

## Info

This questionnaire is composed of two short questionnaires, each taking around 5 minutes of your time. Make sure you continue onto the second study after the first one to ensure you get your credit.

If you are currently using a mobile phone or tablet, please stop answering the survey and begin answering again on a laptop or desktop computer using a dedicated physical keyboard.

Before continuing, please close all other tabs and put the survey into full screen (F11 on Windows). Please refrain from using your phone, calculators or any other programmes on your computer for the duration of the survey.

## Consent 1

### Student Values Study Information

Thank you for your interest in taking part in this study into Student Values. It consists of three sections and participation is rewarded with receipt of 1 credit (in combination with a second short study on Personality and Relationship Success). You will be presented with a few short questionnaires, and a short writing task.

## Consent

I understand that my participation in this project will involve a few short questions about myself and a writing task, taking approximately 7 minutes of my time.

I understand that participation in this study is entirely voluntary and that I can withdraw

from the study at any time without giving a reason and without loss of payment.

I understand that I am free to ask any questions at any time. I am free to withdraw or discuss my concerns with the researcher, Samuel Taylor (TaylorSJ9@cardiff.ac.uk), the supervisor of this project, Dr Richard Morey (moreyr@cardiff.ac.uk), or the School of Psychology, Cardiff University.

I understand that the information provided by me will be held totally anonymously, so that it is impossible to trace this information back to me individually. I understand that this information may be retained indefinitely.

I also understand that at the end of the study I will be provided with additional information and feedback about the purpose of the study.

#### Privacy Notice:

The information provided on the consent form will be held in compliance with GDPR regulations. Cardiff University is the data controller and Matt Cooper is the data protection officer (inforequest@cardiff.ac.uk). This information is being collected by Samuel Taylor, supervised by Dr Richard Morey. This information will be held securely and separately from the research information you provide. Only the researcher will have access to this form and it will be destroyed after 7 years. The lawful basis for processing this information is public interest.

- ☐ I consent, begin the study.
- ☐ I do not consent, I do not wish to take part in this study.

#### Demographics/ Self-Esteem

How old are you?

What is your gender?

- ☐ Male
- ☐ Female
- ☐ Non-binary
- ☐ Other
- ☐ Prefer not to say

How much do you like your name, in total?

- 1 Not at all   2   3   4   5   6   7   8   9 Very much
- ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐

## Self-Esteem

To what extent does the statement "I have high self esteem" apply to you?

- 1 Does not apply at all   2   3   4   5   6   7   8   9 Applies completely
- ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐   ☐

## Affirmation

Please take a look at the following list of values. Rank them in order of importance to you (by clicking and dragging them), with 1 being the value that is most important to you and 6 being the value that is least important to you.

Religion/ Morality

Art/ Music/ Theatre

Government/ Politics

Business

Science/ Pursuit of Knowledge

## Social Life/ Relationships

Please can you now write in the box about the value you ranked as number one – the **most important value to you**. Explain why it is so important and meaningful to you.

Please spend around 5 minutes on the task. The survey will allow you to continue in 5 minutes.



**These page timer metrics will not be displayed to the recipient.**

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## Control

Please take a look at the following list of values. Rank them in order of importance to you (by clicking and dragging them), with 1 being the value that is most important to you and 6 being the value that is least important to you.

Science/ Pursuit of Knowledge

Government/ Politics

Art/ Music/ Theatre

Business

Social Life/ Relationships

Religion/ Morality

Please can you now write in the box about the value you ranked as number six – the **least important value to you**. Explain why it might be important and meaningful to others.

Please spend around 5 minutes on the task. The survey will allow you to continue in 5 minutes.

**These page timer metrics will not be displayed to the recipient.**

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Click Count: *0 clicks*

**"End of Study 1"**

We thank you for your time spent taking this survey.  
Your response has been recorded.

