

## APPENDIX A

### STUDY 1 MATERIALS

[brand screener] First of all, we would like to know a bit about your personal preferences. Please answer the following two questions for all brands listed below.

	Are you a user of this brand?		Do you consider being a user of this brand a part of your identity?	
	Yes (1)	No (2)	Yes (1)	No (2)
Apple (Apple)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disney (Disney)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Forever 21 (Forever 21)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gap (Gap )	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Netflix (Netflix)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Panda Express (Panda Express)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Panera (Panera)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sephora (Sephora)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Starbucks (Starbucks)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uber (Uber)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Under Armour (Under Armour)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Whole Foods (Whole Foods)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[SHOWN ONLY IF THERE WERE NO BRANDS THAT PARTICIPANT ANSWERED “YES” FOR BOTH SCREENER QUESTIONS]

Q73 Thank you for participating the study! Unfortunately, you did not pass the screener and will not have access to the full survey. You will be paid \$0.2 for your participation.

Your confirmation code is: [\\${e://Field/compcode}](#).

Please hit the >> button to submit your answers and then return to the Mechanical Turk page and enter your completion code.

[ONE BRAND THAT BOTH SCREENER QUESTIONS WERE ANSWERED “YES” RANDOMLY CHOSEN AND SHOWN]

Q62 You mentioned that the following brand is a part of your identity. Is that correct? Select the brand and then hit the >> button to continue.

- ☐ Disney (1)
- ☐ Forever 21 (2)
- ☐ Gap (3)
- ☐ Apple (4)
- ☐ Uber (5)
- ☐ Whole Foods (6)
- ☐ Under Armour (7)
- ☐ Sephora (8)
- ☐ Starbucks (9)
- ☐ Panera (10)
- ☐ Netflix (11)
- ☐ Panda Express (12)

[DV\_Brand choice] In this study, ten participants will have an opportunity to win a \$50 gift card via email as a bonus. The winners will be selected randomly by the system.

If you are selected, would you prefer an Amazon gift card that can be deposited into your Amazon account or a [\\${Q62/ChoiceGroup/SelectedChoices}](#) digital gift card?

For the following scenarios, please choose between receiving an Amazon digital gift card and a [\\${Q62/ChoiceGroup/SelectedChoices}](#) digital gift card.

**Please note that your choices are not hypothetical, and the outcome may happen for real.** You may be paid a bonus through a digital gift card based on one of your choices below. That is, if you are selected as one of the ten winners, the system will randomly draw a line from the following. The brand you select on the chosen line will be how you receive the \$50 digital gift card.

For example, imagine you are selected as a winner and you chose “\$50 Amazon gift card” on the tenth line below. If the system randomly draws this line, you will be paid a \$50 gift card from Amazon.

	1 (1)	2 (2)	
\$5 Amazon gift card	<input type="radio"/>	<input type="radio"/>	\$50 [BRAND] gift card
\$10 Amazon gift card	<input type="radio"/>	<input type="radio"/>	\$50 [BRAND] gift card
\$15 Amazon gift card	<input type="radio"/>	<input type="radio"/>	\$50 [BRAND] gift card
\$20 Amazon gift card	<input type="radio"/>	<input type="radio"/>	\$50 [BRAND] gift card
\$25 Amazon gift card	<input type="radio"/>	<input type="radio"/>	\$50 [BRAND] gift card
\$30 Amazon gift card	<input type="radio"/>	<input type="radio"/>	\$50 [BRAND] gift card
\$35 Amazon gift card	<input type="radio"/>	<input type="radio"/>	\$50 [BRAND] gift card
\$40 Amazon gift card	<input type="radio"/>	<input type="radio"/>	\$50 [BRAND] gift card
\$45 Amazon gift card	<input type="radio"/>	<input type="radio"/>	\$50 [BRAND] gift card
\$50 Amazon gift card	<input type="radio"/>	<input type="radio"/>	\$50 [BRAND] gift card

Q20 In the following section, you will tell us about how the characteristics of your identity and a brand in which you believe expresses these characteristics.

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Q42 Below is a list of some features that are important to personal identity. Please choose the **10 items** below that you believe are most important to your identity. That is, the items that you believe most make you who you are as a person.

- ☐ Degree of shyness (1)
- ☐ Knowledge of math (2)
- ☐ Level of wholesomeness (3)
- ☐ Reliability (4)
- ☐ Goals for personal life (5)
- ☐ Level of loyalty (6)
- ☐ Important childhood memories (7)
- ☐ Cherished memories of time with parents/family (8)
- ☐ Knowledge of music (9)
- ☐ Level of honesty (10)
- ☐ Memories of important life milestones (11)
- ☐ Intelligence level (12)
- ☐ Close friendships (13)
- ☐ Favorite hobbies/activities (14)
- ☐ Significant romantic relationships (15)
- ☐ Aesthetic Preferences (16)

Q21

Next we will ask you to complete the task with the important features of your identity, but first we will practice doing the task with another set of features.

Let's start the practice now!

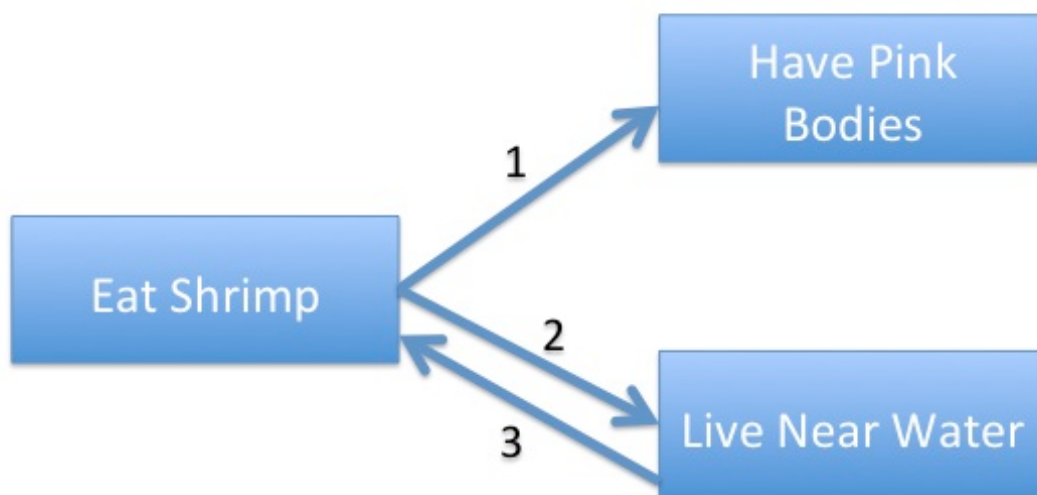
Below is a diagram of how the features of a flamingo fit together. The arrows represent causal relationships such that the items that the arrows point to are caused by (or shaped by) the items at the beginning of the arrow. In the diagram below there are a series of arrows that represent the following causal relationships:

Arrow #1: Eating shrimp causes flamingos to be pink, the more shrimp they eat the pinker their bodies become.

Arrow #2: Eating shrimp causes flamingos to live near water. That is, flamingos live near water so they can find shrimp to eat.

Arrows #3: Because they tend to live near water, flamingos eat shrimp. That is, it's easy to eat shrimp because they live near water. The closer to water they live, the more shrimp they eat.

The combination of Arrows #2 and #3 mean that Living Near Water and Eating Shrimp cause one another.



You will now practice the task with the concept diagrammed above. In this task we will present each of the features one-by-one and ask which of the other features it causes. Please answer the following questions in order to express the causal relationships in the diagram

above. The diagram will appear on the following screens so there is no need to memorize it.

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Q22

Think about the feature: Eat Shrimp.

Which of the following features of flamingos are caused by the fact that they Eat Shrimp?  
Please select all that apply.

☐

Have Pink Bodies (4)

☐

Live Near Water (5)

☐

None of these features are caused by: Eat Shrimp (6)

---

[Show If Have Pink Bodies Is Selected And Live Near Water Is Selected]

Q23

That's correct! According to the diagram Eat Shrimp causes flamingos to both Have Pink Bodies and Live Near Water.

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[Show If Have Pink Bodies Is Selected Or Live Near Water Is Not Selected]

Q24

That's incorrect. According to the diagram the fact that flamingos Eat Shrimp causes them to both Have Pink Bodies and to Live Near Water, so both Have Pink Bodies and Live Near Water should have been selected.

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Q27

Think about the feature: Live Near Water

Which of the following features are caused by the fact the flamingos Live Near Water?  
Please select all that apply.

☐

Have Pink Bodies (3)

☐

Eat Shrimp (4)

☐

None of these features are caused by: Live Near Water (5)

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[Show If Eat Shrimp Is Selected And Have Pink Bodies Is Not Selected]

Q28

That's correct! According to the diagram Live Near Water causes flamingos to Eat Shrimp and does not them to Have Pink Bodies.

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[Show If Eat Shrimp Is Not Selected Or Have Pink Bodies Is Selected]

Q30

That's incorrect. According to the diagram Live Near Water causes flamingos to Eat Shrimp and does not cause them to Have Pink Bodies so only Eat Shrimp should have been selected.

---

Q37 We are now done with practice! You will now do the same task for the aspects of your identity.

There are no right or wrong answers. We are interested in how you think the features of your identity are causally related. That is, which features caused or shaped other features of your identity. You should indicate as many or as few causal relationships as you see fit.

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[Carry Forward Selected Choices from "Below is a list of some features that are important to personal identity. Please choose the 10 items below that you believe are most important to your identity. That is, the items that you believe most make you who you are as a person."]

Q59 Think about the following aspect of **Aesthetic Preferences**.

Which of the other features of your identity listed below, if any, are caused by this aspect, **Aesthetic Preferences**? By caused by, we simply mean that the feature was influenced or shaped by: **Aesthetic Preferences**.

You may select as many or as few features as you see fit. In the below list, please select all the features that you believe are caused by the above feature.

- ☐ ☒ None of the above (1)
- ☐ Being a user of  $\{Q62/ChoiceGroup/SelectedChoices\}$  (2)
- ☐ Degree of shyness (3)
- ☐ Knowledge of math (4)
- ☐ Level of wholesomeness (5)
- ☐ Reliability (6)
- ☐ Goals for personal life (7)
- ☐ Level of loyalty (8)
- ☐ Important childhood memories (9)
- ☐ Cherished memories of time with parents/family (10)
- ☐ Knowledge of music (11)
- ☐ Level of honesty (12)
- ☐ Memories of important life milestones (13)
- ☐ Intelligence level (14)
- ☐ Close friendships (15)
- ☐ Favorite hobbies/activities (16)

☐

Significant romantic relationships (17)

☐

Aesthetic Preferences (18)

[Questions Q58 – Q1 Below Are All The Same Format As Q59 But With “Aesthetic Preferences” Replaced With the Feature In Bold Text.]

Q58 Think about the following aspect of **Romantic relationships**.

Q57 Think about the following aspect of **Favorite hobbies/activities**.

Q56 Think about the following aspect of **Close Friendships**.

Q55 Think about the following aspect of **Intelligence level**.

Q54 Think about the following aspect of **Memories of important life milestones**.

Q50 Think about the following aspect of **Level of honesty**.

Q49 Think about the following aspect of **Knowledge of music**.

Q48 Think about the following aspect of **Cherished memories with parents/family**.

Q43 Think about the following aspect of **Important childhood memories**.

Q42 Think about the following aspect of **Level of loyalty**.

Q41 Think about the following aspect of **Goals for personal life**.

Q40 Think about the following aspect of **Reliability**.

Q39 Think about the following aspect of **Level of Wholesomeness**.

Q38 Think about the following aspect of **Knowledge of math**.

Q1 Think about the following aspect of **Degree of shyness**.

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[Attention Check Question]

Q308 The results of the survey and our research depend critically on your answers and the attention you pay to the questions. We appreciate the time you take to participate in our survey!

To make sure you are reading the questions carefully, for this question, we would like you not to select any of the below options Simply hit the arrow to continue in the survey and do not check any of the boxes.

- ☐ Being a user of  $\{Q62/ChoiceGroup/SelectedChoices\}$  (1)
- ☐ Degree of shyness (2)
- ☐ Knowledge of math (3)
- ☐ Level of wholesomeness (4)
- ☐ Reliability (5)
- ☐ Goals for personal life (6)
- ☐ Level of loyalty (7)
- ☐ Important childhood memories (8)
- ☐ Cherished memories of time with parents/family (9)
- ☐ Knowledge of music (10)
- ☐ Level of honesty (11)
- ☐ Memories of important life milestones (12)
- ☐ Intelligence level (13)
- ☐ Close friendships (14)
- ☐ Favorite hobbies/activities (15)
- ☐ Significant romantic relationships (16)



## Aesthetic Preferences (17)

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[Questions Q60 Below Is The Same Format As Q59 But With “Aesthetic Prefences” Replaced With the Feature In Bold Text.]

Q60 Think about the following aspect of **Being a user of** [\\${Q62/ChoiceGroup/SelectedChoices}](#).

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[Carry Forward Unselected Choices from "Think about the following aspect of Being a user of [\\${q://QID1019/ChoiceGroup/SelectedChoices}](#)". Which of the other features of your identity listed below, if any, are caused by this aspect, Being a user of [\\${q://QID1019/ChoiceGroup/SelectedChoices}](#)? By caused by, we simply mean that the feature was influenced or shaped by: Being a user of [\\${q://QID1019/ChoiceGroup/SelectedChoices}](#). You may select as many or as few features as you see fit. In the below list, please select all the features that you believe are caused by the above feature. "]

Q72 Earlier, you had indicated which features of your identity caused this identity, **Being a user of** [\\${Q62/ChoiceGroup/SelectedChoices}](#), or were causes of this identity, **Being a user of** [\\${Q62/ChoiceGroup/SelectedChoices}](#).

The features you did NOT select are listed below. Among these identity features, are there any features that are merely associated in some way with this identity, **Being a user of** [\\${Q62/ChoiceGroup/SelectedChoices}](#), but NOT causally related to it?

That is, please select all the features below that you see as somehow connected to or somehow going together with this identity, **Being a user of** [\\${Q62/ChoiceGroup/SelectedChoices}](#), despite not being a cause of or caused by this identity.

Please select as many or as few features that you see fit.

- ☐ ☒ None of the above (1)
- ☐ Being a user of  $\{Q62/ChoiceGroup/SelectedChoices\}$  (2)
- ☐ Degree of shyness (3)
- ☐ Knowledge of math (4)
- ☐ Level of wholesomeness (5)
- ☐ Reliability (6)
- ☐ Goals for personal life (7)
- ☐ Level of loyalty (8)
- ☐ Important childhood memories (9)
- ☐ Cherished memories of time with parents/family (10)
- ☐ Knowledge of music (11)
- ☐ Level of honesty (12)
- ☐ Memories of important life milestones (13)
- ☐ Intelligence level (14)
- ☐ Close friendships (15)
- ☐ Favorite hobbies/activities (16)

☐

Significant romantic relationships (17)

☐

Aesthetic Preferences (18)

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Q879 We would now like to understand how you identify with  
\${Q62/ChoiceGroup/SelectedChoices}.

Please indicate your answer with how strongly you believe the statements below reflect your  
connection to \${Q62/ChoiceGroup/SelectedChoices}.

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Q44 \${Q62/ChoiceGroup/SelectedChoices} reflects who I am.

- ☐ Not at all (1)
  - ☐ Rarely (2)
  - ☐ Sometimes (3)
  - ☐ Neutral (4)
  - ☐ Often (5)
  - ☐ Usually (6)
  - ☐ Extremely well (7)
-



Q46 I can identify with \${Q62/ChoiceGroup/SelectedChoices}.

- ☐ Not at all (1)
  - ☐ Rarely (2)
  - ☐ Sometimes (3)
  - ☐ Neutral (4)
  - ☐ Often (5)
  - ☐ Usually (6)
  - ☐ Extremely well (7)
- 

Q48 I feel a personal connection with \${Q62/ChoiceGroup/SelectedChoices}.

- ☐ Not at all (1)
  - ☐ Rarely (2)
  - ☐ Sometimes (3)
  - ☐ Neutral (4)
  - ☐ Often (5)
  - ☐ Usually (6)
  - ☐ Extremely well (7)
-

Q50 I use \${Q62/ChoiceGroup/SelectedChoices} to communicate who I am to other people.

- ☐ Not at all (1)
  - ☐ Rarely (2)
  - ☐ Sometimes (3)
  - ☐ Neutral (4)
  - ☐ Often (5)
  - ☐ Usually (6)
  - ☐ Extremely well (7)
- 

Q52 I think \${Q62/ChoiceGroup/SelectedChoices} helps me become the type of person I want to be.

- ☐ Not at all (1)
  - ☐ Rarely (2)
  - ☐ Sometimes (3)
  - ☐ Neutral (4)
  - ☐ Often (5)
  - ☐ Usually (6)
  - ☐ Extremely well (7)
-

Q64 I consider  $\{Q62/ChoiceGroup/SelectedChoices\}$  to be "me" (it reflects who I consider myself to be or the way I want to present myself to others).

- ☐ Not at all (1)
  - ☐ Rarely (2)
  - ☐ Sometimes (3)
  - ☐ Neutral (4)
  - ☐ Often (5)
  - ☐ Usually (6)
  - ☐ Extremely well (7)
- 

Q66  $\{Q62/ChoiceGroup/SelectedChoices\}$  suits me well.

