2001). Assuming that most of these episodes occur in social-rich environments where possible re-affiliation partners exist, we suspect that the excluded typically process them carefully (assuming they seem like reasonable sources for such re-affiliation). Over time, this "if excluded, then individuate" sequence becomes a sort of "default" way of responding to exclusion. Thus, even in lab settings with targets on a computer screen (with whom the participant likely cannot interact), exclusion may prompt this same default processing reaction. Only when other factors intervene to strip the excluded of their motivation to carefully process—like when someone encounters a target with whom he or she would never wish to interact (Neo-Nazi skinheads, from Experiment 3)—do they deviate from this default mode. It is quite possible that, if we highlighted to participants that they would *never* meet the targets, the effects we observed might be reduced. Similarly, if we highlighted that an interaction was forthcoming, then the exclusion-individuation effect we observed might be even more pronounced. These possibilities await further investigation.

Finally, we think future work should directly investigate the role of cognitive resources and cognitive load in these findings. In addition to motivation, another important determinant of whether a person individuates a target is if he or she has the capacity for careful thought. Given the present findings that excluded participants typically do individuate targets, it seems they must possess sufficient cognitive resources to engage in careful thought about targets. However, if their cognitive resources were taxed via completion of a concurrent task or severe time pressure, it is possible that their ability to individuate would be severely hampered, and they might stereotype at rates equal to included and control participants.

Conclusion

Excluded individuals find themselves in a precarious situation, feeling disconnected from others and susceptible to emotional and even physical turmoil. The most adaptive response to such a circumstance is to find ways to be re-admitted into the "social arms" of others who can alleviate these deleterious feelings. The current work shows that the excluded have the means to do this. Following exclusion, people process others' individuating features carefully, which should aid in their search for welcoming re-affiliative partners. Given that positive social relationships are so crucial for human welfare (Baumeister & Leary, 1995), it is perhaps not surprising that humans have adapted ways to respond when their social connections are threatened by things like exclusion. Careful processing of others, it appears, is one such adaptive response.

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Appendix

Non-Social Targets Used in Experiment 2

Below are the 11 non-social targets used in Experiment 2. In each vignette is a sentence or clause indicating something mildly counter-prototypic about the item (shown here for illustration purposes with underlining). Participants judged the likelihood that each item had certain characteristics (shown below each item). Each of these characteristics is fairly prototypic of the object, but the one shown first is unlikely or impossible given information presented about the object. The items are numbered here for illustration purposes only. In the study itself, presentation of the items was randomized differently for each participant, and the questions for each item were also randomized.

1. On the table is a cell phone. It came with a compact carrying case, but it is usually just tossed in its owner's backpack. It is black with a fairly large screen. It has no data plan, but has wonderful sound quality for phone calls and a nice keyboard for texting.

   The cell phone allows for web browsing.
   The cell phone makes phone calls.
   The cell phone has buttons.

2. In the office is a chair. It is brown and few sit on it for long because it is so uncomfortable, but it is used during meetings. The office is used primarily for faculty meetings, when roughly 30 people gather to discuss the business of the department.

   This chair has a soft cushion.
   This chair has "arms."
   This chair is designed for just one person.

3. In the yard is a vegetable garden. All its plants and flowers have died because no one tends to it, but many spiders can be found there. The neighborhood kids like to play near it in the afternoons following school. It takes up a good portion of the yard and was first planted 10 years ago.

   The garden has large tomatoes growing in it.
   The garden has dirt in it.
   The garden has bugs in it.

4. On the dresser is a jewelry box. It is fairly large and is made of brown wood, with metal knobs and pulls. It is filled with plastic jewelry although every piece is unique. Its owner is thinking of moving it to make more space on the top of her dresser, which is getting much too crowded.

   This jewelry box contains gold and gems.
   This jewelry box has drawers.
   This jewelry box contains earrings.

5. In the kitchen is a steak knife. It's got a heavy base and was purchased at Bed, Bath, and Beyond. It came as part of a matching set, but the other piece was lost. It has been used repeatedly as a box cutter and a mail opener.

   The knife is sharp.
   The knife has a pointed edge.
   The knife has a handle.

6. In the field is a pig. Its pen is large and located on a family farm in rural Indiana. The farm produces primarily corn and wheat. The pig is an unusual color and likes to graze all afternoon. Its favorite foods are grass, leaves, and worms.

   This pig is pink.
   This pig is dirty/muddy.
   This pig oinks.

(*Appendix continues*)

7. In the room is a printer. It is in heavy use during the afternoon, right after the employees come back from lunch. It is out of ink, but is used to scan documents. Though it is old, it operates fairly quickly and reliably. It was originally purchased at Home Depot.

The printer prints color documents.

The printer is loud.

The printer has buttons.

8. On the table is a pumpkin. It is large with seeds still inside although it has been carved. It was purchased at the local grocery store earlier in the day for a good price. It is at the perfect level of ripeness.

This pumpkin has a candle inside.

This pumpkin is orange.

This pumpkin will be used as a Halloween decoration.

9. In the hallway is a table. It is missing a leg although keys can be placed on it. The table was handmade by its owner's father, a carpenter, a few years ago. It is made of cherry wood and has been painted twice, first white and then gray.

This table is stable.

This table has a surface.

This table was designed to have items placed on its surface.

10. In the distance is a tree. It is recently planted and can provide a cooling shade to nearby animals and insects. It stands next to a house, near the back porch. The owners of the house are very happy to have it. They also have a garden and a pond.

This tree is over 10 feet tall.

This tree has green leaves.

This tree houses birds.

11. In the garage is a vehicle. It is an expensive model that has never been driven though it is displayed in car shows. The exterior is a beautiful shade of red and it has an all-leather interior in gray. It has many features, including power locks, integrated iPod dock, dashboard GPS, and keyless ignition.

The vehicle has thousands of miles on it.

The vehicle is well taken care of.

The vehicle is insured.

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