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"Luxury beliefs": Signaling through ideology?

Margaret Samahita
University College Dublin School of Economics

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"Luxury beliefs": Signaling through ideology?*

Margaret Samahita[†]

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Abstract

The concept of "luxury beliefs" has gained increasing attention in recent months. It captures the idea that, as status goods become more affordable, ideology has emerged as a new way to signal status. I use a signaling game to derive a prediction related to the concept: given some beliefs are associated with high status, lower status individuals seek to pool with high status individuals by stating these beliefs if the social image gain is sufficiently high. I test this prediction using two online experiments and a series of statements commonly recognised as "luxury beliefs". I find that i) luxury beliefs are not strongly associated with status: they are only perceived to signal college attendance and negatively correlate with income and perceived income; and ii) there is no evidence of signaling using these beliefs in a (close to anonymous) online setting.

JEL Codes: C90, D83, Z13

Keywords: luxury beliefs, status signaling, social image

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[†]School of Economics and Geary Institute for Public Policy, University College Dublin. E-mail: margaret.samahita@ucd.ie.

In the past, people displayed their membership of the upper class with their material accoutrements. But today, luxury goods are more affordable than before. And people are less likely to receive validation for the material items they display. This is a problem for the affluent, who still want to broadcast their high social position. But they have come up with a clever solution. The affluent have decoupled social status from goods, and re-attached it to beliefs.—Rob Henderson¹

1 Introduction

Individuals have long used conspicuous consumption to signal status (Veblen, 1899). As status goods become more affordable, and given the rise in sustainable consumption and minimalism, certain ideologies have been proposed as a new way to signal status. Sociologist Rob Henderson coined the term "luxury beliefs" in 2019 precisely to describe these ideologies, defining them as "ideas and opinions that confer status on the rich at very little cost, while taking a toll on the lower class."² As Henderson noted, "(t)he chief purpose of luxury beliefs is to indicate evidence of the believer's social class and education."³ An example is eliminating standardised testing for college admission: if implemented, those from elite background have access to informal networks or legacy admission, while those from poorer background would lose the only way they have to signal academic potential. An individual that states that "standardised testing should be eliminated" thus signals that they can afford to have such a belief implemented, and thus that they have elite status. Other examples include defunding the police, promoting degrowth, legalising casual drug use, and many others listed in Section 3.1.

This paper tests the concept of "luxury beliefs" by studying whether these beliefs are indeed associated with high status and whether individuals use these beliefs to signal status or genuinely believe in these ideologies. If luxury beliefs are merely used to signal status, this can lead to uninformative public discourse and pluralistic ignorance, giving rise to increased political polarisation. Moreover, if these ideologies are actually implemented, there may be serious social consequences for those from lower socio-economic background, which can amplify social inequality. It is therefore important to study the extent to which luxury beliefs are used as signals given the potential welfare

¹<https://quillette.com/2019/11/16/thorstein-veblens-theory-of-the-leisure-class-a-status-update/>, accessed 2022-11-15.

²<https://nypost.com/2019/08/17/luxury-beliefs-are-the-latest-status-symbol-for-rich-americans/>, accessed 2022-11-15.

³<https://quillette.com/2019/11/16/thorstein-veblens-theory-of-the-leisure-class-a-status-update/>, accessed 2022-11-15.

consequences.

I start by developing a model that captures the dynamics of luxury beliefs. In a signaling game, a high or low status sender can send a message in the form of either a luxury belief or a mainstream belief. While sending a mainstream belief is costless, stating a luxury belief is assumed to be more costly for a low status sender. This corresponds to the definition of luxury beliefs: they confer status on the rich at low cost but take a toll on the lower class. Upon receiving the message, the receiver responds by stating their perceived status of the sender, which incurs convex attention cost the higher the perceived status. Interacting with a high status sender additionally yields some benefit to the receiver. By definition, I focus on perfect Bayesian equilibria where the probability of high status is higher when stating luxury beliefs than mainstream beliefs. Within this set of equilibria, the likelihood that the sender states a luxury belief is predicted to increase as the social image gain increases.

In Study 1, I test the assumption that luxury beliefs are associated with high status. The study was conducted online with 299 participants, balanced across political affiliations. Following a demographic questionnaire, participants are asked to state their level of agreement to twelve luxury belief statements (some reverse-coded). As expected, these statements are strongly correlated with holding a left-wing political view. I then measure the correlation between agreement to luxury beliefs and status (education and income), finding no significant positive correlation. While some statements (on White Privilege and Critical Race Theory) positively correlate with education level, when all statements are pooled the significance disappears after including controls. The correlation with income, on the other hand, is *negative*: participants who agree with luxury beliefs are more likely to have lower income.

To study whether the association between luxury beliefs and status is predicted by an observer, I also ask Study 1 participants to guess the education and income brackets of another participant who agrees with a statement, randomising the statement into either a luxury belief or its reverse. Agreement to some luxury beliefs are associated with higher education (again, statements on White Privilege and Critical Race Theory) while others are associated with lower education (statements that college is not necessary for success, that the outcomes of your life are outside your control, and that standardised testing should be eliminated). On the other hand, most statements are associated with lower income. When all statements are pooled, I find that agreement with luxury beliefs is predicted to describe an individual who is attending college, not necessarily someone possessing a degree—it is perhaps unsurprising that the individual is then also predicted to be in the lowest income bracket (earning less than 50,000 USD per year). Thus,

luxury beliefs are not strongly associated with status, if anything, they only predict college attendance.

In Study 2 I proceed by testing the prediction of the model: whether the likelihood of stating luxury beliefs increases with higher social image. To manipulate social image, I randomise participants to either a condition where their level of agreement to luxury beliefs are shown to another participant or kept private, hypothesising that agreement will be higher in the former. In an online sample of 534 participants, balanced in political affiliations, I find no significant difference in agreement to luxury beliefs across treatments. I note however that my experimental setting is one which does not promote strong signaling motives: participants' interaction is close to anonymous, they do not expect their audience to strongly agree with luxury beliefs, and (as shown in Study 1) this is a sample where luxury beliefs are not strongly associated with high status. As such, my experiment can be seen as a lower bound for the degree of social interaction necessary to induce signaling, which is expected to be more likely in a face-to-face social setting with audience members known to associate luxury beliefs with status.

This paper contributes to the literature on *status* signaling through conspicuous consumption, as originally coined by Veblen (1899). Many other papers have shown that individuals make consumption choices in a way that signals status (Bloch, Rao and Desai, 2004; Charles, Hurst and Roussanov, 2009; Heffetz, 2011; Bursztyn et al., 2018; Clingingsmith and Sheremeta, 2018). More recently, consumption choices have also been shown to signal *ideology*, which is known in the literature as conspicuous conviction (Schneider, 2022; Friedrichsen and Engelmann, 2018) or conspicuous conservation, when the consumption signals pro-environmental ideologies (Sexton and Sexton, 2014; Delgado, Harriger and Khanna, 2015; Griskevicius, Tybur and Van den Bergh, 2010; Palomo-Vélez, Tybur and van Vugt, 2021). This paper examines the concept of "luxury beliefs" which instead links *ideology* with *status*: as material goods become more affordable, holding certain ideologies are hypothesised to be a more credible way of signaling status.

A closely related paper is Enke, Polborn and Wu (2023), which develops a theoretical framework where values are a luxury good. As income increases, moral liberals can afford to prioritize liberal values, while for moral conservatives, higher income is predicted to increase the importance of conservative values. Using two datasets, the authors show that the prediction holds: the association between income and voting for the Republican Party is stronger among moral conservatives than moral liberals. Similarly, my paper tests the association between values and status (education and income) using statements commonly described to be luxury beliefs. Additionally, I study whether any

association is predicted by an observer, and if individuals use these statements to signal status or if they truly believe in these novel ideologies.

My results provide the first test of "luxury beliefs" as a concept. These were originally defined and described in media narrative as beliefs that are costly for the lower class, making them a way for elites to convey status. While this may be true in certain settings, such as elite educational institutions, it appears that the association between these beliefs and status have not (yet) spread to the general population. Using a more representative sample, I do not find that these beliefs are more likely to be held by higher status individuals (as measured by education and income levels), nor are these statements believed by an observer to be associated with someone of a high status—these are merely believed to predict college attendance. Thus, it is unsurprising that I find no evidence of signaling using luxury beliefs within my sample. Any agreement to luxury beliefs appears to be genuine rather than driven by a signaling motive.

The rest of this paper proceeds as follows. In Section 2, I develop a signaling game to derive a prediction: assuming that luxury beliefs are associated with high status, individuals are more likely to signal through these beliefs as the social image gain increases. The assumption that luxury beliefs are associated with high status will be tested in Study 1, which is described in Section 3. The prediction that individuals signal through luxury beliefs if the social image gain is higher will be tested in Study 2, described in Section 4. Section 5 concludes.

2 Model

The dynamics of luxury belief can be captured by a simple signaling game. An individual (P_1) can be one of two status types: High (H) or Low (L). The probability of High types is ϕ . Type is unobservable, but the individual can send one of two ideological signals: novel (N) or mainstream (M). Professing (and adhering to) mainstream beliefs is costless, but novel beliefs incur a cost which is lower for the high status types who can afford a lifestyle consistent with the novel belief, $c_L > c_H$.⁴ The observer (P_2) confers social image upon P_1 by stating their perceived status of P_1 : \hat{p} when N is observed, and \hat{q} when M is observed. P_2 incurs convex attention cost when conferring high status on P_1 : $\hat{p}^2/2$ and $\hat{q}^2/2$ respectively. Additionally, when interacting with a high status P_1 , P_2 derives payoff b_H per unit of high status conferred. The extensive form of the game

⁴This cost can be thought of as a material implementation cost of adhering to the belief or a psychological cognitive dissonance cost of professing the belief despite knowing about the material implementation cost (or both).

is shown in Figure 1.

