Embarrassment: A Novel Twist on a Familiar Emotion

Abstract

An interesting characteristic of embarrassment is that individuals can experience it vicariously when observing the embarrassing actions of another person. It is strongly enhanced when the observer and transgressor share a personal connection—for example, one of family or friendship. However, we posit that vicarious embarrassment can also arise from the actions of a stranger, as a connection can be construed on the spot when the social context in which the transgression occurs highlights some trait that is common to both observer and transgressor. We document this new source of embarrassment across five studies. Importantly, we separate embarrassment from other self-conscious emotions such as shame or guilt and show that it can trigger costly reparatory behaviors, including gift-giving and paying for someone else's bill.

Keywords: vicarious embarrassment; personal and situational connections; self-conscious emotions; reparatory behavior, distinctiveness.

Embarrassment is a common emotional state experienced when individuals violate socially-accepted conventions, which are negatively appraised by oneself or others (Dahl, Manchanda, & Argo, 2011; Krishna, Herd, & Aydınoğlu, 2019; Kumar, 2008; Watson & Tellegen, 1985). Embarrassment manifests in feeling awkward, uncomfortable, and nervous (Goffman, 1956; Miller, 1992), and it is considered different from other self-conscious emotions such as shame or guilt (Keltner & Buswell, 1997). It is a prevalent emotion in daily life caused by mundane mishaps that signals to others one's awareness of the transgression and serves as a non-verbal apology (Krishna et al., 2019), and it can spur either avoidance (Harris, 2006) or proactive behaviors (Feinberg, Willer, & Keltner, 2012). Embarrassment differs from shame and guilt as shame is triggered by a failure to meet personal standards and guilt by behavior that harm others (Krishna et al. 2019).

An interesting twist in more recent research on embarrassment is the finding that it can be felt vicariously (Fortune & Newby-Clark, 2008; Müller-Pinzler, Rademacher, Paulus, & Krach, 2016). That is, embarrassment is more general than previously conceived as it can be felt merely by observing the mishaps of another individual. It is strongly enhanced when the individual is personally connected by way of friendship, a family tie, or some other intimate link (Fortune & Newby-Clark, 2008; Krach et al., 2016; Miller, 1987; Müller-Pinzler et al., 2016)

The current research shows that embarrassment can be generalized further. Specifically, we argue that vicarious embarrassment can be strongly experienced even in the absence of a personal connection between the observer and transgressor. Rather, connections can be construed on the spot. We refer to this type of connection as situational. We argue that a situational connection is created when the social context highlights a common trait in the dyad. For example, being in a distinct social context enhances the salience of the traits that differentiates the minority from the majority (e.g., Deshpandé & Stayman, 1994). For this reason, while in a nondistinct context (e.g., people living in their home country), an individual sees other individuals with similar traits as different from her/himself (e.g., another person from the same nationality may have different interests), in a distinct context (e.g., one traveling abroad), one sees other individuals with similar traits as similar from her/himself in the most distinctive social category (e.g., the same nationality).

In a series of five studies we demonstrate that the social context can make an otherwise trivial connection strong triggering vicarious embarrassment for an unknown transgressor. Specifically, the observer and transgressor must share some observable traits (e.g., ethnicity, gender, fan of the same football team) that together they do not share with the broader social context for vicarious embarrassment to occur. For example, two Americans may not see that they share this feature unless they are in a setting with many more non-Americans. In sum, we argue that the strength of the connection between the observer and the transgressor, which conditions the presence of vicarious embarrassment, is not dispositional but contextual.

Individuals use two main coping mechanisms to deal with embarrassment: trying to flee the situation (Bell, 2009; Krishna et al., 2019; Tangney, Miller, Flicker, & Barlow, 1996), or compensating to restore self-image (Dong, Huang, & Wyer, 2013; Krishna et al., 2019; Song, Huang, & Li, 2017). Since the social context can create a situational connection between an unknown transgressor and an observer, reparatory behaviors should serve as a mechanism of separation (e.g., "I am not like him"). Fleeing the situation, however, would not serve this purpose since self-image would remain unchanged.

Following our rationale, we hypothesize that an observer feels more embarrassed from a transgression committed by a stranger when they share observable traits (vs. not) that is distinct (vs. nondistinct) from the social context, which in turn, will lead to a reparatory behavior.

Overview of the Studies

In a series of five studies, we placed participants to imagine being in a distinct or nondistinct context, observing a transgression of a transgressor with whom they share observable traits (vs. not). We demonstrate that only when the context is distinct, the dyad of observer and transgressor constructs a situational connection, which leads to reparations. We measured whether the social context influenced embarrassment and their desire to repair, thereby excluding other self-conscious emotions (Studies 1A, 1B, 2).

We showed that our effect is attenuated in the absence of social presence (Study 3), and we ruled-out an alternative explanation by showing that the identity of the victim does not matter (Study 4).

Study 1A: Apologizing

We manipulated the social context by asking university students to imagine attending a party hosted by either other ones of their affiliated students or a party hosted by students from a rival university. Thus, we predicted that participants would experience greater vicarious embarrassment in response to a stranger student from their university misbehaving in an environment in which their shared traits were distinct from that of the hosts. Consequently, they would be more motivated to engage in reparatory behavior.

Method

Sample and Design. Two hundred eighty-six undergraduate students participated in exchange for course credit. We randomly assigned participants to a two-condition (party hosts: same university vs. rival university[1]) between-subjects design. Fifty-eight participants failed an

[1] We hided the university names for the peer review process. Participants read the real name from their university or the rival one.

attention check and were excluded from our analyses, leaving a final sample of 228 participants (55.3% female; M_{age}=20.63, *SD*=5.26; 75.4% Caucasian)[2].

