Testing the socio-functional model: Does precarity cause conspiracy belief?

Short title: Testing the socio-functional model of conspiracy belief

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Abstract

Research seeking to explain why people believe conspiracies has largely focused on intrapsychic factors, but there is growing research examining structural level elements of disadvantage. The socio-functional model of conspiracy belief (Adam-Troian et al., 2023) posits that subjective feelings of permanent insecurity arising from objective material strain (i.e., precarity) *causes* conspiracy belief directly or indirectly through institutional distrust. Across three preregistered studies using observational longitudinal designs over 3 (n = 637) and 11 months (n = 832), and a between-groups experimental design (n = 285), we use various methods to estimate causal effects for this proposition during the current cost-of-living crisis. In Studies 1 and 2 using random intercept cross-lagged panel models we find no evidence that increases in precarity temporally precede increases in conspiracy belief (or vice-versa), but find stable between-persons effects over time. In Study 3, despite successfully manipulating precarity using a self-imagine paradigm, we find no direct or indirect effect on conspiracy belief through decreased government trust. We discuss the importance of using methods that permit credible causal inferences, and key directions for future studies investigating the socio-functional model.

Introduction Explanations for conspiracy theory belief have traditionally focused on intrapsychic factors. Various systematic and meta-analyses examine who believes in conspiracies—and why they believe—by considering personality (Goreis & Voracek, 2019; Stasielowicz, 2022), socio-political factors (Goreis & Voracek, 2019) including powerlessness (Stojanov & Halberstadt, 2020), reflective thinking (Yelbuz et al., 2022), and psychological motives (Biddlestone et al., 2025; Bowes et al., 2023). Researchers have also started investigating correlates beyond individual differences, reporting positive associations with national level indicators (for a recent review see Hornsey et al., 2022) of poor economic performance (Hornsey et al., 2023), economic inequality (Salvador Casara et al., 2022), corruption (Alper, 2023), and cultural values (Adam-Troian et al., 2021). Many of these factors external to individuals are tied in with structural-level elements such as low income (e.g., Freeman & Bentall, 2017), social status (e.g., Mao et al., 2020), and education (e.g., van Prooijen, 2017) which are predictive of conspiracy belief.

Recent research has proposed a socio-functional model of conspiracy belief that seeks to explain why disadvantaged individuals believe in conspiracies (Adam-Troian et al., 2023). It suggests that an experience of precarity—defined as the subjective feeling of permanent insecurity arising from objective material strain—leads to conspiracy belief due to increased distrust in institutions such as the government and political elites, who are perceived as trying to harm or deceive them. From a functional perspective, conspiracy theories borne from social disadvantage allow individuals to explain their circumstances, provide them with an accountable party, and a belief that this party will be caught and punished in the future (Adam-Troian et al., 2023). An implication of this model is that working to reduce precarity at a socio-economic level would decrease conspiracy belief.

Fundamentally, the socio-functional model proposes that conspiracy belief is a consequence of the subjective experience of precarity. To date, the existing research testing this model has relied on several cross-sectional studies from the seminal paper (Adam-Troian et al., 2023) and a registered conceptual replication (Adamus et al., 2024), but without any strategies for producing credible estimates of causal effects. The present research uses both longitudinal and experimental designs to inform on the nature of the relationship between precarity and conspiracy belief. Specifically, we test whether there is evidence of precarity *causing* conspiracy belief, as well as whether conspiracy belief might itself cause precarity. The following sections will review the research findings on the socio-functional model, consider models suitable to generate evidence for causality, and provide the context for the present studies conducted during a period of increasing economic strain termed as a cost-of-living crisis (International Monetary Fund, 2023).

Empirical evidence for the socio-functional model of conspiracy belief

The initial set of studies supporting the socio-functional model used various operationalisations for precarity, trust in institutions, and conspiracy belief in a series of large samples with a cross-sectional design (Adam-Troian et al., 2023). Study 1 used 16 countries ranked as democratically free to test whether precarity, as indicated by insecurity and uncertainty with various areas in life, predicted perceptions of electoral fairness practices (e.g., opposition candidates are prevented from running; voters are bribed) as a proxy for conspiracy belief, and if this relationship was mediated by confidence in elections. Results supported the model with small and significant direct and indirect effects. More valid and precise measures of both conspiracy belief and trust were used in Studies 2a and 2b which also focused on economic precarity with two European samples. Here, economic precarity had significant direct and indirect effects on conspiracy mentality and Covid-19 conspiracy belief through institutional trust (e.g., police; justice system; media) and political trust (i.e., governments and authorities), respectively. These results were robust to adjustments on covariates (e.g., subjective socio-economic status [SES]; income). However, a model tested with specific conspiracy beliefs (e.g., “9/11 was an ‘inside job’”) was not robust, due to a non-significant association with precarity. Even so, this set of initial studies provided supportive evidence for the proposed theoretical model given the large and diverse samples that included several operationalisations of key constructs.

In a preregistered conceptual replication of the original set of studies by Adam-Troian et al. (2023), Adamus et al. (2024) tested the socio-functional model in four studies and a mini meta-analysis. With several large samples from different populations that varied measures of precarity (e.g., subjective SES; financial anxiety; subjective feelings about household income), trust in institutions (e.g., national government; scientists; police), and conspiracy belief (e.g., Covid-19 conspiracy theories; conspiratorial thinking), the results indicated a pattern consistent with the original findings. Furthermore, the results from the mini meta-analysis of all samples suggested a small to moderate average negative association from precarity to trust (β = -0.20) and a small average positive association between precarity and conspiracy belief (β = 0.13), as well as a moderate to large negative association between trust and conspiracy belief (β = -0.46). There was a small average indirect effect through trust (β =

0.09). Taken together, these findings offered further generalisability to the original theoretical model and results (Adam-Troian et al., 2023). Importantly, Adamus et al. acknowledged that because their studies used cross-sectional data they could not be used to understand directionality between variables, and suggested future research address this with other rigorous methods including longitudinal designs. In this spirit, the present research considers the role precarity has with conspiracy belief using three preregistered designs aimed to test evidence for cause-and-effect.