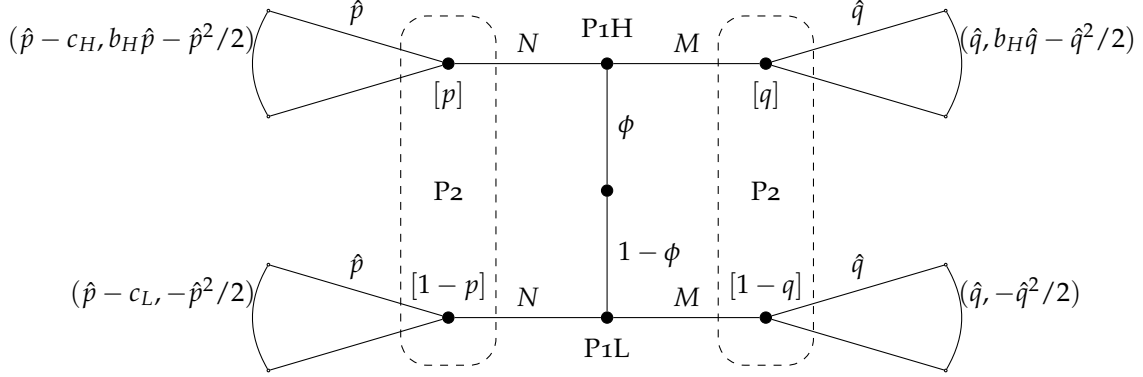


Figure 1: A luxury belief signaling game

Proposition 1. *If a belief N confers status, in the sense that $p = P(H|N) > P(H|M) = q$, the likelihood of signaling through belief N increases as the social image gain from being high status relative to low status ($\hat{p} - \hat{q}$) increases.*

Proof. P2 defines her beliefs as $p = P(H|N)$ and $q = P(H|M)$. Check for sequential rationality (SR) at each information set.

At the N information set, **SR2N:** $Eu(\hat{p}) = pb_H\hat{p} - \hat{p}^2/2$, from the FOC the optimal $\hat{p}^* = pb_H$. Similarly, at the M information set, **SR2M:** $Eu(\hat{q}) = qb_H\hat{q} - \hat{q}^2/2$, from the FOC the optimal $\hat{q}^* = qb_H$. That is, P2's optimal stated perception of P1's status is proportional to their Bayesian posterior.

Since luxury beliefs are defined to confer status on the rich, the Perfect Bayesian Equilibria (PBE) of interest are those where $\hat{p} > \hat{q}$. I therefore make the following assumption:

Assumption 1. *The perception of high status is higher when stating the novel belief than when stating the mainstream belief: $\hat{p} > \hat{q}$ (and equivalently $p > q$).*

Given P2's strategies above, P1's best response is determined as follows. **SR1H:** $Eu(N) = \hat{p} - c_H$, $Eu(M) = \hat{q}$, thus 1H chooses N if $c_H \leq \hat{p} - \hat{q}$. **SR1L:** $Eu(N) = \hat{p} - c_L$, $Eu(M) = \hat{q}$, thus 1L chooses N if $c_L \leq \hat{p} - \hat{q}$.

There are 3 possible cases:

1. $\hat{p} - \hat{q} < c_H < c_L$. If $\hat{p} - \hat{q}$ is too low, both P1H and P1L play M (pooling equilibrium). Then, Bayes Consistency (BC) implies that

$$q = \phi < p$$

and

$$\hat{p} = pb_H > \hat{q} = \phi b_H$$

2. $c_H \leq \hat{p} - \hat{q} < c_L$. If $\hat{p} - \hat{q}$ lies between c_H and c_L , P1H plays N and P1L plays M (separating equilibrium). Then, BC implies that

$$p = 1 > q = 0$$

and

$$\hat{p} = b_H > \hat{q} = 0$$

3. $c_H < c_L \leq \hat{p} - \hat{q}$. If $\hat{p} - \hat{q}$ is sufficiently high, both P1H and P1L play N (pooling equilibrium). Then, Bayes Consistency (BC) implies that

$$p = \phi > q$$

and

$$\hat{p} = \phi b_H > \hat{q} = qb_H$$

The equilibria of interest are cases 2 and 3, either N is chosen only by P1H, or where P1L also chooses N to pool with P1H. It is easy to see that the likelihood of N being chosen by either one or both players increases as $\hat{p} - \hat{q}$ increases. \square

The premise of Proposition 1, Assumption 1 that luxury beliefs confer status, will be tested in Study 1. The proposition itself, that stating luxury beliefs is more likely with increased social image, will be tested in Study 2.

3 Study 1: Do luxury beliefs signify status?

3.1 Design and hypotheses

Study 1 seeks to validate the concept of luxury beliefs as stated in Assumption 1: are the typical examples of novel beliefs associated with higher status, as proxied by education and income? Is this relationship predicted by an observer? The study timeline is shown in Figure 2. Participants start by answering questions about demographics, risk attitude and political affiliation. They then face two blocks, one asking them to state their *own* agreement to a series of statements, and another eliciting their belief about the status of *others* who agree with a series of statements. The order of the two blocks is randomised.

The full survey is included in Appendix Section A.3.

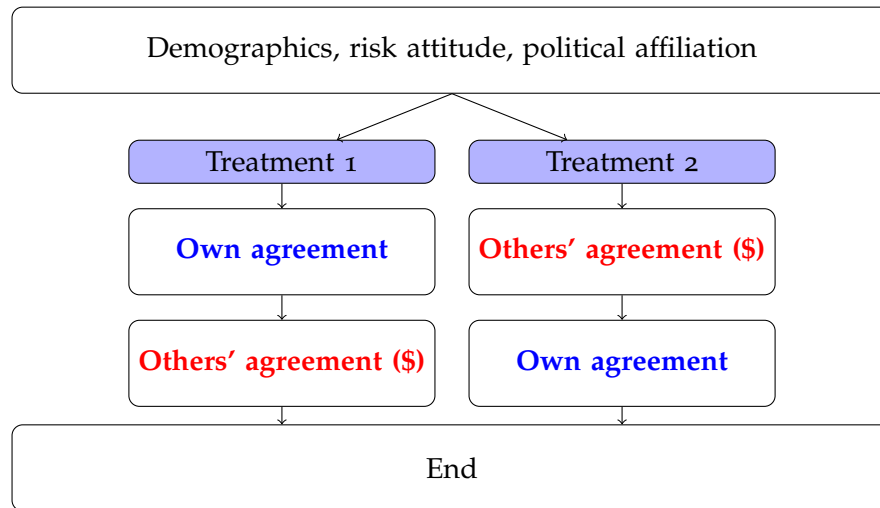


Figure 2: Study 1 timeline

Own agreement

In this block, participants are asked to state their agreement to fifteen randomly ordered statements using a Likert scale from 1 (Strongly disagree) to 7 (Strongly agree). The statements are listed below and consist of twelve "luxury beliefs" or the reverse (coded with *), two placebos (marked with "(P)") from Braghieri (2021), and one attention check. The luxury belief statements are taken from various online articles which have argued that such ideologies confer status to the elites while incurring costs to people from a lower socio-economic background, as referenced and explained below.

- **Attention** To check that you are paying attention, please select the number two.
- **Border***⁵ People and goods should NOT be free to move between jurisdictions with no border restrictions. *Explanation:* Open border leads to higher unemployment among those in low-skilled jobs relative to high-skilled jobs.⁶⁷⁸
- **College** College is NOT necessary to be successful. *Explanation:* Those from lower status benefit greatly from college education.⁷

⁵For statements with *, the luxury belief is obtained by reversing the statement. In this example, the luxury belief is that "People and goods *should* be free to move between jurisdictions with no border restrictions."

⁶Henderson (2019b)

⁷Henderson (2024)

⁸Godwin (2023)

- **CRT*** Racism is NOT a systemic issue and caused only by individuals' prejudice. *Explanation:* Teaching Critical Race Theory (CRT) should be given lower priority when students struggle with more basic history.⁷⁸⁹
- **Degrowth*** Societies should prioritise economic growth over social and ecological well-being. *Explanation:* Emphasizing social and economic well-being over economic growth hurts those from poorer background who would benefit most from economic development.¹⁰
- **Drug*** Casual drug use should be illegal. *Explanation:* Excessive drug use is less costly for those who can afford treatment or rehab facilities.⁶⁷
- **EU (P)** Member states of the European Union should cede more powers to the E.U. (placebo)
- **Family** All family structures (including polyamory) should be equally recognised in society. *Explanation:* The more affluent are better able to manage complications from novel relationship arrangements and have resources to lean on if these do not work out.⁶⁷¹¹
- **Gender** Gender is a social construct and NOT based on biological sex. *Explanation:* Female prisoners are the ones exposed to potentially dangerous male prisoners identifying as women.⁸
- **Locus*** The outcomes of your life are mostly under your control. *Explanation:* People from poorer background are less likely to strive if they believe the outcomes of life are purely due to luck.⁷¹¹
- **Penny (P)** The one-cent coin (i.e. the penny) should be removed from circulation. (placebo)
- **Police** We should defund the police and redirect funds towards social services. *Explanation:* Those from disadvantaged communities are more likely to experience a rise in crime while the elites can afford to pay for their own security.⁷⁸
- **Religion*** Religion is a net benefit to society. *Explanation:* Religion may provide meaning and community for those from poorer background, even if the elites

⁹Pondiscio (2021)

¹⁰Clark (2023)

¹¹Henderson (2019a)

find meaning elsewhere (e.g. in their work) and can thrive without a religious community.¹¹

- **SAT** Universities should eliminate standardised testing as a requirement for admission. *Explanation:* The elites can rely on legacy admission, recommendation letters and extracurriculars, but the SAT is an important way for those from disadvantaged background to signal their potential.¹²
- **WhitePriv** White people enjoy a privilege over non-white people in this society. *Explanation:* Poorer white individuals are the ones who would suffer if laws are enacted to combat white privilege.⁶⁷¹¹

Others' agreement

In this block, participants are randomly presented with either a luxury belief statement or its reverse, and asked to guess the status (education and income brackets) of someone who agrees with the statement. They face each of the fifteen statements above (or its reverse) in random order. They are then asked to consider a participant who agrees with the statement (by selecting either 6 or 7 in the 1-7 Likert scale for agreement), and to guess such participant's education (has never attended college, is attending college or has a college degree) and income level (annually earns less than 50,000 USD, between 50,000-100,000 USD, or over 100,000 USD). To incentivize participants, one of these questions would be picked at random and a correct answer (based on the responses of other participants) would earn the individual a bonus of \$2. The interface for one of the statements is shown in Figure 3.

