

Research article

Embarrassment: The ingroup–outgroup audience effect in faux pas situations

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Abstract

Embarrassment arises when we reveal an apparent flaw of the self in front of others, for instance, in a faux pas situation. An audience is crucial for embarrassment, but the group membership of the audience has not yet been studied. According to the social identity approach, we assign more importance to evaluations by ingroup than by outgroup members, particularly when we identify highly, and the outgroup is of lower status. A pilot study (N = 30) showed that embarrassment correlated positively with group membership of the audience and with identification. Studies 1 to 3 presented participants with several faux pas scenarios. In Study 1 (between-participants design; N = 75), participants reported higher embarrassment in ingroup (Norwegian) and equal-status outgroup (Swedish) conditions than in a lower-status outgroup condition (Polish). In Study 2 (within-participants design; N = 135), participants reported higher embarrassment when they imagined the audience to be other Scots (ingroup) than Americans or Poles (outgroups), particularly when they perceived the outgroup to be lower in status. In Study 3 (between-participants design; N = 59), high identifiers but not low identifiers showed the expected ingroup–outgroup audience effect. Implications for intergroup relations are discussed. Key Message: Embarrassment following faux pas situations depends on the group membership of the audience, relative status of the audience and ingroup identification. Copyright © 2011 John Wiley & Sons, Ltd.

INTRODUCTION

Imagine you are riding on a train, visiting the bathroom and coming out without noticing that a long piece of toilet paper is stuck to the back of your jeans. Would you be more embarrassed if this was witnessed by a group of people of your own nationality or if those in the audience were immigrants? Would it matter which country these immigrants are from, and hence, how ‘important’ they seem to be? And would your level of embarrassment depend on the degree to which you identify with your own nationality?

The present research investigates these issues. It fills a gap in the literature by examining group processes in embarrassment, something that has not been done before. We study the role of an audience’s group membership in a protagonist’s experience

of embarrassment following faux pas situations. We test the idea that an ingroup audience elicits higher embarrassment than an outgroup audience, particularly when outgroup status is lower and when the protagonist identifies with his or her own group. We do so by using a series of scenario studies involving different cultural and intergroup contexts, different participant populations and a variety of faux pas situations.

Embarrassment: Blessing or Curse?

Embarrassment is defined as the ‘acute state of flustered, awkward, abashed chagrin that follows events that increase the threat of unwanted evaluations from real or imagined audiences’ (Miller, 1996, p. 129). We all get embarrassed from time to time, and yet, we find it so aversive that we try to avoid it at all costs, our own or others’. Young adults fail to buy

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†Study 1 is part of the third author’s BSc thesis. Different aspects of the findings reported in this paper were presented as Eller, A., & Koschate, M. (2010). ¿Te importa o te vale? ¿Que audiencia nos causa pena? [Do you care or not? Which audience causes us embarrassment?]. Paper presented at the XIII Mexican Congress of Social Psychology, Hermosillo, Mexico, 8–10 September; Koschate, M., & Eller, A. (2010). Embarrassment depends on who you have in mind. Paper presented at the British Psychological Society Social Psychology Section Annual Conference, Winchester, 7–9 September; Eller, A., & Koschate, M. (2010). Not giving a damn: The ingroup–outgroup audience effect in embarrassment. Paper presented at the 8th Biennial Convention of the Society for the Psychological Study of Social Issues, New Orleans, USA, 24–27 June; Eller, A., Koschate, M., Gilson, K. & Hull, C. (2009). Vergüenza: El efecto del público de grupos pertenencia y externos en situaciones bochornosas [Embarrassment: The ingroup–outgroup audience effect in faux pas situations]. Paper presented at the XVII Mexican Congress of Psychology, Acapulco, Mexico, 14–16 October; Eller, A., Koschate, M., & Gilson, K. (2009). Erröten für die Anderen: Intergruppenkontakt und Verlegenheit gegenüber Fremdgruppenmitgliedern. [Blushing for others: Intergroup contact and embarrassment vis-à-vis outgroup members]. Paper presented at the 12. Tagung der Fachgruppe der Sozialpsychologie of the German Association of Psychology (DGfP), Luxembourg, September 2–4; Koschate, M., Eller, A., & Gilson, K. (2009). Blushing for the outgroup: Intergroup contact as a predictor of embarrassment. Paper presented at the British Psychological Society Social Psychology Section Annual Conference, Sheffield, 15–17 September; Eller, A., Koschate, M., Gilson, K. & Hull, C. (2009). Embarrassment: The ingroup–outgroup audience effect in faux pas situations. Poster presented at the British Psychological Society Annual Conference, Brighton, April 1–3; and Eller, A. & Gilson, K. (2008). Embarrassment: Intergroup audience effects. Paper presented at the 15th General Meeting of the European Association of Experimental Social Psychologists, Opatija, Croatia, June 10–14.

condoms before sexual intercourse (Moore, Dahl, Gorn, & Weinberg, 2006), men avoid prostate examinations (Leary & Kowalski, 1995) and boys fail to prompt their friends to talk about problems (Rose, Swenson, & Robert, 2009), all out of fear to embarrass themselves or others. Given this negative image of embarrassment and its undesirable epiphenomena, such as blushing, feeling awkward, uncomfortable, nervous, foolish, inferior, incompetent, and the like (Parrott & Smith, 1991; cf. Crozier, 2004), early theorists often considered self-conscious emotions, such as shame or embarrassment, disruptive to social interaction. However, more recently, an opposite view has dominated, which regards embarrassment not as disruptive, but as adaptive, or regulatory for social interaction (Miller, 1996, 2007).

This stance can be traced back to Goffman (1955), who pointed out that 'embarrassment is not an irrational impulse breaking through socially prescribed behaviour but part of this orderly behaviour itself' (p. 271). This view is supported by four lines of research (Beer, Heerey, Keltner, Scabini, & Knight, 2003). First, it has been shown that embarrassment arises when social norms and conventions are violated (e.g. Lewis, 1993). Second, the positive, rewarding experience of pride and the negative, punishing experience of embarrassment may reinforce appropriate social behaviour (Brown, 1970). Third, the expression of embarrassment repairs social relations and elicits forgiveness following transgressions. Its nonverbal signals resemble appeasement gestures in other species (Keltner, 2005). For example, Semin and Manstead (1982) found that a person who had knocked over a supermarket display was liked better when he or she showed visible embarrassment than when he or she did not. Finally, expression (in self) and interpretation (in others) of embarrassment tends to be impaired in clinical populations with specific brain damage and in populations that have difficulty regulating their behaviour (Beer et al., 2003).