Procedure. Participants imagined attending a party for their university (versus the rival university) football game as a fan wearing a university jersey supporting the team. In the same university hosts condition, participants read (word changes in the rival university hosts condition are shown in brackets): *"Your host is a Team A [Team B] fan, and the house is decorated in the colors of the A [B] team. The napkins, paper plates, and cups all have the University A [University B] logo. It is quite a festive party."*

Participants were then informed that *"a short while later, another guest arrives, and you learn that he is also a Team A fan – just like you. This guest starts drinking too much and becomes incredibly rude to the hosts of the party. He complains about the food, insults various guests, spills his beer on the carpet and finally leaves the party tumbling wasted out the door."*

Next, participants completed measures assessing their impressions of this situation and how they would feel and behave.

Measures. Participants imagined that they decided to send a text to the host of the party and were provided with an open response to type their message to the host. Participants also indicated the extent to which they felt embarrassed, guilty, and ashamed on seven-point Likert scales (ranging from 1, *not at all*, to 7, *a great deal*). We followed the procedure of Allard and White (2015), in which we defined each emotion. Embarrassment was described as *"arising by an act that is merely socially unacceptable, rather than morally wrong."* Guilt was described as *"arising from a sense of regret or remorse over self-responsibility about a 'bad thing' done."* Shame was described as *"arising from objectionable behaviors seen as reflecting an objectionable self ("I did that horrible thing, and therefore I am unworthy, incompetent, or a bad person.)"* All emotions were presented in a randomized order.

Results

Reparatory Behavior. Participants open responses were coded for the presence of an apology by two research assistants blind to the study hypotheses. Responses that included the words "sorry" or "apology" were coded as '1' (while responses not including these words were coded as '0'). Participants were significantly more likely to apologize to the host from the rival university than to a host from their university (percent apologizing: 73.1% to the rival university host vs. 40.0% to their university host; [$\chi^2(1) = 25.31$, $p < .001$]).

Self-Conscious Emotions. Participants felt more embarrassed ($M_{distinct}$=4.77, *SD*=1.87; $M_{nondistinct}$=3.98, *SD*=1.91; $t(226)$=3.13, p=.002, d = .41) over the behavior of the rude fan with whom they shared traits when the party was hosted by a rival university fan than another fan from their own university. We did not find differences for guilt ($M_{distinct}$=2.61, *SD*=1.71; $M_{nondistinct}$=2.88, *SD*=1.89; $t(226)$=1.10, p=.271, d=.15) or shame ($M_{distinct}$=3.27, *SD*=1.95; $M_{nondistinct}$=2.82, *SD*=1.79; $t(226)$=1.82, p=.069, d=.24).

Mediation. To evaluate whether the increased tendency to apologize to the rival university host was mediated by embarrassment, shame, or guilt, we conducted a binary mediation analysis with bootstrapped standard errors and 1000 replications (Imai, Keele, & Tingley, 2010; Hicks & Tingley, 2011). Embarrassment mediated the relationship between distinct social context and tendency to apologize (95% CI: .01, .07). Guilt (95% CI: -.04, .01) and shame (95% CI: -.03, .01) were not significant mediators.

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[2] We administered 2 attention check questions asking participants to recall information about the experimental scenario. Question 1: "*In the scenario who was the host of the party?"* and Question 2: *"In the scenario who was the guest who behaved badly?"* Both questions provided the same response options: (a) University A, (b) University B, (c) University C. Forty participants incorrectly answered both questions while 16 participants incorrectly answered one question. We excluded two participants who answered both attention check questions correctly but responded in an open response window that they did not read the scenario. Our results do not differ significantly when we include all participants in our analyses.

Discussion

We provide initial evidence that embarrassment can be experienced vicariously in the absence of a personal connection, enabled instead by a distinct social context in which a transgression occurs. While this study provided evidence for our hypotheses, we wanted to evaluate if our effect could replicate in different social settings and assess if vicarious embarrassment could predict other reparatory behaviors.

Study 1B: Willingness to Pay

In this study, we manipulate distinctiveness by recruiting a sample of American participants and asking them to imagine eating at a restaurant in a foreign vs. local setting, in which another American misbehaves to the server. We hypothesized that Americans would experience more vicarious embarrassment in the distinct context and would be more likely to engage in a different reparatory behavior: put money toward the bill of another American guest who failed to pay.

Method

Sample and Design. Five hundred fifteen adults were recruited through Amazon's Mechanical Turk and were paid a nominal fee for participating. We randomly assigned participants to a two-condition (restaurant location: Paris vs. New York City) between-subjects design. Forty-three participants reported they were not American and were excluded from our analyses, as were 72 participants who failed an attention check, leaving a final sample of 400 adults (54.0% female; M_{age}=39.15, SD=12.82; 78.0% Caucasian).[3]

Procedure. Participants were asked to imagine taking a vacation and visiting a restaurant. In the Paris vacation condition, participants read (word changes in the New York City vacation condition are shown in brackets): *"Imagine that you decide to take a vacation to Paris [New York City]. After a long day of visiting the Louvre Museum [Metropolitan Museum of Art] and the Eiffel Tower [Empire State building], you go to a typical French [New York] bar for a drink and a snack. You are amazed by its refined decoration and French [New York] style. The ambiance is cozy and charming- except for one small detail: the noisy, obnoxious behavior coming from one of the guests sitting next to you at the bar. You realize that this noisy, obnoxious guest is another American. While you go through the menu, suddenly, the American guest rudely yells at the waitress. When you look up from your menu, you notice that the American guest spilled their beer over the table. A while later, you notice that the American diner left the bar without paying his bill that is $10.*

Next, participants completed measures assessing their impressions of this situation and how they would feel and behave.

Measures. Participants indicated how likely they would be to contribute money to the bill of the other American guest on a slider (ranging from 0, *Extremely Unlikely* to 100, *Extremely Likely*), and how much money they would put toward the unpaid bill of the other American guest on a slider (ranging from 0, *nothing* to 100, *the entire bill*). Participants also indicated the extent to which they felt embarrassed, guilty, and ashamed on seven-point Likert scales (ranging from 1, *not at all*, to 7, *a great deal*) following the same procedure as Study 1A.

