I feel you! Effects of Temperature on Social-Cognitive Judgments

Erica Kleinknecht
Pacific University

Eddie Carrillo
Pacific University

Sean Arbogast
Pacific University

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I feel you! Effects of Temperature on Social-Cognitive Judgments

Keywords
embodied cognition, social cognition, self-perception, ambient temperature

Disciplines
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Comments
Social interactions “run” on the judgments we make about others. What causes us to judge as we do? In the current research we examine this process through an embodiment lens, building on past research. Dolcos and colleagues (2012) examined how body language (inviting a handshake) and physical proximity (approach v. avoid) influence social-cognition. Key findings: a hand-shake enhances perceptions of trustworthiness regardless of apparent approach/avoid signals. IJzerman & Semin (2009) examined how ambient temperature ratings influence social-cognition. They report that being warm (holding a warm beverage), creates perceptions of “social” warmth. Together, this work suggests that social-cognitive judgments reflect our inner-temperature ratings. Ijzerman & Semin discuss the fact that the rich metaphors that color our social-speech capture this relation.

Our contribution to this line of work is two-fold: we created a more ecologically valid ambient temperature manipulation and we extended the operationalization of social-cognition. Regarding the temperature manipulation, we found that taking participants’ pulse with a hot or cold hand was not effective, whereas asking participants to wear a hot or cold jacket was quite effective.

In two one-way, between subjects studies (n = 60), participants either wore a warm jacket, a cold jacket, or no jacket. In study 1, they rated the friendliness of a stranger and selected 3 words to describe her; in study 2 two they rated their own “friendliness” and selected 3 words to describe themselves. Whereas friendliness ratings did not change as a function of ambient temperature, the quality of the 3-word descriptions did.

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I feel you! Effects of Temperature on Social Cognitive Judgments

Eddie Carrillo, Sean Arbogast and Erica Kleinknecht

Department of Psychology | Pacific University | 2043 College Way | Forest Grove, OR 97116 | eko@pacificu.edu

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Background: Social Cognition and Embodiment

Social interactions run on the judgments we make about others and we make such judgments all the time

Social Judgment: an active social perception process to evaluate a social situation. For example, attending to a persons face to evaluate their intentions or actions.

What causes us to judge as we do? This area of study is called Social Cognition. Theories of Social Cognition vary and the perspective we are examining here is the embodiment perspective.

Embodied Cognition: Thinking and reasoning are shaped by bodies moving in the environment. The “embodiment perspective” suggests that physical experiences direct our internal judgments.

Previous Research

Our work builds from two lines of research that examine the mechanisms of social judgments through an embodiment lens. Both approaches operationalize social judgments differently.


A handshake increased perceived trustworthiness in avoid (uninviting) and approach (inviting) situations. Authors concluded that touch provides a channel of communication.

2. Perception of ambient temperature guides social judgment (Ijzerman & Semin, 2009)

By manipulating participants’ feelings of warmth, researchers found that warm conditions compared to cold: • induced more social proximity • made participants feel closer to experimenter • increased relational perspective

Looking at both lines of research together, despite surface differences we see them as two examples of the same principle. Both scenarios induce feelings of warmth, when you consider the fact that handshakes transfer heat. That is, Dolcos et al.’s (2012) results may have hinged on the fact that through touch or situations that make us feel excited or uncomfortable, our body temperature may rise or fall affecting our social judgments for that reason and not necessarily a handshake.

Current Study

Ijzerman and Semin (2009) remark that their manipulation techniques needed improvement. Using that as a jumping off point, in the present research we extend the work reviewed above. In the current study, we:

1. Examined different ways of manipulating ambient temperature. Multiple approaches were plotted before settling on the final research design.

2. Extended the dependent measures to two traditional social cognitive judgements: perception of a stranger, and perception of the self.

Method

Materials

1. Temperature rating scale: Manipulation check

Participants rated their body temperature a rating scale of 1-10

1 = bad friend, 10 = great friend

2. Assessment of Self: Operationalized in 2 ways

3 Sentence stems for completion: “I am ______ .”

Friendship Quality Rating on a scale of 1-10

1 = bad friend, 10 = great friend

3. Assessment of Stranger: Operationalized in 2 ways

After watching a 2 min black and white silent video:

3 Sentence stems for completion: “She is ______ .”

Friendship Quality Rating on a scale of 1-10

1 = bad friend, 10 = great friend

Procedure

• Upon arrival outside the lab, Pp were greeted, gave their consent, then reported their baseline temperature reading.