A convincing and popular account of why embarrassment occurs is provided by the social evaluation model (Edelmann, 1987; Miller, 1996). It holds that people find failures in impression management aversive because they induce audiences to form undesired impressions, and it is these evaluations that people fear most. Crucially, embarrassment is directly contingent on concern about others' opinion of oneself, 'presumably, if a person cares not at all what others think, he or she should be immune to embarrassment (at least in front of that particular audience)' (Miller, 1996, p. 114). However, although embarrassment is virtually always felt in the presence of an audience (Parrott & Smith, 1991) and *because of* that audience, the audience is usually treated as a given in the literature. The research that has looked at audience effects has found that embarrassment is more likely with higher numbers of onlookers, with strangers and new acquaintances rather than friends and family, and with audiences of high, rather than low status and prestige (Leary & Kowalski, 1995; MacDonald & Davies, 1983; Tangney, Miller, Flicker, & Barlow, 1996).

Embarrassment as a Group Process

Virtually all of the literature (but see Garland & Brown, 1972; Harré, 1990) has treated embarrassment as an interpersonal process. This contrasts with other self-conscious emotions,

such as shame and guilt, which have recently been conceptualized on a collective, intergroup level of analysis (e.g. Leach, Iyer, & Pedersen, 2006; Zebel, Doosje, & Spears, 2009). Embarrassment has often been seen as merely a weaker form of shame, but it has been shown that they are quite distinct emotions, with different triggers, affective and physiological reactions and consequences (Tangney, Mashek, & Stuewig, 2005). For example, Tangney et al. (1996) have shown that even though embarrassment was less painful and more fleeting than shame, it was more likely to be accompanied by physiological changes (blushing, increased heart rate, etc.). The moral implications were less pronounced in embarrassment than in either guilt or shame. In comparison with shame, embarrassment followed events that were more unexpected and for which people felt less responsible. Finally, action tendencies following shame and embarrassment were dissimilar. When feeling shame, people tended to hide from others, which was not the case with embarrassment.

The position advocated here originates in the tradition of social identity theory (Tajfel & Turner, 1979) and self-categorization theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Social identity theory posits a distinction between personal and social identity. People derive the latter primarily from group memberships (e.g. university affiliation, nationality, gender) and generally strive for a positive social identity, which can be achieved by favourable comparisons with relevant outgroups. Related, self-categorization theory proposes categorization of the self at different levels of abstraction: personal (self-categorization in relation to other individuals), group (self-categorization as a member of a social group, such as, female, Scottish, working class, in relation to other groups) and superordinate group (self-categorization as a human being in relation to other species). The process of categorization is inherently flexible and context dependent.

In many situations, the intermediate level of ingroup-outgroup categorizations is most salient to the individual. In these cases, the group (be it based on nationality, gender, university affiliation, or other criteria) and its norms become a frame of reference of how to behave for its members. In other words, when people act as ingroup members, their world view changes. They expect to share the same perspective and standards as fellow group members whose evaluations will be relevant to them. By contrast, there is no such common yardstick shared with outgroup members and much less concern with their evaluation. Or, in Miller's (1996) terms, people should be immune (or relatively so) to embarrassment in front of outgroup, but not ingroup, audiences. This intriguing possibility will be examined in the present series of studies. Given the appeasing, reparative social function of embarrassment, this relative lack of embarrassment in the presence of outgroup members may have quite serious consequences for intergroup relations.

Present Research

The present set of studies significantly advances the field by theorizing and investigating hitherto untested *group processes* in the experience of embarrassment. Faux pas situations from daily life will be used as convenient examples of potentially embarrassing incidents. Our main premise is that people feel

embarrassed when they unwittingly violate social norms in the presence of others. However, these feelings of unease following norm transgression might be much more pronounced when the audience is the ingroup than an outgroup, for evaluations by ingroup members bear much more relevance and consequences for us.

It is plausible that embarrassment is stronger and evaluative concerns higher in the presence of higher-status than lower-status outgroups: we can afford not to care what lower-status groups think of us and thus are not embarrassed even when the situation would call for it. On an interpersonal level, Tangney et al. (1996) found that only a small proportion of embarrassing experiences occur in front of subordinates. As concerns the hypothesized stronger embarrassment in the presence of perceived higher-status groups, in such situations, people might engage in upward social comparison, aiming to heighten the status of their own group (cf. Bureson, Leach, & Harrington, 2005). That is, they might want to create a particularly competent impression when representing their own group in front of a high-status outgroup and thus feel more embarrassment and discomfort when a faux pas situation arises.

Also, people should be more embarrassed for perceived wrongdoings in front of ingroup members if they identify strongly with their respective group, in contrast to having only weak ties (cf. Tajfel & Turner, 1979). If people feel comparatively unconnected to their group, they might not value the opinions and evaluations of fellow ingroup members very much and hence do not experience heightened embarrassment following faux pas events, compared with an audience of outgroup members.

In summary, we hypothesize that embarrassment will be stronger with ingroup as opposed to outgroup audiences. We further expect this ingroup–outgroup audience effect to be augmented in the following situations: (i) when the outgroup is of (perceived) lower, rather than similar or higher, status in relation to the ingroup and (ii) when participants' identification with their own group is high rather than low.

This research comprises one semi-structured interview and three field experiments to establish and test the ingroup–outgroup audience effect on embarrassment and to examine the potential moderators of perceived group status and ingroup identification. The experiments used within-participants (Study 2) and between-participants designs (studies 1 and 3), employed student and non-student samples in Scotland and Norway and used nationality and university affiliation as bases of categorization. Hence, the ingroup–outgroup audience effect on embarrassment will be investigated in a variety of settings to test its generalizability and attenuating factors.

PILOT STUDY

The pilot study was a semi-structured interview aiming to establish the presence of an ingroup–outgroup audience effect on embarrassment. Participants were university students, asked to describe in detail two embarrassing situations in which they were protagonists during the last month. They rated the level of embarrassment they felt, how many people were present, whether these were ingroup or outgroup members (the basis for group membership, e.g. *university*

students, was left for participants to determine themselves, and they had to choose one particular group membership) and identification with their own group. We predict that more ingroup than outgroup members will be present during embarrassing incidents (Hypothesis 1) and that the level of ingroup identification will correlate positively with embarrassment (Hypothesis 3) in incidents involving ingroup members.

Method

Participants and Procedure

These were $N=30$ undergraduate and postgraduate students (seven men and 23 women) at a Scottish university and who received £4 for their participation. Their mean age was 20.8 years ($SD=6.04$, range: 18–50 years). The participants were interviewed verbally on an individual basis in sessions lasting 30–45 minutes. After the interview was completed, the participants were debriefed and thanked.

