metaware\_22a

Start of Block: #0: Consent

**CONSENT FORM  
 DESCRIPTION:** You are invited to participate in a research study being performed by cognitive scientists in the Stanford Center for the Study of Language and Information focused on how participants respond when they receive information about the study hypothesis.  
   
 In the study, you will be asked questions about a variety of experiments. For one of these experiments, you will complete the actual procedure, wherein you will complete several simple facial movements and then answer questions about your experience.  
   
 **TIME INVOLVEMENT:** Your participation will take no longer than 30 minutes.  
   
 **RISKS AND BENEFITS:** There are no foreseeable risks or anticipated benefits involved with you participating in this study. Your decision whether or not to participate in this study will not be held against you in any way. We cannot and do not guarantee or promise that you will receive any benefits from this study.  
   
 **PAYMENTS:** You will receive .50 SONA credits for participating in this study.  
   
 **PARTICIPANT'S RIGHTS:** Your participation in this research is voluntary. You may decline to answer any or all of the following questions. You may decline further participation, at any time, without adverse consequences. You have the right to withdraw your consent or discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. The alternative is not to participate.  
   
 The researchers who have requested your participation will not receive any personal information about you. The data and results from this research study will be presented at scientific meetings, published in scientific journals, and posted in an online data repository.  
   
 **CONTACT INFORMATION:**   
 *Questions:* If you have any questions, concerns or complaints about this research, its procedures, risks and benefits, contact the Protocol Director, Michael C. Frank, at mcfrank@stanford.edu.  
   
 *Independent Contact*: If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the Stanford Institutional Review Board (IRB) to speak to someone independent of the research team at 650-723-2480 or email at irbnonmed@stanford.edu or toll free at 1-866-680-2906. You can also write to the Stanford IRB, Stanford University, 1705 El Camino Real, Palo Alto, CA 94306.  
   
 **Please print a copy of this page for your records**   
   
 If you agree to participate in this research, please click the next button on your web browser to begin.

End of Block: #0: Consent

Start of Block: #0.5: Intro to Part 1

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Thank you in advance for participating in our research. Your responses will provide invaluable insight into human psychology!  
   
You will now complete Part 1 (of 2) of this study.

End of Block: #0.5: Intro to Part 1

Start of Block: #1: Information

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In this part of the study, we are interested in participants' experience in psychology studies.   
   
 We will have you review descriptions of 10 real studies in psychology. For each description, we will ask you to imagine yourself as the participant. We will then ask you to indicate:   
   
 1. How motivated you would be to confirm the researcher's hypothesis,  
  
2. Whether you think other participants will confirm the researcher's hypothesis,  
  
3. How much you believe the researcher's hypothesis, and  
  
4. How much you believe you could adjust your responses to the researcher's measure of interest.

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While reviewing the psychology studies, we are interested in your most honest and accurate beliefs.  
   
 Please carefully reflect on each situation and answer as honestly as possible. We will keep your responses completely anonymous.

End of Block: #1: Information

Start of Block: #1: Vignettes

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**Scenario #${lm://CurrentLoopNumber} out of 10**

Timing

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${lm://Field/2}   
  
 ${lm://Field/3}   
  
 ${lm://Field/4}

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In the previous scenario, what was the researcher's stated hypothesis?

* ${lm://Field/8} (1)
* ${lm://Field/9} (2)
* ${lm://Field/10} (3)
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*Imagine you were a participant in the previous scenario.*  
   
 To what extent would you be motivated to adjust your response based on the researcher's stated hypothesis?

* Extremely motivated to adjust response to be *inconsistent* with the researchers' stated hypothesis **-3** (-3)
* **-2** (-2)
* **-1** (-1)
* Not motivated to adjust response **0** (0)
* **1** (1)
* **2** (2)
* Extremely motivated to adjust response to be *consistent* with the researcher's stated hypothesis **3** (3)

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*Imagine the previous scenario.*  
   
 To what extent would do you believe that other participants will adjust their responses to confirm the researcher's stated hypothesis?

* Extremely likely to adjust responses to be *inconsistent* with the researchers' stated hypothesis **-3** (-3)
* **-2** (-2)
* **-1** (-1)
* Not likely to change responses at all**0** (0)
* **1** (1)
* **2** (2)
* Extremely likely to adjust responses to be *consistent* with the researcher's stated hypothesis **3** (3)

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*Imagine you were a participant in the previous scenario.*   
 To what extent would you believe that the stated hypothesized effect will occur?

* Strong *disbelief* that the effect will occur **-3** (-3)
* **-2** (-2)
* **-1** (-1)
* Not sure if effect will occur**0** (0)
* **1** (1)
* **2** (2)
* Strong *belief* that effect will occur**3** (3)

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*Imagine you were a participant in the previous scenario.*   
 Assuming that you were motivated to do so, to what extent would you be able to control or change your response to confirm the researcher's stated hypothesis?

