Cooling Down Or Heating Up With Emotions: How Temperature Affects Customer Response to Emotional Advertising Appeals

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Drawing on embodied cognition research, we empirically test a new moderator of consumers’ responses to advertising: temperature. We find that cold physical temperature enhances consumers’ attitudes towards emotionally warm ads; warm physical temperature decreases consumers’ responses to emotionally warm ads and instead enhances consumers’ attitudes towards emotionally cold ads.

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EXTENDED ABSTRACT
Target’s heartwarming mascot-puppy Bullseye, the adorable Pillsbury-Doughboy, the cute Gerber-Baby – emotional advertising appeals are prevalent and are even considered as more influential on purchase decisions than reason (Binet and Field 2009; Wood 2012). Advertising particularly frequently arouses emotional warmth (Fam 2008; Smit, van Meurs, and Neijens 2006), that is, a positive, mild, volatile emotional construct triggered by experiencing a love, family or friendship relationship (Aaker, Stayman, and Hagerty 1986). Despite the prevalence of warmth in advertising, empirical research on the effectiveness of such a strategy has been scarce (Vanden Abeele and MacLachlan 1994). So far, it is unclear whether and under which conditions emotionally warm (e.g., joy) or cold advertising appeals (e.g., disgust) are effective.

Recent embodied cognition research proposes that cognition is grounded in the physical context (Barsalou 2010), and emotional and physical warmth are interrelated (e.g., Williams and Bargh 2008). Drawing on this interrelation, we introduce and test in an advertising context the moderating influence of physical temperature on consumers’ responses to emotional warmth versus coldness. We demonstrate in a lab experiment that physical coldness enhances consumers’ attitudes towards emotionally warm ads; physical warmth decreases consumers’ responses to emotionally warm ads and instead enhances attitudes towards emotionally cold ads. Our findings have implications for seasonal and international advertising campaigns.

THEORETICAL BACKGROUND
Embodied cognition research proposes that cognitive activity is grounded in the environment (Barsalou 2010). Put simply, it suggests that mind and body are closely related. Studies found, that respondents experiencing physical warmth considered a person’s personality as warmer (Williams and Bargh 2008) and socially closer (Ijzerman and Semin 2009). In contrast, people feeling physically cold were willing to pay more to watch romantic movies (Hong and Sun 2012), or felt lonelier (Bargh and Shalev 2012) and vice versa (Zhong and Leonardelli 2008).

From a biological perspective, humans urge to keep themselves warm to survive (Austin and Vancouver 1996). Hence, feeling physically cold should lead to an increased desire for warmth. Given the apparent link between physical and emotional warmth, an anxiety for emotional warmth could channel this desire to warm up under physical coldness.

As emotional warmth is predominant in advertising (Fam 2008), this study focuses on the ad context, analyzing the relation of physical temperature with ad-induced warmth in contrast to ad-induced coldness. We predict that physical coldness (warmth) activates a need for psychological warmth (coldness) and thus should increase consumers’ response to advertising triggering emotional warmth (coldness).

METHODOLOGY
In total, 299 students (46.8 % females) were randomly assigned to one of the four conditions of the 2 (cold vs. warm physical temperature) x 2 (cold vs. warm advertising) between-subjects design experiment. In the warm (cold) temperature condition, we held room temperature constant at around 30 °C/86 °F (14 °C/57.2 °F). The emotional temperature was manipulated by pretested emotionally warm (cold) advertisements.

Participants evaluated the ads on six 7-point scales: ad liking, ad interest, convincingness of the ad, ad appeal, the ad’s potential to be remembered, and ad effectiveness. Next, participants indicated the ad’s perceived emotional warmth and the perceived physical room temperature (on 7-point scales, respectively).

We conducted a 2 (physically cold vs. warm) x 2 (emotionally cold vs. warm) between-subjects ANOVA. As our dependent variable, we calculated an index for attitude towards the ad (Aad) as the mean of our six consumer response items (Cronbach’s α = .836). We find a significant main effect of emotional warmth of the advertisements on Aad (F(1, 290) = 13.52, p = .000, η² = .045). The main effect of physical temperature on Aad (F(1, 290) = .06, p = .800, η² = .000) was not significant. However, as predicted, the interaction effect of emotional warmth and physical temperature on Aad was significant (F(1, 290) = 8.37, p = .004, η² = .028). This result implies that respondents’ physical temperature moderated the effect of emotional warmth (see figure 1).

To better understand the interaction effect, we conducted planned comparisons. Respondents in the cold temperature condition indicated for emotionally warm advertisements a significantly higher Aad (M = 3.68) than for emotionally cold advertisements (M = 2.70; F(3, 290) = 7.42, p = .072). Thus, under the influence of cold temperatures our results indicate a positive effect of emotional warmth (vs. emotional coldness) on consumers’ responses to advertising. Moreover, the attitude towards an emotionally warm ad is higher in the physically cold condition (M = 3.68) than in the physically warm condition (M = 3.29; F(3, 290) = 7.42, p = .072). Hence, the results indicate that cold temperature enhances attitude towards emotionally warm ads.

Figure 1
Moderating Effect of Temperature on the Effect of Warm/Cold Appeals

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Physical Temperature</th>
<th>Attitude towards the Ad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warm</td>
<td>3.17</td>
<td>3.29</td>
</tr>
<tr>
<td>Cold</td>
<td>2.70</td>
<td>3.68</td>
</tr>
</tbody>
</table>

[Emotionally cold] [Emotionally warm]
Furthermore, as expected, attitude towards the ad arousing emotional coldness is significantly higher in the physically warm condition ($M = 3.17$) than in the physically cold condition ($M = 2.70$; $F(3, 290) = 7.42, p = .022$). However, once people feel physically warm, they show no significant difference in attitude towards emotionally cold ($M = 3.17$) and warm advertising ($M = 3.29$; $F(3, 290) = 7.42, p = .581$). Hence, while consumers use, as suggested by embodied cognition theory, warm appeals to warm themselves up in a physically cold environment, they do not seem to make a difference between either cold or warm emotional stimulation when they are physically warm.

**DISCUSSION AND IMPLICATIONS**

Drawing on embodied cognition research, we introduce and empirically test the environmental context moderator of physical temperature on the effectiveness of emotionally warm versus cold advertising campaigns. We find that while cold physical temperature enhances consumers’ responses to emotionally warm ads, warm physical temperature decreases consumers’ responses to emotionally warm ads and instead enhances consumers’ attitudes towards emotionally cold ads.

Our findings have important implications for the execution of seasonal and international marketing campaigns. Managers might, for instance, employ either warm or cold appeals in advertising during the summer months or in countries with warm climates, while they should prefer warm appeals over cold ones in winter or in colder regions.

**REFERENCES**