- ☐ Not at all (1)
  - ☐ Rarely (2)
  - ☐ Sometimes (3)
  - ☐ Neutral (4)
  - ☐ Often (5)
  - ☐ Usually (6)
  - ☐ Extremely well (7)
- 

Q306 You're almost done! Just a few more questions to go. Remember, your responses will be kept anonymous, confidential, and will be analyzed only in the aggregate.

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Q299 What is your age (please enter a whole number)?

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Q301 What is your gender?

- ☐ Male (1)
- ☐ Female (2)
- 

Q303 What is your native language (the one that you grew up speaking)?

\_\_\_\_\_

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Q305 What is the highest degree or level of school you have completed, as of today?

- ☐ No schooling completed (1)
- ☐ Nursery school to 8th grade (2)
- ☐ 9th, 10th, or 11th grade (3)
- ☐ High school diploma or equivalent (4)
- ☐ Some college, but not currently enrolled (5)
- ☐ Some college, and currently enrolled (6)
- ☐ Associate degree (7)
- ☐ Bachelor's degree (8)
- ☐ Master's degree (9)
- ☐ Professional degree (10)
- ☐ Doctorate degree (11)
-

Q307 What is your total pretax household income?

- ☐ Less than \$10,000 (1)
  - ☐ \$10,000-\$19,999 (2)
  - ☐ \$20,000-\$29,999 (3)
  - ☐ \$30,000-\$39,999 (4)
  - ☐ \$40,000-\$49,999 (5)
  - ☐ \$50,000-\$59,999 (6)
  - ☐ \$60,000-\$69,999 (7)
  - ☐ \$70,000-\$79,999 (8)
  - ☐ \$80,000-\$89,999 (9)
  - ☐ \$90,000-\$99,999 (10)
  - ☐ \$100,000-\$124,999 (11)
  - ☐ \$125,000-\$149,999 (12)
  - ☐ \$150,000-\$199,999 (13)
  - ☐ \$200,000 or greater (14)
-

## STUDY 2 MATERIALS

Wave 1

Q15

Think about the things that are important about you and that most define you as a person.

Please list 10 different aspects of your identity. By aspects, we simply mean things about yourself that most describe who you are as a person and are most important to your identity.

Make sure that each aspect is different and that you enter all ten.

☐ 1 (1) \_\_\_\_\_

☐ 2 (2) \_\_\_\_\_

☐ 3 (3) \_\_\_\_\_

☐ 4 (4) \_\_\_\_\_

☐ 5 (5) \_\_\_\_\_

☐ 6 (6) \_\_\_\_\_

☐ 7 (7) \_\_\_\_\_

☐ 8 (8) \_\_\_\_\_

☐ 9 (9) \_\_\_\_\_

☐ 10 (10) \_\_\_\_\_

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Q18 Which of the following would you say best describes you?

- ☐ a Denver Broncos fan (1)
  - ☐ a Carolina Panthers fan (2)
  - ☐ a fan of: (3) \_\_\_\_\_
  - ☐ not interested in football (4)
- 

[[\\${e://Field/Football}](#)] = “being a fan of the [Q18 answer]”  
[Answer Options Shown In Random Order]

Q17 Think about **the causes of you [\\${e://Field/Football}](#)**.

Which of the other aspects of your personal identity listed below, if any,  
**caused you [\\${e://Field/Football}](#)?**

You may select as many of as few aspects as you see fit. In the below list, please select all the aspects that you believe influenced the above aspect of your identity.

- ☐  $\{Q15/ChoiceTextEntryValue/1\}$  (1)
  - ☐  $\{Q15/ChoiceTextEntryValue/2\}$  (2)
  - ☐  $\{Q15/ChoiceTextEntryValue/3\}$  (3)
  - ☐  $\{Q15/ChoiceTextEntryValue/4\}$  (4)
  - ☐  $\{Q15/ChoiceTextEntryValue/5\}$  (5)
  - ☐  $\{Q15/ChoiceTextEntryValue/6\}$  (6)
  - ☐  $\{Q15/ChoiceTextEntryValue/7\}$  (7)
  - ☐  $\{Q15/ChoiceTextEntryValue/8\}$  (8)
  - ☐  $\{Q15/ChoiceTextEntryValue/9\}$  (9)
  - ☐  $\{Q15/ChoiceTextEntryValue/10\}$  (10)
  - ☐ your childhood memories (12)
  - ☐ your personal life goals (13)
  - ☐ your friendships (14)
  - ☐ your values and principles (15)
  - ☐ your personality (11)
  - ☐ None of the above (16)
-



[Answer Options Shown In Random Order]

Q21 Think about the **consequences for you of** [\\${e://Field/Football}](#).

Which of the other aspects of your personal identity listed below, if any, were caused by you [\\${e://Field/Football}](#)?

You may select as many or as few aspects as you see fit. In the below list, please select all the aspects that you believe were influenced by the above aspect of your identity.

- ☐  $\{Q15/ChoiceTextEntryValue/1\}$  (1)
  - ☐  $\{Q15/ChoiceTextEntryValue/2\}$  (2)
  - ☐  $\{Q15/ChoiceTextEntryValue/3\}$  (3)
  - ☐  $\{Q15/ChoiceTextEntryValue/4\}$  (4)
  - ☐  $\{Q15/ChoiceTextEntryValue/5\}$  (5)
  - ☐  $\{Q15/ChoiceTextEntryValue/6\}$  (6)
  - ☐  $\{Q15/ChoiceTextEntryValue/7\}$  (7)
  - ☐  $\{Q15/ChoiceTextEntryValue/8\}$  (8)
  - ☐  $\{Q15/ChoiceTextEntryValue/9\}$  (9)
  - ☐  $\{Q15/ChoiceTextEntryValue/10\}$  (10)
  - ☐ your childhood memories (12)
  - ☐ your personal life goals (13)
  - ☐ your friendships (14)
  - ☐ your values and principles (15)
  - ☐ your personality (11)
  - ☐ None of the above (16)
-

[Answer Options Shown In Random Order]

Q22 Think about **the causes of your/you being** [\\${Q15/ChoiceTextEntryValue/5}](#).

Which of the other aspects of your personal identity listed below, if any, caused your/you being [\\${Q15/ChoiceTextEntryValue/5}](#)?

You may select as many or as few aspects as you see fit. In the below list, please select all the aspects that you believe influenced the above aspect of your identity.

- ☐  $\{Q15/ChoiceTextEntryValue/1\}$  (1)
  - ☐  $\{Q15/ChoiceTextEntryValue/2\}$  (2)
  - ☐  $\{Q15/ChoiceTextEntryValue/3\}$  (3)
  - ☐  $\{Q15/ChoiceTextEntryValue/4\}$  (4)
  - ☐  $\{e://Field/Football\}$  (5)
  - ☐  $\{Q15/ChoiceTextEntryValue/6\}$  (6)
  - ☐  $\{Q15/ChoiceTextEntryValue/7\}$  (7)
  - ☐  $\{Q15/ChoiceTextEntryValue/8\}$  (8)
  - ☐  $\{Q15/ChoiceTextEntryValue/9\}$  (9)
  - ☐  $\{Q15/ChoiceTextEntryValue/10\}$  (10)
  - ☐ your childhood memories (12)
  - ☐ your personal life goals (13)
  - ☐ your friendships (14)
  - ☐ your values and principles (15)
  - ☐ your personality (11)
  - ☐ None of the above (16)
-

[Answer Options Shown In Random Order]

Q31 Think about the **consequences for you of your/you being** \$\_{Q15/ChoiceTextEntryValue/5}.

Which of the other aspects of your personal identity listed below, if any, were caused by your/you being \$\_{Q15/ChoiceTextEntryValue/5}?

You may select as many or as few aspects as you see fit. In the below list, please select all the aspects that you believe were influenced by the above aspect of your identity.

- ☐  $\{Q15/ChoiceTextEntryValue/1\}$  (1)
  - ☐  $\{Q15/ChoiceTextEntryValue/2\}$  (2)
  - ☐  $\{Q15/ChoiceTextEntryValue/3\}$  (3)
  - ☐  $\{Q15/ChoiceTextEntryValue/4\}$  (4)
  - ☐  $\{e://Field/Football\}$  (5)
  - ☐  $\{Q15/ChoiceTextEntryValue/6\}$  (6)
  - ☐  $\{Q15/ChoiceTextEntryValue/7\}$  (7)
  - ☐  $\{Q15/ChoiceTextEntryValue/8\}$  (8)
  - ☐  $\{Q15/ChoiceTextEntryValue/9\}$  (9)
  - ☐  $\{Q15/ChoiceTextEntryValue/10\}$  (10)
  - ☐ your childhood memories (12)
  - ☐ your personal life goals (13)
  - ☐ your friendships (14)
  - ☐ your values and principles (15)
  - ☐ your personality (11)
  - ☐ None of the above (16)
-

Q36

Earlier in this survey you reported [\\$e://Field/Football](#). Imagine that this team is playing in the SuperBowl next year. What is the maximum amount (in US dollars) that you would be willing to pay for a ticket to see them play in the SuperBowl?

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[Answer Options Shown In Random Order]

Q25 Do you know who won the SuperBowl on Sunday?

- ☐ Carolina Panthers (1)
- ☐ Denver Broncos (2)
- ☐ I'm not sure (3)

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Q26 Did you watch the SuperBowl this year?

- ☐ Yes, all of it. (1)
- ☐ Yes, some of it. (2)
- ☐ No, I didn't. (3)

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Q27 How interested are you in the sport of football, in general?

- ☐ Very interested (1)
- ☐ Somewhat interested (2)
- ☐ Somewhat uninterested (3)
- ☐ Not interested at all (4)

---

Q20 How many **hours per week** do you typically spend on sports (i.e. watching games or sports news, playing on a sports team, attending sports events, reading about sports, playing sports-based video games, etc...)

---

-----

Q22 People vary in the amount they pay attention to these kinds of surveys. Some take them seriously and read each question, whereas others go very quickly and barely read the questions at all. If you have read this question carefully, please write the word yes in the blank Other box below.

- ☐ 1 - Not all (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 - A great deal (5)
- ☐ Other (please specify) (6)

---

-----

Q24 Please provide us the following demographic information:

☐ Age (1) \_\_\_\_\_

☐ Gender (2) \_\_\_\_\_

☐ Language(s) spoken at home (3)

---



Q34 Household Income: What was your total before-tax household income (including the income of your partner, spouse, or significant other) in 2015?

Please consider income from all sources, including work, alimony, child support, rental income, investment income, and any other money you may receive.

- ☐ Under \$5,000 (11)
- ☐ \$5,000 to \$9,999 (12)
- ☐ \$10,000 to \$14,999 (1)
- ☐ \$15,000 to \$24,999 (2)
- ☐ \$25,000 to \$34,999 (3)
- ☐ \$35,000 to \$44,999 (4)
- ☐ \$45,000 to \$54,999 (5)
- ☐ \$55,000 to \$64,999 (6)
- ☐ \$65,000 to \$74,999 (7)
- ☐ \$75,000 to \$100,000 (8)
- ☐ Over \$100,000 (9)
- ☐ I prefer not to respond. (10)

---

Q30 What state do you live in?

---

Wave 2

Q15

Think about the things that are important about you and that most define who you are a person. Please list 10 different aspects of your identity. By aspects, we simply mean things about yourself that most describe who you are as a person and are most important to your identity.

Make sure that each aspect is different and that you enter all ten.

☐ 1 (1) \_\_\_\_\_

☐ 2 (2) \_\_\_\_\_

☐ 3 (3) \_\_\_\_\_

☐ 4 (4) \_\_\_\_\_

☐ 5 (5) \_\_\_\_\_

☐ 6 (6) \_\_\_\_\_

☐ 7 (7) \_\_\_\_\_

☐ 8 (8) \_\_\_\_\_

☐ 9 (9) \_\_\_\_\_

☐ 10 (10) \_\_\_\_\_

---

Q40 Would you describe yourself as an NFL football fan?

☐ Yes (1)

☐ No (2)

---

[Shown Only If Q40 = “Yes”]

Q18 Which team are you the biggest fan of? (Enter one team only.)

---


[\[\\${e://Field/Football}\]](#) = “being a fan of the [Q18 answer]”

[Shown Only If Q40 = “Yes”]

Q37 Please tell us how much [\\${e://Field/Football}](#) describes who you are on a scale of 1 to 7. Where 1 means "does not describe me" and 7 means "describes me perfectly."

Does not describe me Describes me perfectly

1 2 3 4 5 6 7

How much does <a href="#">\${e://Field/Football}</a> describe you? ()	
---	--

[Shown Only If Q40 = "Yes"]

Q39 Please tell us how much you identify with [\\${e://Field/Team}](#) fans on a scale of 1 to 7 where 1 means "do not identify with group in any way" and 7 means "strongly identify with group."

Do not identify with [\\${e://Field/Team}](#) fans in any way Strongly identify with [\\${e://Field/Team}](#) fans

1 2 3 4 5 6 7

How strongly do you identify with <a href="#">\${e://Field/Team}</a> fans? ()	
---	---

[Shown Only If Q40 = "Yes"]

Q41 Please tell us how much you admire [\\${e://Field/Team}](#) fans on a scale of 1 to 7 where 1 means "do admire the group" and 7 means "really admire the group."

Do not admire group Really admire group

1 2 3 4 5 6 7





How much do you admire <a href="#">\${e://Field/Team}</a> fans? ()	
--	--

[Shown Only If Q40 = "Yes"]

Q43 Think about [\\${e://Field/Team}](#) fans as a group. Please tell us how much you agree with the following statements on a scale of 1 to 9 where 1 means you "strongly disagree" with the statement and 9 means that you "strongly agree" with the statement.

Strongly Disagree Strongly Agree

1 2 3 4 5 6 7 8 9

I am a worthy member of the group ()	
I feel I don't have much to offer to the group ()	
I am a cooperative participant in the activities of the group ()	
I often feel I'm a useless member of the group ()	

[Shown Only If Q40 = “Yes”]

[Answer Options Shown In Random Order]

Q17 Think about **the causes of you** [\\${e://Field/Football}](#).

Which of the other aspects of your personal identity listed below, if any, caused you [\\${e://Field/Football}](#)?

You may select as many or as few aspects as you see fit. In the below list, please select all the aspects that you believe influenced or shaped the above aspect of your identity.

- ☐  $\{Q15/ChoiceTextEntryValue/1\}$  (1)
- ☐  $\{Q15/ChoiceTextEntryValue/2\}$  (2)
- ☐  $\{Q15/ChoiceTextEntryValue/3\}$  (3)
- ☐  $\{Q15/ChoiceTextEntryValue/4\}$  (4)
- ☐  $\{Q15/ChoiceTextEntryValue/5\}$  (5)
- ☐  $\{Q15/ChoiceTextEntryValue/6\}$  (6)
- ☐  $\{Q15/ChoiceTextEntryValue/7\}$  (7)
- ☐  $\{Q15/ChoiceTextEntryValue/8\}$  (8)
- ☐  $\{Q15/ChoiceTextEntryValue/9\}$  (9)
- ☐  $\{Q15/ChoiceTextEntryValue/10\}$  (10)
- ☐ your childhood memories (12)
- ☐ your personal life goals (13)
- ☐ your friendships (14)
- ☐ your values and principles (15)
- ☐ your personality (11)
- ☐ your level of hunger (16)
- ☒ None of the above (17)

---

[Shown Only If Q40 = “Yes”]

[Answer Options Shown In Random Order]

Q21 Think about the **consequences for you of** [\\${e://Field/Football}](#).

Which of the other aspects of your personal identity listed below, if any, were caused by you [\\${e://Field/Football}](#)?

You may select as many or as few aspects as you see fit. In the below list, please select all the aspects that you believe were influenced or shaped by the above aspect of your identity.

- ☐ `#{Q15/ChoiceTextEntryValue/1}` (1)
- ☐ `#{Q15/ChoiceTextEntryValue/2}` (2)
- ☐ `#{Q15/ChoiceTextEntryValue/3}` (3)
- ☐ `#{Q15/ChoiceTextEntryValue/4}` (4)
- ☐ `#{Q15/ChoiceTextEntryValue/5}` (5)
- ☐ `#{Q15/ChoiceTextEntryValue/6}` (6)
- ☐ `#{Q15/ChoiceTextEntryValue/7}` (7)
- ☐ `#{Q15/ChoiceTextEntryValue/8}` (8)
- ☐ `#{Q15/ChoiceTextEntryValue/9}` (9)
- ☐ `#{Q15/ChoiceTextEntryValue/10}` (10)
- ☐ your important childhood memories (12)
- ☐ your personal life goals (13)
- ☐ your friendships (14)
- ☐ your values and principles (15)
- ☐ your personality (11)
- ☐ your cherished memories with parents and family (16)
- ☐ your level of hunger (17)

☐

⊗ None of the above (18)

---

[Shown Only If Q40 = “Yes”]

[Answer Options Shown In Random Order]

Q22 Think about **the causes of your Level of Hunger.**

Which of the other aspects of your personal identity listed below, if any, caused your Level of Hunger?

You may select as many or as few aspects as you see fit. In the below list, please select all the aspects that you believe influenced or shaped the above aspect of your identity.