Other variables

I collect demographic variables at the start of the study. These include: age, gender, ethnicity, education, income, employment status, state, community type (large city, suburb, small city/town or rural), risk attitude, political views on a Left-Right scale (henceforth LR scale) and religion.

Implementation

The study was conducted in March 2024 and participants were recruited from Prolific. In order to ensure a balanced number of participants across political affiliations,

¹²Henderson (2023)

*Suppose someone states that they agree with the HIGHLIGHTED statement (choosing 6 or 7 on a 1-7 agreement scale). Which of the options do you think is more likely regarding...

- i) their education and
- ii) their income?

Please consider your response carefully. We will pick one of these questions at random and pay you depending on whether you are correct, based on the responses of real study participants. **A correct answer will earn you a bonus of \$2.**

	i) Education			ii) Income		
	Has never attended college	Is attending college	Has a college degree	Earns less than \$50k/year	Earns between \$50k-\$100k/year	Earns over \$100k/year
Universities should NOT eliminate standardised testing as a requirement for admission	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 3: Belief elicitation about others' agreement

I recruited 100 self-identified Democrats, Independents (including unaligned) and Republicans, targeting 300 participants.

Table 1 provides summary statistics for Study 1. Participants are on average 43 years old, roughly split between male and female. 68% of participants are white and 54% have a college degree. 75% are employed, with median income bracket "Greater than/equal to 25,000 USD and less than 50,000 USD". 40% live in a suburb near a large city, 25% in a large city, 23% in a small city/town and the rest in a rural area. 59% state they have a religion. They score close to the middle (4.8) on both 0-10 risk and political scales.

Hypotheses

I pre-registered the study on As Predicted #166784, hypothesising that luxury beliefs are associated with and confer status:

Hypothesis 1. *Luxury beliefs are more likely to be held by individuals with higher status, as measured by education and income.*

Hypothesis 2. *Observers associate luxury beliefs with people of higher status, as measured by education and income.*

Table 1: Summary statistics for Study 1

	N	Mean	SD	Min	Max
Age	299	43.47	14.33	18	94
Male	299	0.49	0.50	0	1
White	299	0.68	0.47	0	1
<i>Education</i>					
Some high school or less	299	0.01	0.08	0	1
High school diploma or GED	299	0.15	0.36	0	1
Some college, but no degree	299	0.18	0.38	0	1
Associates or technical degree	299	0.12	0.33	0	1
Bachelor's degree	299	0.39	0.49	0	1
Postgraduate degree	299	0.15	0.36	0	1
<i>Income</i>					
Less than 25,000 USD	299	0.22	0.42	0	1
≥ 25,000 USD and <50,000 USD	299	0.30	0.46	0	1
≥ 50,000 USD and <75,000 USD	299	0.17	0.37	0	1
≥ 75,000 USD and <100,000 USD	299	0.13	0.34	0	1
≥ 100,000 USD and < 125,000 USD	299	0.05	0.23	0	1
≥ 125,000 USD	299	0.13	0.34	0	1
Employed	299	0.75	0.44	0	1
Religious	299	0.59	0.49	0	1
Risk tolerance	299	4.82	2.59	0	10
LR Scale	299	4.83	3.19	0	10

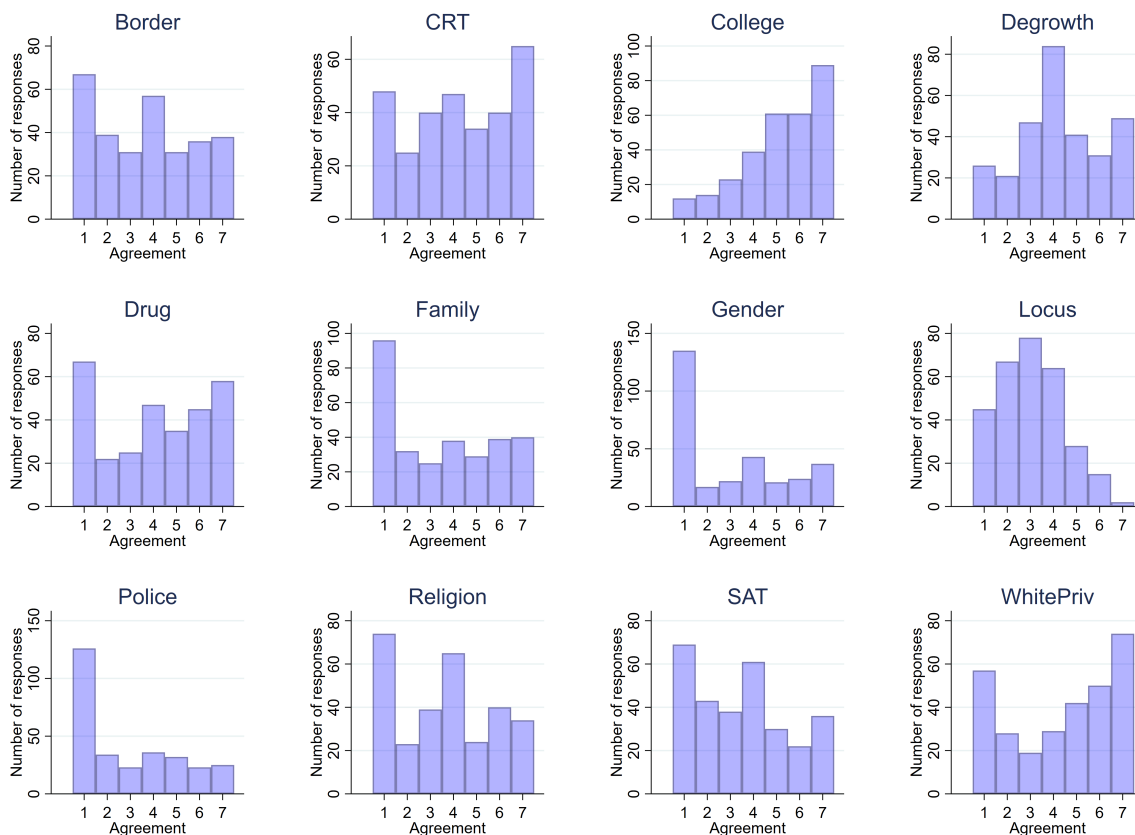
Hypothesis 1 will be tested by correlating participants' own agreement to luxury belief statements and their education and income. Hypothesis 2 will be tested by comparing the perceived status of other participants, when they agree with a luxury belief statement versus when they agree with the reverse statement.

3.2 Results

As shown in Figure 4, agreement to luxury beliefs vary depending on the statement. Strong agreement (skewness > 0.5) is found for the statement that "College is NOT necessary to be successful". However, many participants strongly disagree (skewness < -0.5) with "Gender is a social construct and NOT based on biological sex" and "We should defund the police and redirect funds towards social services".

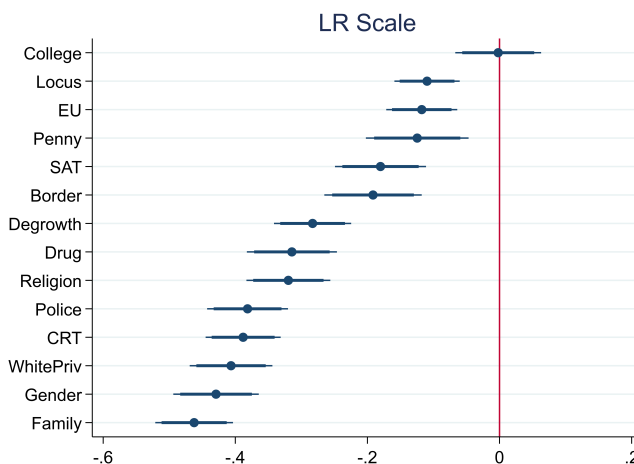
As expected, luxury beliefs are more likely to be held by progressives. Figure 5 plots coefficients from the regression of agreement with each statement on the participant's response on the 0-10 left-right scale. Almost all coefficients are negative (including the two placebo statements): more conservative individuals are less likely to hold luxury beliefs, particularly the Gender and Family statements. Only the coefficient for the College statement is not significantly different from zero.

Figure 4: Agreement to luxury beliefs in Study 1



Note: Agreement to statements among other Study 1 participants. Statements have been reverse-coded where relevant so that higher values correspond with "strongly agree" with the luxury belief.

Figure 5: Agreement with luxury beliefs and political views

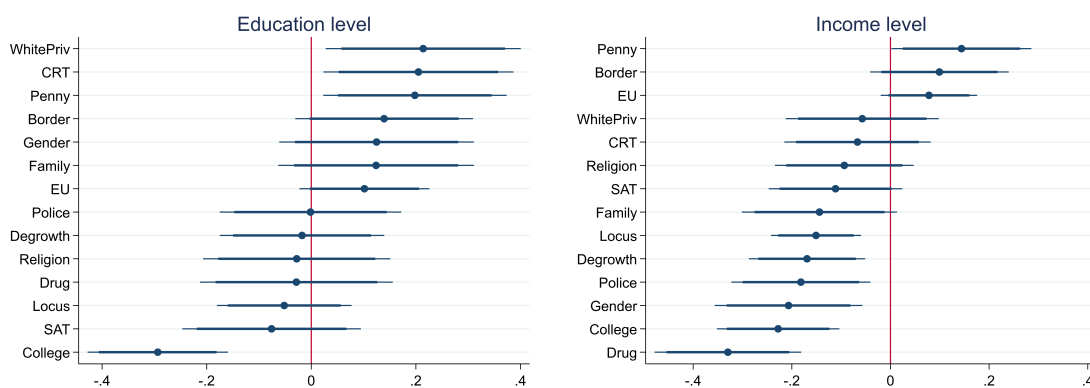


Note: Coefficient of LR scale from OLS regressions of agreement with statement on LR scale. LR scale is response to "In political matters, people talk of 'the left' and 'the right'. How would you place your views on this scale, generally speaking?" on a scale from 0 The Left to 10 The Right.