Results

[3] We administered one attention check question, asking participants to recall what… *"This survey was about…"* and were provided with the response options: (a) an American diner behaving badly in New York, (b) an American diner behaving badly in Paris, (c) an American diner behaving badly in China, (d) a French diner behaving badly in Paris, (e) a French diner behaving badly in China. Our results do not significantly change if we include the entire sample in our analyses.

Reparatory Behavior. Participants eating in a restaurant in Paris (where their nationality was distinct) reported a greater likelihood to contribute money to the other guests' bill ($M_{distinct}$ = 54.06, SD = 37.09; $M_{nondistinct}$= 46.25, SD = 35.18; $t(398) = 2.16$, p=.032, d=.22) than when eating in a New York restaurant (where their nationality was not distinct) and reported that they would pay significantly more (about 11 percentual points more) toward the unpaid bill ($M_{distinct}$ = 62.09, SD = 41.62; $M_{nondistinct}$= 51.14, SD = 42.29; $t(398) = 2.61$, p=.009, d=.26).

Self-Conscious Emotions. Participants felt more embarrassed ($M_{distinct}$=5.56, SD=3.19; $M_{nondistinct}$=4.42, SD=3.22; $t(398)$=3.56, p<.001, d=.36) and more ashamed ($M_{distinct}$ =4.35, SD=2.98; $M_{nondistinct}$=3.51, SD=2.99; $t(398)$=2.79, p=.005, d=.28), over the behavior of the rude American guest at a restaurant where their nationality was distinct (French) vs. non-distinct (New York). We did not find differences for guilt ($M_{distinct}$=2.86, SD=2.57; $M_{nondistinct}$=2.56, SD=2.37; $t(398)$=1.19, p=.235, d=.12).

Mediation. Using PROCESS model 4 (Hayes & Preacher, 2014), we evaluated whether the increased reparatory behavior observed in the distinct context (Paris restaurant) was mediated by embarrassment, shame, or guilt. Results demonstrate that embarrassment fully mediated the relationship between distinct social context and likelihood of putting money toward the other American guest's bill (95% CI, .57, 5.04), and payment amount (95% CI, 1.13, 6.51). However, guilt (likelihood: 95% CI, -.41, 1.69; payment amount: 95% CI, -.39, 1.26), and shame (likelihood: 95% CI, -1.38, 1.54; payment amount: 95% CI, -1.58, 1.68) were not significant mediators.

Discussion

Study 1B provides additional evidence that being in a distinct social context can lead people to feel vicarious embarrassment, which increases reparatory behavior. In both studies, the transgressor shared certain observable traits with the participant. However, we posit that observers only feel vicarious embarrassment that leads to reparatory behavior when these traits match with the transgressor. Therefore, we predict that our effect should be mitigated when the transgressor does not share observable traits with the observer.

Study 2: Manipulating Observable Traits of the Transgressor

In this study, we demonstrate that a distinct social context creates situational connection only when the transgressor and the observer share observable traits. If the observer-transgressor dyad does not share observable traits, the observer will not feel connected to the transgressor and therefore will not feel embarrassment, nor repair for the transgressions. We manipulate distinct social context by asking participants to imagine being a guest of a party where their observable traits would be distinct or nondistinct. Then, we ask them to imagine that another guest misbehaves to the host. In this study, we further manipulate the transgressor as sharing observable traits vs. not. As in our previous studies, we hypothesized that Americans would experience more embarrassment in a social context in which their nationality would be distinct, and would, as a result, be more likely to engage in reparatory behavior. Further, we hypothesized that this effect only holds when both the transgressor and the observer share an observable trait.

Method

Sample and Design. Four hundred ten university students participated in exchange for course credit. We randomly assigned participants to a 2 (party host: Moroccan neighbor vs. American neighbor) x 2 (transgressor identity: Moroccan vs. American) between-subjects design. Fifty-eight participants failed an attention check and were excluded from our analyses. We also excluded participants who were not born in the US, because we conceptualize the party

being hosted by Americans as a shared traits circumstance. This left us with final sample of 305 participants (48.2% female; M_{age}=20.59; *SD*=1.19; 88.2% Caucasian).[4]

Procedure. Participants were asked to imagine a scenario in which they recently met their new neighbors and had been invited to a housewarming party they were hosting. In the Moroccan host condition, the instructions read as follows (word changes in American hosts condition are shown in brackets): "*Imagine you just met your new neighbors. They are Moroccan [American] and recently moved from Morocco [a nearby town] to your neighborhood in the United States. They invite you to their housewarming party. Once you arrive at the party, you are impressed with the exotic [beautiful] party decorations. On the table, you find various types of Moroccan [American] foods and drinks such as kebabs [burgers] and hummus [fries] as well as Moroccan [American] beer and wine. All of the guests are Moroccan [American] and are extremely welcoming and friendly to you. Some women are offering Moroccan tea [soft drinks] to the arriving guests. A Moroccan [Country] band plays music, and you are invited to dance with the other party guests."*

In both conditions, the participant then learns of another neighbor attending the party. In the Moroccan transgressor condition, this other neighbor is Moroccan, while in the American transgressor condition, this other neighbor is American. In the Moroccan host condition, the instructions read as follows (word changes in American hosts condition are shown in brackets): *"A short while later, another one of your neighbors arrives at the party—an American (Moroccan), who immediately starts to create a scene by loudly complaining about the food and making fun of the music being played by the Moroccan [Country] band. This neighbor drinks too much wine and makes inappropriate jokes and then starts tumbling around bumping into other people spilling his wine on the floor."*

Next, participants completed some measures assessing their impressions of this situation and how they would feel and respond to the hosts regarding the guest who misbehaves.