- ☐  $\{Q15/ChoiceTextEntryValue/1\}$  (1)
- ☐  $\{Q15/ChoiceTextEntryValue/2\}$  (2)
- ☐  $\{Q15/ChoiceTextEntryValue/3\}$  (3)
- ☐  $\{Q15/ChoiceTextEntryValue/4\}$  (4)
- ☐  $\{e://Field/Football\}$  (5)
- ☐  $\{Q15/ChoiceTextEntryValue/6\}$  (6)
- ☐  $\{Q15/ChoiceTextEntryValue/7\}$  (7)
- ☐  $\{Q15/ChoiceTextEntryValue/8\}$  (8)
- ☐  $\{Q15/ChoiceTextEntryValue/9\}$  (9)
- ☐  $\{Q15/ChoiceTextEntryValue/10\}$  (10)
- ☐ your important childhood memories (12)
- ☐ your personal life goals (13)
- ☐ your friendships (14)
- ☐ your values and principles (15)
- ☐ your personality (11)
- ☐ your cherished memories with parents and family (16)
- ☐  $\{Q15/ChoiceTextEntryValue/5\}$  (17)

☐

⊗ None of the above (18)

---

[Shown Only If Q40 = “Yes”]

[Answer Options Shown In Random Order]

Q31 Think about the **consequences for you of your Level of Hunger**.

Which of the other aspects of your personal identity listed below, if any, were caused by your Level of Hunger?

You may select as many or as few aspects as you see fit. In the below list, please select all the aspects that you believe were influenced or shaped by the above aspect of your identity.

- ☐  $\{Q15/ChoiceTextEntryValue/1\}$  (1)
- ☐  $\{Q15/ChoiceTextEntryValue/2\}$  (2)
- ☐  $\{Q15/ChoiceTextEntryValue/3\}$  (3)
- ☐  $\{Q15/ChoiceTextEntryValue/4\}$  (4)
- ☐  $\{e://Field/Football\}$  (5)
- ☐  $\{Q15/ChoiceTextEntryValue/6\}$  (6)
- ☐  $\{Q15/ChoiceTextEntryValue/7\}$  (7)
- ☐  $\{Q15/ChoiceTextEntryValue/8\}$  (8)
- ☐  $\{Q15/ChoiceTextEntryValue/9\}$  (9)
- ☐  $\{Q15/ChoiceTextEntryValue/10\}$  (10)
- ☐ your important childhood memories (12)
- ☐ your personal life goals (13)
- ☐ your friendships (14)
- ☐ your values and principles (15)
- ☐ your personality (11)
- ☐ your cherished memories with the parents and family (16)
- ☐  $\{Q15/ChoiceTextEntryValue/5\}$  (18)

☐

⊗ None of the above (19)

[Shown Only If Q40 = “Yes”]

Q36

Earlier in this survey you reported [\\$e://Field/Football](#). Imagine that this team is playing in the SuperBowl next year. What is the maximum amount (in US dollars) that you would be willing to pay for a ticket to see them play in the SuperBowl?

---

[Shown Only If Q40 = “Yes”]

Q26 How likely is it that you will watch the Super Bowl today? Please tell us on a scale of 1 to 7 where 1 means that you "definitely will not watch" and 7 means you "definitely will watch."

Definitely will not  
watch

Definitely will watch

1    2    3    4    5    6    7

Will you watch the Super Bowl? ()

[Shown Only If Q40 = “Yes”]

Q27 How interested are you in the sport of football, in general?

- ☐ Very interested (1)
- ☐ Somewhat interested (2)
- ☐ Somewhat uninterested (3)
- ☐ Not interested at all (4)

[Shown Only If Q40 = “Yes”]

Q20 How many **hours per week** do you typically spend on sports (i.e. watching games or sports news, playing on a sports team, attending sports events, reading about sports, playing sports-based video games, etc...)

---

-----

Q22 People vary in the amount they pay attention to these kinds of surveys. Some take them seriously and read each question, whereas others go very quickly and barely read the questions at all. If you have read this question carefully, please write the word yes in the blank Other box below.

- ☐ 1 - Not all (1)
- ☐ 2 (2)
- ☐ 3 (3)
- ☐ 4 (4)
- ☐ 5 - A great deal (5)
- ☐ Other (please specify) (6)

---

-----

Q24 Please provide us the following demographic information:

- ☐ Age (1) \_\_\_\_\_
- ☐ Gender (2) \_\_\_\_\_
- ☐ Language(s) spoken at home (3)

---

Q72 Is English your native language (the first language you learned)?

☐ Yes (1)

☐ No (2)

---

Q30 What is your marital status?

☐ Single (1)

☐ Married, Engaged, Civil Union, or Live-In Partner (2)

☐ Divorced (3)

☐ Widowed (4)

☐ Other (5) \_\_\_\_\_

---

Q34 Household Income: What was your total before-tax household income (including the income of your partner, spouse, or significant other) in 2015?

Please consider income from all sources, including work, alimony, child support, rental income, investment income, and any other money you may receive.

- ☐ Under \$5,000 (11)
- ☐ \$5,000 to \$9,999 (12)
- ☐ \$10,000 to \$14,999 (1)
- ☐ \$15,000 to \$24,999 (2)
- ☐ \$25,000 to \$34,999 (3)
- ☐ \$35,000 to \$44,999 (4)
- ☐ \$45,000 to \$54,999 (5)
- ☐ \$55,000 to \$64,999 (6)
- ☐ \$65,000 to \$74,999 (7)
- ☐ \$75,000 to \$100,000 (8)
- ☐ Over \$100,000 (9)
- ☐ I prefer not to respond. (10)

-----

Q30 What state do you live in?

\_\_\_\_\_

-----

## STUDY 3 MATERIALS

### EMBEDDED DATA

Cond = 1 [FOOTBALL FAN CONDITION]

Cond = 2 [OCCUPATION CONDITION]

---

Q60

Welcome to the survey! In this first part of the survey, we would like to know some basic things about you. In each question, please select the option that best describes you.

-----

Q62 Please select the option that best describes you:

- ☐ I am an NBA fan (28)
  - ☐ I am not an NBA fan (30)
- 

Q67 Please select the option that best describes you:

- ☐ I am a resident of New York, California, or Illinois (28)
  - ☐ I am not a resident of New York, California, or Illinois (30)
- 

Q64 Please select the option that best describes you:

- ☐ I am a pet lover (23)
  - ☐ I am not a pet lover (24)
- 

Q69 Please select the option that best describes you:

- ☐ I am a college graduate (23)
  - ☐ I am not a college graduate (24)
-



Q66 Please select the option that best describes you:

- ☐ I am an environmentally-friendly person (24)
- ☐ I am not an environmentally-friendly person (25)
- 

Q68 Please select the option that best describes you:

- ☐ I am an NFL fan (1)
- ☐ I am not an NFL fan (2)
- 

Q70 Please select the option that best describes you:

- ☐ I am employed (30)
- ☐ I am unemployed (31)
- 

**Q72 Please select the option that best describes you:**

- ☐ I am over 40 years old (23)
- ☐ I am under 40 years old (24)
- 

[Show If Q68 = 2 OR Q70 = 31]

Q74 Thank you for completing the screener.

You did not qualify for the full survey. You will be paid 20 cents for the screener. Thank you for your participation!

Your confirmation code is:

**`{e://Field/compcode}`**

Please hit the >> button to submit your response and then return to the Mechanical Turk page and enter your completion code.

---

[Show If Q68 = 1 OR Q70 = 30]

Q83 Thank you for completing the screener.

Congratulations! You qualify for the full survey.

Please hit the >> button to continue to the rest of the survey. Thank you for your participation!

---

[Show If Q68 = 1]

End of

Q18 Which NFL team are you the biggest fan of? (Enter one team only.)

---

[Show If Q70 = 30]

Q70 What is your profession? (Enter name of main profession only--e.g., math teacher not I teach math to students.)

---

[Show If Embedded Data Cond = 1]

Q15

We would now like you to think about how **your identity as a fan of the  $\{Q18/ChoiceTextEntryValue\}$  relates to other aspects of your identity**. By aspects of your identity, we simply mean things about yourself that describe who you are as a person and are most important to your identity. These can be important experiences/memories, personality traits, moral qualities, preferences, goals/desires, relationships, groups, demographics, anything that you think makes you who you are as a person.

In the spaces below, please list the aspects of your identity that **caused (shaped or influenced) your identity as a fan of the  $\{Q18/ChoiceTextEntryValue\}$** . By caused, we simply mean that the aspect is part of why you are, why you became, or has influenced how you act as a fan of the  $\{Q18/ChoiceTextEntryValue\}$ .

You don't not have to fill all of the below spaces but please list as many aspects as you can think of.

- ☐ 1 (1) \_\_\_\_\_
- ☐ 2 (2) \_\_\_\_\_
- ☐ 3 (3) \_\_\_\_\_
- ☐ 4 (4) \_\_\_\_\_
- ☐ 5 (5) \_\_\_\_\_
- ☐ 6 (6) \_\_\_\_\_
- ☐ 7 (7) \_\_\_\_\_
- ☐ 8 (8) \_\_\_\_\_

---

[Show If Embedded Data Cond = 1]

Q97

In the spaces below, please list the aspects of your identity that were **caused by** (shaped or influenced) your identity as a  $\text{\$}\{Q18/ChoiceTextEntryValue\}$ . By **caused by**, we **simply mean that your identity as a  $\text{\$}\{Q18/ChoiceTextEntryValue\}$**  is part of why you have, why you have developed, or has influenced/shaped how you display these other aspects of your identity.

You don't not have to fill all of the below spaces but please list as many aspects as you can think of.

- ☐ 1 (1) \_\_\_\_\_
- ☐ 2 (2) \_\_\_\_\_
- ☐ 3 (3) \_\_\_\_\_
- ☐ 4 (4) \_\_\_\_\_
- ☐ 5 (5) \_\_\_\_\_
- ☐ 6 (6) \_\_\_\_\_
- ☐ 7 (7) \_\_\_\_\_
- ☐ 8 (8) \_\_\_\_\_

---

[Show If Embedded Data Cond = 1]

Q54 Now, in the space below, **please tell us about how the aspects of your identity that you just listed in the last two questions have shaped or have been shaped by your identity as a fan of the  $\{Q18/ChoiceTextEntryValue\}$ .** Please write at least 3 sentences describing how your identity as a fan of the  $\{Q18/ChoiceTextEntryValue\}$  is causally related to these other aspects of your identity.

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---

[Show If Embedded Data Cond = 2]

Q96

We would now like you to think about how **your identity as a  $\{Q70/ChoiceTextEntryValue\}$  relates to other aspects of your identity.** By aspects of your identity, we simply mean things about yourself that describe who you are as a person and are most important to your identity. These can be important experiences/memories,

personality traits, moral qualities, preferences, goals/desires, relationships, groups, demographics, anything that you think makes you who you are as a person.

In the spaces below, please list the aspects of your identity that **caused (shaped or influenced) your identity as a \${Q70/ChoiceTextEntryValue}**. By caused, we simply mean that the aspect is part of why you are, why you became, or has influenced how you act as a **\${Q70/ChoiceTextEntryValue}**.

You don't not have to fill all of the below spaces but please list as many aspects as you can think of.

- ☐ 1 (1) \_\_\_\_\_
- ☐ 2 (2) \_\_\_\_\_
- ☐ 3 (3) \_\_\_\_\_
- ☐ 4 (4) \_\_\_\_\_
- ☐ 5 (5) \_\_\_\_\_
- ☐ 6 (6) \_\_\_\_\_
- ☐ 7 (7) \_\_\_\_\_
- ☐ 8 (8) \_\_\_\_\_

-----  
[Show If Embedded Data Cond = 2]

Q88

In the spaces below, please list the aspects of your identity that were **caused by** (shaped or influenced) your identity as a **\${Q70/ChoiceTextEntryValue}**. By **caused by, we simply mean that your identity as a \${Q70/ChoiceTextEntryValue}** is part of why you have, why you have developed, or has influenced/shaped how you display these other aspects of your identity.

You don't not have to fill all of the below spaces but please list as many aspects as you can think of.

- ☐ 1 (1) \_\_\_\_\_
- ☐ 2 (2) \_\_\_\_\_
- ☐ 3 (3) \_\_\_\_\_
- ☐ 4 (4) \_\_\_\_\_
- ☐ 5 (5) \_\_\_\_\_
- ☐ 6 (6) \_\_\_\_\_
- ☐ 7 (7) \_\_\_\_\_
- ☐ 8 (8) \_\_\_\_\_

---

[Show If Embedded Data Cond = 2]

Q98 Now, please write about how the aspects you just listed in the last two questions have shaped or have been shaped by your identity as a  $\{Q70/ChoiceTextEntryValue\}$ . Please write at least 3 sentences describing how your identity as a  $\{Q70/ChoiceTextEntryValue\}$  is causally related to these other aspects of your identity.

---

---

---

---

---

---

Q36

Earlier in this survey you reported being a fan of the  $\{Q18/ChoiceTextEntryValue\}$ . Imagine that this team is playing in the next Super Bowl that happens. What is the maximum amount (in US dollars) that you would be willing to pay for a ticket to see them play in the Super Bowl?

Use only numbers (do not use any symbols or decimals, etc).

Q86 Please tell us how much [\\${Q18/ChoiceTextEntryValue}](#) fan describes who you are on a scale of 1 to 7. Where 1 means "does not describe me" and 7 means "describes me perfectly."

Does not describe me Describes me perfectly

1 2 3 4 5 6 7

How much does <a href="#">\${a://QID34/ChoiceTextEntryValue}</a> fan describe you? ()	
---	--

Q88 Please tell us how much you identify with [\\${Q18/ChoiceTextEntryValue}](#) fans on a scale of 1 to 7 where 1 means "do not identify with group in any way" and 7 means "strongly identify with group."

Do not identify with [\\${e://Field/Team}](#) fans in any way Strongly identify with [\\${e://Field/Team}](#) fans

1 2 3 4 5 6 7

How strongly do you identify with <a href="#">\${Q18/ChoiceTextEntryValue}</a> fans? ()	
---	--

Q90 Please tell us how much you admire [\\${Q18/ChoiceTextEntryValue}](#) fans on a scale of 1 to 7 where 1 means "do admire the group" and 7 means "really admire the group."

Do not admire group Really admire group

1 2 3 4 5 6 7

How much do you admire <a href="#">\${Q18/ChoiceTextEntryValue}</a> fans? ()	
--	--

Q76 You're almost done! Just a few more questions to go. Remember, your responses will be kept anonymous, confidential, and will be analyzed only in the aggregate.

---



Q78 What is your age (please enter a whole number)?

---

Q80 What is your gender?

- ☐ Male (1)
  - ☐ Female (2)
  - ☐ Other (3)
- 

Q22 People vary in the amount they pay attention to these kinds of surveys. Some take them seriously and read each question, whereas others go very quickly and barely read the questions at all. If you have read this question carefully, please write the word yes in the blank Other box below.

- ☐ 1 - Not all (1)
  - ☐ 2 (2)
  - ☐ 3 (3)
  - ☐ 4 (4)
  - ☐ 5 - A great deal (5)
  - ☐ Other (please specify) (6) \_\_\_\_\_
-



Q82 What is your native language (the one that you grew up speaking)?

- ☐ English (1)
  - ☐ Spanish (2)
  - ☐ Chinese (including Mandarin and Cantonese) (4)
  - ☐ Other (please specify): (5) \_\_\_\_\_
- 

Q84 What is the highest degree or level of school you have completed, as of today?

- ☐ No schooling completed (1)
  - ☐ Nursery school to 8th grade (2)
  - ☐ 9th, 10th, 11th grade, or 12th without diploma (3)
  - ☐ High school diploma or equivalent (4)
  - ☐ Some college, but not currently enrolled (5)
  - ☐ Some college, and currently enrolled (6)
  - ☐ 2-year college, AA or AS degree (7)
  - ☐ 4-year college, BA or BS degree (8)
  - ☐ Master's degree (9)
  - ☐ Doctorate degree (11)
-

Q92 What is your total pretax household income?

- ☐ Less than \$10,000 (1)
  - ☐ \$10,000-\$19,999 (2)
  - ☐ \$20,000-\$29,999 (3)
  - ☐ \$30,000-\$39,999 (4)
  - ☐ \$40,000-\$49,999 (5)
  - ☐ \$50,000-\$59,999 (6)
  - ☐ \$60,000-\$69,999 (7)
  - ☐ \$70,000-\$79,999 (8)
  - ☐ \$80,000-\$89,999 (9)
  - ☐ \$90,000-\$99,999 (10)
  - ☐ \$100,000-\$124,999 (11)
  - ☐ \$125,000-\$149,999 (12)
  - ☐ \$150,000-\$199,999 (13)
  - ☐ \$200,000 or greater (14)
- 

Q88 Please specify your ethnicity:

- ☐ Asian American / Pacific Islander (7)
- ☐ Black or African American (5)
- ☐ Hispanic or Latino American (4)
- ☐ Native American or American Indian (6)
- ☐ White or Caucasian American (1)
- ☐ Other (8)

## STUDY 4 MATERIALS

Q34

Welcome to the survey! In this survey, we will ask you about how the characteristics of your identity fit together to make up who you are.