Measures

Embarrassment. The participants were asked to describe two embarrassing incidents that had happened to them during the last month, describing the situation in great detail. They were then asked to rate the extent of their embarrassment in the situation on a feeling thermometer ranging from 0° to 100°C.

Audience Size/Group Membership. The participants were asked how many people were watching the embarrassing incident, whether they were aware of one or more group(s) or categor(ies) people in the audience belonged to and with how many members of the audience they felt that they shared membership in a group or category (in %).

Ingroup Identification. We enquired how many participants identified with their own group (0 = *not at all*, 30 = *a lot*).

Results and Discussion

The participants reported 60 embarrassing incidents, with one or more ingroup members present in 37 of them. A variety of ingroups/outgroups were reported such as sports groups, student societies, nationality, students/lecturers, students/townsppeople, young/older people. As summarized in Table 1, the participants felt rather high levels of embarrassment (64 on a 100-point scale) and felt that they shared a group membership with a majority of the audience (68% for situation 1 and 53% for situation 2). Mean audience size was around 4–6 people, showing a lot of variation. In terms of the interrelationships among variables, embarrassment correlated significantly and positively with ingroup membership of the audience ($r=.41$, $p<.01$) and with level of ingroup identification ($r=.33$, $p<.05$). The results are wholly in line with the predictions, showing, for the first time, that the emotion of embarrassment depends on the group membership of the audience. The higher the percentage of ingroup members in an audience, the more embarrassed we feel following a faux pas. We also feel more embarrassed the more we identify with the respective group we are part of.

Table 1. Descriptive statistics and correlations among variables for the pilot study

Measure	Situation 1		Situation 2		Correlations (<i>r</i>) (aggregated across situations)			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	1	2	3	4
1 Embarrassment ^a	63.93	24.87	63.60	24.12	–	–.07	.41**	.33*
2 Audience size ^b	6.32	7.20	4.24	5.47	–	–	.14	–.41*
3 Group membership (%) ^a	68.48	43.19	53.81	47.25	–	–	–	.53**
4 Ingroup identification ^c	16.00	10.44	16.89	11.96	–	–	–	–

Note: All correlations for ingroup identification involve only embarrassing situations where ingroup is present.

^aScale from 0 to 100.

^bActual number of people.

^cScale from 0 to 30.

* $p < .05$.

** $p < .01$.

The fact that the level of embarrassment was uncorrelated with audience size ($r = -.07$, $p > .05$) is at odds with the literature. Tangney et al. (1996) showed that embarrassment is more likely to occur with larger than smaller audiences. What might be occurring here is a process of depersonalisation (Turner, 1984) following category salience, which leads group members to perceive themselves and other group members less as differing individuals and more as similar, prototypical representatives of their ingroup category. Thus, group size becomes less relevant, whereas the importance (and compliance with) group norms increases (Turner et al., 1987). Depersonalisation might also explain the significant negative correlation between audience size and identification, although no predictions about the relationship between these two variables were made.

An example incident, reported by a 30-year-old male Scottish PhD student, nicely illustrates the impact of ingroup membership (here, the ingroups are staff and postgraduate students of the same academic school) on embarrassment.

A seminar in history school. And I have been invited along by my supervisor. And all the rest of people there are staff and current PhD students. And they were talking about something and at first I didn't quite get what was going on. It was quite intense stuff, and then I started to get nervous because of that. I started to feel embarrassed that I wasn't getting the idea. But then, what really embarrassed me was that I worked out what they were talking about and I had some ideas about it myself. I wanted to say something but I couldn't make myself say something. I can't say something in front of all these people.

This pilot study presented first evidence that the experience of embarrassment is contingent upon the group membership of the audience. Study 1 will investigate the ingroup–outgroup audience effect more methodically, through a field experiment. We will also conduct an initial examination of the role of perceived group status as a moderator.

STUDY 1

Study 1 was a field experiment of the general public in Norway. It had a between-participants design in which participants were presented with a number of pre-tested, potentially embarrassing

faux pas situations from daily life. The participants had to rate how embarrassing they would find each incident when witnessed by unknown fellow Norwegians (ingroup) or by Swedish people (outgroup) or by Polish people (outgroup). Study 1 had three objectives: (i) to subject the ingroup–outgroup audience effect to an experimental test, supplementing the more anecdotal evidence gathered in the pilot study; (ii) to conduct an initial examination into the moderating role of group status in the ingroup–outgroup audience effect (Hypothesis 2); and (iii) to test the effect's generalizability to another country (Norway) and culture (Scandinavia).

In the present study, we designated the Polish to be the lower-status outgroup and the Swedish to be an equal-to-higher-status outgroup relative to the ingroup of Norwegians, reflecting general consensus. These particular national outgroups were chosen for their relevance in Norway. In 2006, when the present study was conducted, 8.3% of Norway's population was made up of immigrants. Swedes constitute the second-largest immigrant group, and Poles are the fastest-growing immigrant group in Norway (33% of immigrants in 2005; Statistics Norway, 2009).

We predict that embarrassment as a result of faux pas situations will be highest in the Norwegian condition (ingroup), lowest in the Polish condition (lower-status outgroup), with the Swedish condition (equal-to-higher status outgroup) being in between these two scores.

Method

Participants and Procedure

The participants were $N = 75$ Norwegian adults (41 men, 34 women) who completed paper-and-pencil questionnaires. The participants' mean age was 33.04 years ($SD = 13.31$; range 18–64 years). Their professional background was quite varied, including, for example, university students, teachers, politicians, ambulance drivers, electricians and farmers. Participation was voluntary and not reimbursed. Data collection took place in Porsgrunn, Skien, Siljan, Bamble and Nome, five Norwegian towns (County of Telemark). The participants were recruited through opportunity sampling and instructed to complete questionnaires on their own. When they had finished, they were debriefed and thanked.

Measures and Design

Embarrassment. In a between-participants design, the participants were presented with five potentially embarrassing incidents from daily life that were witnessed either by a few ingroup (Norwegians) or by outgroup members (Swedes, Poles; $N=25$ per condition), all unacquainted to the participants. For example,

'Imagine you are sitting in a doctor's practice waiting for your turn. You've just had quite a big lunch and lots of coke to drink and suddenly you burp loudly. There are a few other [Norwegians/Swedes/Poles] in the waiting room. How embarrassed would you feel?' (See Appendix A for complete list of embarrassment items.)

The participants then had to rate their level of embarrassment. Conditions were randomized to ensure that geographical area or occupation was not conflated with condition. Embarrassment ranged from one (*not at all embarrassed*) to seven (*extremely embarrassed*), with higher scores indicating more embarrassment. The embarrassment ratings for all five vignettes loaded on a single factor and were therefore averaged to form an embarrassment scale with a Cronbach's alpha of .80.

