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Reports

The color of safety: Ingroup-associated colors make beer safer ☆

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ABSTRACT

Individuals display high levels of trust and express feelings of safety when interacting with social ingroup members. Here, we investigated whether cues related to ingroup membership would change perceptions of the safety of alcohol. Participants were exposed to images of beer in either a standard can or a can featuring the colors of their university (i.e., 'fan cans'). We hypothesized that exposure to fan cans would change perceptions of the risks of beer drinking. Results showed that participants exposed to fan cans rated beer consumption as less dangerous (Experiment 1), were more likely to automatically activate safety-related mental content after unconscious perception of beer cues (Experiment 2), and viewed their ingroup's party practices as less dangerous (Experiment 3). These results provide evidence that ingroup-associated colors can serve as a safety cue for alcohol, which may in theory perpetuate alcohol-related risk-taking, already a cause for concern on college and university campuses.

Across cultures, social groups go to great lengths to associate themselves with particular color schemes, thereby facilitating the identification of group members and their activities (Georgeson & Lampard, 2005). A prime example of this practice occurs within the American college and university system, where considerable money is spent outfitting sports teams in group colors (Weinbach, 2007). This university-color association provides an important source of revenue to many institutions, perpetuating sales of products featuring school colors to students, alumni, and fans. Unsurprisingly, unaffiliated companies frequently attempt to take advantage of these associations, marketing products in colors representative of local groups in the hope that product desirability and sales will increase.

Critically, such practices not only have the potential to influence corporate profits but may also convey subtle messages to group members concerning the types of items they should possess and how they should feel about the products' purchase and use (e.g., Han & Shavitt, 1994). Although likely to be innocuous in many circumstances, this may have negative consequences. Recently, we considered one novel implication of the practice when a large (formerly) American brewer began distributing university-themed beer cans – so-called 'fan cans' – in several college markets (e.g., black and gold cans in Missouri; scarlet and gray cans in Ohio). Representatives from many of the affected universities complained to the brewer (Olivares, 2009; Smith, 2009), fearing that fan cans would affect underage drinking practices, perhaps exacerbating the already challenging problems stemming from college student drinking (e.g., increased risk-taking and sexual assault; see Cooper, 2002).

In particular, our hypothesis regarding these fan cans was informed by past research on ingroup emotion. This work indicates that cues suggesting ingroup affiliation elicit feelings of trust and safety (Voci, 2006), and that individuals behave in a more trusting manner with ingroup compared to outgroup members (e.g., Brewer, 2008). Because of these effects, it is possible that beer presented in ingroup packaging will change perceptions regarding the safety of this product. In other words, simply associating an object with one's ingroup might make it seem safer and more trustworthy than it would otherwise. Thus, we investigated the possibility that exposure to beer cans associated with the ingroup might communicate a subtle message regarding the safety of beer, causing participants to perceive beer and its consumption as less dangerous after exposure to fan cans compared to standard cans.

We tested this hypothesis in two initial experiments by exposing participants to either standard beer cans or fan cans and then examining perceptions regarding the dangerousness of drinking beer (Experiment 1) and the degree to which presentation of the word "beer" automatically activated cognitions related to safety and danger (Experiment 2). In a third experiment, we utilized a fully crossed, 2 (beverage type: beer vs. water) × 2 (logo color: ingroup vs. neutral) design to more precisely test the factors that may cause the fan can to produce these effects. Across all experiments, we predicted that exposure to fan cans would increase the extent to which beer and related drinking behaviors are associated with safety.

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Experiment 1

Participants

Ninety-eight University of Missouri undergraduates (48 women) were randomly assigned to one of two conditions in a single factor (beer can type: standard vs. fan can) between-subjects design.

Materials and procedure

Beer exposure

During this manipulation, participants viewed pictures of various beverages and were asked to answer six questions about their feelings towards each (e.g., "How desirable is this beverage?" and "How likely would you be to share this beverage with a friend?"). Each question was presented on a separate screen and was accompanied by an image of the beverage under consideration (i.e., a can of beer, a bottle of Dasani® water, a can of Coca-Cola®, and a can of ginger ale). Participants in the standard can condition viewed a picture of a regular Bud Light® can, whereas those in the other condition viewed the Bud Light® fan can marketed in central Missouri (colored black and gold after the University of Missouri). Both images were actual product photographs and featured a single can set against a black background. The photographs were identical except for the cans' labels.

Safety assessment

After completing the above manipulation, participants' perceptions of alcohol safety were measured. Participants were asked to answer the question, "How dangerous is it to drink beer?" on a 7-point scale anchored by the values 0 (*Not at all*) and 6 (*Very*).