• Following ABC counterbalancing, participants then either put on a warm jacket + hand warmers, a cold jacket + ice packs, or no jacket.

• Wearing their jackets, they then walked up a flight of stairs to the lab and the second temperature reading was gathered.

• Then they completed the appropriate DV materials, were debriefed and thanked for their time.

Participants

• Study1: “Other”

M = 19.47, SD = 1.17

Male = 15, Female = 15

• Study2: “Self”

M = 20.90, SD = 3.26

Male = 15, Female = 15

Results

• In this in-between subjects design, both quantitative and qualitative measurement strategies were used

• To evaluate the effect of temperature on other and self perception, as measured quantitatively, 1-way between ANOVA was utilized

• Qualitative responses in each condition were evaluated by independent raters. All disagreements were resolved through discussion

• Other Perception:

As shown in the table below, participants baseline temperature rating changed as a function of the manipulation.

<table>
<thead>
<tr>
<th>Baseline Temperature</th>
<th>Post-test Temperature</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warm</td>
<td>M = 6.60 (1.23)</td>
<td>M = 8.00 (1.05)</td>
</tr>
<tr>
<td>Cold</td>
<td>M = 6.40 (1.07)</td>
<td>M = 6.70 (1.25)</td>
</tr>
<tr>
<td>Control</td>
<td>M = 5.70 (0.95)</td>
<td>M = 6.30 (1.16)</td>
</tr>
</tbody>
</table>

Ratings of friendship quality did not differ as a function of temperature: F(2,27) = 1.20, p > .05

Qualitative responses suggest that participants who experienced a change in temperature described the character differently though

<table>
<thead>
<tr>
<th>She is ______ .</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cold</td>
</tr>
<tr>
<td>Weird, Crazy, Insane</td>
</tr>
<tr>
<td>Happy, Easily Excited, Warm</td>
</tr>
<tr>
<td>Hot</td>
</tr>
<tr>
<td>Happy, Nervous, Not Easy Going</td>
</tr>
<tr>
<td>Control</td>
</tr>
<tr>
<td>Guitar Player, Outgoing, Hungry</td>
</tr>
<tr>
<td>Curly Haired, Quirky, Fashionable</td>
</tr>
</tbody>
</table>

Ratings of friendship quality did not differ as a function of temperature: F(2,27) = 1.47, p > .05

Qualitative responses suggest that participants who experienced a change in temperature described the selves differently.

<table>
<thead>
<tr>
<th>I am ______ .</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cold</td>
</tr>
<tr>
<td>Always there, Helpful, Easy going</td>
</tr>
<tr>
<td>The greatest, Funny, Laughable</td>
</tr>
<tr>
<td>Caring, Loving, Honest</td>
</tr>
<tr>
<td>Hot</td>
</tr>
<tr>
<td>Funny, Outgoing, Helpful</td>
</tr>
<tr>
<td>Control</td>
</tr>
<tr>
<td>Nice, Happy, Friendly</td>
</tr>
<tr>
<td>Ok, tired,</td>
</tr>
</tbody>
</table>

Discussion

Based on past research we hypothesized that Pp in the hot condition would rate themselves and others as being better friends. We expected that Pp in the hot condition would also describe the stranger and themselves more positively.

Our results are not wholly consistent with these predictions, but we do believe an effect is present. Those who were exposed to a temperature change, either hot or cold, did appear to describe themselves or the stranger differently compared to those in the control group. We believe that the change from baseline – whether hot or cold – prompted deeper, more personal reflection.

To better capture the quality of increased reflection/consideration prompted by a change in state (ambient temperature), in future research we believe that a more sensitive measure is needed. Unlike past research, our manipulation of temperature was strong, but our DVs were not as sensitive as expected.

Going forward, as we fine-tune our measures, we would also like to evaluate the effect of temperature change on autobiographical memory narratives. From the embodied perspective, we expect that personal reflections of all kinds shift with environmental cues in ways individuals are not always aware of, at the fore.