**In the first part, we would like to know some basics about you. In each question, please select the option that best describes you.**

---

Q36 Please select the option that best describes you:

- ☐ I want to retire at 65 years old (28)
  - ☐ I don't want to retire at 65 years old (30)
- 

Q38 Please select the option that best describes you:

- ☐ I am a pet lover (23)
  - ☐ I am not a pet lover (24)
- 

Q64 Please select the option that best describes you:

- ☐ I want to be an environmentally-friendly person (24)
  - ☐ I don't want to be an environmentally-friendly person (25)
- 

Q42 Please select the option that best describes you:

- ☐ I am a sports fan (1)
  - ☐ I am not a sports fan (2)
-

Q44 Please select the option that best describes you:

- ☐ I want to move to another city/town (30)
- ☐ I don't want to move to another city/town (31)

---

Q65 Please select the option that best describes you ("frugal" means being sparing or economical with regard to money or food):

- ☐ I am a frugal person (23)
- ☐ I am not a frugal person (24)

---

[SHOWN ONLY FOR THE ENVIRONMENTALIST CONDITION]

Q20

We'd now like you to reflect a bit on one of the features of your identity that you just selected.

Please write at least 5 sentences on the following aspect of your identity:

**`{Q64/ChoiceGroup/SelectedChoices}`**

Please express any thoughts you have about this aspect of your identity that you listed earlier. For example, you might write about what this aspect means to you, how you would express this aspect, and/or how this aspect has affected you.

Please be as specific as possible.

---

---

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---

[SHOWN ONLY FOR THE CONTROL CONDITION]

Q24

We'd now like you to reflect a bit on what you do with your time.

Please write at least 5 sentences about what you did yesterday.

Please express any thoughts you have about what you did yesterday. For example, you might write about what activities you did, how you did them, and/or how any of those actions affected you.

Please be as specific as possible.

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Q3 On the next page, please write down the identity features that are most important to you. That is, the aspects of your identity that make you the person who you are. Please do NOT mention any choices you just made in the first multiple-choice part of the survey.

-----

Q5 In the space provided below, please list a memory that is most important to your identity. Please be as specific as possible--let us know what memory has made you the person who you are.

Please do NOT mention any choice you made in the previous survey.

Memory (1) \_\_\_\_\_

-----

Q7 In the space provided below, please list a **goal or desire** that is most important to your identity. Please be as specific as possible--let us know what goal or desire has made you the

person who you are.

Please do NOT mention any choice you made in the previous survey.

Goal/Desire (1) \_\_\_\_\_

-----

Q9 In the space provided below, please list a **preference** that is most important to your identity. Please be as specific as possible--let us know what preference has made you the person who you are. Please do NOT mention any choice you made in the previous survey.

Preference (1) \_\_\_\_\_

-----

Q11 In the space provided below, please list a **moral quality** that is most important to your identity. Please be as specific as possible--let us know what moral quality has made you the person who you are. Please do NOT mention any choice you made in the previous survey.

Moral Quality (1) \_\_\_\_\_

-----

Q13 In the space provided below, please list a **personality trait** that is most important to your identity. Please be as specific as possible--let us know what personality trait has made you the person who you are. Please do NOT mention any choice you made in the previous survey.

Personality Trait (1) \_\_\_\_\_

-----

Q15 In the space provided below, please list any other aspect of your identity that you believe is important to your identity. Please do NOT mention any choice you made in the previous survey.

Other Aspect (1) \_\_\_\_\_

-----

Q43 Please press the arrow to continue to the next page.

---

Q44

Soon we will now ask you to tell us **which features/aspects of your identity cause other features/aspects of your identity**. But first, we will practice identifying these types of causal relationships with an example.

Let's start the practice now!

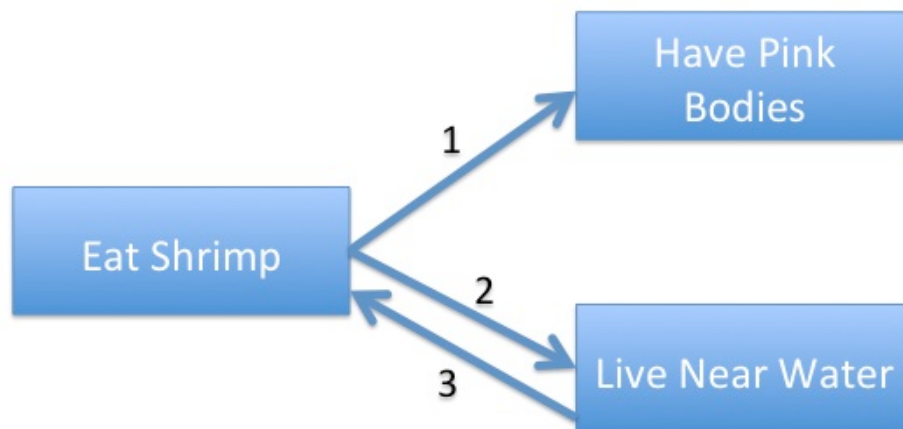
Below is a diagram of how the features of a flamingo fit together. The arrows represent causal relationships such that the items that the arrows point to are caused by (or shaped by) the items at the beginning of the arrow. In the diagram below there are a series of arrows that represent the following causal relationships:

Arrow #1: Eating shrimp causes flamingos to be pink, the more shrimp they eat the pinker their bodies become.

Arrow #2: Eating shrimp causes flamingos to live near water. That is, flamingos live near water so they can find shrimp to eat.

Arrows #3: Because they tend to live near water, flamingos eat shrimp. That is, it's easy to eat shrimp because they live near water. The closer to water they live, the more shrimp they eat.

The combination of Arrows #2 and #3 mean that Living Near Water and Eating Shrimp cause one another.



You will now practice the task with the concept diagrammed above. In this task we will present each of the features one-by-one and ask which of the other features it causes. Please answer the following questions in order to express the causal relationships in the diagram above. The diagram will appear on the following screens so there is no need to memorize it.

---

Q46

Think about the feature: Eat Shrimp.

Which of the following features of flamingos are caused by the fact that they Eat Shrimp?  
Please select all that apply.

- ☐ Have Pink Bodies (4)
- ☐ Live Near Water (5)
- ☒ None of these features are caused by: Eat Shrimp (6)

---

*Display This Question:*

*If  $Q46 = 4$*

*And  $Q46 = 5$*

Q48

That's correct! According to the diagram Eat Shrimp causes flamingos to both Have Pink Bodies and Live Near Water.

---

*Display This Question:*

*If  $Q46 \neq 4$*

*Or  $Q46 \neq 5$*

Q50

That's incorrect. According to the diagram the fact that flamingos Eat Shrimp causes them to both Have Pink Bodies and to Live Near Water, so both Have Pink Bodies and Live Near Water should have been selected.

---

Q52

Think about the feature: Have Pink Bodies



Which of the following features are caused by Have Pink Bodies? Please select all that apply.

☐

Live Near Water (4)

☐

Eat Shrimp (5)

☐

☒ None of these features are caused by: Have Pink Bodies (6)

-----

*Display This Question:*

*If  $Q52 = 6$*

Q54

That's correct! According to the diagram Have Pink Bodies does not cause any other features of flamingos.

---

*Display This Question:*

*If  $Q52 \neq 6$*

Q56

That's incorrect. According to the diagram Have Pink Bodies does not cause either one of the other features so None of These Features should have been selected.

---

Q58 We are done with practice! You will now do the same task for the features/aspects of your **personal identity** that you listed and selected earlier in this survey.

There are no right or wrong answers. We are interested in how you think the features of your identity are causally related. That is, which features cause or shape other features of your personal identity.

You should indicate as many or as few causal relationships as you see fit.

[FOR EACH PARTICIPANT, ANSWERS TO Q36, Q38, Q64, Q42, Q44, Q65, Q5, Q7, Q9, Q11, Q13, Q15 RANDOMLY ASSIGNED TO VARIABLES S1 – S12]

-----

Q44 Think about the following aspect of your identity: **#{e://Field/S1}**

Which of the other features of your personal identity listed below, if any, are caused by this aspect: **#{e://Field/S1}**? By caused by, we simply mean that the feature was influenced or shaped by this aspect: **#{e://Field/S1}**.

You may select as many or as few features as you see fit. In the below list, please select all the features that you believe are caused by the above feature.

- ☐  $\{e://Field/S2\}$  (1)
- ☐  $\{e://Field/S3\}$  (2)
- ☐  $\{e://Field/S4\}$  (3)
- ☐  $\{e://Field/S5\}$  (4)
- ☐  $\{e://Field/S6\}$  (5)
- ☐  $\{e://Field/S7\}$  (6)
- ☐  $\{e://Field/S8\}$  (7)
- ☐  $\{e://Field/S9\}$  (8)
- ☐  $\{e://Field/S10\}$  (9)
- ☐  $\{e://Field/S11\}$  (10)
- ☐  $\{e://Field/S12\}$  (11)
- ☐ ☒ None of these features are caused by this aspect:  $\{e://Field/S1\}$  (12)

[Q43-Q49 AND Q50-53 SAME AS Q44 ABOVE WITH DIFFERENT TARGET ASPECTS]

Q43 Think about the following aspect of your identity:  $\{e://Field/S2\}$

Q44 Think about the following aspect of your identity:  $\{e://Field/S3\}$

-----

Q45 Think about the following aspect of your identity: **#{e://Field/S4}**

-----

Q46 Think about the following aspect of your identity: **#{e://Field/S5}**

-----

Q47 Think about the following aspect of your identity: **#{e://Field/S6}**

-----

Q48 Think about the following aspect of your identity: **#{e://Field/S7}**

-----

Q49 Think about the following aspect of your identity: **#{e://Field/S8}**

-----

[ATTENTION CHECK]

Q54 The results of the survey and our research depend critically on your answers and the attention you pay to the questions. We appreciate the time you take to participate in our survey!

To make sure you are reading the questions carefully, for this question, we would like you not to select any of the below options. Simply hit the arrow to continue in the survey and do not check any of the boxes.

- ☐  $\{e://Field/S1\}$  (1)
  - ☐  $\{e://Field/S2\}$  (2)
  - ☐  $\{e://Field/S3\}$  (3)
  - ☐  $\{e://Field/S4\}$  (4)
  - ☐  $\{e://Field/S5\}$  (5)
  - ☐  $\{e://Field/S6\}$  (6)
  - ☐  $\{e://Field/S7\}$  (7)
  - ☐  $\{e://Field/S8\}$  (8)
  - ☐  $\{e://Field/S10\}$  (9)
  - ☐  $\{e://Field/S11\}$  (10)
  - ☐  $\{e://Field/S12\}$  (11)
  - ☐  $\otimes$ None of these features are caused by this aspect:  $\{e://Field/S9\}$  (12)
-

Q50 Think about the following aspect of your identity:  $\{e://Field/S9\}$

---

Q51 Think about the following aspect of your identity:  $\{e://Field/S10\}$

---

Q52 Think about the following aspect of your identity:  $\{e://Field/S11\}$

---

Q53 Think about the following aspect of your identity:  $\{e://Field/S12\}$

---

Q26

You will now make some **purchasing decisions**. For each of the following pairs of products, please tell us which you would rather purchase. Please report which product you think you would **actually** purchase if faced with this decision.

---

[ANSWER OPTIONS DISPLAYED SIDE-BY-SIDE WITH PICTURES OF PRODUCTS, SEE Q36 FOR PICTURES, SIDE THAT PRODUCTS WERE DISPLAYED ON WAS RANDOMIZED]

Q28 Imagine that you need light bulbs, which would you prefer to purchase? The light bulbs in the pictures are same in size.

☐ GE 60-Watt, 4-Pack of A19 Light Bulbs for \$4 (1)

☐ GE LED 60-Watt, 4 Pack of A19 Light Bulbs for \$19.99 (2)

---

[ANSWER OPTIONS DISPLAYED SIDE-BY-SIDE WITH PICTURES OF PRODUCTS, SEE Q38 FOR PICTURES, SIDE THAT PRODUCTS WERE DISPLAYED ON WAS RANDOMIZED]

Q30 Imagine that you need a bag to put your groceries in, which would you prefer to purchase?

- ☐ One single-use plastic shopping bag for \$0.10 (1)
- ☐ One re-usable canvas shopping bag for \$3.99 (2)

[ANSWER OPTIONS DISPLAYED SIDE-BY-SIDE WITH PICTURES OF PRODUCTS, SEE Q40 FOR PICTURES, SIDE THAT PRODUCTS WERE DISPLAYED ON WAS RANDOMIZED]

Q32 Imagine that you need batteries, which would you prefer to purchase?

- ☐ Energizer 4-pack of AA alkaline batteries for \$4.99 (1)
- ☐ Energizer 4-pack of AA rechargeable batteries for \$13.99 (2)

Q34 Now, for each of the choices you made, please tell us which product you think is better for the environment.

Q36 Light Bulbs

60-watt  
incandescent  
light bulbs



Neither product

60-watt LED  
light bulbs



1

2

3

4

5

Which product is better for the environment? ()





### Q38 Shopping Bags

Single-use  
plastic  
shopping bag

Neither product

Re-usable  
canvas  
shopping bag



1

2

3

4

5

Which product is better for the  
environment? ()



### Q40 Batteries

Energizer  
alkaline  
batteries

Neither product

Energizer re-  
chargeable  
batteries



1

2

3

4

5

Which product is better for the  
environment? ()



Q58 You're almost done! Just a few more questions to go. Remember, your responses will be kept anonymous, confidential, and will be analyzed only in the aggregate.

---

Q60 What is your age?

---

Q62 What is your gender?

☐ Male (1)

☐ Female (2)

---

Q64 What is your native language (the one that you grew up speaking)?

---

Q66 What is the highest degree or level of school you have completed, as of today?

- ☐ No schooling completed (1)
  - ☐ Nursery school to 8th grade (2)
  - ☐ 9th, 10th, or 11th grade (3)
  - ☐ High school diploma or equivalent (4)
  - ☐ Some college, but not currently enrolled (5)
  - ☐ Some college, and currently enrolled (6)
  - ☐ Associate degree (7)
  - ☐ Bachelor's degree (8)
  - ☐ Master's degree (9)
  - ☐ Professional degree (10)
  - ☐ Doctorate degree (11)
-

Q68 What is your total pretax household income?

- ☐ Less than \$10,000 (1)
  - ☐ \$10,000-\$19,999 (2)
  - ☐ \$20,000-\$29,999 (3)
  - ☐ \$30,000-\$39,999 (4)
  - ☐ \$40,000-\$49,999 (5)
  - ☐ \$50,000-\$59,999 (6)
  - ☐ \$60,000-\$69,999 (7)
  - ☐ \$70,000-\$79,999 (8)
  - ☐ \$80,000-\$89,999 (9)
  - ☐ \$90,000-\$99,999 (10)
  - ☐ \$100,000-\$124,999 (11)
  - ☐ \$125,000-\$149,999 (12)
  - ☐ \$150,000-\$199,999 (13)
  - ☐ \$200,000 or greater (14)
-

Q70 What best describes your religious views or identity?

- ☐ Catholic (9)
  - ☐ Protestant (10)
  - ☐ Evangelical (11)
  - ☐ Other Christian (1)
  - ☐ Islam (2)
  - ☐ Judaism (7)
  - ☐ Buddhism (3)
  - ☐ Other religions (4)
  - ☐ Agnosticism or Atheism (5)
  - ☐ Spiritual but unaffiliated (8)
  - ☐ Rather not say (6)
-

## STUDY 5 MATERIALS

### Phase 1

#### Screening Intro

Welcome to the survey! In this survey, we will ask you about how the characteristics of your identity fit together to make up who you are.

**In the first part, we would like to know some basics about you. In each question, please select the option that best describes you.**

-----

IDretire Please select the option that best describes you:

- ☐ I want to retire at 65 years old (28)
  - ☐ I don't want to retire at 65 years old (30)
- 

IDpet Please select the option that best describes you:

- ☐ I am a pet lover (23)
  - ☐ I am not a pet lover (24)
- 

IDenviron Please select the option that best describes you:

- ☐ I want to be an environmentally-friendly person (24)
  - ☐ I don't want to be an environmentally-friendly person (25)
- 

IDsport Please select the option that best describes you:

- ☐ I am a sporty person (1)
  - ☐ I am not a sporty person (2)
-

IDcity Please select the option that best describes you:

- ☐ I want to move to another city (30)
- ☐ I don't want to move to another city (31)
- 

IDfrugal **Please select the option that best describes you ("frugal" means being sparing or economical with regard to money or food):**

- ☐ I am a frugal person (23)
- ☐ I am not a frugal person (24)
- 

[SHOWN ONLY IF QIDFRUGAL = 24 OR QIDENVIRON = 25]

no-qualify-end Thank you for completing the screener!

You did not qualify for the full survey, so you will be paid 10 cents for the screener.

You will not be invited to participate in the second part of the study.

Your confirmation code for this study is:

QX\${e://Field/compcode}

Please hit the >> button to submit your response and then return to the Mechanical Turk page and enter your completion code.

---

qualified page Thank you for completing the screener.

You have qualified for the full survey. We will now begin the main survey!

---

SalienceIntro You have selected some personal identity features in the previous section. Now we would like you to elaborate on **one** of these identity features. We will randomly select one of your identity features that you answered "yes" in the previous questions. Please write at least **5** sentences on this identity feature.

The identity feature you are going to write about will be shown on the next page.

---

[SHOWN FOR ENVIRONMENTALIST CONDITION ONLY]

EnviorCondi Please write at least 5 sentences on this identity feature:

**I want to be an environmentally-friendly person**

Please express any thoughts you have about this aspect of your identity that you listed earlier, and describe how it has affected you.

Please be as specific as possible.

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---

[SHOWN FOR CONTROL CONDITION ONLY]

FrugalCondi Please write at least 5 sentences on this identity feature:

**I am a frugal person**

Please express any thoughts you have about this aspect of your identity that you listed earlier, and describe how it has affected you.