Results and Discussion

An analysis of variance (ANOVA) showed a significant effect of condition, $F_{(2,72)} = 4.05$, $p < .02$, $\eta^2 = .10$. Planned comparisons showed that embarrassment was significantly higher in the presence of a Norwegian ($M = 4.42$, $SD = 1.12$) than a Polish audience ($M = 3.63$, $SD = 1.44$, $t(48) = 2.15$, $p = .036$) and also higher with a Swedish ($M = 4.59$, $SD = 1.23$) than a Polish audience present ($t(48) = 2.54$, $p = .014$; Figure 1). The Norwegian and Swedish conditions did not differ significantly from each other, $t(48) = -0.53$, $p = .600$.

Study 1 replicates the effect of perceived group status in the ingroup–outgroup audience effect of embarrassment. The participants were significantly less embarrassed when they imagined faux pas situations in the presence of a Polish audience than when they imagined the same events in the presence of a Norwegian or Swedish audience. This finding mirrors the results obtained in the pilot study and suggests that people are less concerned about their behaviour when outgroup members are present, as long as the outgroup is seen as lower in status.

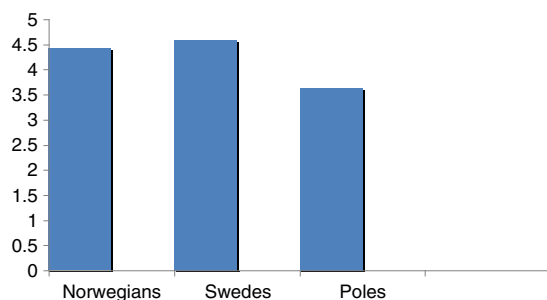


Figure 1. Level of embarrassment as a function of audience (Study 1). Note: Embarrassment is significantly lower in the Polish condition than both in the Norwegian and Swedish conditions ($t_s > 2.10$, $p_s < .04$)

As mentioned in the Introduction to this study, when confronted with perceived higher-status outgroup members, group members may be concerned about increasing their own group's status. This concern might drive them to engage in impression management in front of a perceived higher-status outgroup, similar to that shown vis-à-vis an ingroup, following a faux pas situation. An unfavourable evaluation by a low-status outgroup, by comparison, should matter relatively little for the ingroup's status. This difference in reaction to low-status versus high-status outgroups might hinge on the differential importance we assign to their opinions and evaluations of us. Put bluntly, we care about what a higher-status outgroup thinks of us, we care less about what a lower-status outgroup thinks of us and we behave and feel accordingly. We are thus (relatively) immune to embarrassment in front of lower-status outgroup members (cf. Miller, 1996).

Because we did not measure perceived status in Study 1, a second plausible reason why embarrassment did not differ between Norwegians (ingroup) and Swedes (outgroup) might be due to social categorization. There is a substantial body of literature showing that perceiving oneself and a member of another group to be part of a common ingroup is linked to reduced prejudice and stereotyping and increased liking, trust and respect (e.g. Eller & Abrams, 2003, 2004; Gaertner & Dovidio, 2000; González & Brown, 2006). Sweden, unlike Poland, neighbours Norway and is part of Scandinavia. Thus, the participants might have perceived Swedes to be part of a common category, that is, part of a greater ingroup, which might have increased their level of embarrassment in the presence of Swedish people.

Study 2 takes us back to the UK, uses a non-student sample and examines the moderating role of perceived group status more directly than Study 1.

STUDY 2

Study 2 was a field experiment involving the general public in Scotland. Our aims for this study were threefold. First, we were interested in extending the experimental investigation of the ingroup–outgroup audience effect to Scotland (from Norway in Study 1) to examine its generalizability across countries and participant populations. Second, we used a within-participant design to be able to better control for inter-individual differences in embarrassment. In between-participant designs, as used in Study 1, we need to rely on randomization to control for such factors. Finally, we wanted to test the potential moderating role of group status more directly than in Study 1. As outlined in the Introduction, embarrassment should be stronger in the presence of perceived higher-status than lower-status outgroups.

Participants were Scottish adults, presented with a number of faux pas incidents from daily life. These scenarios were pre-tested in a separate study for their suitability in different intergroup contexts and their potential to elicit embarrassment. Studies 1 to 3 used different numbers of scenarios to measure embarrassment because some scenarios were not suitable in the particular context and to keep questionnaire length at bay. In a within-participants design, the participants had to rate how embarrassing they would find each incident when

witnessed by fellow Scottish people (ingroup), Americans (outgroup), or Polish people (outgroup), and how they perceived the status of each group. Note that members of all three groups were strangers to the participants. We predict that the imagined presence of national ingroup members will generate more embarrassment than the presence of national outgroup members (Hypothesis 1) and that the effect (i.e. the difference between conditions) would be smaller the higher the status of the outgroup was perceived to be (Hypothesis 2). Americans have always been a relevant comparison group for Scottish people because Americans are by far the main non-UK tourist group, with a fair number of Americans claiming Scottish heritage (UKTS, 2009). Following Poland's entry into the European Union in May 2004, there has been a relatively large influx of Poles to the UK, with 96 000 Polish immigrants to the UK in 2007 alone. Estimates of Poles living in Scotland alone vary from 40 000 to 50 000; in the whole of the UK, there are almost 500 000 (Office for National Statistics, 2009).

Method

Participants and Procedure

The participants were $N=135$ Scottish adults (61 men, 74 women) who completed an online questionnaire. They were recruited mainly through a People's Panel for the county of Fife, which is used to consult the public on a variety of issues and which reflects the county's population in terms of age, gender, working status and geographical location. Fifty-four per cent of the participants were employed (including self-employment), 17% were currently unemployed or working at home, 21% were retired and 8% were full-time students. The participants were also recruited by means of household flyers, a website for university students and community websites in the counties of Fife and Angus.

Participation was voluntary and not reimbursed; however, on completion of the questionnaire, the participants could enter a raffle to win one of three £15 gift vouchers. The participants' mean age was 47.32 years ($SD=14.37$; range 19–78 years). Their educational level was quite high; over 50% had a university degree. After they had completed their questionnaires, the participants were directed to a debriefing website, designed for the current study.

Measures and Design

Embarrassment. The participants were presented with 15 potentially embarrassing incidents from daily life, for example, 'Imagine you are letting a fart go in an apparently empty room when you discover another person is there. How embarrassed would you feel if the other person was a(n) ...?' The participants then had to rate their level of embarrassment imagining this incident was witnessed by the following: (i) an American; (ii) a Pole; and (iii) a Scot, unacquainted to the participants. Embarrassment ranged from one (*not at all embarrassed*) to seven (*extremely embarrassed*), with higher scores indicating more embarrassment. Again, embarrassment ratings for all vignettes were averaged to form a scale with Cronbach's alpha values of .89 (American audience), .88 (Polish audience) and .90 (Scottish audience).