Own agreement

Figure 6 shows the relationship between agreement to luxury beliefs and own education and income, plotting the coefficients from the regression of agreement with each statement on education level (left) and income level (right). The association between agreement to luxury belief and higher education is only found for two of the statements: White Privilege and Critical Race Theory (CRT). For the majority of statements, agreement is not associated with higher education. The College statement is in fact more likely to be agreed to by those with lower education (who presumably have not attended college).

Figure 6: Agreement with luxury beliefs and own status



Note: Coefficient of Education (left) and Income (Right) from OLS regressions of agreement with statement on education level and income level (separately). Education level is 1 for "Some high school or less", 2 for "High school diploma or GED", 3 for "Some college, but no degree", 4 for "Associates or technical degree", 5 for "Bachelor's degree", 6 for "Graduate or professional degree (MA, MS, MBA, PhD, JD, MD, DDS etc.)". Income level is 1 for "<25,000 USD", 2 for "≥25,000 USD and <50,000 USD", 3 for "≥50,000 USD and <75,000 USD", 4 for "≥75,000 USD and <100,000 USD", 5 for "≥100,000 USD and <125,000 USD", 6 for "≥125,000 USD".

I do not find an association between luxury beliefs and higher income. In fact, the opposite is true: those with higher income are more likely to *disagree* to most of the luxury belief statements, in particular regarding Drug, College and Gender.

To test Hypothesis 1, I pool all statements (excluding placebos) and estimate the following regression:

$$Agreement_{si} = \beta_0 + \beta_1 Edu_i + \beta_2 Inc_i + X_i' \gamma + \Sigma \delta_s + \varepsilon_i$$

$Agreement_{si}$ is individual i 's agreement to luxury belief statement s (reverse-coding where applicable) on a 1-7 scale. Edu_i and Inc_i are i 's education and income levels, using a continuous scale (1-6) or categorical. X_i' is a vector of demographic controls,

including age, male DV, race and LR scale. In some specifications I also include state political affiliation, community, risk tolerance, religion DV and order DV. I include topic fixed effects δ_s and cluster standard errors at the individual level.

Table 2 shows the regression results. While the coefficient for education (continuously coded) is positive, it is no longer significant when including controls in columns (2)-(3). On the other hand, the coefficient for income (continuously coded) is consistently negative and significant (columns 1-3). To understand whether certain education or income brackets are more likely to be associated with luxury beliefs, columns (4)-(6) regress agreement with all the categorical dummy variables for education and income. Holding a Bachelor's degree (relative to the omitted category, high school diploma or less) is significantly correlated with agreement to luxury beliefs (column 4), however the significance disappears with controls in columns (5)-(6). While the coefficients for other education levels are positive, none of these is significant. On the other hand, column (4) shows the coefficients for all income categories are significantly negative: relative to the omitted category, earning $< 25,000$ USD per year, earning more is associated with lower agreement with luxury beliefs. Most of these coefficients are still significant when including the full set of controls in column (6). The relationship is particularly strong for the top income bracket: earning $\geq 125,000$ USD per year is associated with 0.43 points lower agreement with luxury beliefs on the 1-7 scale.¹³

Result 1. *Luxury belief holders are not more likely to have higher status: there is no strong correlation with education and there is a strong negative correlation with income.*

Others' agreement

Figure 7 shows the relationship between others' agreement to luxury beliefs and their perceived status (education and income), plotting the coefficients from the regression of beliefs about status variables on treatment DV which equals 1 for others' agreement to luxury beliefs and 0 for others' agreement to the reverse statement. The association between luxury belief and higher level of education is not uniform and significantly positive only for CRT, White Privilege, Religion and Family. On the other hand, agreement with statements about Police, Drug, SAT, Locus and College is *negatively* associated with education. Focusing on college attendance, as expected, most of the coefficients are positive: almost all luxury belief holders are perceived to be current college students.

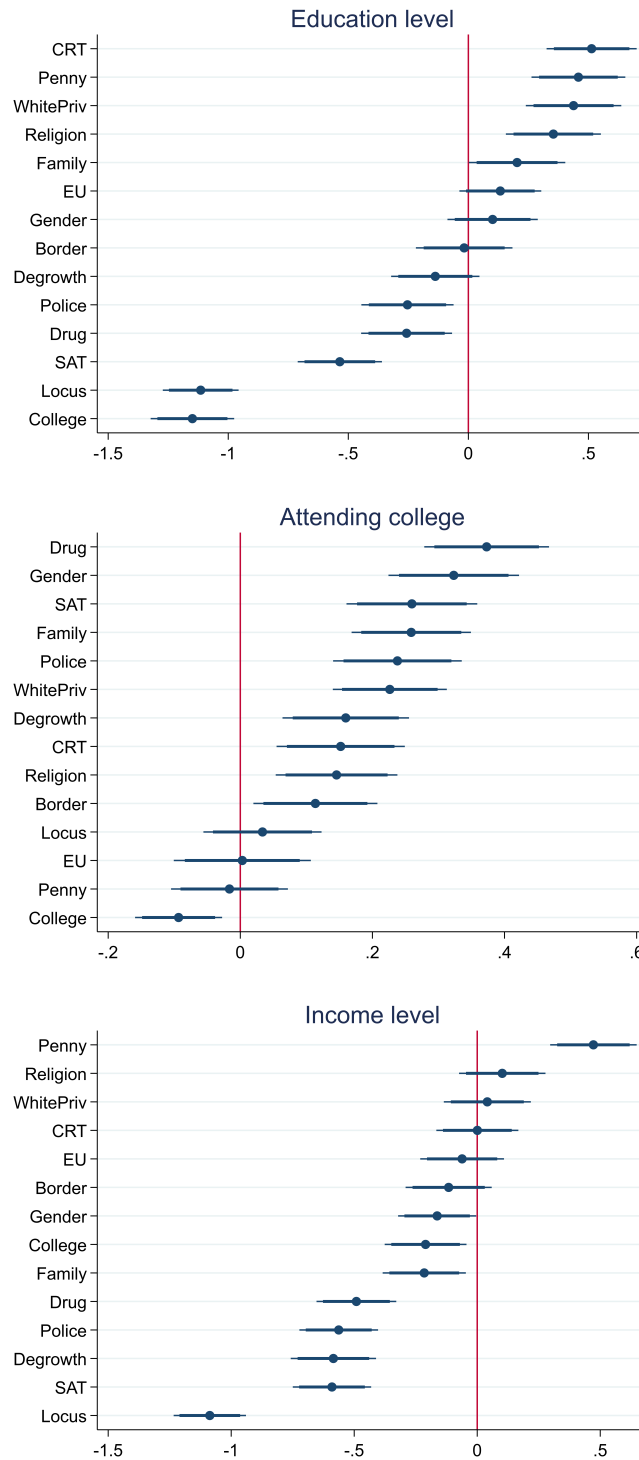
¹³Results are similar excluding participants who completed the task second (though I also find significant positive correlations with higher levels of education), who failed the attention checks and whose duration is outside the 10th and 90th percentile. See Table A1 in the Appendix.

Table 2: Agreement to statements

	(1)	(2)	(3)	(4)	(5)	(6)
Education level (cont.)	0.114** (0.053)	0.044 (0.034)	0.056 (0.035)			
Income level (cont.)	-0.175*** (0.046)	-0.083*** (0.030)	-0.074** (0.030)			
Some college, but no degree				0.319 (0.201)	0.154 (0.144)	0.143 (0.141)
Associates or technical degree				0.461* (0.246)	0.261 (0.173)	0.242 (0.176)
Bachelor's degree				0.568*** (0.200)	0.213 (0.140)	0.221 (0.140)
Postgraduate degree				0.399 (0.249)	0.183 (0.164)	0.235 (0.165)
≥ 25,000 USD and <50,000 USD				-0.601*** (0.196)	-0.195* (0.116)	-0.249** (0.114)
≥ 50,000 USD and <75,000 USD				-0.464* (0.240)	-0.398*** (0.149)	-0.387*** (0.140)
≥ 75,000 USD and <100,000 USD				-0.889*** (0.259)	-0.202 (0.154)	-0.202 (0.153)
≥ 100,000 USD and < 125,000 USD				-0.888** (0.345)	-0.482** (0.227)	-0.428* (0.224)
≥ 125,000 USD				-0.984*** (0.259)	-0.441*** (0.170)	-0.433*** (0.162)
N	3588	3588	3588	3588	3588	3588
R-sq	0.107	0.284	0.293	0.116	0.287	0.296
Demog. controls		X	X		X	X
Extra controls			X			X

Note: OLS regressions of agreement with statements. Education level is 1 for "Some high school or less", 2 for "High school diploma or GED", 3 for "Some college, but no degree", 4 for "Associates or technical degree", 5 for "Bachelor's degree", 6 for "Graduate or professional degree (MA, MS, MBA, PhD, JD, MD, DDS etc.)". Income level is 1 for "<25,000 USD", 2 for "≥25,000 USD and <50,000 USD", 3 for "≥50,000 USD and <75,000 USD", 4 for "≥75,000 USD and <100,000 USD", 5 for "≥100,000 USD and <125,000 USD", 6 for "≥125,000 USD". **Demographic controls:** age, male DV, race and LR scale. **Extra controls:** state political affiliation, community, risk tolerance, religion DV and order DV. All specifications include topic fixed effects and standard errors are clustered at the individual level.

Figure 7: Others' agreement with luxury beliefs and perceived status



Note: Coefficient of treatment DV for others' agreement with luxury beliefs from OLS regressions of beliefs about education level (top), college attendance dummy (middle), and income level (bottom). Education level is 1 for "Has never attended college", 2 for "Is attending college", 3 for "Has a college degree". Income level is 1 for "<50,000 USD", 2 for "≥50,000 USD and ≤100,000 USD", 3 for "≥100,000 USD".

I do not find an association between agreement with luxury beliefs and perceived higher income. In fact, as Figure 7 shows, most luxury belief holders are expected to have lower income.