Please be as specific as possible.

---

---

---



---

---

Choice intro

You will now make some **purchasing decisions**. For each of the following pairs of products, please tell us which you would rather purchase. Please report which product you think you would **actually** purchase if faced with this decision.

---

[ANSWER OPTIONS DISPLAYED SIDE-BY-SIDE WITH PICTURES OF PRODUCTS, SEE QBULB\_RATE FOR PICTURES, SIDE THAT PRODUCTS WERE DISPLAYED ON WAS RANDOMIZED]

bulb\_choice Imagine that you need light bulbs, which would you prefer to purchase? The light bulbs in the pictures are same in size.

- ☐ GE 60-Watt, 4-Pack of A19 Light Bulbs for \$4 (1)
  - ☐ GE LED 60-Watt, 4 Pack of A19 Light Bulbs for \$19.99 (2)
- 

[ANSWER OPTIONS DISPLAYED SIDE-BY-SIDE WITH PICTURES OF PRODUCTS, SEE QBAG\_RATE FOR PICTURES, SIDE THAT PRODUCTS WERE DISPLAYED ON WAS RANDOMIZED]

bag\_choice Imagine that you need a bag to put your groceries in, which would you prefer to purchase?

- ☐ One single-use plastic shopping bag for \$0.10 (1)
  - ☐ One re-usable canvas shopping bag for \$3.99 (2)
- 

[ANSWER OPTIONS DISPLAYED SIDE-BY-SIDE WITH PICTURES OF PRODUCTS, SEE QBATT\_RATE FOR PICTURES, SIDE THAT PRODUCTS WERE DISPLAYED ON WAS RANDOMIZED]

batt\_choice Imagine that you need batteries, which would you prefer to purchase?

- ☐ Energizer 4-pack of AA alkaline batteries for \$4.99 (1)
- ☐ Energizer 4-pack of AA rechargeable batteries for \$13.99 (2)

rating intro Now, for each of the choices you made, please tell us which product you think is better for the environment.

bulb\_rate Light Bulbs

60-watt incandescent light bulbs      Neither product      60-watt LED light bulbs



60-watt incandescent light bulbs      Neither product      60-watt LED light bulbs

1      2      3      4      5

Which product is better for the environment? ()



bag\_rate Shopping Bags

Single-use  
plastic  
shopping bag

Neither product

Re-usable  
canvas  
shopping bag



1

2

3

4

5

Which product is better for the  
environment? ()



batt\_rate Batteries

Energizer  
alkaline  
batteries

Neither product

Energizer re-  
chargeable  
batteries



1

2

3

4

5

Which product is better for the  
environment? ()



GenEnd Thank you for completing the survey! You will be paid \$0.50 for participating in this survey.

**Please note you will be invited to participate in the second part of the study via M-turk in around one week. You will receive an additional \$2.00 for completing the second part of the study!**

Your confirmation code for this study is:

**`${e://Field/compcode}`**

Please hit the >> button to submit your response and then return to the Mechanical Turk page and enter your completion code.

-----

Phase 2

workerID Please enter your worker ID below. You won't be able to continue to the next section if you enter your ID incorrectly.

-----

Q380 Please click the arrow below to continue.

-----

[SHOWN ONLY IF WORKERID WAS NOT FOUND IN PHASE 1 DATA]

Q381

Sorry, we could not find your worker ID: **`${workerID/ChoiceTextEntryValue}`**

Please re-enter your worker ID below. You won't be able to continue to the next section if you enter your ID incorrectly.

-----

Q1112 Please click the arrow below to continue.

[SHOWN IF WORKERID WAS FOUND IN PHASE 1 DATA]

IDintro Thank you for entering your workerID.

On the next page, please write down the identity features that are most important to you. That is, the aspects of your identity that make you the person who you are. Please do NOT mention any choice you made in the previous survey.

-----

IDmemo In the space provided below, please list a memory that is most important to your identity. Please be as specific as possible--let us know what memory has made you the person who you are.

Please do NOT mention any choice you made in the previous survey.

☐ Memory (1) \_\_\_\_\_

-----

IDgoal In the space provided below, please list a **goal or desire** that is most important to your identity. Please be as specific as possible--let us know what goal or desire has made you the person who you are.

Please do NOT mention any choice you made in the previous survey.

☐ Goal/Desire (1) \_\_\_\_\_

-----

IDprefer In the space provided below, please list a **preference** that is most important to your identity. Please be as specific as possible--let us know what preference has made you the person who you are. Please do NOT mention any choice you made in the previous survey.

☐ Preference (1) \_\_\_\_\_

-----

IDmoral In the space provided below, please list a **moral quality** that is most important to your identity. Please be as specific as possible--let us know what moral quality has made you the person who you are. Please do NOT mention any choice you made in the previous survey.

☐ Moral Quality (1) \_\_\_\_\_

-----

IDpersona In the space provided below, please list a **personality trait** that is most important to your identity. Please be as specific as possible--let us know what personality trait has made you the person who you are. Please do NOT mention any choice you made in the previous survey.

☐ Personality Trait (1) \_\_\_\_\_

-----

IDother In the space provided below, please list any other aspect of your identity that you believe is important to your identity. Please do NOT mention any choice you made in the previous survey.

☐ Other Aspect (1) \_\_\_\_\_

-----

PracInstruct

We will now ask you to tell us **which identity features cause other identity features**. But first, we will practice identifying causal relationships with an example.

Let's start the practice now!

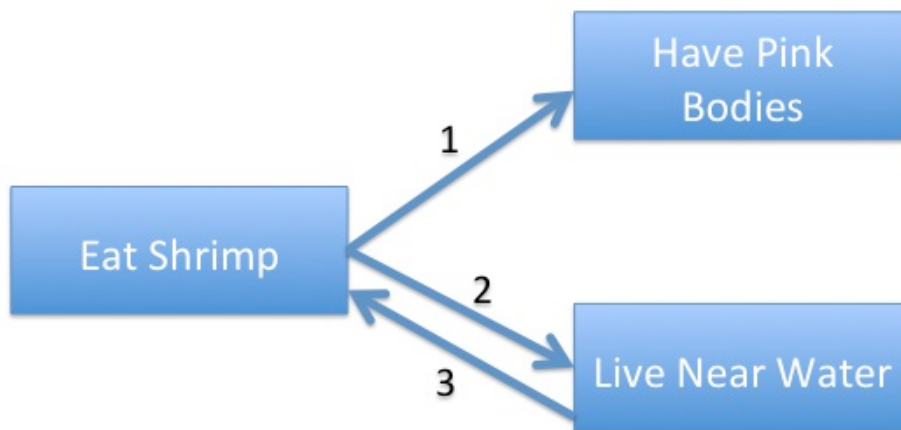
Below is a diagram of how the features of a flamingo fit together. The arrows represent causal relationships such that the items that the arrows point to are caused by (or shaped by) the items at the beginning of the arrow. In the diagram below there are a series of arrows that represent the following causal relationships:

Arrow #1: Eating shrimp causes flamingos to be pink, the more shrimp they eat the pinker their bodies become.

Arrow #2: Eating shrimp causes flamingos to live near water. That is, flamingos live near water so they can find shrimp to eat.

Arrows #3: Because they tend to live near water, flamingos eat shrimp. That is, it's easy to eat shrimp because they live near water. The closer to water they live, the more shrimp they eat.

The combination of Arrows #2 and #3 mean that Living Near Water and Eating Shrimp cause one another.



You will now practice the task with the concept diagrammed above. In this task we will present each of the features one-by-one and ask which of the other features it causes. Please answer the following questions in order to express the causal relationships in the diagram above. The diagram will appear on the following screens so there is no need to memorize it.

---

#### PracShrimpQ

Think about the feature: Eat Shrimp.

Which of the following features of flamingos are caused by the fact that they Eat Shrimp? Please select all that apply.

- ☐ Have Pink Bodies (4)
- ☐ Live Near Water (5)
- ☒ None of these features are caused by: Eat Shrimp (6)

---

Page Break

*Display This Question:*

*If  $\text{PracShrimpQ} = 4$*

*And  $\text{PracShrimpQ} = 5$*

PracShrimpR

That's correct! According to the diagram Eat Shrimp causes flamingos to both Have Pink Bodies and Live Near Water.

*Display This Question:*

*If  $\text{PracShrimpQ} \neq 4$*

*Or  $\text{PracShrimpQ} \neq 5$*

PracShrimpW

That's incorrect. According to the diagram the fact that flamingos Eat Shrimp causes them to both Have Pink Bodies and to Live Near Water, so both Have Pink Bodies and Live Near Water should have been selected.

PracPinkQ

Think about the feature: Have Pink Bodies

Which of the following features are caused by Have Pink Bodies? Please select all that apply.

☐

Live Near Water (4)

☐

Eat Shrimp (5)

☐

☒ None of these features are caused by: Have Pink Bodies (6)

*Display This Question:*

*If  $\text{PracPinkQ} = 6$*



PracPinkR

That's correct! According to the diagram Have Pink Bodies does not cause any other features of flamingos.

---

*Display This Question:*

*If PracPinkQ != 6*

PracPinkW

That's incorrect. According to the diagram Have Pink Bodies does not cause either one of the other features so None of These Features should have been selected.

---

PracEnd We are done with practice! You will now do the same task for your **personal identity** features that you listed and selected earlier.

You will see a list of identity features on the next page. Some identity features are selected from your answers in the previous survey. For example, if you selected the choice "I am a pet lover" in the previous survey, this answer may appear as one of your identity features in the following questions.

There are no right or wrong answers. We are interested in how you think the features of your identity are causally related. That is, which features cause or shape other features of your personal identity.

You should indicate as many or as few causal relationships as you see fit.

---

causal\_retire Think about the following aspect of your identity:

***$\{e://Field/IDretire\}$***

Which of the other features of your personal identity listed below, if any, are caused by this aspect:  ***$\{e://Field/IDretire\}$*** ? By caused by, we simply mean that the feature was influenced or shaped by:  ***$\{e://Field/IDretire\}$*** .

You may select as many or as few features as you see fit. In the below list, please select all the features that you believe are caused by the above feature.

- ☐  $\{e://Field/IDPet\}$  (1)
- ☐  $\{e://Field/IDEnviron\}$  (2)
- ☐  $\{e://Field/IDSport\}$  (3)
- ☐  $\{e://Field/IDCity\}$  (4)
- ☐  $\{e://Field/IDFrugal\}$  (5)
- ☐  $\{IDmemo/ChoiceTextEntryValue/1\}$  (6)
- ☐  $\{IDgoal/ChoiceTextEntryValue/1\}$  (9)
- ☐  $\{IDprefer/ChoiceTextEntryValue/1\}$  (11)
- ☐  $\{IDmoral/ChoiceTextEntryValue/1\}$  (13)
- ☐  $\{IDpersona/ChoiceTextEntryValue/1\}$  (16)
- ☐  $\{IDother/ChoiceTextEntryValue/1\}$  (18)
- ☐ ☒ None of these were caused by:  $\{e://Field/IDretire\}$  (15)

[QUESTIONS BELOW UNTIL THE ATTENTION CHECK ARE THE SAME AS QCAUSAL\_REITRE WITH DIFFERENT TARGET FEATURES]

causal\_pet Think about the following aspect of your identity:

**$\${e://Field/IDPet}$**

-----

causal\_environ Think about the following aspect of your identity:

**$\${e://Field/IDEnviron}$**

-----

causal\_sport Think about the following aspect of your identity:

**$\${e://Field/IDSport}$**

-----

causal\_city Think about the following aspect of your identity:

**$\${e://Field/IDCity}$**

-----

causal\_frugal Think about the following aspect of your identity:

**$\${e://Field/IDFrugal}$**

-----

causal\_memo Think about the following aspect of your identity:

**$\${IDmemo/ChoiceTextEntryValue/1}$**

-----

causal\_goal Think about the following aspect of your identity:

**$\${IDgoal/ChoiceTextEntryValue/1}$**

-----

[ATTENTION CHECK]

Attention The results of the survey and our research depend critically on your answers and the attention you pay to the questions. We appreciate the time you take to participate in our survey!

To make sure you are reading the questions carefully, for this question, we would like you not to select any of the below options. Simply hit the arrow to continue in the survey and do not check any of the boxes.

- ☐ `#{e://Field/IDretire}` (20)
  - ☐ `#{e://Field/IDPet}` (1)
  - ☐ `#{e://Field/IDEnviron}` (2)
  - ☐ `#{e://Field/IDSport}` (3)
  - ☐ `#{e://Field/IDCity}` (4)
  - ☐ `#{e://Field/IDFrugal}` (5)
  - ☐ `#{IDmemo/ChoiceTextEntryValue/1}` (6)
  - ☐ `#{IDgoal/ChoiceTextEntryValue/1}` (9)
  - ☐ `#{IDprefer/ChoiceTextEntryValue/1}` (11)
  - ☐ `#{IDmoral/ChoiceTextEntryValue/1}` (13)
  - ☐ `#{IDpersona/ChoiceTextEntryValue/1}` (16)
  - ☐ `#{IDother/ChoiceTextEntryValue/1}` (18)
-

[QUESTIONS BELOW UNTIL QCONCLUINTRO ARE THE SAME AS QCAUSAL\_REITRE WITH DIFFERENT TARGET FEATURES]

causal\_pref Think about the following aspect of your identity:

**$\{\text{IDprefer}/\text{ChoiceTextEntryValue}/1\}$**

-----

causal\_moral Think about the following aspect of your identity:

**$\{\text{IDmoral}/\text{ChoiceTextEntryValue}/1\}$**

-----

causal\_persona Think about the following aspect of your identity:

**$\{\text{IDpersona}/\text{ChoiceTextEntryValue}/1\}$**

-----

causal\_other Think about the following aspect of your identity:

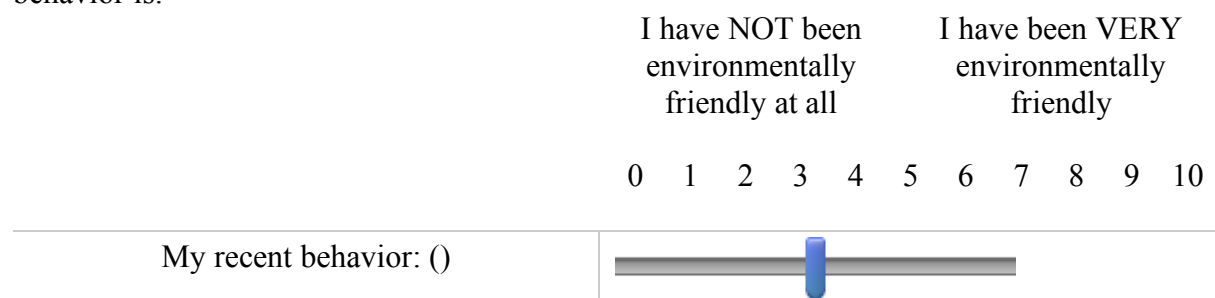
**$\{\text{IDother}/\text{ChoiceTextEntryValue}/1\}$**

-----

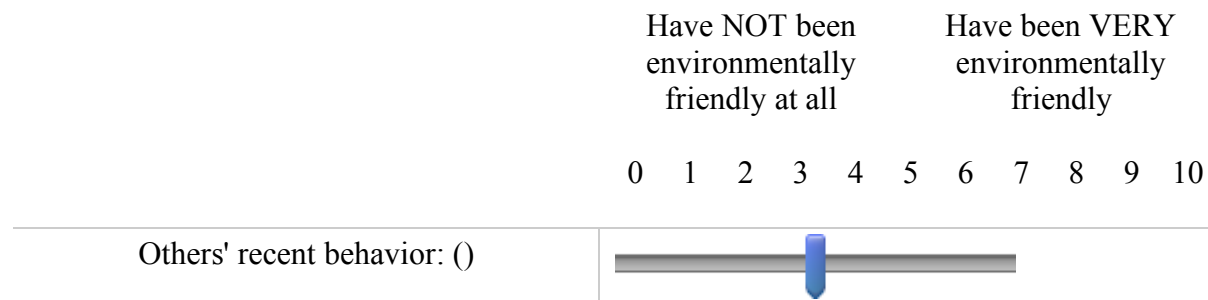
ConcluIntro You're almost done! Just a few more questions to go. Remember, your responses will be kept anonymous, confidential, and will be analyzed only in the aggregate.