Measures. Participants responded to a question measuring their likelihood of apologizing for the behavior of the rude guest: *"I would apologize to the hosts for the bad behavior of the rude guest."* This question was measured on a 7-point scale (ranging from 1, *strongly disagree* to 7, *strongly agree*).

Participants also indicated the extent to which they felt they would send flowers to the party hosts the following day on a 7-point scale (ranging from 1, *extremely unlikely* to 7, *extremely likely*). Participants were also asked to report how much they would be willing to spend on flowers (willingness to spend was measured on a slider ranging from $10 to $100).

Moreover, participants indicated the extent to which they felt embarrassed, guilty, and ashamed on seven-point Likert scales (ranging from 1, *not at all*, to 7, *a great deal*) following the same procedure as the previous studies.

This study was pre-registered on As-Predicted (#15678).

Results

Intention to Apologize. We did not find neither a main effect of host (F(1,302)= .10, p= .757, η^2= .00), nor a main effect of transgressor (F(1,302)=.90, p= .343, η^2= .003). However, supporting our rationale, we found a marginally significant interaction (F(1,301)= 3.59, p= .059, η^2= .01). While participants were equally likely to apologize to the American host (nondistinct social context) when the transgressor was Moroccan or American ($M_{transgressor_Moroccan}$= 4.85, *SD*= 1.63; $M_{transgressor_American}$= 4.65, *SD*= 1.22; F(1,299) = .47, p = .493, η^2= .002), when the host was Moroccan (distinct social context), participants were more

[4] We administered one attention check question asking participants to recall *"This identity of the rude guest was…"* and were provided with the response options: (a) American, (b) Chinese, (c) German, (d) Moroccan, (e) Brazilian. Our results do not significantly change if we include the entire sample in our analyses.

likely to apologize when the transgressor was American (M= 5.11, SD= 1.80) than when he was Moroccan (M= 4.52, SD= 2.05; F(1,299) = 3.83, p= .051 η^2= .013).

Likelihood of Sending Flowers. We conducted a 2x2 ANOVA to assess the impact of social context (distinct vs. nondistinct) and transgressor ethnic trait (American vs. Moroccan) on likelihood of sending flowers. Participants were more likely to send flowers when the social context was distinct ($M_{distinct}$ = 3.49, SD = 2.00; $M_{nondistinct}$ = 2.80, SD = 1.69), F(1,303) = 9.69, p = .002, η^2 = .03), but there was no effect for transgressor ($M_{American_transgressor}$ = 3.17, SD = 1.89; $M_{Moroccan_transgressor}$ = 3.08, SD = 1.85), F(1,303) = .15, p = .703, η^2 = .00). More interestingly, there was a significant interaction between social context and transgressor, F(1,303) = 6.21, p= .013, η^2 = .02. Planned comparisons showed that when the participant did not share an ethnic trait with the transgressor, there was no difference in likelihood of sending flowers ($M_{distinct}$ = 3.16, SD = 2.02; $M_{nondistinct}$ = 3.03, SD = 1.72; F(1,300) = .18, p = .671, η^2=.00). However, when the participant shared an ethnic trait with the transgressor and this shared trait was distinct from the hosts (vs. not distinct from the hosts) participants expressed a greater likelihood of sending flowers ($M_{distinct}$ = 3.76, SD = 1.96; $M_{nondistinct}$ = 2.58, SD = 1.64); F(1,300)= 16.80, p< .001, η^2=.05).

Amount Spent on Flowers. We conducted a 2x2 ANOVA to assess the impact of social context (distinct vs. nondistinct) and transgressor traits (American vs. Moroccan) on amount that the participant would be willing to spend on flowers. Participants reported that they would be willing to spend more on flowers when their shared trait was distinct ($M_{distinct}$= \$22.15, SD= \$10.80; $M_{nondistinct}$= \$19.19, SD= 9.11), F(1,304)= 6.04, p= .015, η^2= .02), but there was no effect of transgressor ($M_{American_trasngressor}$= \$20.79, SD= \$10.52; $M_{Moroccan_transgressor}$= \$20.38, SD= \$9.52), F(1,304)= .13, p= .720, η^2= .00). More interestingly, there was a significant interaction between distinctiveness and transgressor, F(1,304)= 4.34, p= .038, η^2= .01. Planned comparisons showed that when the participant did not share an ethnic trait with the transgressor, there was no difference in willingness to spend on flowers ($M_{distinct}$= \$20.61, SD= \$8.31; $M_{nondistinct}$= \$20.19, SD= \$10.46; F(1,301)= .07, p= .798, η^2=.00). However, when the participant shared an ethnic identity with the transgressor and this shared identity was distinct from the hosts (vs. not distinct from the hosts) participants were willing to spend more on flowers ($M_{distinct}$= \$23.40, SD= \$12.38; $M_{nondistinct}$= \$18.22, SD= \$7.51); F(1,301)= 10.98, p= .001, η^2=.035).

Embarrassment. We conducted a 2x2 ANOVA to assess the impact of social context (distinct vs. nondistinct) and transgressor's traits (American vs. Moroccan) on embarrassment. There was no main effective of distinctiveness ($M_{distinct}$= 4.12, SD= 1.97; $M_{nondistinct}$= 3.71, SD= 1.98; F(1,304)= 2.57, p= .110, η^2= .01), nor of transgressor ($M_{American}$= 4.09, SD= 1.94; $M_{Moroccan}$= 3.69, SD= 2.02; F(1,304)= 3.85, p= .064, η^2= .01). However, there was a significant interaction between distinctiveness and transgressor's identity, F(1,304)= 5.94, p= .015, η^2= .02. Planned comparisons showed that when the transgressor was American, participants experienced greater embarrassment when their shared ethnic trait was distinct ($M_{distinct}$= 4.55, SD= 1.85; $M_{nondistinct}$= 3.64, SD= 1.93; F(1,301)= 8.68, p= .003, η^2=.03). However, when the transgressor was Moroccan, there was no difference in embarrassment by distinct social context ($M_{distinct}$= 3.58, SD= 1.99; $M_{nondistinct}$= 3.77, SD= 2.04); F(1,301)= .33, p= .567, η^2=.00).