Status. In order to measure the perceived relative status of each group, we asked the respondents the following (adapted from Major et al., 2002):

'There are many people who believe that different nationalities enjoy different amounts of social status. You may not believe this for yourself, but if you had to rate each of the following groups as such people see them, how would you do?'

The respondents rated each group (Scottish, American, Polish people) on a scale ranging from one (*low status*) to seven (*high status*).

Results and Discussion

A repeated-measures ANOVA across the three within-participants conditions (Scots, Poles, Americans) showed a significant effect, $F_{(2,268)}=4.55$, $p=.01$, $\eta^2=.03$. Planned comparisons showed that embarrassment was significantly higher in the presence of a Scottish ($M=4.23$, $SD=1.18$) than a Polish ($M=4.16$, $SD=1.17$, $F_{(1,134)}=4.89$, $p<.03$, $\eta^2=.04$) and American ($M=4.13$, $SD=1.20$, $F_{(1,134)}=5.26$, $p<.03$, $\eta^2=.04$) audience (Figure 2). The Polish and American conditions did not differ significantly from each other, $F_{(1,134)}=1.53$, $p=.22$, $\eta^2=.01$. Next, a repeated-measures ANOVA with the within-participants factors 'audience' (Scots, Americans) and 'outgroup status' (for outgroup Americans) yielded a significant main effect for 'audience' ($F_{(1,134)}=9.89$, $p=.002$, $\eta^2=.07$), a significant main effect for 'outgroup status' ($F_{(1,134)}=8.75$, $p=.004$, $\eta^2=.06$) and a significant audience \times status interaction ($F_{(1,134)}=7.25$, $p=.008$, $\eta^2=.05$). For planned comparisons, we median split the variable 'outgroup status'. Embarrassment was significantly higher in the presence of a Scottish ($M=4.33$, $SD=1.34$) than an American audience ($M=4.21$, $SD=1.33$) only when the American outgroup was perceived to have a relatively low status ($t(88)=2.10$, $p<.05$) but not when a high status was perceived (Scottish audience: $M=4.81$, $SD=1.28$; American audience: $M=4.84$, $SD=1.28$; $t(50)=-0.44$, $p>.20$). A repeated-measures ANOVA with 'audience' (Scots, Poles) and 'outgroup status' (for outgroup Poles) showed no such interaction effect ($F<1.00$, $p>.20$).

Study 2 has provided further experimental evidence that the same faux pas incident elicits less embarrassment if witnessed by (national) outgroup than ingroup members. People are not as concerned to fart, burp, trip or knock over

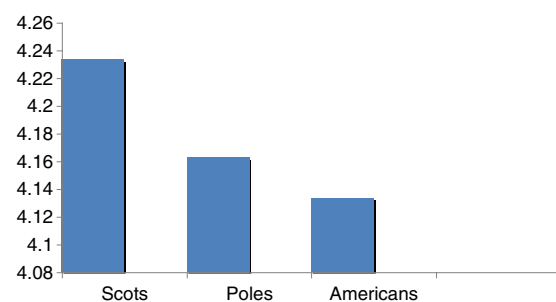


Figure 2. Level of embarrassment as a function of group membership and status differentials (Study 2). Note: Embarrassment is significantly higher in the Scottish condition than both in the Polish and American conditions ($F_s>4.80$, $p_s<.03$)

other people's coffee when the audience is composed of people who are not part of their social group or category, particularly if they also perceive the outgroup to be relatively low in status. Although embarrassment was overall rated to be lower with both an American and a Polish outgroups present compared with a Scottish ingroup, perceived group status only emerged as a moderator for the American outgroup but not for the Polish outgroup. A floor effect may account for this unexpected result: compared with the American outgroup, the Polish outgroup was overall seen as significantly lower in status as both the Scottish ingroup and the American outgroup.¹ Thus, the perceived status of the Polish outgroup may be sufficiently low in absolute terms to create the ingroup–outgroup effect on embarrassment even when rated comparatively high. In contrast, the status of the American outgroup was rated equal-to-higher than the status of Scottish people by some participants but lower than the status of the ingroup by others, creating the ingroup–outgroup effect only for the latter.

The within-participants design was advantageous in that it minimized inter-individual differences, such as embarrassment (cf., Miller, 1996) and in interpretation of faux pas events, for example, in terms of their severity. However, it could be argued that the direct comparison of audiences for each scenario augmented the ingroup–outgroup audience effect. The participants might have felt compelled to give different ratings to the different audiences as a result of demand characteristics. Thus, in the present research, it is more difficult to find differences between conditions in a between-participants than a within-participants design, such that a between-participants design constitutes a much more stringent test than a within-participants design of the ingroup–outgroup effect in embarrassment.

This issue was dealt with in Study 1 and will be scrutinized again in Study 3. Study 3 is a field experiment in Scotland, using university affiliation as a basis of categorization in a between-participants design. We have already shown in studies 1 and 2, across different cultural contexts and different types of intergroup relations, how status affects the intensity of embarrassment. In Study 3, we will focus instead on the moderating role of ingroup identification in a context where the outgroup is generally considered to be of lower status than the ingroup.

STUDY 3

Study 3 was a field experiment with the University of St Andrews students as the participants in Scotland. It had a between-participants design in which the participants were presented with a number of pre-tested, potentially embarrassing faux pas situations from daily life. The participants had to rate how embarrassing they would find each incident when witnessed *either* by unknown fellow University of St Andrews

students (ingroup) *or* by University of Dundee students (outgroup). The universities of St Andrews and Dundee are only 13 miles apart, and there is a friendly rivalry between the students of the two universities, such that it is a relevant and salient intergroup context. We chose the University of Dundee as the outgroup in Study 3, as it is generally perceived to be of lower status than the University of St Andrews.

The aims of Study 3 were as follows: (i) to yield further evidence for the ingroup–outgroup audience effect of embarrassment in a between-participants design using a different basis of categorization than nationality, namely university affiliation and (ii) to test the moderating potential of ingroup identification in driving this effect (Hypothesis 3), supplementing the pilot study with experimental data. It is probable that people are more embarrassed for perceived wrongdoings in front of ingroup members if they identify strongly with their respective group, in contrast to having only weak ties (cf. Tajfel & Turner, 1979). Low identifiers will not value the views and evaluations of their fellow ingroup members as much as high identifiers, such that their level of embarrassment should not depend so much on the group membership of the audience.