-----

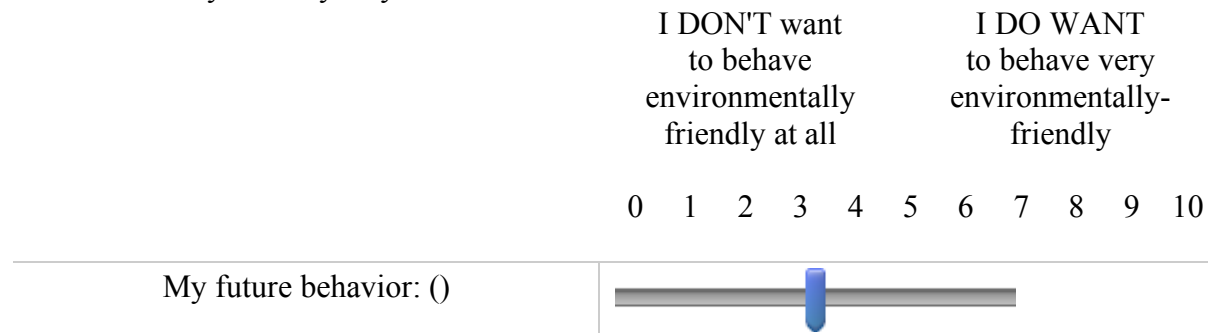
me-present On the scale below, please indicate how environmentally-friendly your recent behavior is:



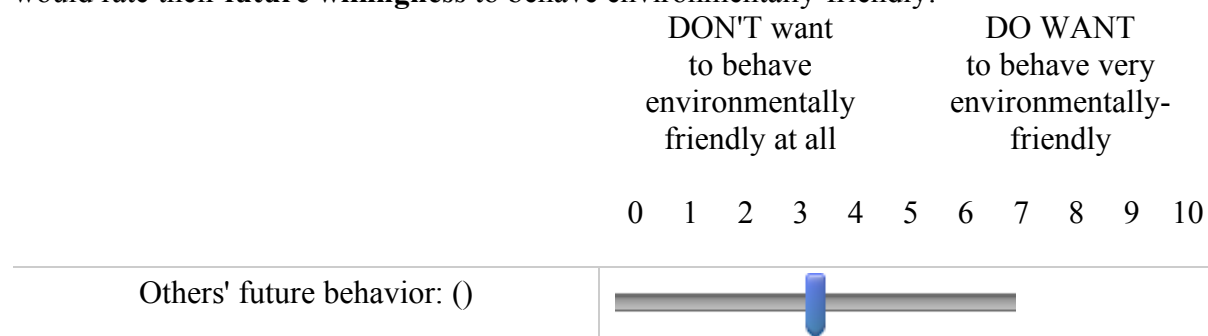
other-present On the scale below, please indicate how you think other people (on average) would rate their behavior:



me-future On the scale below, please indicate how much you **want to** behave in an environmentally-friendly way **in the future**:





other-future On the scale below, please indicate how you think other people (on average) would rate their **future willingness** to behave environmentally-friendly:



EnvironImportance How important are each of the following to you? Please answer on a scale of 1 to 7 where 1 means "Not at all important" and 7 means "Extremely important."

Not at all important      Extremely important

1      2      3      4      5      6      7

Protecting the environment ()	
Buying environmentally friendly products ()	

Age What is your age (please enter a whole number)?

\_\_\_\_\_

Gender What is your gender?

- ☐ Male (1)
- ☐ Female (2)
- ☐ Other (3)

Education What is the highest degree or level of school you have completed, as of today?

- ☐ No schooling completed (1)
  - ☐ Nursery school to 8th grade (2)
  - ☐ 9th, 10th, 11th grade, or 12th without diploma (3)
  - ☐ High school diploma or equivalent (4)
  - ☐ Some college, but not currently enrolled (5)
  - ☐ Some college, and currently enrolled (6)
  - ☐ 2-year college, AA or AS degree (7)
  - ☐ 4-year college, BA or BS degree (8)
  - ☐ Master's degree (9)
  - ☐ Doctorate degree (11)
-



Income This past year (2017), what was your total pretax household income?

- ☐ Less than \$10,000 (1)
  - ☐ \$10,000-\$19,999 (2)
  - ☐ \$20,000-\$29,999 (3)
  - ☐ \$30,000-\$39,999 (4)
  - ☐ \$40,000-\$49,999 (5)
  - ☐ \$50,000-\$59,999 (6)
  - ☐ \$60,000-\$69,999 (7)
  - ☐ \$70,000-\$79,999 (8)
  - ☐ \$80,000-\$89,999 (9)
  - ☐ \$90,000-\$99,999 (10)
  - ☐ \$100,000-\$124,999 (11)
  - ☐ \$125,000-\$149,999 (12)
  - ☐ \$150,000-\$199,999 (13)
  - ☐ \$200,000 or greater (14)
-

ethnicity Please specify your ethnicity:

- ☐ Asian American / Pacific Islander 7 (7)
  - ☐ Black or African American (5)
  - ☐ Hispanic or Latino American (4)
  - ☐ Native American or American Indian (6)
  - ☐ White or Caucasian American (1)
  - ☐ Other (8)
-

## APPENDIX B

### REGRESSION TABLES AND EXTRA ANALYSES

#### Study 1

*Descriptive Statistics.* On average, participants reported 3.15 causal relationships between the brand-user identity and the other aspects of the self-concept, from among an average total of 30.60 links reported among all aspects. The average number of brand gift card choices was 5.87 (out of 10).

TABLE 1

Study 1: Linear regression predicting choice of brand gift card, no exclusions

Factor	$\beta$	SE	$t$	$p$
Constant	5.87	.40	14.51	<.001
Brand-user causal centrality	.16	.08	1.97	.049
Total number of links	-.02	.02	-1.59	.113

TABLE 2

Study 1: Linear regression predicting choice of brand gift card

Factor	$\beta$	SE	$t$	$p$
Constant	5.70	.50	11.43	<.001
Brand-user causal centrality	.32	.09	3.35	<.001
Total number of links	-.03	.02	-1.59	.114

TABLE 3

Study 1: Linear regression predicting choice of brand gift card, controlling for income

Factor	$\beta$	SE	$t$	$p$
Constant	5.50	.58	9.51	<.001
Brand-user causal centrality	.32	.09	3.35	.001
Total number of links	-.03	.02	-1.62	.107
Income	.00	.00	.69	.489

TABLE 4

Study 1: Linear regression predicting choice of brand gift card, controlling for brand-user identity associations

Factor	$\beta$	SE	$t$	$p$
Constant	5.87	.53	11.03	<.001
Brand-user causal centrality	.31	.09	3.31	.001
Total number of links	-.03	.02	-1.45	.149
Brand-user (non-causal) associations	-.17	.18	-.92	.360

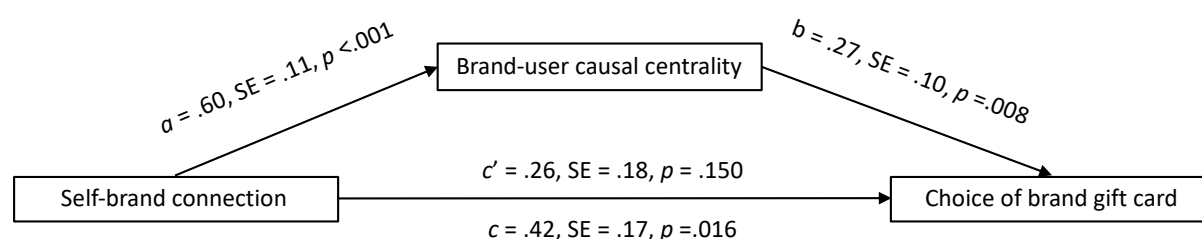
TABLE 5

Study 1: Linear regression predicting choice of brand gift card, controlling for self-brand connection

Factor	$\beta$	SE	$t$	$p$
Constant	4.57	.93	4.91	<.001
Brand-user causal centrality	0.27	.10	2.69	.007
Total number of links	-.03	.02	-1.50	.137
Self-brand connection	0.26	.18	1.45	.150

FIGURE 1

CAUSAL CENTRALITY MEDIATES RELATIONSHIP BETWEEN SELF-BRAND CONNECTION AND GIFT CARD CHOICE, STUDY 1



NOTE—Mediation analysis performed using the PROCESS bootstrapping macro (model 4) with 5,000 resamples. A 95% confidence interval was computed to test the indirect effect (95% CI of the indirect effect = [.04 .30]). Total number of links was included as a covariate in the analysis.

## Study 2

*Descriptive Statistics.* On average, participants reported that 3.03 other features were causally linked to their football fan identity and that 6.52 other features were causally linked to the control feature. The average WTP to see their team in the Super Bowl was \$475.77. The average interest in football was 1.6 on a 4-point scale (1 = very interested, 4 = very uninterested), confirming that our sample was made up of football fans.

TABLE 6

Study 2: Linear regression predicting log-WTP for ticket to watch favorite team in Super Bowl, including outlier and participants who failed attention check and reported duplicate IPs

Factor	$\beta$	SE	$t$	$p$
Constant	4.71	.18	26.51	<.001
Football fan causal centrality	.23	.03	6.62	<.001
Control causal centrality	-.07	.02	-3.10	.002

TABLE 7

Study 2: Linear regression predicting willingness to pay for ticket to watch favorite team in Super Bowl, including outlier and participants who failed attention check and reported duplicate IPs

Factor	$\beta$	SE	$t$	$p$
Constant	$-3.44 \times 10^{14}$	$3.10 \times 10^{14}$	-1.11	.267
Football fan causal centrality	$2.65 \times 10^{14}$	$6.09 \times 10^{13}$	4.35	<.001
Control causal centrality	$-7.98 \times 10^{13}$	$4.05 \times 10^{13}$	-1.97	.049

TABLE 8

Study 2: Linear regression predicting log-WTP for ticket to watch favorite team in Super Bowl

Factor	$\beta$	SE	$t$	$p$
Constant	4.79	.15	31.76	<.001
Football fan causal centrality	.14	.03	4.64	<.001
Control causal centrality	-.04	.02	-1.96	.050

TABLE 9

Study 2: Linear regression predicting willingness to pay for ticket to watch favorite team in Super Bowl

Factor	$\beta$	SE	$t$	$p$
Constant	367.07	59.02	6.37	<.001
Football fan causal centrality	43.82	11.79	3.72	<.001
Control causal centrality	-7.10	7.67	-.926	.355

TABLE 10

Study 2: Linear regression predicting log-WTP for ticket to watch favorite team in Super Bowl, controlling for income

Factor	$\beta$	SE	$t$	$p$
Constant	4.41	.20	22.32	<.001
Football fan causal centrality	.13	.03	4.28	<.001
Control causal centrality	-.03	.02	-1.71	.088
Income	.00	.00	2.87	.004

TABLE 11

Study 2: Linear regression predicting willingness to pay for ticket to watch favorite team in Super Bowl, controlling for income

Factor	$\beta$	SE	$t$	$p$
Constant	313.00	77.90	4.02	<.001
Football fan causal centrality	42.52	11.92	3.57	<.001
Control causal centrality	-6.07	7.71	-.79	.432
Income	.00	.00	1.17	.244

TABLE 12

Study 2: Linear regression predicting interest in football

Factor	$\beta$	SE	$t$	$p$
Constant	1.68	.05	35.67	<.001
Football fan causal centrality	-.05	.01	-5.36	<.001
Control causal centrality	.01	.01	1.56	.119

NOTE—1 = Very interested, 2 = Somewhat interested, 3 = Somewhat uninterested, 4 = Very uninterested

TABLE 13

Study 2: Linear regression predicting log-WTP for ticket to watch favorite team in Super Bowl, controlling for interest

Factor	$\beta$	SE	$t$	$p$
Constant	6.35	.27	23.20	<.001
Football fan causal centrality	.09	.03	3.13	.002
Control causal centrality	-.03	.02	-1.57	.012
Interest	-.93	.14	-6.71	<.001

NOTE—1 = Very interested, 2 = Somewhat interested, 3 = Somewhat uninterested, 4 = Very uninterested

TABLE 14

Study 2: Linear regression predicting willingness to pay for ticket to watch favorite team in Super Bowl, controlling for interest

Factor	$\beta$	SE	$t$	$p$
Constant	800.74	109.58	7.31	<.001
Football fan causal centrality	31.08	11.89	2.61	.009
Control causal centrality	-4.69	7.54	-.62	.534
Interest	-253.11	55.46	-4.56	<.001

NOTE—1 = Very interested, 2 = Somewhat interested, 3 = Somewhat uninterested, 4 = Very uninterested

TABLE 15

Study 2: Linear regression predicting log-WTP for ticket to watch favorite team in Super Bowl, additional controls\*

Factor	$\beta$	SE	$t$	$p$
Constant	6.43	.37	17.29	<.001
Football fan causal centrality	.09	.03	2.89	.004
Control causal centrality	-.03	.02	-1.48	.140
Interest	-.83	.15	-5.38	<.001
Hours spent on sports	.01	.02	.82	.413
Super Bowl watching	-.25	.19	-1.33	.184

NOTE—Factors were coded as follows:

Interest: 1 = Very interested, 2 = Somewhat interested, 3 = Somewhat uninterested, 4 = Very uninterested

Super Bowl watching (wave 1): 1 = Watched all of Super Bowl, 2 = Watched some of Super Bowl, 3 = Did not watch

Super Bowl watching (wave 2): Likelihood of watching measured on a 7-point scale, 1 = definitely will not watch, 7 = definitely will watch, converted to a 3-point scale to merge with wave 1 data (1 and 2 were coded as 3; 3-5 were coded as 2; 6 and 7 were coded as 1)

\*one participant reported spending more hours on sports per week than there are in a week and was removed from this regression

TABLE 16

Study 2: Linear regression predicting willingness to pay for ticket to watch favorite team in super bowl, additional controls\*

Factor	$\beta$	SE	$t$	$p$
Constant	753.82	149.03	5.06	<.001
Football fan causal centrality	27.85	12.06	2.31	.021
Control causal centrality	-4.07	7.56	-.54	.590
Interest	-208.47	61.92	-3.37	<.001
Hours spent on sports	10.7	7.04	1.52	.129
Super Bowl watching	-59.82	74.48	-.80	.422

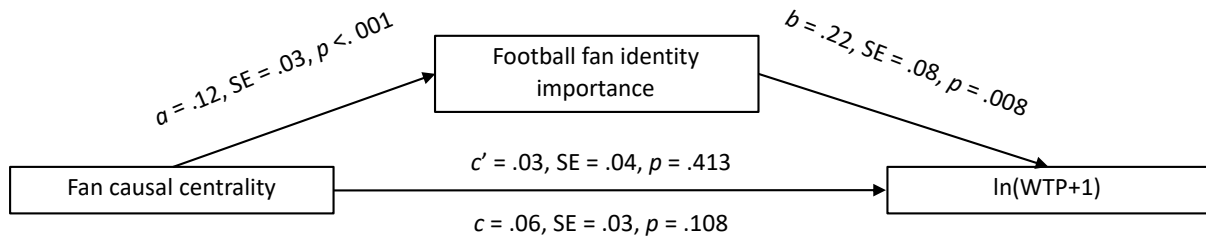
NOTE—see table 15 for coding

\*one participant reported spending more hours on sports per week than there are in a week and was removed from this regression



FIGURE 2

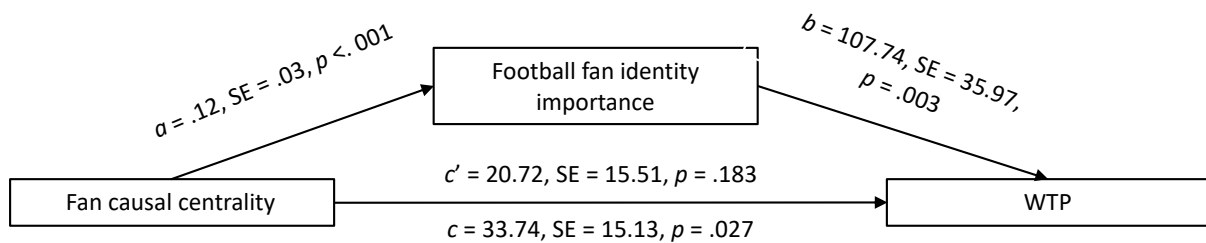
IDENTITY IMPORTANCE MEDIATES RELATIONSHIP BETWEEN FOOTBALL FAN  
CAUSAL CENTRALITY AND LOG-WTP, STUDY 2



NOTE—Mediation analysis performed using the PROCESS bootstrapping macro (model 4) with 5,000 resamples. A 95% confidence interval was computed to test the indirect effect (95% CI of the indirect effect = [.00 .06]). Total number of links was included as a covariate in the analysis.

FIGURE 3

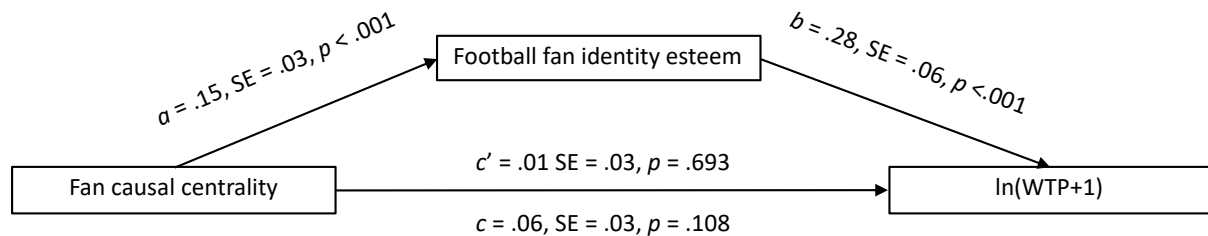
IDENTITY IMPORTANCE MEDIATES RELATIONSHIP BETWEEN FOOTBALL FAN  
CAUSAL CENTRALITY AND WTP, STUDY 2



NOTE—Mediation analysis performed using the PROCESS bootstrapping macro (model 4) with 5,000 resamples. A 95% confidence interval was computed to test the indirect effect (95% CI of the indirect effect = [5.29 22.27]). Total number of links was included as a covariate in the analysis.