Guilt. We conducted a 2x2 ANOVA to assess the impact of social context (distinct vs. nondistinct) and transgressor's ethnic trait (American vs. Moroccan) on guilt. Guilt did not differ as a function of social context ($M_{distinct}$= 2.68, SD= 1.79; $M_{nondistinct}$= 2.46, SD= 1.60), F(1,304)= .89, p= .346, η^2= .00 or ethnic trait of the transgressor ($M_{American}$= 2.70, SD= 1.72; $M_{Moroccan}$=2.41, SD=1.63), F(1,304)= 2.43, p= .120, η^2=.01. There was also not a significant interaction between distinctiveness and transgressor identity, F(1,304)= 2.62, p=.107, η^2=.01.

Shame. We conducted a 2x2 ANOVA to assess the impact of social context (distinct vs. nondistinct) and transgressor's ethnic trait (American vs. Moroccan) on shame. Shame did

not differ as a function of distinct social identity ($M_{distinct}$= 2.26, SD= 1.56; $M_{nondistinct}$= 2.57, SD= 1.79), $F(1,304)$= 1.18, p= .279, η^2=.00, nor of the transgressor's ethnic trait ($M_{American}$= 2.57, SD= 1.79; $M_{Moroccan}$= 2.26, SD= 1.56), $F(1,304)$= 2.61, p= .107, η^2=.01. However, there was a significant interaction between distinct social context and transgressor identity, $F(1,304)$= 3.92, p= .049, η^2=.01. Similar to embarrassment, when the transgressor was American, participants felt more ashamed when their identity was distinct then when it was not ($M_{distinct}$= 2.86, SD= 1.79; $M_{non\text{-}distinct}$= 2.27, SD= 1.75; $F(1,301)$= 5.00, p= .026, η^2=.02). However, when the transgressor was Moroccan, there was no difference in shame by distinct social context ($M_{distinct}$= 2.17, SD= 1.62; $M_{nondistinct}$= 2.34, SD= 1.52); $F(1,301)$= .38, p= .539, η^2= .00).

Mediation. Using PROCESS (Hayes & Preacher, 2014) following model 7, we next examined whether the interaction observed between distinctiveness and transgressor identity traits on the intention to apologize was driven by embarrassment. The indirect effect of embarrassment mediated the relationship between distinct social context and intention to apologize when the transgressor shared an ethnic trait with the participant (that was also distinct), (95% CI., .08, .48) but not when the transgressor did not (95% CI, -.27, .14). We also evaluated the potential mediating role of guilt and shame. Guilt was not a mediator when the transgressor shared (95% CI, .-00, .42) or did not share (95% CI, -.27, .15) an ethnic trait with the participant. However, shame also mediated the relationship when the transgressor shared (95% CI, .02, .43) but not when they did not share (95% CI, -.25, .11) an ethnic trait with the participant.

Next, we examined whether the interaction observed between distinctiveness and transgressor ethnic traits on the likelihood of sending flowers was driven by embarrassment. The indirect effect of embarrassment mediated the relationship between distinct social context and likelihood of sending flowers when the transgressor shared traits with the participant (that was also distinct), (95% CI., .04, .36) but not when the transgressor did not share observable traits with the participant, (95% CI, -.18, .09). We also evaluated the potential mediating role of guilt and shame. Guilt was not a mediator when the transgressor shared (95% CI, .-00, .30) or did not share (95% CI, -.20, .08) an ethnic trait with the participant. However, shame also mediated when the transgressor shared (95% CI, .01, .32), but not when he did not share (95% CI, -.20, .08) an ethnic trait with the participant.

We also examined whether the interaction observed between distinctiveness and social observability of the transgression on the amount participants were willing to spend on flowers was driven by embarrassment. The indirect effect of embarrassment mediated the interaction between distinct social context and transgressor's identity on amount willing to spend on flowers when the transgressor ethnic traits were shared with the participant in a distinct context (95% CI, -1.57, -.02), but not otherwise (95% CI., -.34, .66). As with likelihood of sending flowers, guilt was not a mediator when the transgressor was the same ethnicity as the participant in a distinct context (95% CI, .-.35, .33) nor otherwise (95% CI, -.98, .09). Similarly, shame did not mediate when the transgressor was the same ethnicity as the participant in a distinct context (95% CI, .-.32, .51) nor otherwise (95% CI, -1.17, .02).

Discussion

This study provides further evidence that individuals experience vicarious embarrassment when the behavior of another is likely to be perceived to represent them. Participants did not experience the same amount of embarrassment and reparatory behavior when the transgression was committed by an actor that did not share ethnic traits with the participant.

While studies 1A, 1B, and 2 supports our rationale, we manipulated only the distinctiveness of the social context, measuring both embarrassment (mediator) and reparatory

behaviors (dependent variables). Ideally, we should create a scenario that manipulates embarrassment to find casual evidence for the mediator.

Study 3 tackles this issue. We evaluate whether our effects are moderated by the extent to which a transgression is observed by others. Since social presence is a strong driver of embarrassment (Argo, Dahl, & Manchanda, 2005), we posit that participants will experience vicarious embarrassment and be willing to do reparatory behaviors only when a transgression is observed by others.

Study 3: The Role of Social Observation of Transgressions

We randomly assigned participants to a 2 (social context: distinct or nondistinct) x 2 (social presence: witness of transgression or no witness) between-subjects design.