We predict that the ingroup–outgroup audience effect on embarrassment will be moderated by identification with the ingroup, such that it is stronger with high identifiers than low identifiers (Hypothesis 3).

Method

Participants and Procedure

The participants were $N=59$ University of St Andrews students (19 men, 40 women; 9% psychology students) who completed an online questionnaire. The participants' mean age was 21.44 years ($SD=1.92$; range 18–27 years). Participation was voluntary, and the participants did not receive any compensation for participating. The participants were recruited on a student website. They were instructed to complete the questionnaire on their own and not to discuss it with their friends or classmates. After they had completed the questionnaires, the participants were debriefed and thanked.

Measures and Design

Embarrassment. In a between-participants design², the participants were presented with 13 potentially embarrassing

¹For Study 2, a repeated-measures ANOVA across the three within-participants conditions (Scots, Poles, Americans) showed a significant effect of group status, $F_{(2,232)}=52.06$, $p<.001$, $\eta^2=.31$. Planned comparisons showed that group status was perceived to be significantly lower for Poles ($M=3.68$, $SD=1.19$) than for Scots ($M=4.85$, $SD=1.28$, $F_{(1,116)}=65.85$, $p<.001$, $\eta^2=.36$) and Americans ($M=5.15$, $SD=1.21$, $F_{(1,116)}=98.05$, $p<.001$, $\eta^2=.46$). The difference in status between Americans and Scots was marginally significant, $F_{(1,116)}=3.35$, $p=.07$, $\eta^2=.03$.

²Study 3 originally also included the between-participants factor of *relative status*. Relative status was measured with a two-item scale: 'Compared with Dundee University students, St Andrews student have a ...' 1 = 'much lower status' to 5 = 'much higher status' and 'Compared with Dundee University students, St Andrews students have a ...' 1 = 'much worse reputation' to 5 = 'much better reputation'; Cronbach's $\alpha=.77$. A hierarchical regression analysis using z -standardized scores showed no significant effects of status, status \times audience, status \times identification or status \times audience \times identification. A plausible reason for these non-significant findings might be the presence of a ceiling effect, with relative status: $M=3.90$, $SD=0.81$). This makes sense given that we purposely chose Dundee as a lower-status outgroup vis-à-vis St Andrews.

Study 3 also included a further between-participants factor, that of territory (ingroup versus outgroup). We reasoned that responses of embarrassment might differ not only as a function of the audience's group membership but also as a function of where the incident takes place, in the present case, in St Andrews or Dundee. However, territory did not have any significant main or interactive effects, such that we analysed data only according to the audience's group membership, collapsing across the condition of territory.

incidents from daily life, for example, 'Imagine you are muttering to yourself in an apparently empty reading room when you discover another student from the University of [St Andrews/Dundee] is there. How embarrassed would you feel?' The participants then had to rate their level of embarrassment imagining this incident was witnessed by the following: (i) a University of St Andrews student ($N=22$) or (ii) a University of Dundee student ($N=37$), all unacquainted to the participants. Embarrassment ranged from one (*not at all embarrassed*) to seven (*extremely embarrassed*), with higher scores indicating more embarrassment. The embarrassment ratings for all 13 vignettes loaded on one factor and were therefore averaged to a scale, with a Cronbach's alpha of .88.

Ingroup Identification. A four-item scale by Doosje, Ellemers, and Spears (1995) was used to measure identification with St Andrews University students, for example, 'I identify with other St Andrews students.' Identification ranged from one (*strongly disagree*) to seven (*strongly agree*), with higher scores indicating higher identification. The scale loaded on a single factor and had a Cronbach's alpha of .88.

Results and Discussion

Embarrassment and ingroup identification did not correlate with one another, $r = .01$, ns . After z -standardizing audience and identification, we used hierarchical multiple regression analysis to test the effects of audience and identification (step 1) and their interaction (step 2) on embarrassment. There were no significant main effects on embarrassment of either audience, $\beta = .06$, $t = 0.42$, $p > .10$ or ingroup identification, $\beta = -.02$, $t = -0.14$, $p > .10$. However, there was a significant audience \times identification interaction on embarrassment, $\beta = .38$, $t = 2.42$, $p = .02$. Analyses of simple slopes (see Aiken & West, 1991) showed that there was an ingroup–outgroup audience effect on embarrassment for high ingroup identification ($\beta = .45$, $t = 2.03$, $p < .05$) but not low ingroup identification ($\beta = -.32$, $t = 1.58$, $p > .10$) (Figure 3).

Study 3 complements the pilot study in showing that the ingroup–outgroup audience effect on embarrassment is moderated by identification with one's group. High identifiers experienced significantly stronger embarrassment in the presence of ingroup than outgroup members, whereas this was not the case for low identifiers. Hence, high identifiers value the evaluation of ingroup members significantly more

than that of outgroup members, whereas the level of embarrassment of low identifiers does not depend to the same degree on the group membership of the audience. Low identifiers are likely to be relatively unconcerned about their group's views of themselves, such that their embarrassment in response to faux pas incidents does not depend on the university affiliation of their audience.

Moreover, Study 3 revealed these audience effects on embarrassment using a different and perhaps less entrenched and important basis for categorization (university affiliation) than studies 1 and 2 (nationality). On the one hand, this makes the significant audience \times identification interaction effect all the more powerful. On the other hand, the lack of a main effect of audience might be due to the less essential (to the self) group membership of university affiliation.

GENERAL DISCUSSION

The present research consisted of one semi-structured interview and three field experiments investigating the proposed ingroup–outgroup audience effect on embarrassment. We used different participant populations and different intergroup settings in different countries to produce findings that would be as generalizable as possible. Across the studies, we found strong support for the ingroup–outgroup audience effect. Participants repeatedly reported more embarrassment following faux pas incidents when the audience was their ingroup than an outgroup. This ingroup–outgroup difference was moderated by (perceived) group status. Participants who imagined committing a faux pas in front of a lower-status outgroup reported significantly less embarrassment than those imagining the same situation in front of a higher-status outgroup (Study 1). This is in line with the interpersonal literature of audience effects on embarrassment (Leary & Kowalski, 1995; Tangney et al., 1996). The ingroup–outgroup audience effect was also moderated by ingroup identification (Pilot Study and Study 3). In the inter-university context of Study 3, only the participants who identified highly with their own university showed the typical differences in embarrassment as a function of audience, whereas those who did not identify very much with their university did not.