[Click to move onto the second study.](#)

**Info/ Consent 2**

## Personality and Relationship Success

Thank you for your interest in taking part in this study into Personality and Relationship Success. It consists of a short questionnaire and a comprehension task, and participation is rewarded with receipt of 1 credit (in combination with a second short study on Student Values). You will be presented with a short questionnaire and a data comprehension task.

## Consent

I understand that my participation in this project will involve a short questionnaire and a data comprehension task that will take approximately 7 minutes of my time.

I understand that participation in this study is entirely voluntary and that I can withdraw from the study at any time without giving a reason and without loss of payment.

I understand that I am free to ask any questions at any time. I am free to withdraw or discuss my concerns with the researcher, Samuel Taylor (TaylorSJ9@cardiff.ac.uk), the supervisor of this project, Dr Richard Morey (moreyr@cardiff.ac.uk), or the School of Psychology, Cardiff University.

I understand that the information provided by me will be held totally anonymously, so that it is impossible to trace this information back to me individually. I understand that this information may be retained indefinitely.

I also understand that at the end of the study I will be provided with additional information and feedback about the purpose of the study.

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- ☐ I understand and consent to take part in this study.
- ☐ I do not consent to take part in this study.

## Individualism Scale

### Individualistic Inventory

Please answer the following questions by choosing one statement in each pair of statements that best describes you.

#### Question 1.

- ☐ 1. Success depends on help from others.
- ☐ 2. Success depends on my abilities.

#### Question 2.

- ☐ 1. I know more about others than I do about myself.
- ☐ 2. I know more about myself than I do about others.

#### Question 3.

- ☐ 1. Being excluded from my group would be very hard on me.
- ☐ 2. Being dependent on others would be very hard on me.

#### Question 4.

- ☐ 1. Silence is comfortable.
- ☐ 2. Silence is embarrassing.

### Question 5.

- ☐ 1. It is important that my behavior is appropriate for the situation.
- ☐ 2. It is important that my behavior and attitudes correspond.

### Question 6.

- ☐ 1. I sometimes feel ashamed.
- ☐ 2. I sometimes feel guilty.

### Question 7.

- ☐ 1. Friendships are difficult to establish, but are generally very intimate.
- ☐ 2. Friendships are fairly easy to establish, but often not very intimate.

### Question X.

- ☐ 1. I sometimes feel angry. To let us know that you are paying attention, please select this option.
- ☐ 2. I sometimes feel happy. To let us know that you are paying attention, please select the other option.

### Question 8.

- ☐ 1. I generally socialize in groups.
- ☐ 2. I generally socialize in pairs.

### Question 9.

- ☐ 1. I would depend on my family and friends for support
- ☐ 2. I would depend on myself before depending on family and friends



**Question 10.**

- ☐ 1. I would discuss a major problem with my friends
- ☐ 2. I would handle a major problem on my own

**Question 11.**

- ☐ 1. The opinion of a group matters to me more than my own
- ☐ 2. My opinion is just as important as the groups

**Question 12.**

- ☐ 1. I am uncomfortable around large groups
- ☐ 2. I am uncomfortable when I am by myself.

**Question 13.**

- ☐ 1. I am loyal to my friends more than I am to myself
- ☐ 2. I am loyal to myself more than I am to my friends

**Individualism Results****Scoring Individualistic and More Information**

Scoring the Individualistic Inventory is quite simple. For the 13 questions, the number of times that the statement from each pair marked "1." was chosen is counted. Then, the number of times the statement marked "2." was chosen is also counted.

| Number of times you chose 1.         | Number of times you chose 2.         |
|--------------------------------------|--------------------------------------|
| $\{gr://SC\_a3H2S66JzIQZKFD/Score\}$ | $\{gr://SC\_bPkLAr3AbkRPKKh/Score\}$ |

If the number of times you chose 1. is greater than the number of times you chose 2., you are low in individualism.

If the number of times you chose 2. is greater than the number of times you chose 1., you are high in individualism.

