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## **Embodied Cognition and Social Consumption: Self-Regulating Temperature Through Social Products and Behaviors**

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Individuals self-regulate lack of interpersonal warmth by substituting physical warmth. Four experiments suggest that physical/psychological temperature act as motivators to self-regulate in order to achieve a “steady state”, that the link between physical and perceived interpersonal temperature is bi-directional, and that consumption behaviors act as a source for self-regulation.

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# Embodied Cognition and Social Consumption: Self-Regulating Temperature through Social Products and Behaviors

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## EXTENDED ABSTRACT

A recent surge of psychology research examines an essential link between physiological experiences and social perceptions, behavior, and judgments (Williams & Bargh, 2008; Bargh & Shalev, 2012). These results are consistent with the emerging field of embodied cognition that argues that our metaphorical understanding of concepts are grounded in, and can be influenced by, the physical experiences of our environment (Wilson, 2002). Much of the extant embodied cognition literature in this domain focuses on the link between physical warmth or coldness and its relation to social relationships. For instance, physical warmth positively influences social perceptions, social trust, and social proximity (Ijzerman & Semin, 2009; Kang et al., 2011; Williams & Bargh, 2008), while feeling lonely (i.e., social exclusion) relates to perceptions of physical coldness or desire for warm remedies (Ijzerman & Semin, 2010). That is, experiencing physical warmth relates to interpersonal affection whereas experiencing physical coldness relates to exclusion and self-centeredness (Williams & Bargh, 2008). In addition, this link is bidirectional in nature (Lee & Schwarz, 2012); physiological experiences affect social affiliation as much as social experiences affect physiological reactions.

Four experiments examine the relationship between physical temperature, social warmth, and consumption experiences. Specifically, we demonstrate that certain consumptive behaviors (consumptive experiences and products whose attributes are interpersonal in nature) serve as a self-regulatory mechanism. Further, we show that this relationship is bi-directional in nature, in that experiencing a socially consumptive behavior leads to preferences for a temperature-regulating physical object, whereas consuming a cold or warm product induces a physical temperature change that leads to a preference for a self-regulating social consumption experience.

The results of experiment 1 suggest that social consumption setting affect perceptions of ambient temperature. Specifically, eating a meal alone (a low social consumption setting) led individuals to underestimate the actual ambient temperature of the room, while eating a meal with another individual (a high social consumption setting) led individuals to overestimate the actual ambient temperature in the room.

The results of experiment 2 provide two important findings. First, it demonstrate that a social product serve as a substitute for social interactions. Secondly, although previous research (Zhong & Leonardelli, 2008) demonstrates that social exclusion leads individuals to prefer hot drinks, ostensibly in attempt to warm oneself, this research is the first to demonstrate that those who interact socially prefer cold drinks, seemingly in order to cool themselves down. Physiological research has long known the threats of overheating and the importance of cooling (Sutton, 1909; Caruso et al., 1992) and there is reason to believe that individuals feel the need to cool off in social situations as well. Shyness, or the tendency to avoid social situations (Pilkonis, 1977), is a universal emotional state (Henderson, Zimbardo, & Carducci 2010). Similarly, social anxiety represents a discomfort in social interaction, thus motivating individuals to “cool off” when situations becomes uncomfortable. As such, the results of experiment 2 confirm our predictions that

individuals interacting with a social alarm clock desired a cold drink, whereas those that did not interact with the social product preferred the hot drink.

The results of experiment 3 provide convergent evidence that social products serve as a proxy for social interactions and that the relationship between social interactions and temperature is bi-directional. Furthermore the results of experiment 3 support the idea that those individuals who feel warm become less interested in social interactions, whereas those who feel cold are more likely to seek such interactions.

The results of experiment 4 provide additional evidence that individuals self-regulate their temperature to combat both warm and cold situations through consumption behaviors. Specifically the results demonstrate that individuals who feel cold desire consumption that included others, whereas those who were warm desired lone consumption.

Past marketing studies related to temperature primarily focus on retailers’ “servicescape”, specifically on how temperature affects ambient experiences (Hoffman and Turley 2002). For example, consumers perceive temperature in on-the-ground department stores as more stable than underground department stores (Chun and Tamura 1998). While these studies reveal the important role of temperature in consumer experiences, researchers lack the understanding of how temperature relates to social consumption contexts (i.e., consuming alone vs. consuming with others) or with social products (e.g., interactive features such as Siri in iPhones).

Our contribution is summarized by three statements. First, physiological experiences affect social consumption behavior as much as social consumption affects physiological reactions, confirming the bi-directional relationship of the socio-physio link. Second, instead of warmth promoting interpersonal affection and coldness promoting isolation, we find that people seek to achieve balance (e.g., desiring interactive products when cold and isolation when hot). This suggests that when one feels cold, people have increased social affiliative motives; when one feels hot, people seek relatively more social isolation. Third, and most importantly, we extend this framework into consumption scenarios and development of social products, providing managerial implications for marketers.

The findings benefit marketers in multiple ways. First, it is important for marketers to control environmental settings (e.g., room temperature) to initiate relational behavior. For example, it is often considered that live speed dating sites should operate in “warm and cozy rooms” to increase interpersonal affection for potential candidates. In contrast, we suggest that colder rooms may encourage individuals to desire social remedies, such as developing interpersonal relations, in order to self-regulate their physical coldness. This research is also relevant to marketers seeking to develop social products. For instance, an arcade (which may have many interactive games) may benefit from keeping their gaming area cooler to assist consumers in balancing their bodily system or retail stores trying to sell social products (i.e., interactive toys) may encourage individuals to seek out social products by keeping their stores cooler. On the other hand, retail stores trying to sell more non-social products (e.g. a bookstore) may benefit from keeping their area warmer.

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