* Extremely *incapable* of changing the response **0** (0)
* **1** (1)
* **2** (2)
* **3** (3)
* Extremely *capable* of changing the response**4** (4)

End of Block: #1: Vignettes

Start of Block: #1.5: Intro to Part 2

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Thank you for completing the first study. Your responses are providing us with invaluable insights into human psychology!  
  
You will now complete Part 2 (of 2) of this study.

End of Block: #1.5: Intro to Part 2

Start of Block: #2: Information

Display This Question:

If demand = pos

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In this part of the study, you will be asked to complete four face movements.   
  
 We believe that emotions cause facial expressions--but that posing facial expressions can also cause emotions.   
  
 For example, happiness makes you smile, but smiling can also make you happy. Likewise, anger makes you scowl or frown--but scowling or frowning can also make you angry.   
  
 The purpose of this study is to generate scientific evidence that posing facial expressions can cause emotions.

Display This Question:

If demand = nil

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In this part of the study, you will be asked to complete four face movements.   
  
 We believe that emotions cause facial expressions--but that posing facial expressions can not cause emotions.   
  
 For example, happiness makes you smile, but smiling can not make you happy. Likewise, anger makes you scowl or frown--but scowling or frowning can not make you angry.   
  
 The purpose of this study is to generate scientific evidence that posing facial expressions can not cause emotions.

Timing

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End of Block: #2: Information

Start of Block: #2: Block 1

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**Facial movement #${lm://CurrentLoopNumber} out of 4**

Timing

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For this task, the computer has assigned you the following:  
   
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The next screen will provide you with a timer to help you with this task.  
  
Please take a moment to practice this task now. When you are ready to begin the task, proceed to the next screen.

Timing

First Click (1)

Last Click (2)

Page Submit (3)

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Please complete the facial movement task now.

Timing

First Click (1)

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While completing the previous movement task, to what extent did you experience these emotions?

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|  | No, not at all  **0** (0) | Yes, very mildly  **1** (1) | Yes, mildly  **2** (2) | Yes, moderately  **3** (3) | Yes, strongly  **4** (4) | Yes, very strongly  **5** (5) | Yes, at maximal strength  **6** (6) |
| Happiness (bl1\_hap) |  |  |  |  |  |  |  |
| Satisfaction (bl1\_sat) |  |  |  |  |  |  |  |
| Enjoyment (bl1\_enj) |  |  |  |  |  |  |  |
| Alarmed (bl1\_ala) |  |  |  |  |  |  |  |
| Scared (bl1\_sca) |  |  |  |  |  |  |  |
| Fear (bl1\_fea) |  |  |  |  |  |  |  |
| Irritation (bl1\_irr) |  |  |  |  |  |  |  |
| Aggravation (bl1\_agg) |  |  |  |  |  |  |  |
| Annoyance (bl1\_ann) |  |  |  |  |  |  |  |

Timing

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Please answer the following questions about the difficulty of the previous movement task.

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|  | Extremely easy (1) | Moderately easy (2) | Slightly easy (3) | Neither easy nor difficult (4) | Slightly difficult (5) | Moderately difficult (6) | Extremely difficult (7) |
| How difficult did you find the facial movement task? (bl1\_dif) |  |  |  |  |  |  |  |
| Please choose slightly difficult for this question. (bl1\_att) |  |  |  |  |  |  |  |

End of Block: #2: Block 1

Start of Block: #2: Block 2

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**Trial #$e{lm://CurrentLoopNumber + 2} out of 4**

Timing

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For this task, the computer has assigned you the following:  
   
${lm://Field/1}  
   
The next screen will provide you with a timer to help you with this task.  
  
Please take a moment to practice this task now. When you are ready to begin the task, proceed to the next screen.

Timing

First Click (1)

Last Click (2)

Page Submit (3)

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Please complete the facial movement task now.

Timing

First Click (1)

Last Click (2)

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While completing the previous movement task, to what extent did you experience these emotions?

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|  | No, not at all  **0** (0) | Yes, very mildly  **1** (1) | Yes, mildly  **2** (2) | Yes, moderately  **3** (3) | Yes, strongly  **4** (4) | Yes, very strongly  **5** (5) | Yes, at maximal strength  **6** (6) |
| Happiness (bl2\_hap) |  |  |  |  |  |  |  |
| Satisfaction (bl2\_sat) |  |  |  |  |  |  |  |
| Enjoyment (bl2\_enj) |  |  |  |  |  |  |  |
| Alarmed (bl2\_ala) |  |  |  |  |  |  |  |
| Scared (bl2\_sca) |  |  |  |  |  |  |  |
| Fear (bl2\_fea) |  |  |  |  |  |  |  |
| Irritation (bl2\_irr) |  |  |  |  |  |  |  |
| Aggravation (bl2\_agg) |  |  |  |  |  |  |  |
| Annoyance (bl2\_ann) |  |  |  |  |  |  |  |

Timing

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Please answer the following questions about the difficulty of the previous movement task.