Based on this, click below whether you are low or high in individualism:

Low Individualism



High Individualism



The Individualistic Inventory has been used previously in assessing individualism. The Individualistic Inventory has been proven to be a highly valid and reliable method of assessing individualism. Thus, it has been used by numerous research institutions including the National Institutes of Mental Health and has been a key feature of hundreds of published research studies on personality.

### Scenario Block (High = Good)

Researchers are interested in which personality traits are associated with successful relationships. High scores in some traits are associated with a high rate of successful relationships, but high scores in other traits are associated with a high rate of failed relationships.

Researchers have conducted an experiment on individualism and the success of relationships. In the experiment, participants were divided into those high in individualism and those low in individualism.

In each group, the number of people whose relationships failed and the number whose relationships succeeded are recorded in the table below. Because participants do not always complete studies, the total number of patients in each group is not exactly the same, but this does not prevent assessment of the results.

Please indicate whether the experiment shows that having high individualism is likely to lead to failed or successful relationships.

Failed

Successful

|                                      | Relationships | Relationships |
|--------------------------------------|---------------|---------------|
| People <u>high</u> in individualism. | 223           | 75            |
| People <u>low</u> in individualism.  | 107           | 21            |

What result does the study support?

- ☐ People with high individualism were more likely to to have successful relationships than those with low individualism.
- ☐ People with high individualism were more likely to have failed relationships than those with low individualism.

According to the data in the table, to what degree is individualism associated with the success or failure of romantic relationships?



According to the data in the table, when a person is high in individualism, they are how likely to end up with romantic relationship failures compared with a person low in individualism?



### Scenario Block (High = Bad)

Researchers are interested in which personality traits are associated with successful relationships. High scores in some traits are associated with a high rate of successful relationships, but high scores in other traits are associated with a high rate of failed relationships.

Researchers have conducted an experiment on individualism and the success of relationships. In the experiment, participants were divided into those high in individualism and those low in individualism.

In each group, the number of people whose relationships failed and the number whose relationships succeeded are recorded in the table below. Because participants do not always complete studies, the total number of participants in each group is not exactly the same, but this does not prevent assessment of the results.

Please indicate whether the experiment shows that having high individualism is likely to lead to failed or successful relationships.

|                                      | Successful Relationships | Failed Relationships |
|--------------------------------------|--------------------------|----------------------|
| People <u>high</u> in individualism. | 223                      | 75                   |
| People <u>low</u> in individualism.  | 107                      | 21                   |

What result does the study support?

- ☐ People with high individualism were more likely to have successful relationships than those with low individualism.
- ☐ People with high individualism were more likely to have failed relationships than those with low individualism.

According to the data in the table, to what degree is individualism associated with the success or failure of romantic relationships?

1 Not at all    2    3    4    5    6    7    8    9 Very much  
☐    ☐    ☐    ☐    ☐    ☐    ☐    ☐    ☐

According to the data in the table, when a person is high in individualism, they are how likely to end up with romantic relationship failures compared with a person low in individualism?

-4 Much  
less likely

+4 Much  
more likely



## Debrief

**PLEASE SCROLL TO THE BOTTOM OF THE PAGE AND CLICK THE ARROW TO SUBMIT YOUR RESPONSES**

**IF YOU DON'T, YOU WON'T RECEIVE YOUR CREDITS!**

## Debriefing

Thank you for taking part in this experiment!

This study aims to investigate the effects of self-esteem and self-affirmation techniques on interpretation of threatening and nonthreatening data.

In the final task, the data is setup so that if you use one of two simple heuristic strategies (simple comparison of the number of failed vs successful relationships for those “high” in individualism, or simple comparison of the number of successful relationships for “high” vs “low” individualism), you would form the incorrect conclusion. Proper interpretation of the results requires comparing the ratio of successful:failed relationships for “high” individualism with the same ratio for “low” individualism (i.e., making use of all 4 cells of the correlation matrix).