Method

Sample and Design. Four hundred ninety-eight American adults were recruited through Amazon's Mechanical Turk and were paid a nominal fee for participating. We randomly assigned participants to a 2 (party host: Moroccan neighbor - distinct social context vs. American neighbor – nondistinct social context) by 2 (transgression observed by others: yes vs. no) between-subjects design. Seventy-two participants failed an attention check, leaving a final sample of 426 adults (57.7% female; M_{age}=32.83, SD=18.11; 72.5% Caucasian).[5]

Procedure. Similar to Study 2, participants were asked to imagine attending a housewarming party hosted by their new neighbors. The manipulation is similar to the previous study, with the following changes. First, the transgressor is always American. Second, participants in the transgression observed by others condition read (word changes in the transgression not observed by others are shown in brackets): *A short while later, another one of your neighbors arrives at the party – an American, who immediately starts to complain about the food and to make fun of the music being played by the band for everyone to hear [but nobody else but you heard these comments]. The American then goes in the garden and pees on the flowers and all of the guests [but you are the only guest to] observe this behavior.*

Next, participants completed measures assessing their impressions of this situation and how they would feel and behave.

Measures. Participants indicated how likely they would be to send flowers to their new neighbors the day after the party on a seven-point Likert scale (ranging from 1, *Extremely Unlikely* to 7, *Extremely Likely*), and how much money they would spend on the flowers on a slider (ranging from $0 to $100).

Participants also indicated the extent to which they felt embarrassed, guilty, and ashamed on seven-point Likert scales (ranging from 1, *not at all*, to 7, *a great deal*) following the same procedure as Studies 1A, 1B, and 2.

This study was pre-registered on As-Predicted #26845.

Results

Likelihood of Sending Flowers. We conducted a 2x2 ANOVA to assess the impact of social context (distinct vs. nondistinct) and social observability of the transgression (yes vs. no)

[5] We administered three attention check questions asking participants to recall information about the experimental scenario. Question 1: *"In the scenario who was the host of the party?"* and were provided with the response options: (a) my neighbors that were American, (b) my neighbors that were Moroccan, (c) my neighbors that were Chinese, (d) my neighbors that were African American. Question 2: *"In the scenario who was the guest who behaved badly?"* (a) an American neighbor, (b) a Moroccan neighbor, (c) a Chinese neighbor, (d) an African American neighbor. Question 3: *"In the scenario who saw the guest behaving badly?"* (a) only me, (b) me and all the other party guests, (c) all the party guests but me. Eight participants incorrectly answered all three questions, 23 participants incorrectly responded to two questions and 41 participants incorrectly responded to one question. Our results do not significantly change if we include all the excluded participants in our analyses.

on likelihood of sending flowers. Participants were more likely to send flowers when their identity was distinct ($M_{distinct}$ = 4.80, SD = 1.85; $M_{nondistinct}$ = 3.83, SD = 1.84), $F(1,422) = 31.52$, $p<.001$, $\eta^2 = .07$), and when the transgression was observed by others ($M_{observed}$ = 4.64, SD = 1.87; $M_{not_observed}$ = 4.17, SD = 1.92, $F(1,422) = 5.40$, $p = .021$, $\eta^2 = .01$). There was also a significant interaction between distinctiveness and social observability of the transgression, $F(1,422) = 4.07$, $p=.044$, $\eta^2 = .01$. Planned comparisons showed that when the social context was non-distinct, there was no difference in reparatory behavior ($M_{observed}$ = 3.86, SD = 1.83; $M_{not_observed}$ = 3.80, SD = 1.86; $F(1,422) = .04$, $p = .839$, $\eta^2=.00$). However, when the social context was distinct, social observability of the transgression (vs. no social observation of the transgression) resulted in a greater likelihood of sending flowers ($M_{observed}$ = 5.23, SD = 1.67; $M_{not_observed}$ = 4.45, SD = 1.93); $F(1,422) = 10.95$, $p = .001$, $\eta^2=.03$).

Amount Spent on Flowers. We conducted a 2x2 ANOVA to assess the impact of social context and social observability of the transgression on amount that the participant would be willing to spend on flowers. Participants reported that they would spend more on flowers when the social context was distinct ($M_{distinct}$ = \$31.09, SD = \$18.28; $M_{nondistinct}$ = \$23.51, SD = \$14.86), $F(1,422) = 23.98$, $p < .001$, $\eta^2 = .05$), and when the transgression was observed by others ($M_{observed}$ = \$30.69, SD = \$18.72; $M_{not_observed}$ = \$25.49, SD = \$15.67), $F(1,422) = 8.17$, p =.004, $\eta^2 = .02$). There was also a significant interaction between distinctiveness and social observability of the transgression, $F(1,422) = 6.33$, $p = .012$, $\eta^2 = .01$. Consistent with likelihood of sending flowers, planned comparisons showed that when the social context was nondistinct, there was no difference in the amount participants would spend on flowers ($M_{observed}$ = \$23.82, SD = \$14.99; $M_{not_observed}$ = \$23.26, SD = \$14.82; $F(1,422) = .05$, $p = .821$, $\eta^2=.00$). However, when the social context was distinct, social observability of the transgression (vs. no social observation of the transgression) resulted in a greater amount participants would spend on flowers ($M_{observed}$ = \$35.93, SD = \$19.62; $M_{not_observed}$ = \$27.15, SD = \$16.13); $F(1,422) = 16.79$, $p < .001$, $\eta^2=.04$).

Embarrassment. We conducted a 2x2 ANOVA to assess the impact of social context and social observability of the transgression on embarrassment. Participants experienced more embarrassment when their identity was distinct ($M_{distinct}$= 4.88, SD= 2.34; $M_{nondistinct}$= 4.12, SD= 2.04, $F(1,422)$= 17.20, $p< .001$, $\eta^2= .03$) and when the transgression was observed by others ($M_{observed}$= 5.31, SD= 1.95; $M_{not_observed}$= 3.94, SD= 2.29, $F(1,422)$= 38.63, $p< .001$, $\eta^2= .09$). There was also a significant interaction between distinctiveness and social observability of the transgression, $F(1,422)$= 14.75, $p< .001$, $\eta^2= .03$. Planned comparisons showed that when the social context was nondistinct, there was no difference in embarrassment ($M_{observed}$= 4.39, SD= 1.92; $M_{not_observed}$= 3.90, SD= 2.12; $F(1,422)$= 2.48, p= .116, $\eta^2= .01$). However, when the social context was distinct, social observability of the transgression (vs. no social observation of the transgression) resulted in greater embarrassment ($M_{observed}$= 6.02, SD= 1.66; $M_{not_observed}$= 3.96, SD= 2.42; $F(1,422)$= 58.78, $p< .001$, $\eta^2= .19$).

