Pathogen avoidance and warm temperatures

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INTRODUCTION

Background
- Contagious pathogens represent a recurring threat throughout evolutionary history [1]
- Consequently, humans possess multiple disease-avoidant mechanisms to mitigate the threat of disease
- For example: disgust motivates avoidance of potential pathogen threats, like people with signs of illness
- Pathogen avoidance motivations may also explain some social prejudice
- Prejudice toward people who are foreign has been linked to pathogen threat
- Avoidance of others reduces the likelihood of contagion [2]
- Warm temperatures are also linked to social cognition, but have not been studied in the context of disease threats
- Warm can sometimes signal social proximity [3]
- When people are concerned about the threat of disease, perceived closeness may exacerbate pathogen-avoidance effects

Purpose
- We tested whether ambient temperature would interact with signals of disease threat to predict prejudice

Predictions
- Based on previous work, we expected prejudice to be highest after exposure to a disease threat.
- We also expected temperature to moderate this effect, such that prejudice would be highest when exposed to disease threat in an especially warm room

METHOD

Subjects.
- 68 psychology students (44 female), ages 18-35 (M=20.49 years), participated in exchange for extra credit

Method
- Participants were randomly assigned to view one of three emotion induction video clips:
  - 1. Control Condition – Nature Documentary
  - 2. Sad Condition – The Champ
  - 3. Disgust Condition – Trainspotting
- We measured ambient room temperature with a digital thermometer
- Participants completed a 15-item Ethnocentrism scale [4]
  - Example item: “Most other cultures are backward compared to my culture.”

RESULTS (Preliminary Data)

- Disgust (compared to control) increased ethnocentrism (b = .30, t(61) = 2.41, p = .02)
- Ambient temperature did not affect ethnocentrism (b = .08, t(61)=1.11, p=.27), and did not interact with prime condition.

CONCLUSIONS

- This study replicates previous work demonstrating that disgust can increase ethnocentrism compared to control emotional states.
- Contrary to predictions, temperature did not significantly affect this relationship.
  - One limitation is the restricted range of observed ambient temperature.
- Future work will directly manipulate the experience of warm vs cold temperatures to test the influence of temperature on pathogen-avoidance.

REFERENCES