Previous research has found that people with higher numeracy scores (i.e., better at maths) tend to do better at this task than people with lower numeracy scores when the information is *neutral*, e.g., about the effectiveness of a rash cream (Kahan, Peters, Dawson, & Slovic, 2017). However, when the data is *threatening*, such as presenting data that suggests gun control doesn’t work to US Democrats, a clear bias emerges in those high in numeracy. Whilst they report the correct answer most of the time to nonthreatening information, they provide it far less to *nonthreatening* information. Kahan et al. (2017) argue that this is because whilst those high in numeracy *can* correctly interpret the threatening data, they *choose* to rely on heuristics to interpret the result congruent to their sense of self.

The “Individualistic Inventory” was a fictitious personality variable included to manipulate whether the information presented in the final task was threatening or nonthreatening. There were two versions of

the final task: one where being high in individualism was associated with more *successful* relationships, and another where being high in individualism was associated with more *failed* relationships. As such, if you scored *low* in individualism, the former variation was designed to be threatening; the latter was designed to be threatening if you scored *high* in individualism.

**As such, it is important to make clear that your individualism score does not come from a real scale and should be treated as such. Furthermore, it should be made clear that the results of the study in the final task are also not from a real study and should be treated as such.**

The "two study" setup was a ruse to disguise the fact that the writing task is not itself being studied, but was being used as an intervention. Participants ranked the values from 1 to 6, before either writing about their most important value (self-affirmation) or their least important value (control). Self-affirmation has been found to reduce defensiveness (Crocker, Niiya, & Mischkowski, 2008), and so of interest to this study was whether self-affirmation would reduce the rate of incorrectly interpreting threatening information.

**As such, it should also be clear that this was one study and not two separate ones as suggested.**

The study also included an *explicit* measure of self-esteem ("I have high self-esteem") and an *implicit* measure of self-esteem ("How much do you like your name?"). These were included to examine whether self-esteem predicts the likelihood of reporting the correct result if it is threatening. Both measures were included as a particular combination of high *explicit* self-esteem but low *implicit* self-esteem ("defensive" self-esteem) has been associated with further defensive behaviours and may interact with the self-affirmation intervention (Haddock, Maio, Arnold, & Huskinson, 2008).

We would like to remind you that all data will be held anonymously which means that answers cannot be traced back to individual participants. Also, you are free to withdraw your data up until the point that the data is anonymized.

If you have any questions or concerns please feel free to discuss them with myself, or my supervisor Dr Richard Morey, at any time.

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In case you have any further concerns or complaints please contact the Ethics Committee:

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**References**

Crocker, J., Niiya, Y., & Mischkowski, D. (2008). Why does writing about important values reduce defensiveness? Self-affirmation and the role of positive other-directed feelings. *Psychological Science*, 19(7), 740-747.

Haddock, G., Maio, G. R., Arnold, K., & Huskinson, T. (2008). Should persuasion be affective or cognitive? The moderating effects of need for affect and need for cognition. *Personality and Social Psychology Bulletin*, 34(6), 769-778.

Kahan, D. M., Peters, E., Dawson, E. C., & Slovic, P. (2017). Motivated numeracy and

enlightened self-government. *Behavioural Public Policy*, 1(1), 54-86.

Munro, G. D., & Stansbury, J. A. (2009). The dark side of self-affirmation: Confirmation bias and illusory correlation in response to threatening information. *Personality and Social Psychology Bulletin*, 35(9), 1143-1153

One last question... If you have taken part in one of Dr Richard Morey's second year practicals, it is possible that you have come across the type of correlation task presented in the last task (presented again below). Were you aware of the task?

|                                      | Failed Relationships | Successful Relationships |
|--------------------------------------|----------------------|--------------------------|
| People <u>high</u> in individualism. | 223                  | 75                       |
| People <u>low</u> in individualism.  | 107                  | 21                       |

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