The highest level of embarrassment in Study 3 actually occurred in low identifiers in front of outgroup members, which is an unexpected result. It is likely that low identifiers behave more like individuals than group members. Hence, this finding fits with the results obtained in embarrassment studies at the interpersonal level, showing that people tend to show more embarrassment in front of strangers and new acquaintances rather than friends and family (Leary & Kowalski, 1995; MacDonald & Davies, 1983). It appears then that group identification (high versus low) splits people into responding in interpersonal or intergroup ways to embarrassing situations.

Theoretical Implications

Our research is novel and innovative in that it scrutinizes hitherto neglected group processes in the social emotion of embarrassment. We have shown that social group membership

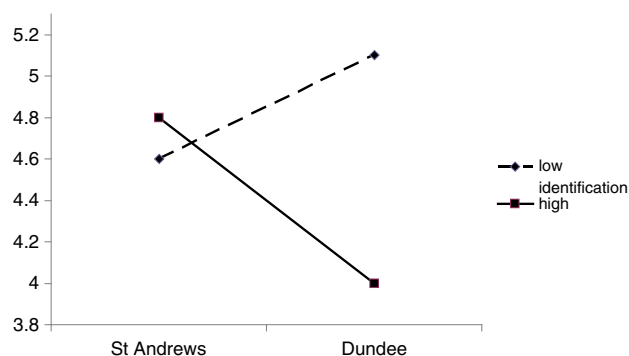


Figure 3. Social identification moderates the ingroup–outgroup audience effect on embarrassment (Study 3)

modifies the experience of embarrassment, heightening it when relevant evaluating instances (i.e. ingroup members) witness our mishap and attenuating it when we assign little importance to the opinions of those around us (i.e. outgroup members, particularly lower-status outgroups; cf. Tajfel & Turner, 1979). These findings have important implications for the fields of emotion as well as for intergroup relations. On the one hand, the current research provides further answers to the question of *who* embarrasses us, complementing the scarce literature on audience effects in embarrassment (Leary & Kowalski, 1995; Tangney et al., 1996). It also shows that group processes play an important role in embarrassment, just as they do with other moral, social emotions, such as shame and guilt (e.g. Leach et al., 2006; Zebel et al., 2009).

On the other hand, as outlined earlier, the emotion of embarrassment is (in most cases) adaptive, and its expression repairs social relations and elicits forgiveness following transgressions (Keltner, 2005; Semin & Manstead, 1982). What happens, then, if we do not feel and show much embarrassment to outgroup members following a situation that would call for it? In the best case intergroup relations between our own group and the relevant outgroup would remain unchanged, but more likely, relations would deteriorate (cf. Semin & Manstead, 1982). Given the frequency with which faux pas incidents occur in daily life and given that situations in which two or more social groups coincide in daily life are the norm, the implications for intergroup relations are vast. Considering these factors, embarrassment should indeed be considered a blessing, not a curse (Miller, 2007), for positive intergroup relations. Hence, attempts should be made to increase it when the situation calls for it.

Our perspective is also in line with the *black sheep effect* (Marques & Yzerbyt, 1988; Marques & Paez, 1994). Research on this effect has found that desirable ingroup members are preferred over desirable outgroup members, whereas undesirable outgroup members are favoured over undesirable ingroup members. This devaluation serves to exclude undesirable members and their anti-normative behaviour from the representation of the ingroup and hence protect the group's identity. Identification with the ingroup increases the black sheep effect (cf. Hutchison, Abrams, Gutierrez, & Viki, 2008). It is plausible that the anxious anticipation of this evaluation by the ingroup following norm transgression elicits higher embarrassment in the individual group member in a faux pas situation, particularly when the person identifies highly with the group. Whereas research on the black sheep effect has usually focused on group members' evaluations of the anti-normative member, we have investigated the vantage point of the norm-violating group member. Future research on the ingroup-outgroup audience effect on embarrassment could examine the individual's fear of evaluation, punishment and exclusion as mediating processes.

Limitations

We should mention some cautionary notes about the current research. First, in all studies, the participants did not actually commit an actual faux pas on which they then reported but *imagined* that they had committed such a faux pas. This was due to practicality, ethical issues and experimental control. It

would have taken an extraordinary amount of time and effort if we had somehow made the participants commit the different faux pas used in this research, and some of these situations (e.g. farting in an apparently empty room) would have been impossible to elicit spontaneously. Apart from this difficulty, it would have also been unethical to create potentially mortifying situations for naïve participants in public places, which they might not have agreed to otherwise. Moreover, had we taken a more behaviourist approach, we would have lost a good deal of experimental control. In Study 2's within-participants design, the embarrassing potential of the faux pas situations would have worn thin after the second, and particularly third, reenactment, such that the results would be rather meaningless. In Studies 1 and 3's between-participants designs, however, we could not have been sure that the situations would be psychologically equivalent among groups of participants (conditions), again rendering the findings meaningless.

For these reasons, we believe that asking the participants to imagine faux pas events and then reporting on their embarrassment was the best available option to study the ingroup-outgroup audience effect. We should also add that the faux pas events were constructed on the basis of the results of the semi-structured interviews (Pilot Study) and reflected everyday-life situations that a great majority of, if not all, the participants had had personal experience with. Furthermore, the power of imagination should not be underestimated. Mental imagery has been shown to have similar characteristics as the real experience with respect to emotional and motivational responses (Dadds, Bovbjerg, Redd, & Cutmore, 1997; Paivio, 1985). For example, Crisp and colleagues (Stathi & Crisp, 2008; Turner, Crisp, & Lambert, 2007) found that imagined intergroup contact with various outgroups has actual positive effects on intergroup attitudes and relations.

Another caveat concerning the current research is that in Study 1, embarrassment in front of a Swedish (higher-status outgroup) audience was equally strong as embarrassment in front of a Norwegian (ingroup) audience. As outlined in the Discussion of Study 1, this might have been due to processes of social categorization (common ingroup with Swedes within Scandinavia) or concern to increase the ingroup's status in relation to the outgroup. Another possibility is that the participants thought it more likely that they would have future interactions with Swedes (who come from a nearby country) than Poles (who originate further away). Finally, Study 3 did not show a main effect of audience on embarrassment, such that the ingroup-outgroup audience effect on embarrassment occurred only with high identifiers but not low identifiers. As argued earlier, differences in importance people assign to group memberships might account for this lack of a main effect. Whereas Studies 1 and 2 used nationality as a basis of group membership, which is usually quite central to people's social identity, Study 3 used university affiliation, which is more ephemeral and less entrenched. Also, the proximity of the two universities used might have created a common ingroup, attenuating the ingroup-outgroup audience effect on embarrassment.