To test Hypothesis 2, I pool all statements (excluding placebos) and estimate the following regression:

$$Outcome_{si} = \beta_0 + \beta_1 Agreement_s + X_i' \gamma + \sum \delta_s + \varepsilon_i$$

$Outcome_{si}$ is a dummy variable which equals 1 if individual i selects a particular education or income level for someone who agrees with statement s , where education level is one of the following: "Has never attended college", "Is attending college", "Has a college degree" and income level is one of the following: "<50,000 USD", "≥50,000 USD and ≤100,000 USD", "≥100,000 USD". $Agreement_s$ is treatment dummy which equals 1 for others' agreement (6-7 on the 1-7 Likert scale) to statement s when expressed as a luxury belief and equals 0 when statement s is expressed as the reverse of a luxury belief. X_i' is a vector of demographic controls, including age, male DV, race and LR scale. In some specifications I also include state political affiliation, community, risk tolerance, religion DV and order DV. I include topic fixed effects δ_s and cluster standard errors at the individual level.

Table 3 shows the regression results for education levels. A fellow participant who agrees with a luxury belief statement is perceived to be most likely attending college, while the association with having a degree is negative. Table 4 shows the regression results for income levels. A fellow participant who agrees with a luxury belief statement is perceived to be most likely in the lowest income bracket (earning less than 50,000 USD per year), while a fellow participant who agrees with the *reverse* luxury belief statement is perceived to be in the highest income bracket (earning more than 100,000 USD per year).¹⁴

Result 2. *Luxury belief holders are not perceived to have higher status: they are perceived to be most likely currently attending college and in the lowest income bracket.*

¹⁴Results are robust to excluding participants who completed the task second, who failed the attention checks and whose duration is outside the 10th and 90th percentile. See Tables A2 and A3 in the Appendix.

Table 3: Perceived likelihood of education level

	No degree		Attending college		Has degree	
	(1)	(2)	(3)	(4)	(5)	(6)
Agreement DV	-0.014 (0.023)	-0.014 (0.023)	0.182*** (0.017)	0.183*** (0.017)	-0.169*** (0.023)	-0.169*** (0.023)
N	3588	3588	3588	3588	3588	3588
R-sq	0.030	0.032	0.076	0.078	0.057	0.061
Demog. controls	X	X	X	X	X	X
Extra controls		X		X		X

Note: OLS regressions of perceived levels of education. Agreement DV is equal to 1 if statement presented is a "luxury belief" and 0 otherwise. **Demographic controls:** age, male DV, race, own education, own income and LR scale. **Extra controls:** state political affiliation, community, risk tolerance, religion DV and order DV. All specifications include topic fixed effects and standard errors are clustered at the individual level.

Table 4: Perceived likelihood of income level

	<50k USD		50k-100k USD		>100k USD	
	(1)	(2)	(3)	(4)	(5)	(6)
Agreement DV	0.177*** (0.023)	0.176*** (0.023)	-0.028 (0.020)	-0.028 (0.020)	-0.149*** (0.016)	-0.148*** (0.016)
N	3588	3588	3588	3588	3588	3588
R-sq	0.079	0.084	0.018	0.021	0.089	0.093
Demog. controls	X	X	X	X	X	X
Extra controls		X		X		X

Note: OLS regressions of perceived levels of income. Agreement DV is equal to 1 if statement presented is a "luxury belief" and 0 otherwise. **Demographic controls:** age, male DV, race, own education, own income and LR scale. **Extra controls:** state political affiliation, community, risk tolerance, religion DV and order DV. All specifications include topic fixed effects and standard errors are clustered at the individual level.

4 Study 2: Do individuals signal through luxury beliefs?

4.1 Design and hypotheses

Study 2 seeks to test the prediction of Proposition 1 that individuals are more likely to signal using luxury beliefs when the social image, as measured by $\hat{p} - \hat{q}$, increases. Recall that $\hat{p} - \hat{q} = b_H(p - q)$, where b_H is the observer's benefit from interacting with a high status sender while p and q are the probabilities that the sender is high status conditional on stating the luxury belief and mainstream belief, respectively. I manipulate social image by varying whether participants' responses are shown to an audience (yielding $b_H > 0$) or kept private ($b_H = 0$).

The study timeline is shown in Figure 8. Participants start by answering questions about demographics, risk attitude and political affiliation. They are then randomised into one of two treatments which determines whether their agreement to a series of statements would be shown to another participant or kept private. At the end they complete a post-survey questionnaire containing an incentivized norm elicitation, a question about social image, and a conformity scale. The full survey is included in Appendix Section A.3.

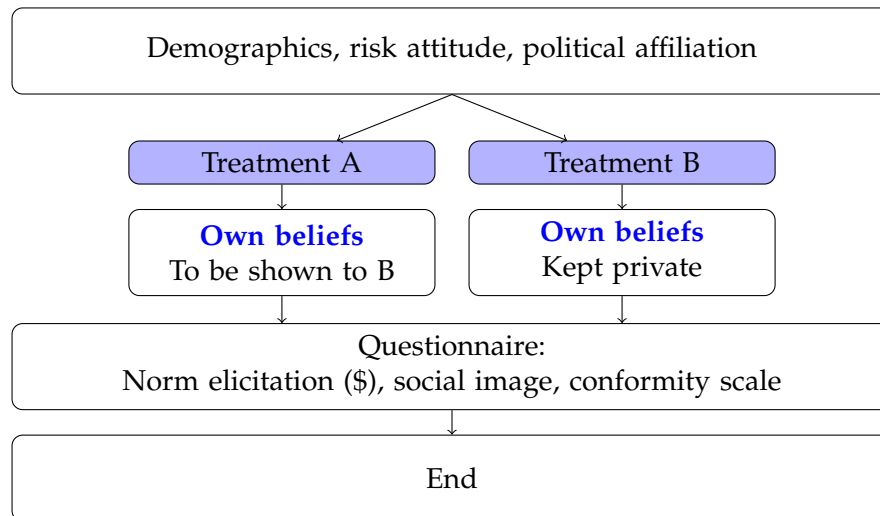


Figure 8: Study 2 timeline

Treatments

After completing the demographic questionnaire, participants are presented with the following information. They would be matched with another participant and be part-

ners for the remainder of the study. One of them would be Participant A and the other Participant B. They would then be asked to state their agreement to a series of questions. After they have both completed the study, the responses of Participant A would be shown to Participant B, for example: "Your partner Participant A states that they [level of agreement] with [statement]." The responses of Participant B would not be shown to Participant A. Thus, Participant A whose statements are shown to an audience should anticipate higher social image gain ($b_H > 0$) relative to Participant B whose statements are kept private and yield no social image gain ($b_H = 0$).

In the next screen, participants observe which role they are assigned and are reminded of the relevant information:

You are **Participant A**.

You will now see a series of statements. After each statement, you will be asked how much you agree/disagree with it.

Remember that **your responses will be shown to your partner Participant B after both of you have completed the study.**

or

You are **Participant B**.

You will now see a series of statements. After each statement, you will be asked how much you agree/disagree with it.

Remember that **your responses will NOT be shown to your partner Participant A.**

Participants then face the same fifteen randomly ordered statements as described in Section 3.1 and state their agreement using a Likert scale from 1 (Strongly disagree) to 7 (Strongly agree).

Norm elicitation, social image and conformity scale

In the post-survey questionnaire, I elicit participants' belief about the popularity of luxury beliefs. For each of the fifteen statements (either presented as a luxury belief or its reverse), randomly ordered, participants are asked to guess what the majority opinion is among "all participants in this US-based survey". They respond on a Likert scale from 1 "Most people strongly disagree" to 7 "Most people strongly agree". Participants are urged to read each statement carefully as it may be stated in reverse compared to

what they saw before. To incentivize thoughtful responses, each correct answer earns the participant a ticket for a lottery of 50 USD, to be paid out after the study.

Next, I ask: "How important is the opinion that others hold about you to you?" and participants answer on a scale from 0 "Not important at all" to 10 "Extremely important". This question has been used to measure social image concerns in other studies such as [Petrishcheva, Riener and Schildberg-Hörisch \(2023\)](#); [Ewers and Zimmermann \(2015\)](#).

Finally, to measure participants' tendency to conform, I include the Social Conformity scale ([Mehrabian and Stefl, 1995](#)) which include eleven statements such as "I am more independent than conforming in my ways" and "I tend to rely on others when I have to make an important decision quickly". Participants answer on a scale from 0 "Not at all true of me" to 7 "Extremely true of me".

Other variables

I collect demographic variables at the start of the study. These include: age, gender, ethnicity, education, income, employment status, state, community type (large city, suburb, small city/town or rural), risk attitude, political views (LR scale) and religion.

Implementation

The study was conducted in April 2024 on Prolific. To ensure a balanced number of participants across political affiliations, I recruited 180 self-identified Democrats, Independents (including unaligned) and Republicans, targeting 540 participants.

Table 5 provides summary statistics for Study 2. Participants are on average 43 years old, roughly split between male and female. 67% of participants are white and 54% have a college degree. 73% are employed, with median income bracket "Greater than/equal to 50,000 USD and less than 75,000 USD". 40% live in a suburb near a large city, 29% in a large city, 20% in a small city/town and the rest in a rural area. 63% state they have a religion. They score close to the middle on the 0-10 scales for risk (5.1), political views (4.7) and social image concern (4.2). On the social conformity index, the average score is 35.6 for the eleven items, out of a possible maximum of 77.

After the study is completed, Participant A's responses were communicated to Participant B through a Prolific message containing a link to a spreadsheet. In the first column, Participant B could identify their applicable row using characters 20-23 of their 24-character Prolific ID. The next 15 columns contain the responses (1-7, where 1 is Strongly disagree and 7 is Strongly agree) of their matched Participant A for each of the 15 statements. The last column provides an explanation of what these statements are.

