

INTRODUCTION

- While many factors influencing trust have been examined in previous research, investigations into the relationship between emotional experience and trust are relatively limited.
 - However, the existing literature examining this relationship has found that changes in emotional states do indeed influence trust (Dunn & Sweitzer, 2005).
 - More specifically, positive emotional experiences, such as happiness, are associated with greater levels of self-reported trust, whereas negative emotional experiences, such as anger, are associated with lower levels of trust (Dunn & Sweitzer, 2005).
 - Additionally, positive mood states, such as being optimistic, have also been associated with greater levels of trust (Ben-Ner & Halldorsson, 2010).
- There is a sizeable literature examining physiological underpinnings of emotion, which can inform predictions about potential relationships between emotional experience, physiology, and trust.
 - Findings from such studies have shown differences in autonomic nervous system (ANS) activation between negative and positive emotional experiences.
 - More specifically, larger cardiac (Levenson, Ekman, & Friesen, 1990; Neumann & Waldstein, 2001; Schwartz, Weinberger, & Singer, 1981) and skin conductance increases are associated with negative emotional experiences (excluding disgust) and smaller cardiac increases are associated with positive emotional experience such as happiness (Neumann & Waldstein, 2001).
 - There are competing theories regarding the ordering of this relationship, in terms of whether physiological changes lead to emotional states, or whether emotional states lead to changes in physiology (Kreibig, 2010).

HYPOTHESES

- Based on prior research on emotion and trust, it is hypothesized that, while controlling for reports of general positive and negative affect:
 - There will be a negative relationship between negative emotional experience and trust.
 - There will be a positive relationship between positive emotional experience and trust.
- Based on prior research on relationships between ANS activation and emotional experiences, as well as emotional experience and trust, we hypothesize that:
 - Trust will be negatively correlated with ANS activation, as indicated by decreases in heart rate (HR) and electrodermal activation (EDA), prior to and during decisions to trust another individual.
- Additionally, because the order of the relationship between emotional experience and physiology has yet to be determined, two competing mediation models will be tested for best fit.
 - Although it is expected that the relationship between emotional experience and trust will be mediated by ANS activation (Model 1) and that the relationship between ANS activation and trust will be mediated by emotional experience (Model 2), it is expected that Model 1 will be the better fitting model. (See Fig. 1 and Fig. 2.)