Guilt. We conducted a 2x2 ANOVA to assess the impact of social context and social observability of the transgression on guilt. Different from the previous result, participants experienced less guilt when the social context was distinct ($M_{distinct}$= 4.40, SD= 2.32; $M_{nondistinct}$= 4.85, SD= 1.92, $F(1,422)$= 4.87, p= .028, $\eta^2= .01$). However, they felt guiltier when the transgression was observed by others ($M_{observed}$= 5.19, SD= 1.94; $M_{not_observed}$= 4.10, SD = 2.23, $F(1,422) = 28.26$, $p < .001$, $\eta^2 = .06$). Unlike the previous result, there was not a significant interaction between distinctiveness and social observability of the transgression ($F(1,422)$= .03, p= .873, $\eta^2= .00$).

Shame. We conducted a 2x2 ANOVA to assess the impact of social context and social observability of the transgression on shame. Participants did not experience more shame when their identity was distinct ($M_{distinct}$= 4.75, SD= 2.36; $M_{nondistinct}$= 5.07, SD= 1.93, $F(1,422)$= 2.01, p= .157, $\eta^2= .01$), but did experience more shame when the transgression was observed by

others ($M_{observed}$= 5.58, SD= 1.76; $M_{not_observed}$= 4.32, SD= 2.35, $F(1,422)$= 35.68, p< .001, η^2= .08. However, there was not a significant interaction between distinctiveness and social observability of the transgression, $F(1,422)$= 1.33, p= .250, η^2= .00.

Mediation. Using PROCESS (Hayes & Preacher, 2014) following model 7, we next examined whether the interaction observed between distinctiveness and social observability of the transgression on the likelihood of sending flowers was driven by embarrassment. Embarrassment as a mediator of the relationship between distinct social context and likelihood of sending flowers did not reach significance (with social observation: 95% *CI.*, -.07 to .20; with no social observation: 95% *CI.*, -.03 to .04). However, neither guilt (with social observation: 95% *CI.*, -.04 to .06; with no social observation: 95% *CI.*, -.04 to .06) or shame (with social observation: 95% *CI.*, -.02 to .02; with no social observation: 95% *CI.*, -.05 to .06) mediated this relationship.

We also examined whether the interaction between distinctiveness and social observability of the transgression on the amount willing to spend on flowers was driven by embarrassment. The indirect effect of embarrassment mediated the relationship between distinct social context and amount willing to spend on flowers when the transgression was observed by others (95% *CI.*, .18 to 3.00) but not when the transgression was not observed by others (95% *CI.*, -.55 to .66). As with likelihood of sending flowers, guilt was not a mediator when a transgression was observed by others (95% *CI.*, .-.81, .20) or when a transgression was not observed by others (95% *CI.*, -.84, .14). Similarly, shame did not mediate when a transgression was observed by others (95% *CI.*, -.50, .46) or was not observed by others (95% *CI.*, -1.32, .09).

Discussion

We demonstrate that our basic effect is aggravated by social observability. Furthermore, we show more evidence that embarrassment, not guilt nor shame, is the vicarious emotion that drives reparatory behavior.

So far, we have demonstrated that the social context can construct a situational connection, which leads to vicarious embarrassment and reparatory behavior. However, in the previous studies, the social context was manipulated as a victim and a group of observers that have the same traits. These scenarios raise a question: is the effect driven by the victim or the other people in the context? Since our rationale is that the social context creates the situational connection, the victim's traits should not matter. We designed Study 4 to tackle this limitation.

Study 4: Manipulating the Victim's Trait

In Study 4, we described a situation that occurred in a restaurant either in Paris or in New York City. Also, we manipulated the victim by being either American or French.

Method

Sample and Design. Eight hundred seven adults were recruited through Amazon's Mechanical Turk and were paid a nominal fee for participating. We randomly assigned participants to a 2 (restaurant location: Paris vs. New York City) by 2 (victim: American vs. French) between-subjects design. Fifty-three participants reported they were not American and were excluded from our analyses, as were an additional 96 participants who failed an attention check, leaving a final sample of 655 adults (56.5% female; M_{age}=41.40, SD=12.86; 83.1% Caucasian).[6]

[6] We administered three attention check questions asking participants to recall information about the experimental scenario. Question 1: *"In this survey you were asked to imagine taking a vacation and having a dining experience in what location?"* and were provided with the response options: (a) New York, New York;

Procedure. As in Study 1B, participants imagined taking a vacation and visiting a restaurant. The manipulation is similar, with the following changes: Participants in the French victim condition read (word changes in the American victim condition are shown in brackets): *"When the waitress comes to your table and offers you the menu, you realize a French [American] accent. The waitress confirms that she is French [American]. While you go through the menu, suddenly, the American guest rudely yells at the waitress. When you look up from your menu, you notice the American guest spilled beer over the table. A while later, you notice that the American diner left the bar without paying his bill that is $10."*

Next, participants completed measures assessing their impressions of this situation and how they would feel and behave.

Measures. Participants indicated how much money they would put toward the unpaid bill of the other American guest on a slider (ranging from $0 to $10). Participants also indicated the extent to which they felt embarrassed, guilty, and ashamed on seven-point Likert scales (ranging from 1, *not at all*, to 7, *a great deal*) following the same procedure as the previous studies.