Results and discussion

As predicted, exposure to the fan can caused participants to judge beer drinking as significantly less dangerous ($M = 3.16$, $SD = 1.30$) than exposure to the standard beer can ($M = 3.71$, $SD = 1.35$, $t(96) = 2.06$, $p = 0.04$, $d = 0.41$). We also examined whether participants' preferences for beer differed across can types by computing a single-item index averaging responses to the six questions answered during the beer exposure manipulation. This measure was not significantly affected by our manipulation, $t < 1$ (no single items were affected; $ps > 0.18$).

As expected, participants who were briefly exposed to beer packaged in colors associated with their university subsequently perceived beer drinking as less dangerous than individuals who had seen a standard beer can. Thus, it appears that the mere act of associating beer with ingroup-related colors communicated a subtle message about the safety of this product, decreasing perceptions of its dangerousness. The fact that this effect emerged without influencing participants' preferences towards the beverages is also advantageous for testing our hypothesis. First, it highlights the potential insidious nature of associating a product with ingroup-related colors, demonstrating that such a manipulation can have indirect effects that aren't observed when individuals are directly queried about the target object (cf. Crano & Alvaro, 1998). Perhaps more importantly, this null effect also eliminates a powerful confound. If preferences had been affected, one might easily predict that increased liking of the fan can would mediate any effect on the safety of beer (because of associations between liking and safety; Fazio, Eiser, & Shook, 2004).[1]

[1] Although useful for interpretation of the study's results, many readers will be aware that this finding is somewhat inconsistent with research showing that individuals prefer ingroup-related objects (e.g., Greenwald et al., 2002). One possible explanation for this difference is the limited age range of our samples. Consuming alcohol was illegal for all but three of our participants (across all studies), perhaps causing most individuals to report dampened beer preferences and creating a ceiling effect.

Although Experiment 1 provided initial support for our hypothesis that ingroup cues alter perceptions of the safety of drinking beer, it is unclear whether this effect only emerges when participants are directly asked about this topic or if it might also occur spontaneously when participants encounter any stimulus related to the product. To investigate this issue, we changed the dependent measure for Experiment 2. Participants instead completed a primed lexical decision task (LDT) in which we measured the accessibility of information related to safety and danger after the subliminal presentation of beer-related and neutral cues.

This LDT procedure has two primary advantages over our previous measure. First, because participants are never directly asked about their feelings towards the product, it circumvents any concerns that the effects of Experiment 1 were due to participants' strategic recruitment of information when responding to explicit questions about the safety of beer. Second, because we present beer primes subliminally, we can examine whether the effect discovered in Experiment 1 might also emerge automatically, whenever individuals encounter subtle cues related to beer (Neely, 1991).

Experiment 2

Participants

Sixty-seven University of Missouri undergraduates were randomly assigned to conditions in a single factor (beer can type: standard vs. fan can) between-subjects design. One participant with an average LDT reaction time greater than three standard deviations from the mean was dropped from the study, leaving data from 66 participants in the final analyses (39 women).

Materials and procedure

Beer exposure

Participants completed the same manipulation described in Experiment 1, except that in this version they only answered six preference questions for a can of beer and a bottle of Dasani® water (in that order). All other aspects of the manipulation were identical.

Lexical decision task

Participants next completed a 40-trial primed LDT. The target stimuli consisted of five safety-related words (*controllable*, *good*, *harmless*, *safe*, and *secure*), five danger-related words (*bad*, *dangerous*, *harmful*, *hazardous*, and *risky*), and ten pseudohomophone nonwords (e.g., *furst*, *keap*, *wawl*, etc.; see Joordens & Becker, 1997). Each target stimulus was presented twice, in a randomized order, once preceded by the subliminal prime 'beer' and once by the subliminal non-word letter string 'qxyz'. This procedure allowed us to estimate the degree to which the beer prime facilitated responding to these stimuli, controlling for baseline reaction times (RTs) to each stimulus type. On each trial of the LDT, a fixation point (*) appeared for 1000 ms and was immediately followed by a 16 ms prime presentation (either *beer* or *qxyz*). The prime was then cleared and masked with a string of Xs for 250 ms, after which the target letter string was presented. Participants' task was simply to indicate, as quickly as possible, whether or not the letter string was a correctly-spelled English word. Targets stayed on the screen until a response was made. All stimuli were displayed foveally, in the center of the screen. At the conclusion of the task, participants completed a funnel-debriefing procedure (Bargh & Chartrand, 2000) to probe for awareness of the subliminal primes. No participant reported observing the primes.

Results and discussion

To test our hypothesis, we created a single value representing the degree to which the presentation of the subliminal prime *beer* led to a