Figure 1. Possible emotion-related paths of trust decisions

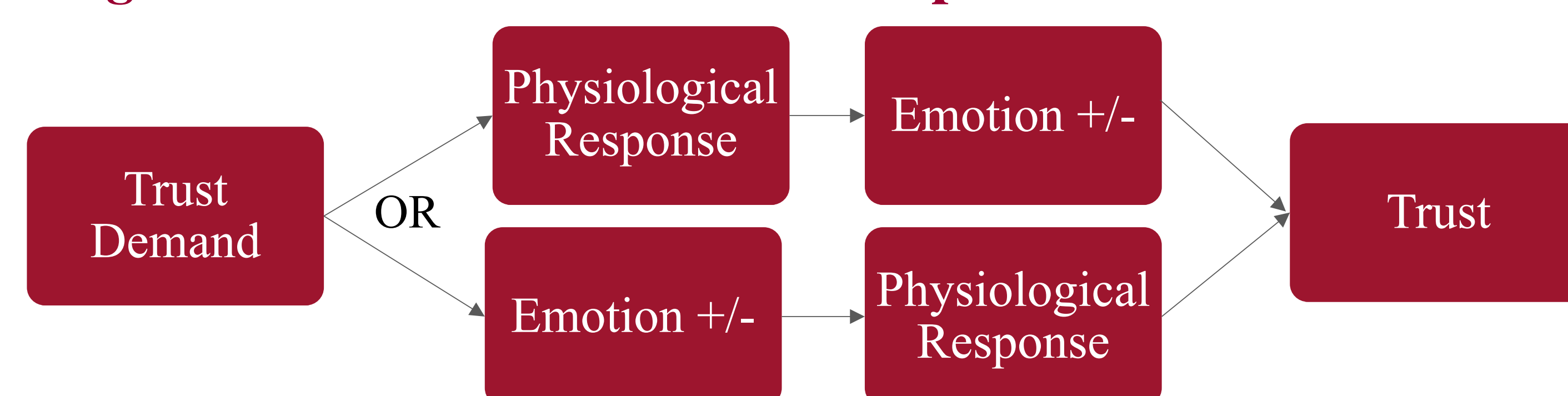
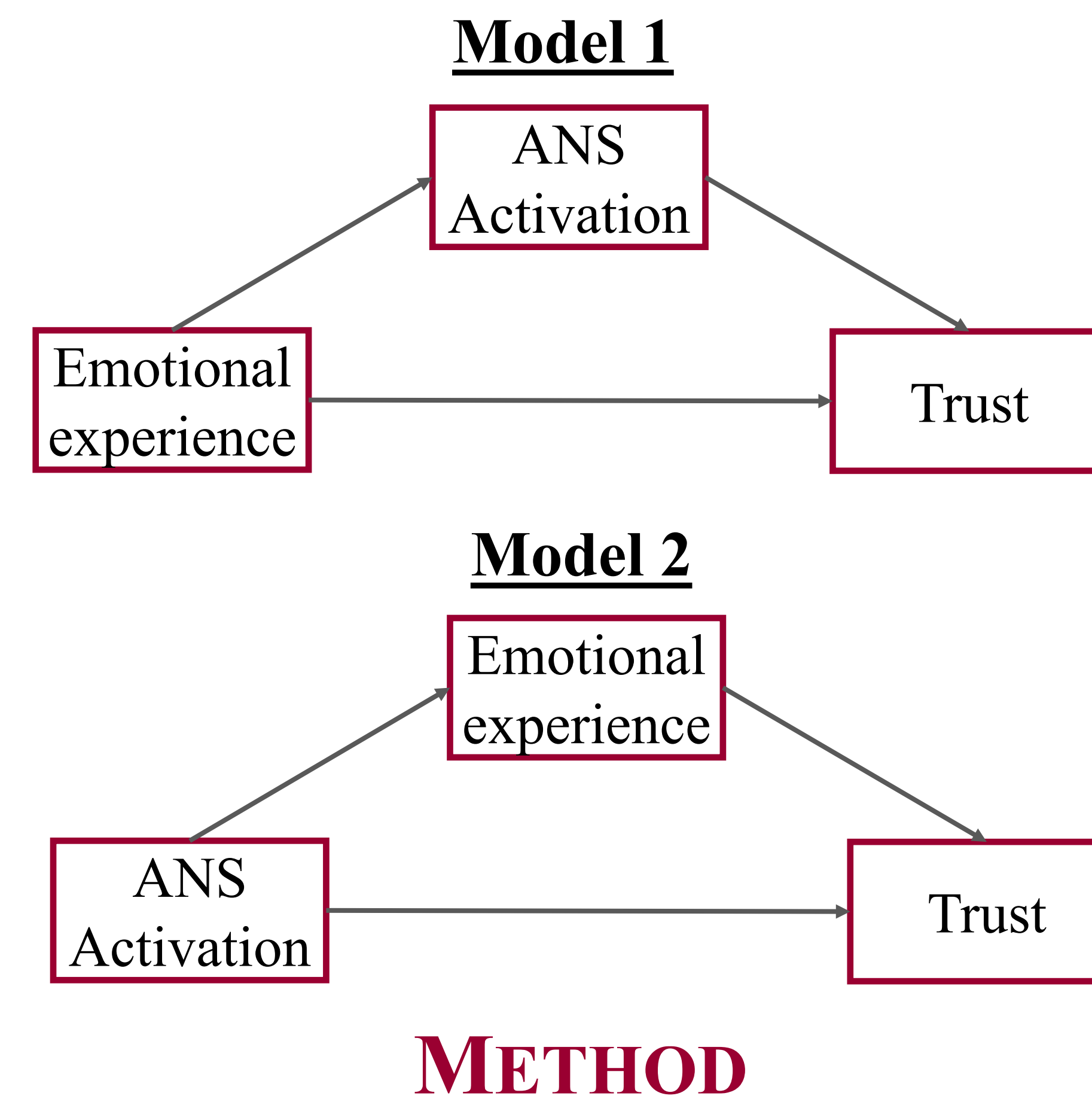