Table 5: Summary statistics for Study 2

	N	Mean	SD	Min	Max
Age	534	43.40	13.02	19	86
Male	534	0.49	0.50	0	1
White	534	0.67	0.47	0	1
<i>Education</i>					
Some high school or less	533	0.01	0.07	0	1
High school diploma or GED	533	0.14	0.35	0	1
Some college, but no degree	533	0.21	0.41	0	1
Associates or technical degree	533	0.11	0.31	0	1
Bachelor's degree	533	0.36	0.48	0	1
Postgraduate degree	533	0.18	0.38	0	1
<i>Income</i>					
Less than 25,000 USD	534	0.22	0.41	0	1
≥ 25,000 USD and < 50,000 USD	534	0.24	0.43	0	1
≥ 50,000 USD and < 75,000 USD	534	0.20	0.40	0	1
≥ 75,000 USD and < 100,000 USD	534	0.13	0.33	0	1
≥ 100,000 USD and < 125,000 USD	534	0.06	0.23	0	1
≥ 125,000 USD	534	0.16	0.36	0	1
Employed	534	0.73	0.44	0	1
Religious	534	0.63	0.48	0	1
Risk tolerance	534	5.05	2.60	0	10
LR Scale	534	4.71	3.15	0	10
Others' opinion important	534	4.20	2.92	0	10
Social conformity index	534	35.64	10.21	11	71

Hypotheses

I pre-registered the study on As Predicted #169913, hypothesising that signaling through luxury beliefs is more likely with higher social image:

Hypothesis 3. *Participants are more likely to state luxury beliefs when their beliefs are shown to others than when kept private.*

Hypothesis 4. *Treatment effect is stronger when participant: i) is more conforming, ii) cares more about others' opinion of them, iii) thinks others also hold the luxury belief, and iv) the stronger the association between the belief and status (income or education) as measured in Study 1.*

Hypothesis 3 will be tested by comparing agreement to luxury beliefs across treatments. To test Hypothesis 4, I will conduct heterogeneity analyses for variables that are expected to increase signaling at the individual level: degree of conformity, social image concern and perceived majority views. I also check for heterogeneity at the topic level, using the coefficients from regressions of i) own belief on status and ii) perceived status of others on luxury belief, as measured in Study 1. An increase in these coefficients are expected to correspond to an increase in $p - q$, the status gain from stating the luxury belief.

4.2 Results

Participants' level of agreement to the luxury belief statements are similar to Study 1 and presented in Figure A1 in the Appendix.

Audience treatment

To test Hypothesis 3, I pool all statements (excluding placebos) and estimate the following regression:

$$Agreement_{si} = \beta_0 + \beta_1 Audience_i + X_i' \gamma + \Sigma \delta_s + \varepsilon_i$$

$Agreement_{si}$ is individual i 's agreement to luxury belief statement s (reverse-coding where applicable) on a 1-7 scale. $Audience_i$ is a dummy variable for the Audience treatment. X_i' is a vector of demographic controls, including age, male DV, race, education, income and LR scale. In some specifications I also include state political affiliation, community, risk tolerance and religion DV. I include topic fixed effects δ_s and cluster standard errors at the individual level.

Table 6 shows the regression results. Overall, I do not find any evidence of signaling: participants are not more likely to state luxury beliefs when their responses would be shown to another participant, relative to when they are kept private. The results are consistent when including demographic and additional controls.

Table 6: Agreement to statements

	(1)	(2)	(3)
Audience	0.051 (0.103)	-0.013 (0.065)	-0.032 (0.064)
N	6408	6396	6396
R-sq	0.107	0.302	0.307
Demog. controls		X	X
Extra controls			X

Note: OLS regressions of agreement with statements. **Demographic controls:** age, male DV, race, education, income and LR scale. **Extra controls:** state political affiliation, community, risk tolerance and religion DV. All specifications include topic fixed effects and standard errors are clustered at the individual level.

Heterogeneity analyses

Although overall I find no treatment effect to suggest participants signal through luxury beliefs, this null result may mask some heterogeneity across different groups, as predicted in Hypothesis 4.¹⁵ I first check for heterogeneity across degree of conformity, hypothesising that those who have a higher tendency to conform may be more likely to signal through luxury beliefs than those who care less about conforming. I therefore interact the treatment dummy with the standardised responses to the Social Conformity scale (Mehrabian and Stefl, 1995). The results are shown in column (1) of Table 7. While the coefficient of the interaction term is positive (as expected), it is not significant.

I next test whether the audience effect is greater for those who care more about others' opinion of them, interacting treatment with responses to "How important is the opinion that others hold about you to you? " on a scale from 0-10. The results are shown in column (2) of Table 7. I do not find any significant heterogeneity in this dimension either.

Signaling is also expected to be stronger if participants think their audience holds luxury beliefs. Figure 9 shows the perceived majority views for each of the luxury belief statements. An ideal condition for a strong signaling motive is that participants expect others to hold luxury beliefs, which would be indicated by a negative skew (a mass on

¹⁵None of the heterogeneity variables conformity, social image concern, or belief about majority opinion is significantly different across treatments ($p = 0.4196$, $p = 0.1288$, and $p = 0.3995$ respectively).

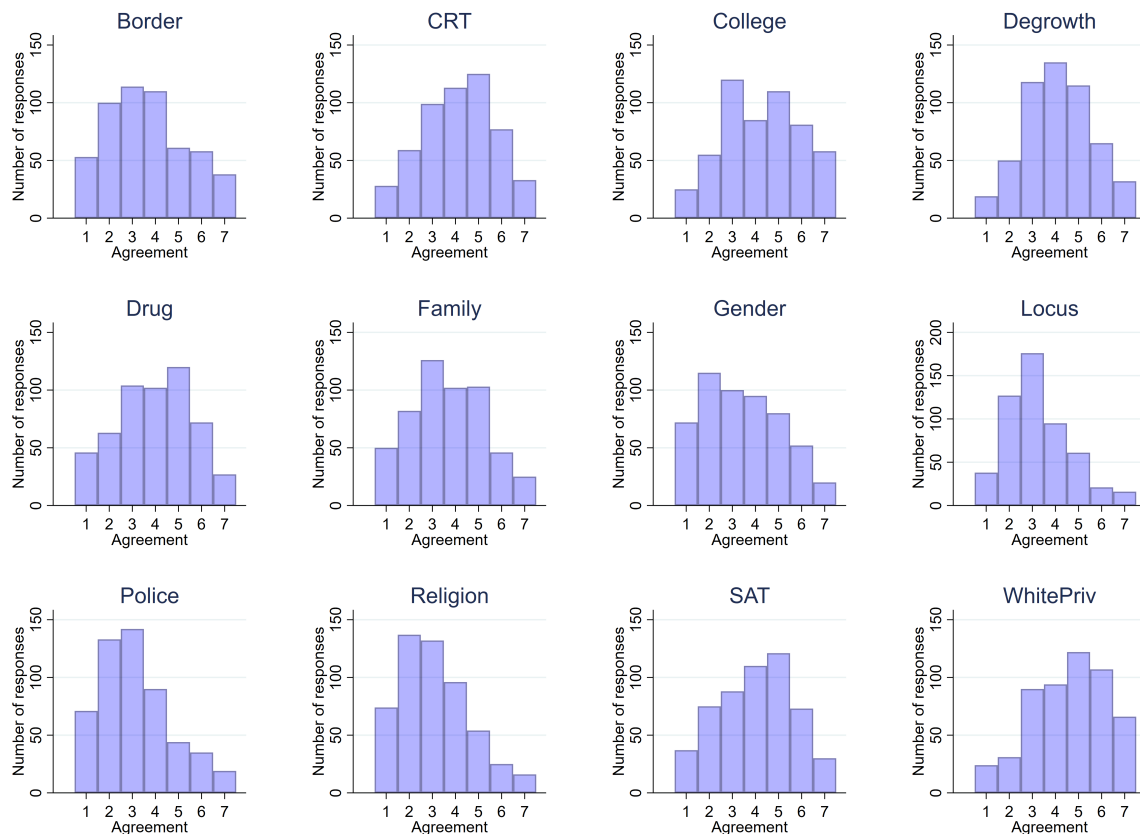
Table 7: Agreement to statements

	(1)	(2)	(3)	(4)	(5)
Audience	-0.031 (0.065)	-0.006 (0.119)	-0.065 (0.164)	-0.015 (0.063)	0.054 (0.080)
Social conformity index	0.018 (0.050)				
Audience × Social conformity index	0.010 (0.067)				
Others' opinion important		0.013 (0.017)			
Audience × Others' opinion important		-0.006 (0.024)			
Perceived norm			0.259*** (0.031)		
Audience × Perceived norm			0.010 (0.041)		
β (own agreement & edu) (S ₁)				9.647*** (1.501)	
Audience × β (own agreement & edu) (S ₁)				-0.675 (0.421)	
β (college & others' agreement) (S ₁)					6.413*** (1.010)
Audience × β (college & others' agreement) (S ₁)					-0.470 (0.414)
N	6396	6396	6396	6396	6396
R-sq	0.307	0.307	0.346	0.307	0.307
Demog. & extra controls	X	X	X	X	X

Note: OLS regressions of agreement with statements. **Social conformity index:** responses to Social Conformity scale (Mehrabian and Stefl, 1995) (standardised). **Others' opinion important:** response to "How important is the opinion that others hold about you to you? " (0-10). **Perceived norm:** belief about majority opinion on statement (1-7). **β (own agreement & edu):** coefficients from OLS regressions of agreement on education level in Study 1. **β (college & others' agreement):** coefficients from OLS regressions of belief about current college attendance on DV for others' agreement. **Demographic controls:** age, male DV, race, education, income and LR scale. **Extra controls:** state political affiliation, community, risk tolerance and religion DV. All specifications include topic fixed effects and standard errors are clustered at the individual level.

the right). As can be seen in the figure, this condition is only met for some statements: CRT, College, Drug, SAT and White Privilege. Thus, ex-ante, signaling motive is not expected to be strong in this sample: most participants do not expect others to have strong agreement with the luxury beliefs. To isolate those who believe otherwise, my third heterogeneity analysis therefore interacts treatment with the perceived majority view for each statement (from 1 Strongly disagree to 7 Strongly agree), reverse-coded where relevant. The results are shown in column (3) of Table 7. Unsurprisingly, the coefficient for perceived norm is positive and significant, indicating a correlation between own views and the perceived views of others. The interaction coefficient, while as expected is positive, is not significant.

Figure 9: Perceived norms



Note: Perceived majority views among other study participants. Statements have been reverse-coded where relevant so that higher values correspond with "Most people strongly agree" with the luxury belief.