Future Research. The present paper reports the initial research carried out on the ingroup-outgroup audience effect on embarrassment and the role of perceived group status and

ingroup identification as moderating variables. Future research should investigate further moderators of the effect, such as social categorization and anticipated contact with the particular outgroup. We would predict that social categorization (in terms of an inclusive group membership) and anticipated contact mitigate the ingroup–outgroup audience effect on embarrassment with different types of outgroups. If we never see the people again who witnessed our mishap, our embarrassment might not be as strong.

It should also be tested what is *driving* the ingroup–outgroup audience effect, for instance, cultural knowledge of normative behaviour among the respective groups and importance assigned to a particular outgroup's opinion. Here, our hypotheses would be that greater knowledge of outgroup norms and high importance given to outgroup members' views would decrease the ingroup–outgroup audience effect. With respect to higher-status groups, stereotype threat (Steele & Aronson, 1995) might be one process driving the ingroup–outgroup audience effect. We are afraid of confirming negative stereotypes the outgroup holds about our group (e.g. the British/Scottish are binge drinkers) and are therefore more anxious and embarrassed when a potentially stereotype-confirming situation arises in front of higher-status outgroups (we have had a couple of drinks in the pub and fall down on the way home).

Another promising area of research with crucial impact on the real world is the consequences of the ingroup–outgroup audience effect. An immunity to embarrassment (with respect to outgroup members) might reflect a lack of respect and a total disregard for the particular outgroup's members' opinions. However, this missing emotion might also entail further prejudice, discrimination and dehumanization (i.e. treating outgroup members as less than human; Pereira, Vala, & Leyens, 2009). An example is the widely publicized misbehaviour by security guards of the US embassy in Kabul, Afghanistan (CNN, 2009). It involved public nudity, sexual behaviour and large amounts of alcohol, reflecting a complete indifference for local (outgroup) norms and customs and apparently no embarrassment. Similarly, personnel of the 372nd Military Police Company of the United States Army famously tortured and sexually abused Iraqi prisoners in Abu Ghraib prison in 2004 without feeling the slightest hint of embarrassment—or shame, for that matter (Gardham & Cruickshank, 2009).

CONCLUSION

We all get embarrassed from time to time—and should do. The problem is if we do not, particularly in front of certain outgroups. Embarrassment following norm transgression is adaptive for social functioning, on an interpersonal level as well as on an intergroup level. The current research has theorized and established the ingroup–outgroup audience effect on embarrassment. This involves a relative lack of embarrassment following norm violation vis-à-vis outgroups, particularly among highly identified group members and towards lower-status outgroups. We reasoned that this effect might be attenuated by means of a perception of a superordinate category, which includes both the ingroup and

the particular outgroup. Notably, the effect is likely to have serious negative consequences for intergroup relations, underlining the importance of the study of group processes in embarrassment.

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APPENDIX A: EMBARRASSMENT SCENARIOS

1. Imagine you are going to do some shopping. You seem to recognise an acquaintance on the street and start smiling and greeting from a distance. As you get closer you realise that the person is a stranger. How embarrassed would you feel if the stranger was a(n) ... ?
2. Imagine you just had lunch and then a 20-minute, lively conversation with another person. When you are on your own again, you look into a mirror and discover that you have spinach stuck between your front teeth. How embarrassed would you feel if the other person was a(n) ... ?
3. Imagine you enter a café and as you walk towards an empty table you accidentally knock over the coffee of another person, which spills into her lap. How embarrassed would you feel if the other person was a(n) ... ?
4. Imagine you are in a shopping centre and go to the bathroom. As you come out, you realise that you used the bathroom of the opposite sex. How embarrassed would you feel if this had been witnessed by a couple of ... ?
5. Imagine you are talking to a friend in the waiting room of a train station. A group of people is sitting there reading. The room makes your voice sound very loud. How embarrassed would you feel if you were overheard by a group of ... ?
6. Imagine you are sitting in a doctor's practice waiting for your turn. You've just had a big lunch and lots of coke to drink and suddenly you burp loudly. How embarrassed would you feel if you were seen by a few ... ?
7. Imagine you are muttering to yourself in an apparently empty room when you discover another person is there. How embarrassed would you feel if the other person was a(n) ... ?
8. Imagine you are going out with a group of friends. The women are wearing revealing pink or purple dresses with high heels. The men are wearing their football/rugby shirts. How embarrassed would you feel if you were seen by a group of ... ?
9. Imagine you are in a bar for lunch. First, the waiter ignored you for a while, and when you finally managed to order, he brought the wrong dish. You start arguing with him. How embarrassed would you feel if this was overheard by some ... ?
10. Imagine you created a professional looking sign for a friend's new shop in the middle of town. While you put up the sign on the shop front, you notice a spelling error. How embarrassed would you feel if this was also noticed by a few ... ?
11. Imagine you are in a pub with a group of acquaintances discussing their drinking habits. One woman is telling the group that she starts her day with a large glass of gin to relax before going to work. Others are talking about their last drinking bout. How embarrassed would you feel if you were overheard by a group of ... ?

12. Imagine you are letting a fart go in an apparently empty room when you discover another person is there. How embarrassed would you feel if the other person was a(n) ... ?
13. Imagine you are going somewhere by train. You use the bathroom and walk back to your seat but you haven't noticed that there is toilet paper stuck to your trousers. How embarrassed would you feel if you were seen by a group of ... ?
14. Imagine you slip and fall on a patch of ice in a public place, dropping a package of groceries. How embarrassed would you feel if you were seen by a group of ... ?
15. Imagine you are in a cafe with your two young (grand-) children. They are running around and enjoying themselves, hiding under tables and behind other people. How embarrassed would you feel if the other guests were ... ?
16. Imagine you are in a supermarket in St Andrews. At the self-service checkout you realise that you forgot your wallet/purse. A group of St Andrews University students is waiting behind you. How embarrassed would you feel?
17. Imagine you are on your way home after a night out in St Andrews with your friends. Although you are quite sober, you trip over something lying on the floor. A couple of St Andrews University students are looking at you. How embarrassed would you feel?
18. Imagine you are in a bar in St Andrews. You just made a witty joke in front of a couple of St Andrews University students but they do not laugh. How embarrassed would you feel?
19. Imagine you are chatting with a friend in South Street, St Andrews, when an acquaintance from St Andrews University passes by. You are about to introduce the two to each other when you realise that you have forgotten your acquaintance's name. How embarrassed would you feel?

Study 1 (target groups: Norwegians, Swedish, Poles)

Items 2, 3, 6, 12 and 13, adapted for context.

Study 2 (target groups: Americans, Polish, Scottish)

Items 1 to 15, adapted for context.

Study 3 (target groups: University of St Andrews students, University of Dundee students)

Items 1, 2, 3, 4, 6, 7, 12, 13, 14, 16, 17, 18 and 19, adapted for context.