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|  | Extremely easy (1) | Moderately easy (2) | Slightly easy (3) | Neither easy nor difficult (4) | Slightly difficult (5) | Moderately difficult (6) | Extremely difficult (7) |
| How difficult did you find the facial movement task? (bl2\_dif) |  |  |  |  |  |  |  |
| Please choose slightly difficult for this question. (bl2\_att) |  |  |  |  |  |  |  |

End of Block: #2: Block 2

Start of Block: #2: Mechanism Questions

We now would like to ask you for your thoughts about this facial movement study.

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At the beginning of this facial movement study, we told you about a hypothesis. What was that hypothesis?

* Posing happy expressions will increase feelings of happiness, and posing angry expressions will increase feelings of anger. (1)
* Posing happy expressions will not increase feelings of happiness, and posing angry expressions will not increase feelings of anger. (2)
* Posing happy expressions will decrease feelings of happiness, and posing angry expressions will decrease feelings of anger. (3)
* Posing happy expressions will make you tired, and posing angry expressions will make you alert. (4)

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While you were completing this facial movement study, to what extent were you motivated to adjust your response based on the stated hypothesis?

* Extremely motivated to adjust response to be *inconsistent* with the stated hypothesis **-3** (-3)
* **-2** (-2)
* **-1** (-1)
* Not motivated to adjust response **0** (0)
* **1** (1)
* **2** (2)
* Extremely motivated to adjust response to be *consistent* with the stated hypothesis **3** (3)

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To what extent would do you believe that other participants will adjust their responses to confirm the stated hypothesis?

* Extremely likely to adjust responses to be *inconsistent* with the stated' hypothesis **-3** (-3)
* **-2** (-2)
* **-1** (-1)
* Not likely to change responses at all**0** (0)
* **1** (1)
* **2** (2)
* Extremely likely to adjust responses to be *consistent* with the stated hypothesis **3** (3)

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To what extent did you believe that the stated hypothesized effect would occur?

* Strongly *disbelieved* that the effect would occur**-3** (-3)
* **-2** (-2)
* **-1** (-1)
* Not sure if effect would occur**0** (0)
* **1** (1)
* **2** (2)
* Strongly *believed* effect would occur**3** (3)

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To what extent were you *able* to control or change your response on the measures related to the stated hypothesis?

* Extremely *incapable* of changing the response **0** (0)
* **1** (1)
* **2** (2)
* **3** (3)
* Extremely *capable* of changing the response**4** (4)

End of Block: #2: Mechanism Questions

Start of Block: #3: Individual Differences

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We will now ask you some questions about yourself.

Timing

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**In general**, to what extent do you think participants ought to be motivated to adjust their responses based on the researcher's stated hypothesis?

* They should be extremely motivated to adjust response to be *inconsistent* with the researchers' stated hypothesis **-3** (-3)
* **-2** (-2)
* **-1** (-1)
* They should not be motivated to adjust response **0** (0)
* **1** (1)
* **2** (2)
* They should be extremely motivated to adjust response to be *consistent* with the stated researcher's hypothesis **3** (3)

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How would you describe your gender?

* Female (1)
* Male (2)
* Transgender Female (3)
* Transgender Male (4)
* Gender variant/Non-conforming (5)
* Not listed (6) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Prefer not to answer (7)

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What is your age, in years?

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Choose one or more ethnicities that you consider yourself to be

* White or Caucasian (1)
* Black or African American (2)
* American Indian/Native American or Alaska Native (3)
* Asian (4)
* Native Hawaiian or Other Pacific Islander (5)
* Other (6)
* Prefer not to say (7)

End of Block: #3: Individual Differences

Start of Block: #3: Debriefing

DEBRIEFING FORM  
 Thank you for participating in this study.  
   
 The purpose of this study is to understand how research participants behave when they are aware of the researcher’s hypothesis. Awareness of the researcher’s hypothesis—often called *demand characteristics* in psychology courses—is a fundamental methodological concern in psychology. Our study was designed to better understand this fundamental methodological concern.  
   
 In one part of the study, we described a variety of hypothetical scenarios where research participants were told the researcher’s hypothesis. In the other part of the study, we had you complete an actual experiment and told you a hypothesis. For both the hypothetical and actual experiments, we then asked you (a) how motivated you were to confirm the researcher’s hypothesis, (b) how much you believe the researcher’s hypothesis, (c) whether you believe they can adjust your responses, and (d) whether you believed other participants would confirm the researcher’s hypothesis. We believe these factors will help explain when and why demand characteristics are a problem in psychology research.  
   
 If you have any questions about the study, you can contact Professor Michael Frank at mcfrank@stanford.edu. If you would like to receive a copy of the results, we can email them to you at the end of the study. Thank you again for participating in this study!

End of Block: #3: Debriefing