Finally, as hypothesised in Proposition 1, the likelihood of stating luxury beliefs is also expected to be higher as $(p - q)$, the probability of being high status when stating luxury beliefs relative to mainstream beliefs, increases. As the results of Study 1 show,

in general luxury beliefs are not strongly associated with high status. To check if the signaling motive is stronger for statements that are more highly correlated with status, in the last two columns of Table 7 I interact treatment with statement-specific coefficients. In column (4), I use coefficients from the regression of own agreement on own education level (as plotted in the left panel of Figure 6). In column (5), I use coefficients from the regression of belief about others' college attendance on treatment DV which equals 1 for luxury belief and 0 for its reverse (as plotted in the middle panel of Figure 7). Visual inspection shows that these specific models display the most positive correlation between luxury beliefs and the status variable (unlike, say, income). In column (4), $\beta(\text{own agreement \& edu})$ has a large positive and significant coefficient: for each unit change in the agreement to luxury belief due to going up one education level in Study 1, agreement to luxury belief in Study 2 increases by over 9 units. However, there is no significant interaction effect with the audience treatment. Similarly, in column (5), $\beta(\text{college \& others' agreement})$ has a large positive and significant coefficient: for each unit change in the probability of selecting college attendance for someone agreeing to the luxury belief in Study 1, agreement to luxury belief in Study 2 increases by over 6 units. However, there is no significant interaction effect with the audience treatment either.

To sum up, I do not find evidence that participants seek to signal status by stating luxury beliefs when their responses are shown to an audience.

Result 3. *There is no evidence that individuals use "luxury beliefs" for signaling.*

However, I note the following caveats. First, as shown in Study 1 and Figure 9, in my studies luxury beliefs are not perceived to strongly signal status and nor are they perceived to be held by the majority. Thus, the motive to signal in the current setting is weak relative to social networks in elite institutions where many are expected to hold such beliefs.

Second, the experimental setting is one of close to complete anonymity. While it would be ideal to have closer interactions between study participants to increase the salience of social image concerns, it is difficult to achieve in an online experimental setting. Nevertheless, my setting can be interpreted as a lower bound for the social interaction required for signaling and replicates many close-to-anonymous online interactions between individuals.

5 Conclusion

This paper tests the concept of "luxury beliefs" and whether individuals use these statements to signal status. While luxury beliefs are associated with left-wing political views, there is no association with high status as measured by the education and income of the belief-holder or as predicted by an observer. If anything, these statements are believed to signal college attendance. I find no evidence that individuals signal using luxury beliefs: agreement to these statements is not higher in the audience treatment relative to the private treatment.

One possible reason for the lack of evidence for signaling is the weak association between luxury beliefs and status in my sample. While luxury beliefs were originally hypothesised to convey status and used as a signaling device among the elites, I show that their association with status has not (yet) trickled down to the more general population. To this sample, and arguable to the general population, agreement to luxury beliefs may be perceived to signal wokeness cultivated through college attendance. Given the weak signal of status, it is unsurprising that I find no increase in agreement to luxury beliefs in the presence of an audience.

A second possible reason for the lack of signaling is the close-to-anonymous setting employed in the online experiment. While not unlike many online interactions, future studies can explore the signaling motive in other types of face-to-face settings, especially one where the audience members are known to associate luxury beliefs with status. This is more likely to be the case in elite institution settings, where the individuals are also more likely to be active or influential in policy debates—thus pointing to the importance of future research on the topic.

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A Appendix

A.1 Appendix Tables

Table A1: Agreement to statements

	(1)	(2)	(3)	(4)	(5)	(6)
Some college, but no degree	0.218 (0.203)	0.297 (0.191)	0.163 (0.147)	0.165 (0.138)	0.024 (0.151)	0.017 (0.145)
Associates or technical degree	0.349 (0.219)	0.393* (0.212)	0.303* (0.178)	0.309* (0.171)	0.151 (0.194)	0.094 (0.191)
Bachelor's degree	0.299 (0.193)	0.427** (0.182)	0.210 (0.140)	0.213 (0.133)	0.180 (0.155)	0.172 (0.152)
Postgraduate degree	0.467** (0.223)	0.593*** (0.224)	0.191 (0.168)	0.247 (0.164)	0.187 (0.184)	0.234 (0.182)
≥ 25,000 USD and <50,000 USD	-0.315* (0.162)	-0.404** (0.161)	-0.187 (0.114)	-0.268** (0.108)	-0.222* (0.130)	-0.300** (0.126)
≥ 50,000 USD and <75,000 USD	-0.295 (0.228)	-0.252 (0.231)	-0.384*** (0.148)	-0.370*** (0.138)	-0.476*** (0.166)	-0.471*** (0.153)
≥ 75,000 USD and <100,000 USD	-0.141 (0.179)	-0.098 (0.194)	-0.157 (0.157)	-0.142 (0.150)	-0.304* (0.175)	-0.288 (0.177)
≥ 100,000 USD and < 125,000 USD	-0.396 (0.336)	-0.349 (0.329)	-0.418* (0.244)	-0.390 (0.239)	-0.572** (0.232)	-0.544** (0.227)
≥ 125,000 USD	-0.578** (0.226)	-0.563** (0.221)	-0.413** (0.167)	-0.379** (0.157)	-0.373** (0.185)	-0.377** (0.180)
N	1776	1776	3408	3408	2892	2892
R-sq	0.287	0.299	0.292	0.305	0.292	0.305
Demog. controls	X	X	X	X	X	X
Extra controls		X		X		X
Sample	T1	T1	Att	Att	Dur	Dur

Note: OLS regressions of agreement with statements. Sample excludes participants who completed the task second (1-2), who failed the attention checks (3-4) and whose duration is outside the 10th and 90th percentile (5-6). **Demographic controls:** age, male DV, race and LR scale. **Extra controls:** state political affiliation, community, risk tolerance, religion DV and order DV. All specifications include topic fixed effects and standard errors are clustered at the individual level.

Table A2: Perceived likelihood of education level

	No degree			Attending college			Has degree		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Agreement DV	-0.007 (0.034)	-0.012 (0.024)	-0.007 (0.026)	0.183*** (0.022)	0.187*** (0.017)	0.176*** (0.018)	-0.176*** (0.032)	-0.176*** (0.024)	-0.169*** (0.026)
N	1812	3408	2892	1812	3408	2892	1812	3408	2892
R-sq	0.046	0.034	0.029	0.088	0.078	0.077	0.081	0.060	0.063
Controls	X	X	X	X	X	X	X	X	X
Sample	T2	Att	Dur	T2	Att	Dur	T2	Att	Dur

Note: OLS regressions of perceived levels of education. Sample excludes participants who completed the task second, who failed the attention checks and whose duration is outside the 10th and 90th percentile. Agreement DV is equal to 1 if statement presented is a "luxury belief" and 0 otherwise. **Controls:** age, male DV, race, own education, own income, LR scale, state political affiliation, community, risk tolerance, religion DV and order DV. All specifications include topic fixed effects and standard errors are clustered at the individual level.

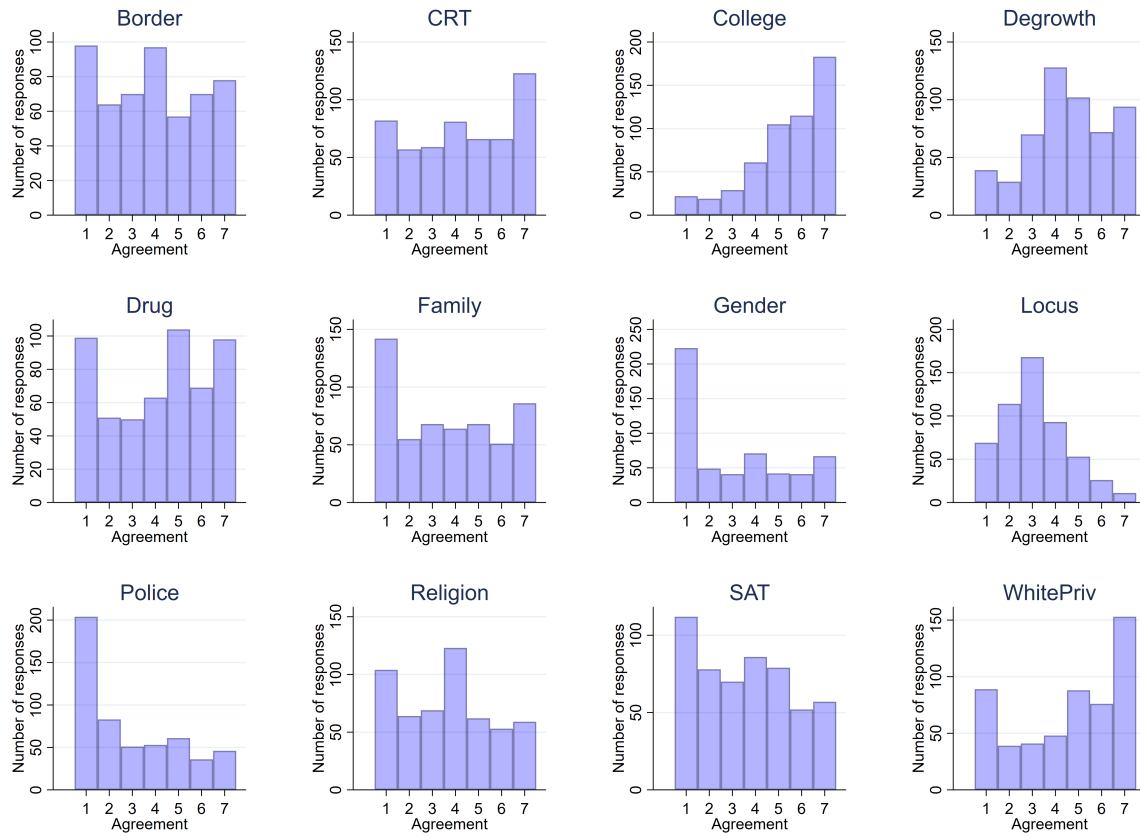
Table A3: Perceived likelihood of income level

	<50k USD			50k-100k USD			>100k USD		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Agreement DV	0.196*** (0.032)	0.187*** (0.024)	0.183*** (0.026)	-0.062** (0.029)	-0.035* (0.021)	-0.033 (0.022)	-0.134*** (0.023)	-0.152*** (0.017)	-0.150*** (0.019)
N	1812	3408	2892	1812	3408	2892	1812	3408	2892
R-sq	0.092	0.086	0.087	0.042	0.020	0.022	0.089	0.093	0.092
Controls	X	X	X	X	X	X	X	X	X
Sample	T2	Att	Dur	T2	Att	Dur	T2	Att	Dur

Note: OLS regressions of perceived levels of income. Sample excludes participants who completed the task second, who failed the attention checks and whose duration is outside the 10th and 90th percentile. Agreement DV is equal to 1 if statement presented is a "luxury belief" and 0 otherwise. **Controls:** age, male DV, race, own education, own income, LR scale, state political affiliation, community, risk tolerance, religion DV and order DV. All specifications include topic fixed effects and standard errors are clustered at the individual level.