Results

Reparatory Behavior. We conducted a 2x2 ANOVA to assess the impact of social context (distinct vs. nondistinct) and victim ethnicity (American vs. French) on reparatory behavior. Participants would put more money toward the unpaid bill when the social context was distinct ($M_{distinct}$=$6.19, SD=$4.56; $M_{nondistinct}$=$3.87, SD=$4.54), $F(1,651)=42.81$, $p<.001$, $\eta^2=.06$, but were similarly likely to engage in reparatory behavior when the victim was American or French ($M_{American}$=$4.97, SD=$4.69; M_{French}=$5.04, SD=$4.71), $F(1,651)=.03$, $p=.857$, $\eta^2=.00$). Further, there was no significant interaction between distinct social context and victim identity, $F(1,651)=.57$, $p=.452$, $\eta^2=.00$.

Embarrassment. We conducted a 2x2 ANOVA to assess the impact of social context and victim ethnicity on embarrassment. Participants experienced more embarrassment when the social context was distinct ($M_{distinct}$=6.11, SD=3.32; $M_{nondistinct}$=4.36, SD=3.20), $F(1,651)=47.48$, $p<.001$, $\eta^2=.07$, but were similarly embarrassed when the victim was American or French ($M_{American}$=5.00, SD=3.38; M_{French}=5.41, SD=3.36), $F(1,651)=1.44$, $p=.231$, $\eta^2=.00$. Further, there was no significant interaction between distinctiveness and victim ethnicity, $F(1,651)=1.04$, $p=.308$, $\eta^2=.00$.

Guilt. We conducted a 2x2 ANOVA to assess the impact of social context and victim ethnicity on guilt. Participants felt similarly guilty regardless of either of them ($M_{distinct}$=2.59, SD=2.39; $M_{nondistinct}$=2.31, SD=2.37), $F(1,651)=2.37$, $p=.124$, $\eta^2=.00$, ($M_{American}$=2.51, SD=2.46; M_{French}=2.39, SD=2.31), $F(1,651)=.51$, $p=.473$, $\eta^2=.00$. Further, there was no significant interaction between both variables, $F(1,651)=.46$, $p=.498$, $\eta^2=.00$.

Shame. We conducted the same 2x2 ANOVA on shame. Participants experienced more shame when the social context was distinct ($M_{distinct}$=4.39, SD=3.18; $M_{nondistinct}$=3.15, SD=2.85), $F(1,651)=26.07$, $p<.001$, $\eta^2=.04$, and felt slightly more ashamed when the victim was American or French ($M_{American}$=3.50, SD=2.96; M_{French}=4.00, SD=3.17, $F(1,651)=3.58$, $p=.059$, $\eta^2=.00$). Further, there was a significant interaction between distinctiveness and victim ethnicity, $F(1,651)=4.11$, $p=.043$, $\eta^2=.01$, Participants felt equally ashamed in the nondistinct social context ($M_{American}$=3.17, SD=2.90; M_{French}=3.14, SD=2.81, $F(1,651)=.01$, $p=.923$, $\eta^2=.00$);

(b) Paris, France; (c) Sydney, Australia; (d) Amsterdam, The Netherlands; (e) Tokyo, Japan. Question 2: *"In the scenario, the waitress was…"* (a) American, (b) French, (c) Australian, (d) Dutch, (e) Japanese. Question 3: *"In the scenario, the other restaurant guest that behaved badly was…"* (a) American, (b) French, (c) Australian, (d) Dutch, (e) Japanese. 1 participant incorrectly answered all three questions, 26 participants incorrectly responded to two questions and 69 participants incorrectly responded to one question. Our results do not significantly change if we include all the excluded participants in our analyses.

while in the distinct context, participants felt more ashamed when the victim was French ($M_{American}$=3.89, SD=3.00; M_{French}=4.81, SD=3.28, F(1,651)=7.49, p=.006, η^2=.01).

Mediation. Using PROCESS model 4 (Hayes & Preacher, 2014), we evaluated whether the increased reparatory behavior observed in the distinct context (Paris restaurant) was mediated by embarrassment, shame, or guilt. Results demonstrate that embarrassment mediated the relationship between distinct social context and likelihood of putting money toward the other American guest's bill (95% CI, .62, 1.28). However, guilt (95% CI, -.01, .14), and shame (95% CI, -.08, .27) were not significant mediators.

Discussion

Study 4 replicated our previous findings that together, the shared traits of the observer and the transgressor and a distinct social context elicits vicarious embarrassment and reparatory behavior. More importantly, it provided critical evidence that our effects are driven by the social context in which a transgression occurs and not by the victim.

General Discussion

An observer can feel embarrassment for a transgression committed by a stranger when both share traits that are distinct from the social context. This in turn (not guilt nor shame) triggers costly reparatory behaviors, including gift-giving and paying for someone else's bill. This finding generalizes embarrassment, since it not only can be felt vicariously, but also from situational (not dispositional) connections.

This research has some limitations. First, we studied a specific source of embarrassment; which comes from someone else's transgression. While this situation is common in everyday lives, we haven't investigated other sources. For example, future research could assess if embarrassment from unintentional mishaps can also arise from situational connections and, if so, whether the behavioral consequences are similar to the ones we found here.

Second, we have ruled out that our basic effect is driven by guilt or shame, two self-conscious that can also be felt vicariously (Lickel, Schmader, Curtis, Scarnier, & Ames, 2005). Future research could investigate under which conditions individuals feel vicarious guilt and shame. More specifically, future studies could investigate if these emotions can also arise from situational connections and, if so, why.

Finally, there may be some circumstances under which vicarious embarrassment leads to fleeing the situation. We proposed that reparatory behaviors should serve as a mechanism of separation from the transgressor. But it is possible that some situations mimic such a strong connection that they do not allow observers to separate themselves. Future research could fine tune this finding.

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