FIGURE 4

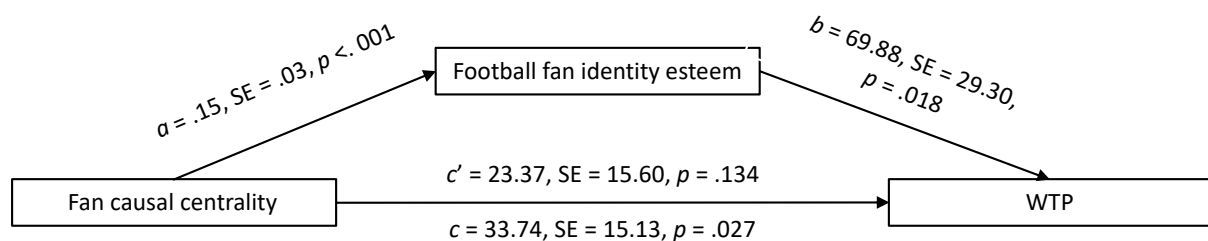
IDENTITY ESTEEM MEDIATES RELATIONSHIP BETWEEN FOOTBALL FAN  
CAUSAL CENTRALITY AND LOG-WTP, STUDY 2



NOTE—Mediation analysis performed using the PROCESS bootstrapping macro (model 4) with 5,000 resamples. A 95% confidence interval was computed to test the indirect effect (95% CI of the indirect effect = [.02 .07]). Total number of links was included as a covariate in the analysis.

FIGURE 5

IDENTITY ESTEEM MEDIATES RELATIONSHIP BETWEEN FOOTBALL FAN  
CAUSAL CENTRALITY AND WTP, STUDY 2



NOTE—Mediation analysis performed using the PROCESS bootstrapping macro (model 4) with 5,000 resamples. A 95% confidence interval was computed to test the indirect effect (95% CI of the indirect effect = [2.80 19.79]). Total number of links was included as a covariate in the analysis.

TABLE 17

Study 2, wave 1: Linear regression predicting log-WTP for tickets to see favorite team in Super Bowl, including outlier and participants who failed the attention check and reported duplicate IP addresses

Factor	$\beta$	SE	<i>t</i>	<i>p</i>
Constant	4.38	.31	13.91	<.001
Football fan causal centrality	.35	.06	5.96	<.001
Control causal centrality	-.10	.04	-2.48	.014

TABLE 18

Study 2, wave 1: Linear regression predicting willingness to pay for tickets to see favorite team in Super Bowl, including outlier and participants who failed the attention check and reported duplicate IP addresses

Factor	$\beta$	SE	<i>t</i>	<i>p</i>
Constant	-2.55 x 10 <sup>14</sup>	6.09 x 10 <sup>14</sup>	-.42	.676
Football fan causal centrality	5.53 x 10 <sup>14</sup>	1.15 x 10 <sup>14</sup>	4.80	<.001
Control causal centrality	-1.75 x 10 <sup>14</sup>	7.55 x 10 <sup>13</sup>	-2.32	.021

TABLE 19

Study 2, wave 1: Linear regression predicting log-WTP for ticket to watch favorite team in super bowl

Factor	$\beta$	SE	<i>t</i>	<i>p</i>
Constant	4.35	.26	16.46	<.001
Football fan causal centrality	.18	.05	3.37	<.001
Control causal centrality	-.02	.03	-.75	.455

TABLE 20

Study 2, wave 1: Linear regression predicting willingness to pay for ticket to watch favorite team in super bowl

Factor	$\beta$	SE	<i>t</i>	<i>p</i>
Constant	356.51	99.09	3.60	<.001
Football fan causal centrality	57.74	19.46	2.96	.003
Control causal centrality	-8.55	12.28	-.70	.487

TABLE 21

Study 2, wave 1: Linear regression predicting interest in football

Factor	$\beta$	SE	$t$	$p$
Constant	1.84	.08	23.39	<.001
Football fan causal centrality	-.07	.02	-4.27	<.001
Control causal centrality	.00	.01	.01	.994

NOTE—1 = Very interested, 2 = Somewhat interested, 3 = Somewhat uninterested, 4 = Very uninterested

TABLE 22

Study 2, wave 2: Linear regression predicting log-WTP for ticket to watch favorite team in super bowl, no exclusions

Factor	$\beta$	SE	$t$	$p$
Constant	5.26	.16	32.49	<.001
Football fan causal centrality	.06	.03	1.69	.093
Control causal centrality	.00	.02	.03	.977

TABLE 23

Study 2, wave 2: Linear regression predicting willingness to pay for ticket to watch favorite team in Super Bowl, no exclusions

Factor	$\beta$	SE	$t$	$p$
Constant	406.62	76.55	5.31	<.001
Football fan causal centrality	37.09	16.24	2.28	.023
Control causal centrality	-5.06	11.59	-.437	.663

TABLE 24

Study 2, wave 2: Linear regression predicting log-WTP for ticket to watch favorite team in Super Bowl

Factor	$\beta$	SE	$t$	$p$
Constant	5.25	.16	32.37	<.001
Football fan causal centrality	.06	.03	1.61	.108
Control causal centrality	.00	.02	-.04	.970

TABLE 25

Study 2, wave 2: Linear regression predicting willingness to pay for ticket to watch favorite team in Super Bowl

Factor	$\beta$	SE	$t$	$p$
Constant	403.78	71.42	5.65	<.001
Football fan causal centrality	33.74	15.12	2.23	.027
Control causal centrality	-7.33	10.80	-.68	.498

TABLE 26

Study 2, wave 2: Linear regression predicting interest in football

Factor	$\beta$	SE	$t$	$p$
Constant	1.54	.06	27.35	<.001
Football fan causal centrality	-.03	.01	-2.34	.020
Control causal centrality	.01	.01	1.14	.257

NOTE—1 = Very interested, 2 = Somewhat interested, 3 = Somewhat uninterested, 4 = Very uninterested

### Study 3

TABLE 27

Study 3: Summary of main results when including all participants with valid responses

Factor	$M_{\text{FootballFan}}$	$M_{\text{Occupation}}$	$t(435)$	$p$
WTP	742.82	569.80	1.34	.180
Ln WTP+1	5.82	5.54	2.15	.032
Identity Importance	5.35	5.06	2.44	.015

TABLE 28

Study 3: Summary of main results

Factor	$M_{\text{FootballFan}}$	$M_{\text{Occupation}}$	$t(405)$	$p$
WTP	765.12	528.89	1.83	.068
Ln WTP+1	5.89	5.53	2.68	.008
Identity Importance	5.40	5.10	2.56	.011

TABLE 29

Study 3: Linear regression predicting log-WTP for ticket to see favorite team in Super Bowl

Factor	$\beta$	SE	$t$	$p$
Constant	5.31	.13	42.34	<.001
Condition	.17	.07	2.59	.010
Income	.00	.00	3.81	<.001

NOTE—Football fan condition = 1, Control condition = -1

#### Study 4

*Descriptive Statistics.* On average, participants reported 3.27 links to the environmentalist identity, out of an average total of 19.91 links. Overall, participants reported that the environmentally-friendly items were, on average, significantly better for the environment than conventional items ( $M = 4.56$ , chance = 3.0,  $t(410) = 64.58$ ,  $p < .001$ , 95% CI = [4.52, 4.61]).

TABLE 30

Study 4: Linear regression predicting causal centrality of environmentalist identity

Factor	$\beta$	SE	$t$	$p$
Constant	1.97	.09	23.03	<.001
Condition	.16	.18	.90	.370
Total number of links	.19	.01	26.6	<.001

NOTE—Frugal condition = 0, Environmental condition = 1

TABLE 31

Study 4: Linear regression predicting choice of environmentally-friendly products, no exclusions for duplicate IP addresses and attention check failures

Factor	$\beta$	SE	$t$	$p$
Constant	1.97	.09	23.03	<.001
Condition	.14	.08	1.74	.082
Environmental causal centrality	.09	.02	4.32	<.001
Total number of links	-.02	.01	-3.04	.003

NOTE—Frugal condition = 0, Environmental condition = 1

TABLE 32

Study 4: Linear regression predicting choice of environmentally-friendly products

Factor	$\beta$	SE	$t$	$p$
Constant	2.03	.08	25.90	<.001
Environmental causal centrality	.10	.02	4.46	<.001
Total number of links	-.02	.01	-2.99	.003

TABLE 33

Study 4: Linear regression predicting choice of environmentally-friendly products, controlling for income

Factor	$\beta$	SE	$t$	$p$
Constant	2.11	.14	15.50	<.001
Environmental causal centrality	.09	.03	2.87	.005
Total number of links	-.02	.01	-2.40	.017
Income	.00	.00	.85	.398

TABLE 34

Study 4: Linear regression predicting choice of environmentally-friendly products, environmental-identity-salient condition only

Factor	$\beta$	SE	$t$	$p$
Constant	2.18	.12	20.09	<.001
Environmental causal centrality	.10	.03	2.94	.004
Total number of links	-.02	.01	-2.46	.015

TABLE 35

Study 4: Linear regression predicting choice of environmentally-friendly products, control condition only

Factor	$\beta$	SE	$t$	$p$
Constant	1.90	.11	16.76	<.001
Environmental causal centrality	.10	.03	3.33	.001
Total number of links	-.01	.01	-1.72	.088

TABLE 36

Study 4: Linear regression predicting choice of environmentally-friendly products

Factor	$\beta$	SE	$t$	$P$
Constant	1.97	.09	22.64	<.001
Environmental causal centrality	.10	.02	4.40	<.001
Total number of links	-.02	.01	-2.97	.003
Condition	.13	.08	1.64	.102

NOTE—Frugal condition =0, Environmental condition = 1

TABLE 37

Study 4: Linear regression predicting choice of environmentally-friendly products

Factor	$\beta$	SE	$t$	$p$
Constant	1.90	.11	17.37	<.001
Condition	.29	.16	1.82	.070
Environmental causal centrality	.10	.03	3.45	<.001
Total number of links	-.01	.01	-1.78	.076
Condition x environmental centrality	.00	.04	-.09	.928
Condition x total number of links	-.01	.01	-.63	.528

NOTE—Frugal condition =0, Environmental condition = 1

## Study 5

*Descriptive Statistics.* Participants reported on average 2.24 links between the environmentalist identity and other features of identity (the causal centrality of the



environmentalist identity), relative to an average total of 16.32 links. Overall, participants reported that the environmentally-friendly items were, on average, significantly better for the environment than conventional items ( $M = 4.57$ , chance = 3.0,  $t(206) = 47.35$ ,  $p < .001$ , 95% CI = [4.51, 4.64]).

TABLE 38

Study 5: Linear regression predicting choice of environmentally-friendly products, no exclusions for duplicate IP addresses and attention check failures (participants reporting duplicate worker IDs are excluded because it is unclear how to match part 1 to part 2 data for these participants)

Factor	$\beta$	SE	$t$	$p$
Constant	1.83	.12	14.77	<.001
Condition	.51	.12	4.12	<.001
Environmental causal centrality	.08	.04	2.29	.023
Total number of links	-.02	.01	-2.25	.025

NOTE—Frugal condition = 0, Environmental condition = 1

TABLE 39

Study 5: Linear regression predicting choice of environmentally-friendly products

Factor	$\beta$	SE	$t$	$p$
Constant	1.90	.14	14.07	<.001
Condition	.49	.13	3.89	<.001
Environmental causal centrality	.08	.04	2.06	.041
Total number of links	-.02	.01	-1.96	.051

NOTE—Frugal condition = 0, Environmental condition = 1

TABLE 40

Study 5: Linear regression predicting choice of environmentally-friendly products, excluding participants who did not follow writing task instructions\*

Factor	$\beta$	SE	$t$	$p$
Constant	1.81	.18	10.16	<.001
Condition	.65	.15	4.24	<.001
Environmental causal centrality	.08	.05	1.72	.088
Total number of links	-.02	.01	-1.69	.094

NOTE—Frugal condition =0, Environmental condition = 1, \*67 participants were excluded for either not writing five sentences as the task instructed or spending less than 45 seconds on the writing task.

TABLE 41

Study 5: Linear regression predicting choice of environmentally-friendly products with additional controls

Factor	$\beta$	SE	$t$	$p$
Constant	1.72	.17	10.39	<.001
Condition	.48	.13	3.83	<.001
Frugal causal centrality	.02	.03	.69	.492
Environmental causal centrality	.08	.04	2.17	.031
Total number of links	-.02	.01	-2.26	.025
Income	.00	.00	1.78	.076

NOTE—Frugal condition =0, Environmental condition = 1

TABLE 42

Study 5: Linear regression predicting choice of environmentally-friendly products

Factor	$\beta$	SE	$t$	$p$
Constant	1.93	.16	12.34	<.001
Condition	.43	.23	1.87	.062
Environmental causal centrality	.09	.05	1.88	.061
Total number of links	-.02	.01	-1.85	.064
Condition x environmental centrality	-.04	.07	-.54	.587
Condition x total number of links	.01	.02	.56	.579

NOTE—Frugal condition =0, Environmental condition = 1

TABLE 43

Study 1: Linear regression predicting brand choices, links with brand-user identity as cause and links with brand-user identity as effect separated

Factor	$\beta$	SE	<i>t</i>	<i>P</i>
Constant	5.70	.50	11.43	<.001
Total number of links	-.02	.02	-1.43	.155
Brand-user identity as cause	.17	.16	1.10	.275
Brand- user identity as effect	.49	.17	2.80	.006

TABLE 44

Study 2: Linear regression predicting log-WTP for a ticket to see favorite team in Super Bowl, links with football fan identity as cause and links with football fan identity as effect separated

Factor	$\beta$	SE	<i>t</i>	<i>P</i>
Constant	4.77	.15	31.03	<.001
Fan identity as effect	.17	.05	3.30	.001
Fan identity as cause	.10	.06	1.51	.131
Control causal centrality	-.04	.02	-1.98	.048

TABLE 45

Study 2: Linear regression predicting WTP for ticket to see favorite team in Super Bowl, links with fan identity as cause and links with fan identity as effect separated

Factor	$\beta$	SE	<i>t</i>	<i>P</i>
Constant	360.3	60.05	6.00	<.001
Fan identity as effect	67.01	20.44	3.27	.001
Fan identity as cause	13.23	24.99	.53	.597
Control causal centrality	-7.39	7.66	-.96	.336

TABLE 46

Study 4: Linear regression predicting environmentally-friendly choices, links with environmental identity as cause and links with environmental identity as effect separated

Factor	$\beta$	SE	$t$	$P$
Constant	2.04	.08	25.96	<.001
Total number of links	-.02	.01	-3.09	.002
Environmental identity as cause	.06	.03	1.86	.064
Environmental identity as effect	.13	.03	3.97	<.001

TABLE 47

Study 5: Linear regression predicting environmentally-friendly choices, links with environmental identity as cause and links with environmental identity as effect separated

Factor	$\beta$	SE	$t$	$P$
Constant	2.20	.11	19.14	<.001
Total number of links	-.02	.01	-2.31	.022
Environmental identity as cause	.16	.08	2.08	.038
Environmental identity as effect	.01	.06	.23	.821

## APPENDIX C

### PILOT STUDY A1

Study A1 provided a preliminary exploration of the relationship between the environmental identity and hypothetical choices between more expensive environmentally-friendly version and a cheaper conventional version. We predicted that participants who perceived their goal to buy environmentally-friendly products as more causally central would be willing to pay more for environmentally-friendly products and make more identity-consistent choices than those who perceived the same social identity as more peripheral.

#### Method

*Participants.* One hundred Mechanical Turk U.S. Amazon Mechanical Turk participants completed the study. Excluding those who failed the attention check yielded 96 participants.

*Procedure.* Study A1 consisted of two tasks: the listing causal relationships task and a choice task. In the listing causal relationships task, participants listed the two most important features of their self-concept in each of five categories that had been identified in previous research as being important to the self (memories, goals/desires, preferences, moral qualities, personality traits; Chen, Urminsky, and Bartels 2016; Strohming and Nichols 2014). They then listed two important features of their self-concept that had not yet been reported. After a practice task, participants completed the listing causal relationships task described above with the twelve features of the self-concept that they had reported and two additional features: desire to protect the environment and desire to buy environmentally friendly products.

The choice task was identical to the task used in studies 4 and 5. Participants made hypothetical choices between purchasing an environmentally-friendly and a cheaper

conventional version of three products (light bulbs, shopping bags, and batteries, see figure 1 in appendix A for details). The order of the choices and the placement of the environmentally-friendly and conventional options were randomized for each subject. Finally, for each of the three products choices, participants reported which item they believed was better for the environment on a scale of 1 (conventional item better) to 5 (environmentally-friendly item better).

## Results

*Preliminary Analysis.* Overall, participants reported that the environmentally-friendly items were, on average, significantly better for the environment than conventional items ( $M = 4.60$  vs. midpoint of 3,  $t(95) = 31.52$ ,  $p < .001$ , 95% CI = [4.50 4.71]). In each pair of options, the environmentally-friendly item was considered significantly better for the environment than the conventional item ( $M_s \geq 4.40$ ,  $t_s > 13.01$ ,  $p_s < .001$ ).

### *Relationship Between Causal Centrality of Environmental Goals and Environmentally-Friendly Choices.*

A linear regression predicting the number of environmentally-friendly choices based on the causal centrality of the desire to purchase environmentally-friendly products, controlling for total number of links reported revealed that the causal centrality of the desire to purchase environmentally-friendly products predicted choices. Participants for whom environmental goals were more causally central selected more environmentally-friendly products than participants for whom environmental goals were more causally peripheral ( $B = .139$ ,  $SE = .05$ ,  $p = .005$ ).