Figure 2. Competing Mediation Models



METHOD

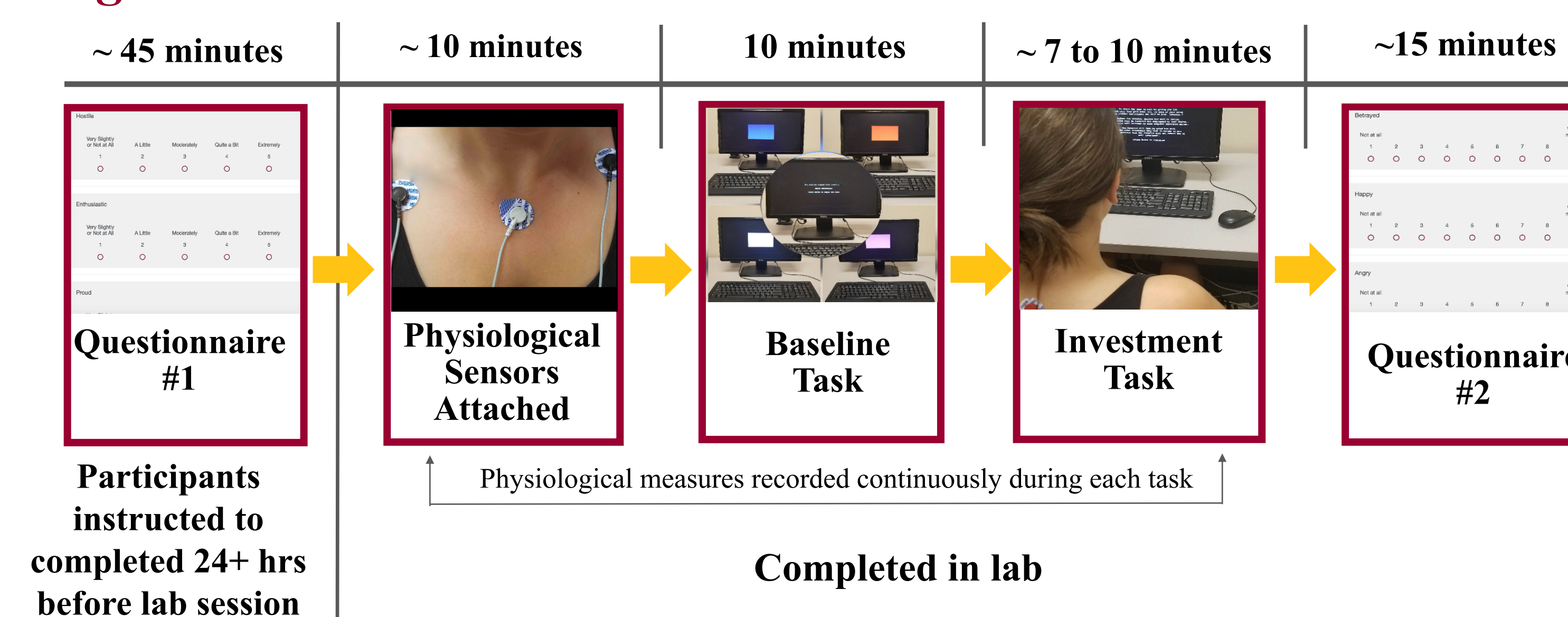
Participants

- 150 college students (≥ 18 yrs of age) recruited via the department's research participation pool.

Procedure

- Part 1: Online questionnaires (see Measures) prior to a laboratory session.
- Part 2: Laboratory session: Physiological sensors attached (monitored throughout); baseline task (counting squares); economic trust game ("investment game") against a perceived second player (Player 2). (See Fig. 3.)
 - Participant is given \$20 (real money) and must decide how much to give to Player 2 to invest and return.
 - One of four profiles about Player 2 is presented prior to the game, manipulating religion and extent of religious practices (for analysis in another study).

Figure 3. Procedure Timeline



Measures: Questionnaires

- Demographics**
 - Includes age, sex, ethnicity, marital status, religious affiliation and knowledge, education, and household income.
- The Positive and Negative Affect Schedule (PANAS)**
 - Consists of two, 10-item subscales rated on a Likert-type scale (1= Very slightly or *not at all* to 7 = *Extremely*). Higher scores indicate greater levels of positive and negative affect, respectively (Watson, Clark, & Tellegen, 1988).
- The Domain-Specific Risk Taking Scale (DOSPERT)**
 - Consists of five, 6-item subscales rated on a Likert-type scale (1= *Extremely unlikely* to 7 = *Extremely likely*). Higher scores indicate greater likelihood of engaging in ethical, financial, health or safety, recreational, and social risks (Blais & Weber, 2006).

Measures

- Self-reported emotion ratings**
 - 18 specific emotion items rated on a 1 to 9 scale (1 = *Not at all* to 9 = *Very much*). Ratings for positive (e.g., happy, content) and negative (e.g., sad, suspicious, angry) items will be averaged to create scales for positive and negative emotion, respectively. Higher ratings indicate greater overall feeling of positive or negative emotional experiences, retrospectively considering the time when making the trust decision.
- Trust assessment**
 - A single item rated on a 1 to 5 scale (1 = *Not at all* to 5 = *Completely*), retrospectively regarding the level of trust in Player 2 before the investment. Higher scores indicate greater levels of initial trust in Player 2.
 - Amount invested in the game: ranges from \$0 to \$20. Measures trust in real time, as opposed to retrospectively. Higher amount indicates greater trust, after controlling for risk-taking propensity.
- Physiological**
 - ANS activation (change from baseline) while deciding how much money to invest (30 sec) and while waiting for the investment to be returned (30 sec)
 - Cardiac interbeat interval (time between R-spikes on the electrocardiogram)
 - Electrodermal activation (skin conductance level and number of skin conductance responses)
 - Data acquired and scored with hardware and software furnished by Mindware Technologies, OH.

EXPECTED RESULTS

- Greater self-reported positive emotional experience will show a positive relationship with trust, and greater negative emotional experience will show a negative relationship with trust.
- Greater ANS activation will be associated with lower levels of trust.
- Model 1 depicting the relationship between emotional experiences and trust mediated by ANS activation is expected to be the better fit model.

DISCUSSION

- This work has implications for how we make decisions about who to trust, specifically, how general affect and current emotional states influence these decisions.
- Additionally, it will offer insight into how physiological cues may shape trust decisions. Awareness of these cues can help guide us toward safe versus risky decisions (Bechara, Damasio, & Damasio, 2000).
- Although it does not determine a causal relationship, this work will further our understanding of how emotional experiences and physiological processes intersect to shape trust decisions, and even suggest which is potentially more primary in this context.

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