

VIVA2.1 - Privacy by Design (#47426)

Created: 09/10/2020 01:35 AM (PT)

Public: 04/07/2022 02:10 AM (PT)

Author(s)

Julia Stapels (Bielefeld University) - julia.stapels@uni-bielefeld.de

1) Have any data been collected for this study already?

No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?

In this online experiment, one group will evaluate a robot with high privacy settings (high privacy condition). The other group will evaluate a robot with low privacy settings (low privacy condition).

H1: Robot likeability is higher in the high privacy condition than in the low privacy condition.

H2: Trust towards the robot is higher in the high privacy condition than in the low privacy condition.

H3: Contact Intentions towards the robot are higher in the high privacy condition than in the low privacy condition.

H4: Subjective Ambivalence is lower in the high privacy condition than in the low privacy condition.

H5: Objective Ambivalence is lower in the high privacy condition than in the low privacy condition.

H6: a) Depth of self-disclosure, and b) breadth of self-disclosure are higher in the high privacy condition than in the low privacy condition.

3) Describe the key dependent variable(s) specifying how they will be measured.

Likeability (six items, five items adapted from Reysen, (2005) and one item from Salem et al., 2013)

Trust (four items adapted from Touré-Tillery & McGill, 2015)

Contact Intentions (five items adapted from Eyssel & Kuchenbrandt, 2012)

Objective Ambivalence (two items adapted from Thompson, Zanna & Griffin, 1995)

Subjective Ambivalence (three items adapted from Priester & Petty, 1996)

Depth of self-disclosure (one self-generated item asking for the preferred level of intimacy of a potential conversation (1 = not at all intimate 7 = very intimate))

Breadth of self-disclosure (one self-generated item asking for the subjective length of a potential conversation (1 = as short as possible to 7 = as long as possible))

Technology commitment (eight items, adapted from Reich-Stiebert & Eyssel, 2015)

4) How many and which conditions will participants be assigned to?

Participants will be assigned to one of two conditions (low vs high privacy condition)

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.

7 independent one-sided t-tests: IV: Privacy Condition, DV: Likeability (H1) or Trust (H2) or Contact Intentions (H3) or Subjective Ambivalence (H4) or Objective Ambivalence (H5), or Depth of Self-Disclosure (H6a) or Breadth of Self-Disclosure (H6b). To prevent alpha error cumulation, we will adjust the alpha level to $.05/7 = .007$

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

Incomplete datasets and participants who indicate not having participated meticulously will be excluded.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.

128 valid responses will be collected (power analysis with Gpower for a ANCOVA with 80% power, alpha = 5%, $f = .25$, one covariate).

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

As a manipulation check, we assess the perceived privacy risks with 5 items, adapted from the subscale "risk beliefs" from a larger scale measuring internet user's information privacy concerns (Malhotra, Kim & Agarwal, 2004).

For exploratory purposes, we will repeat the main analysis as ANCOVAs with technology commitment as a covariate.

After the evaluation of the presented robot with high or low privacy settings, the participant will have the opportunity to choose the privacy settings for a robot themselves. We will conduct dependent t-tests to test whether objective and subjective ambivalence are lower towards the self-chosen setting than the default robot.

In the last part of the study, we explore the relative importance of a robot's price and privacy settings (data saving, internet connection) through a conjoint analysis. We employ a classic conjoint analysis (Luce & Tukey, 1964) to investigate the relative importance of the price, the internet settings and the data storage settings.

We further investigate correlations of the dependent variables with personality variables such as loneliness (five items, Lamm & Stephan, 1986) and Technology Commitment (eight items, adapted from Reich-Stiebert & Eyssel, 2015).