## PILOT STUDY A2

In pilot study A2, we examined two manipulations of the salience of the environmental identity. In the first manipulation of salience, participants write about one of two social identities, their environmental identity or their frugal identity. In the second manipulation of salience, participants write about their environmental identity either before or after doing the causal centrality task. Following the writing task and casual centrality task, participants made the same choices between environmentally-friendly products and cheaper traditional alternatives as they did in studies A1, 4 and 5.

## Method

*Participants.* Three hundred ninety U.S. Amazon Mechanical Turk participants passed the screener and completed the study. The survey yielded a total of two hundred ninety-two valid participants, after excluding those who reported duplicate IP addresses, failed the attention check, or did not complete the writing task.

*Procedure.* We screened participants prior to completing the survey using the same screener used in study 5. Only participants who reported both being frugal and wanting to be an environmentally-friendly person completed the full study.

The study consisted of three tasks in which participants 1) performed the listing causal relationships task, 2) wrote about one of the target identities (the salience manipulation) and, 3) made choices between environmentally-friendly and conventional products. The order of the listing causal relationships task and the writing task was counterbalanced. The three tasks were the same as those used in study 5 except that they were all conducted in one session.

The design resulted in four cells: 1) environmental identity, writing first, 2) environmental identity, causal centrality first, 3) frugal identity, writing first, and 4) frugal identity, causal centrality first. Participants in cell 1 were the only participants for which the environmental identity salient when causal centrality was measured. By comparing cells 1

and 2, we could determine whether writing about the environmental identity before the listing causal relationships task vs. not writing about any social identity before the listing causal relationships task influenced the causal centrality of the environmentalist identity. By comparing cells 1 and 3, we could determine whether writing about the frugal vs. environmental identity (prior to the listing causal relationships task) influenced the causal centrality of the environmental identity.

Note that since all participants did *both* the causal centrality tasks *before* the choice task, for the choice analysis the task order conditions are collapsed.

## Results

*Preliminary Analysis.* Overall, participants reported that the environmentally-friendly items were, on average, significantly better for the environment than conventional items ( $M = 4.63$ , chance = 3.0,  $t(291) = 58.61$ ,  $p < .001$ , 95% CI = [4.58, 4.69]). In each pair of options, the environmentally-friendly item was considered significantly better for the environment than the conventional item ( $M_s \geq 4.52$ ,  $t_s > 30.52.96$ ,  $p_s < .001$ ).

On average, participants reported 2.02 (out of 3) environmentally-friendly choices. Participants reported on average 2.70 links drawn to the environmentalist identity and on average a total of 19.79 links.

*Causal Centrality Analysis.* To examine the effects of our two identity salience manipulations on the causal centrality of the environmental identity, we performed a 2 (condition: frugal vs. environmental identity) x 2 (task order) ANOVA. The results revealed no significant effect of condition ( $F(1,288) = 1.18$ ,  $p = .279$ ) and a marginally significant main effect of task order ( $F(1,288) = 3.55$ ,  $p = .061$ ). The condition by order interaction was not significant ( $F(1,288) = 1.86$ ,  $p = .174$ ).

We examined each of the manipulations of causal centrality separately. First, we examined whether writing about the frugal identity vs. the environmentalist identity



influenced causal centrality of the environmental identity. Among participants who completed the writing task before the causal centrality task only, we compared the causal centrality of the environmentalist identity reported by participants who wrote about the frugal identity to that reported by participants who wrote about the environmental identity. Those who wrote about their environmental identity reported marginally more links to the environmentalist identity than those who wrote about their frugal identity ( $M_{\text{environmental}} = 3.44$ ,  $M_{\text{frugal}} = 2.61$ ,  $t(146) = 1.74$ ,  $p = .085$ , 95% CI = [-.12, 1.77]).

Second, we examine whether writing about the environmental identity vs. not writing about a social identity influenced the causal centrality of the environmentalist identity. Among participants who wrote about their environmental identity only, we compared the causal centrality of the environmentalist identity reported by those who did the writing task *before* the causal centrality task to those who did the writing task *after* the causal centrality task. Participants who for whom the environmentalist identity was salient (those who wrote before the causal centrality task) reported more links to that identity than those for whom the identity was not salient while doing the causal centrality task ( $M_{\text{writingfirst}} = 3.44$ ,  $M_{\text{centralityfirst}} = 2.34$ ,  $t(139) = 2.21$ ,  $p = .023$ , 95% CI = [.11, 2.08]).

*Power Analysis for Study 4.* As the second salience manipulation appeared to be more effective than the first, we planned to use this manipulation (writing about environmentalist identity before causal centrality task vs. not writing about any social identity before the causal centrality task) in study 4 with two modifications. First, to better equate the writing component of the two tasks, participants in the control condition of study 4 would perform another writing task (write about what they did the previous day, adapted from Coleman and Williams 2013) prior to the causal centrality task. Second, as we aimed to explore whether salience influenced choice via causal centrality, we would not have any participants write about their environmental identity after the causal centrality task since we would not be able

to detect if or how the salience manipulation influenced causal centrality if the manipulation came after causal centrality was measured.

To determine the sample size of study 4, we performed a power analysis to determine the sample size needed to detect an effect with 95% power with a two-tailed independent groups t-test using G\*Power software. The effect size determined from the pilot study was  $d = .37$ . The sample size calculated by G\*Power was 191 participants per condition.

*Choice Analysis.* Participants chose more environmentally-friendly products when the environmentalist identity was made salient by the writing task. An independent t-test revealed that participants who wrote about the environmentalist identity ( $M = 2.17$ ) chose significantly more environmentally-friendly products than participants who wrote about the frugal identity ( $M = 1.89$ ;  $t(290) = 2.54$ ,  $p = .011$ , 95% CI = [.06, .50]).

A linear regression predicting the total number of environmentally-friendly choices with causal centrality of the environmentalist identity controlling for total number of links revealed that participants who saw their environmental identity as more central chose significantly more environmentally-friendly products ( $B = .09$ ,  $SE = .03$ ,  $p = .004$ , see table 1 for details).

TABLE 1

Study A2: Linear regression predicting choice of environmentally-friendly products

Factor	$\beta$	SE	$t$	$p$
Constant	2.01	.10	19.77	<.001
Environmental causal centrality	.09	.03	2.86	.004
Total number of links	-.01	.00	-1.68	.094

A linear regression predicting environmentally-friendly choices based on causal centrality of the environmentalist identity and condition (environmentalist vs. frugal identity salient), controlling for total number of links, confirmed that both condition ( $B = .25$ ,  $SE = .11$ ,  $p = .026$ ) and the causal centrality of the environmentalist identity ( $B = .08$ ,  $SE = .03$ ,  $p =$

.011) were significant predictors of choice (see table 2 for details). Further the interaction between causal centrality and condition was not significant ( $B = .02$ ,  $SE = .06$ ,  $p = .685$ , see table 3 for details), suggesting that the effects of identity salience and causal centrality are distinct. Salience increased environmentally-friendly choices whether or not the environmentalist identity was causally centrality and causal centrality predicted environmentally-friendly choices regardless of whether the environmentalist identity was manipulated to be salient.

TABLE 2

Study A2: Linear regression predicting choice of environmentally-friendly products

Factor	$\beta$	SE	$t$	$P$
Constant	1.88	.12	16.08	<.001
Environmental causal centrality	.08	.03	2.57	.011
Total number of links	-.02	.01	-2.97	.003
Condition	-.01	.01	-1.41	.160

NOTE—Frugal condition =0, Environmental condition = 1

TABLE 3

Study A2: Linear regression predicting choice of environmentally-friendly products, including interactions

Factor	$\beta$	SE	$t$	$p$
Constant	1.94	.15	13.29	<.001
Condition	.14	.20	.69	.490
Environmental causal centrality	.06	.04	1.61	.108
Total number of links	-.01	.01	-1.20	.231
Condition x environmental centrality	.02	.06	.41	.685
Condition x total number of links	.00	.01	.16	.872

NOTE—Frugal condition =0, Environmental condition = 1

# META-ANALYSIS: INFLUENCE OF IDENTITY SALIENCE ON CAUSAL CENTRALITY

To further examine whether manipulating identity salience had an effect on causal centrality, we performed a meta-analysis, combining study 4 and the conditions used for the power analysis from study A2. We performed a linear regression predicting the causal centrality of the environmentalist identity with condition (environmental-identity-salient vs. control), total number of links, and a study dummy-code (environmentalist condition of study A2 vs study 4 from the main manuscript). This analysis revealed that combining both studies ( $n = 552$ ), there was a marginally significant effect of the salience manipulation on causal centrality ( $B = .27$ ,  $SE = .16$ ,  $p = .089$ , see table 4). Thus, the results across both studies suggest that there may be a small marginal effect of salience on causal centrality that yielded inconsistent results across study 4 and study A2. However, a power analysis suggests that reliably detecting this effect (e.g., with 80% power) would require a very large sample size ( $n = 1572$ ).

TABLE 4

Study 4 and pilot study 2 meta-analysis: linear regression predicting environmental identity causal centrality with condition, controlling for study and total number of links

Factor	$\beta$	SE	$t$	$p$
Constant	-.95	.21	-4.61	<.001
Total number of links	.19	.01	31.07	<.001
Study	.29	.18	1.65	.100
Condition	.27	.16	1.70	.089

NOTE—Condition: 0 = control, 1 = environmental identity salient; Study: 0 = study A2, 1 = study 4

## STUDY A3

Study A3 was a pre-registered replication of study 3 in the main manuscript (<https://aspredicted.org/blind.php?x=7vr297>).

### Method

*Participants.* Four hundred and fourteen U.S. Amazon Mechanical Turk participants qualified and completed the study. The survey yielded a total of 395 valid participants, after excluding those who failed the attention check, gave non-valid answers to the open-ended questions, and provided duplicate IP addresses.

*Procedure.* The procedure and study materials were the same as those used in study 3. Participants were first screened to ensure that they were both football fans and employed. Those who passed the screener completed the main survey which consisted of three tasks in which participants 1) listed and wrote about the aspects that caused or were caused by a target social identity (their football fan identity or their occupation, causal centrality manipulation), 2) reported WTP and, 3) completed the identity importance scale.

### Results

*Effect of the Causal Thinking Manipulation on WTP.* There was a marginally significant difference between the WTP of participants who wrote about the causal relationships between their football fan identity ( $M = 698.88$ ) and other aspects of the self-concept and the WTP of participants who wrote about their occupation's causal relationships ( $M = 477.16$ ,  $t(393) = 1.68$ ,  $p = .094$ , 95% CI of the difference  $[-38.20, 481.63]$ ). There was

no significant difference in log-WTP across the football fan and occupation conditions ( $M_{\text{football}} = 5.66$ ,  $M_{\text{occupation}} = 5.49$ ,  $t(393) = 1.26$ ,  $p = .207$ , 95% CI of the difference  $[-.10, .44]$ ). A linear regression predicting log-WTP with condition (football fan vs. control), controlling for income, confirmed that condition was not a significant predictor of log-WTP ( $B = .09$ ,  $SE = .07$ ,  $p = .192$ , see table 5).

TABLE 5

Study A3: Linear regression predicting log-WTP

Factor	$\beta$	SE	$t$	$p$
Constant	5.31	.14	38.61	<.001
Condition	.09	.07	1.31	.192
Income	.00	.00	2.25	.025

NOTE—Condition was coded as follows: occupation = -1, football fan = 1.

*Effect of the Causal Thinking Manipulation on Importance.* Participants in the football fan condition reported significantly higher football fan identity importance than those in the occupation condition ( $M_{\text{football}} = 5.29$ ,  $M_{\text{occupation}} = 5.01$ ,  $t(393) = 2.36$ ,  $p = .018$ , 95% CI of the difference  $[.05, .52]$ ).

### META-ANALYSIS OF STUDIES 3 AND A3

To further examine whether the causal thinking manipulation had an effect on willingness to pay among football fans, we performed a meta-analysis, combining studies 3 and A3.

## Results

*Effect of the Causal Thinking Manipulation on WTP.* Participants who wrote about the causal relationships between their football fan identity and other aspects of the self-concept reported a higher WTP ( $M = 732.51$ ) than participants who wrote about their occupation ( $M = 503.41$ ,  $t(800) = 2.48$ ,  $p = .013$ , 95% CI of the difference [47.91, 410.29]). There was also a significant difference in log-WTP across the football fan and occupation conditions ( $M_{\text{football}} = 5.78$ ,  $M_{\text{occupation}} = 5.51$ ,  $t(800) = 2.79$ ,  $p = .006$ , 95% CI of the difference [.08, .45]). A linear regression predicting log-WTP with condition (football fan vs. control), controlling for income, confirmed that those who wrote about their football fan identity were willing to pay more to see their team in the Super Bowl ( $B = .13$ ,  $SE = .05$ ,  $p = .006$ , see table 6).

TABLE 6

Study A3: Linear regression predicting log-WTP

Factor	$\beta$	SE	$t$	$p$
Constant	5.30	.09	57.28	<.001
Condition	.13	.05	2.77	.006
Income	.00	.00	4.40	<.001

NOTE—Condition was coded as follows: occupation = -1, football fan = 1.

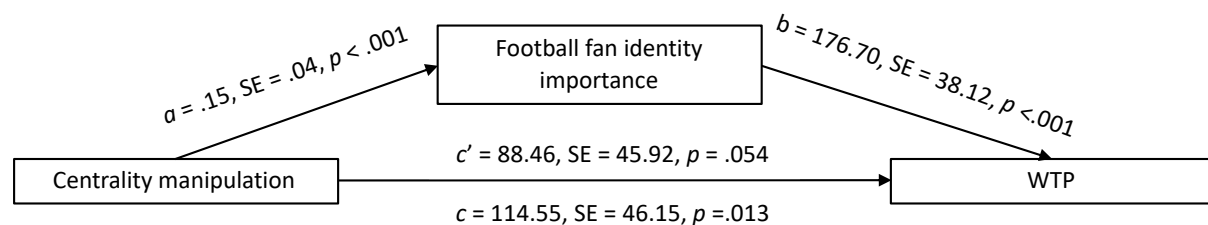
*Effect of the Causal Thinking Manipulation on Importance.* Participants in the football fan condition reported significantly higher football fan identity importance than those in the occupation condition ( $M_{\text{football}} = 5.35$ ,  $M_{\text{occupation}} = 5.05$ ,  $t(800) = 3.49$ ,  $p < .001$ , 95% CI of the difference [.13, .46]).

*Mediation Analysis.* We conducted a mediation analysis to test whether the effect of thinking about the football fan identity's causal relationships influenced WTP via importance. There was a significant indirect effect of the causal thinking manipulation on

WTP via fan identity importance ( $B = 26.09$ , 95% Bootstrapped CI = [10.36, 46.45]). The relationship between log-WTP was partially mediated by importance and was marginally significant when controlling for importance ( $B = 88.46$ ,  $SE = 45.92$ ,  $p = .054$ , see figure 1).

**FIGURE 1**

META-ANALYSIS OF STUDIES 3 AND A3: IDENTITY IMPORTANCE MEDIATES  
RELATIONSHIP BETWEEN THE CAUSAL CENTRALITY MANIPULATION AND  
WTP



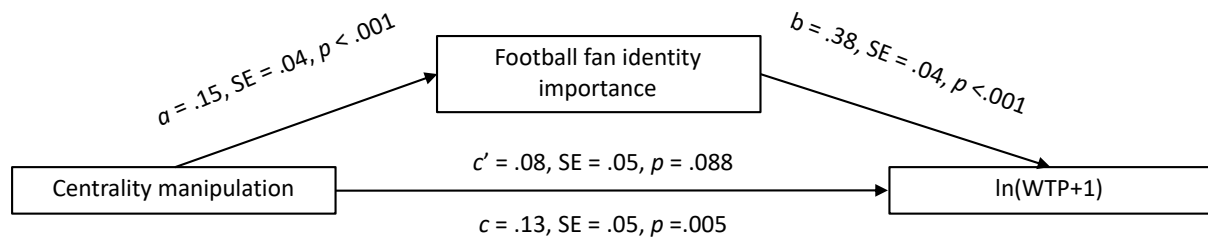
NOTE—Centrality manipulation was coded as follows: occupation = -1, football fan = 1. Mediation analysis performed using the PROCESS bootstrapping macro (model 4) with 5,000 resamples. A 95% confidence interval was computed to test the indirect effect (95% CI of the indirect effect = [10.36, 46.45]).

We also conducted a mediation analysis to test whether the effect of thinking about the football fan identity's causal relationships influenced log-WTP via importance. The results were very similar to the mediation analysis using raw WTP values. There was a significant indirect effect of the causal thinking manipulation on log-WTP via fan identity importance ( $B = .06$ , 95% Bootstrapped CI = [.02, .09]). The relationship between log-WTP was partially mediated by importance and was marginally significant when controlling for importance ( $B = .08$ ,  $SE = .05$ ,  $p = .088$ , see figure 2).



**FIGURE 2**

META-ANALYSIS OF STUDIES 3 AND A3: IDENTITY IMPORTANCE MEDIATES  
RELATIONSHIP BETWEEN THE CAUSAL CENTRALITY MANIPULATION AND  
LN(WTP+1)



NOTE—Centrality manipulation was coded as follows: occupation = -1, football fan = 1. Mediation analysis performed using the PROCESS bootstrapping macro (model 4) with 5,000 resamples. A 95% confidence interval was computed to test the indirect effect (95% CI of the indirect effect = [.02, .09]).