A.2 Appendix Figures

Figure A1: Agreement to luxury beliefs in Study 2



Note: Agreement to statements among other Study 2 participants. Statements have been reverse-coded where relevant so that higher values correspond with "strongly agree" with the luxury belief.

A.3 Full Surveys

Begins on next page.

STUDY 1



**Introductory Statement*

This study is conducted by Dr Margaret Samahita from the School of Economics, University College Dublin.

What is this research about?

I aim to understand the opinions of Americans.

Why have you been invited to take part?

You have been contacted because you are an adult aged over 18 years living in the US.

How will your data be used?

Your answers are anonymous; only aggregate results will be published.

What will happen if you decide to take part in this research study?

You will fill out a **10 minute** survey using your desktop computer.

How will your privacy be protected?

No personal data is collected and all information is fully anonymous.

What are the benefits of taking part in this research study?

Your responses will help researchers better understand Americans' opinions. You may also earn a **small bonus** for correctly answering questions in the survey.

What are the risks of taking part in this research study?

There are no foreseeable risks to taking part in this study.

Can you change your mind at any stage and withdraw from the study?

Yes, if you wish to withdraw at any point, simply close the survey window.

How will you find out what happens with this project?

Future updates to the project will be available by contacting the researcher.

Contact details for further information

margaret.samahita@ucd.ie

I have read and understood the above and want to participate in this study.

Yes

No

*What is your Prolific ID? Please note that this response should auto-fill with the correct ID

*What is your age (in years)?

*What is your gender?

- Male
- Female
- Non-binary / other
- Prefer not to say

*What is your ethnicity?

- White
- Black or African American
- Hispanic or Latino
- Asian or Pacific Islander
- Native American or American Indian
- Other
- Prefer not to say

*What is the highest level of education you have completed?

- Some high school or less
- High school diploma or GED
- Some college, but no degree
- Associates or technical degree
- Bachelor's degree
- Graduate or professional degree (MA, MS, MBA, PhD, JD, MD, DDS etc.)
- Prefer not to say

*Please estimate your gross annual salary.

- Less than 25,000 USD
- Greater than/equal to 25,000 USD and less than 50,000 USD
- Greater than/equal to 50,000 USD and less than 75,000 USD
- Greater than/equal to 75,000 USD and less than 100,000 USD
- Greater than/equal to 100,000 USD and less than 125,000 USD
- Greater than/equal to 125,000 USD and less than 150,000 USD
- Greater than/equal to 150,000 USD and less than 175,000 USD
- Greater than/equal to 175,000 USD and less than 200,000 USD
- Greater than/equal to 200,000 USD and less than 225,000 USD
- Greater than/equal to 225,000 USD and less than 250,000 USD
- Greater than/equal to 250,000 USD and less than 275,000 USD
- Greater than/equal to 275,000 USD and less than 300,000 USD
- Greater than/equal to 300,000 USD
- Prefer not to say

*What best describes your employment status?

- Working full-time
- Working part-time
- Unemployed and looking for work
- A homemaker or stay-at-home parent
- Student
- Retired
- Other

*In which state do you currently reside?

*What type of community do you live in?

- Large city
- Suburb near a large city
- Small city or town
- Rural area

*Please tell us, in general, how willing or unwilling you are to take risks.

0 1 2 3 4 5 6 7 8 9 10

Completely unwilling to take risks Very willing to take risks

* In political matters, people talk of 'the left' and 'the right'. How would you place your views on this scale, generally speaking?

0 1 2 3 4 5 6 7 8 9 10

The Left The right

*What is your political affiliation?

- Democrat
- Independent
- Republican
- Other

*What is your religion?

- Christian
- Catholic
- Jewish
- Muslim
- Buddhist
- Hindu
- None/Atheist/Agnostic
- Other
- Prefer not to say

We would like to know, for each of the following issues, your **assumptions** regarding **the kind of people who agree** with the statement.

Please consider your response carefully. We will pick one of these questions at random and pay you depending on whether you are correct, based on the responses of real study participants. **A correct answer will earn you a bonus of \$2.**

***Suppose someone states that they agree with the HIGHLIGHTED statement** (choosing 6 or 7 on a 1-7 agreement scale). Which of the options do you think is more likely regarding...

- i) their education and
- ii) their income?

Please consider your response carefully. We will pick one of these questions at random and pay you depending on whether you are correct, based on the responses of real study participants. **A correct answer will earn you a bonus of \$2.**

	i) Education			ii) Income		
	Has never attended college	Is attending college	Has a college degree	Earns less than \$50k/year	Earns between \$50k-\$100k/year	Earns over \$100k/year
Racism is NOT a systemic issue and caused only by individuals' prejudices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[Repeated for all fifteen statements]

You will now be asked additional questions related to the issues you saw previously. Please read the statements carefully since **we may reverse the way it is stated.**

We would like to know **your position** in relation to a number of issues.

***Where do you stand on the following issue?**

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4	5	6	7
Promoting the traditional family structure is good for society						All family structures (including polyamory) should be equally recognised in society

[Repeated for all fifteen statements]

Please let us know if you experienced any issue in the study, for example if anything was unclear or did not work (optional).

Thank you for participating in this study.

This study aims to investigate the opinions held by Americans from different social backgrounds.

Bonus earnings will be calculated within the next few weeks and any bonus payment will be paid directly through your Prolific account.

If you wish to remove your data or have any question regarding the study, please contact the researcher through your Prolific account.

Please click the button below to be redirected back to Prolific and register your submission. In case needed, the completion code is C9XKRCHM.

STUDY 2



**Introductory Statement*

This study is conducted by Dr Margaret Samahita from the School of Economics, University College Dublin.

What is this research about?

I aim to understand the opinions of Americans.

Why have you been invited to take part?

You have been contacted because you are an adult aged over 18 years living in the US.

How will your data be used?

Your answers are anonymous; only aggregate results will be published.

What will happen if you decide to take part in this research study?

You will fill out a **10 minute** survey using your computer.

How will your privacy be protected?

No personal data is collected and all information is fully anonymous.

What are the benefits of taking part in this research study?

Your responses will help researchers better understand Americans' opinions.

What are the risks of taking part in this research study?

There are no foreseeable risks to taking part in this study.

Can you change your mind at any stage and withdraw from the study?

Yes, if you wish to withdraw at any point, simply close the survey window.

How will you find out what happens with this project?

Future updates to the project will be available by contacting the researcher.

Contact details for further information

margaret.samahita@ucd.ie

I have read and understood the above and want to participate in this study.

Yes

No

*What is your Prolific ID? Please note that this response should auto-fill with the correct ID

*What is your age (in years)?

*What is your gender?

- Male
- Female
- Non-binary / other
- Prefer not to say

*What is your ethnicity?

- White
- Black or African American
- Hispanic or Latino
- Asian or Pacific Islander
- Native American or American Indian
- Other
- Prefer not to say

*What is the highest level of education you have completed?

- Some high school or less
- High school diploma or GED
- Some college, but no degree
- Associates or technical degree
- Bachelor's degree
- Graduate or professional degree (MA, MS, MBA, PhD, JD, MD, DDS etc.)
- Prefer not to say


*Please estimate your gross annual salary.

- Less than 25,000 USD
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- Greater than/equal to 250,000 USD and less than 275,000 USD
- Greater than/equal to 275,000 USD and less than 300,000 USD
- Greater than/equal to 300,000 USD
- Prefer not to say

*What best describes your employment status?

- Working full-time
- Working part-time
- Unemployed and looking for work
- A homemaker or stay-at-home parent
- Student
- Retired
- Other

*In which state do you currently reside?

*What type of community do you live in?

- Large city
- Suburb near a large city
- Small city or town
- Rural area

*Please tell us, in general, how willing or unwilling you are to take risks.

0 1 2 3 4 5 6 7 8 9 10

Completely unwilling to take risks Very willing to take risks

* In political matters, people talk of 'the left' and 'the right'. How would you place your views on this scale, generally speaking?

0 1 2 3 4 5 6 7 8 9 10

The Left The right

*What is your political affiliation?

- Democrat
- Independent
- Republican
- Other

*What is your religion?

- Christian
- Catholic
- Jewish
- Muslim
- Buddhist
- Hindu
- None/Atheist/Agnostic
- Other
- Prefer not to say

You will now be matched with another participant and be partners for the remainder of the study. One of you will be assigned the role of Participant A and the other will be Participant B.

You will then see a series of statements. After each statement, you will be asked how much you agree/disagree with it.

After you have both completed the study, the responses of Participant A will be shown to Participant B. For example: "Your partner Participant A states that they [level of agreement] with [statement]."

The responses of Participant B will NOT be shown to Participant A.

You are **Participant A**.

You will now see a series of statements. After each statement, you will be asked how much you agree/disagree with it.

Remember that **your responses will be shown to your partner Participant B after both of you have completed the study.**

*The one-cent coin (i.e. the penny) should be removed from circulation

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4	5	6	7
Strongly disagree						Strongly agree

[Repeated for all fifteen statements]

You have now completed the responses that will be shown to your partner Participant B.

From here on, your responses will NOT be shown to your partner Participant B.

Please let us know if you experienced any issue in the study, for example if anything was unclear or did not work (optional).

Thank you for participating in this study.

This study aims to investigate the opinions held by Americans from different social backgrounds.

If you were Participant B, the responses of Participant A will be sent to you via Prolific message after the study is complete.

If you wish to remove your data or have any question regarding the study, please contact the researcher through your Prolific account.

Please click the button below to be redirected back to Prolific and register your submission. In case needed, the completion code is C1DAOCOL.

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