Generating causal evidence

The large, varied samples, and operationalisations in the previous studies provided good external validity. Furthermore, robustness checks including various control variables that could be confounders of the relationship between precarity, trust and conspiracy belief, strengthened *tentative* causal inferences in the absence of an experiment (Grosz et al., 2020). However, the socio-functional model makes firm claims about causal effects, and these prior studies did not apply designs or analyses that permit *credible* casual inferences. Bolstering internal validity, or evidence for cause-and-effect, can be furthered through traditional experimental designs but can also be gathered through specific longitudinal designs.

One common method for estimating causal effects in longitudinal research is the cross-lagged panel model (CLPM). However, critiques (e.g., Hamaker et al., 2015) have suggested they make estimates difficult or impossible to interpret meaningfully as they confound between-person stability with within-person change (Berry & Willoughby, 2017). A random intercepts cross-lagged panel model (RI-CLPM; Hamaker et al., 2015) separates this between-person stability (i.e., stable trait-like differences) from within-person (i.e., time variant state like) changes. An advantage of this approach is that it can test whether within-person increases in precarity temporally precede within-person increases in conspiracy belief.

There has been a steady increase in longitudinal research employing both CLPMs and RI-CLPMs to answer questions on the antecedents and consequences of conspiracy belief. While some research has solely employed CLPMs due to having two-timepoints (e.g., Jolley et al., 2022), several research findings with three or more timepoints often also model findings using an RI-CLPM. For example, various studies employing a CLPM reported reciprocal associations between increased belief in Covid-19 conspiracy theories and national narcissism (Górska et al., 2022), increased powerlessness (Ballová Mikušková & Teličák, 2024), increased psychological distress (Chan et al., 2023), and decreased vaccination intentions (van Prooijen & Böhm, 2023). However, when modelled as RI-CLPMs, the within-person cross lagged effects in these studies were much smaller (Orth et al., 2022) and non-significant, suggesting cross-lagged associations were being explained over time by more stable between person variance[1]. If the goal is to better understand within-person dynamics over time and improve estimates of temporal causality, then the RI-CLPM seems better suited as it separates the true within-person change from the stable between person differences over time.

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[1] A study that investigated the reciprocal relationship between Covid-19 conspiracy belief and decreased physical distancing, policy support, and perceived danger showed some within-person cross lagged effects (van Prooijen et al., 2023).

Published RI-CLPMs examining the dynamics of conspiracy belief, including their antecedents and consequences have largely yielded mixed answers to questions of causal or reciprocal effects. Some studies report increased changes in conspiracy belief precede increased changes in health beliefs, self-reported behaviour and intentions (Coelho et al., 2022; Oleksy et al., 2021; Oleksy et al., 2022). Others indicate that within-person changes in stress, depression, and anxiety do not precede or follow conspiracy belief (Fox et al., 2025)[2]; that increases in conspiracy belief do precede increases in anxiety, uncertainty aversion and existential threat (in one but not another study; Liekefett et al., 2023); that loneliness and conspiracy belief do not predict each other over time (Bertlich et al., 2025); or that decreases in control and belonging as well as increases in meaning in life precede increases in conspiracy belief (Albath et al., 2024)[3]. One study reported a reciprocal within-person effect between increased social media use and increased conspiracy belief (Valenzuela et al., 2024).

Notably, there are also differences across these studies that make it difficult to draw general conclusions about cause-and-effect. On the one hand, differences in operationalisations (e.g., Covid-19 conspiracy beliefs, general conspiracy beliefs, conspiracy mentality), measurement intervals (e.g., fortnightly, monthly, or annual timepoints), and model specification (i.e., unconstrained or constrained over time) provide almost limitless choices that influence interpretation. On the other hand, measurement over time may be advantageous in generating evidence for temporal causality (e.g., testing for reciprocal effects between precarity and conspiracy belief) as

[2] There was one significant within-person effect from anxiety to conspiracy belief.
[3] There was one significant within-person effect from control to conspiracy belief.

it does not rely on traditional experimental methods which examine average causal effects between persons.

Experimental paradigms suitable to test for the effect of subjective precarity on conspiracy belief can be found in related research. For example, Salvador Casara et al. (2022) used a self-imagine paradigm to test for the effect of the subjective experience of economic inequality on conspiracy belief. Demonstrating this across several studies, participants were randomly allocated to imagine living in a fictitious society described as having high or low levels of economic inequality. Experimental manipulation checks showed self-reported ratings of perceptions of both economic inequality and equality were higher and lower in the high versus low inequality condition, respectively (Cohen's *d*s 1.10–2.34). Furthermore, these results suggested that exposure to a self-imagine paradigm of an unequal society increased belief in conspiracy theories, and this was mediated by anomie—a feeling that the fabric of society was breaking down. Overall, these findings were consistent with other studies assessing both perceived and objective inequality at an individual- or country-level (Salvador Casara et al., 2022).

Cost-of-living crisis

Since the Covid-19 pandemic there has been a substantial increase in living costs in many high-income countries. In Australia, the living cost index, which measures the effect of changes in prices on the out–of–pocket living expenses, has risen each quarter since September 2020 (Australian Bureau of Statistics, 2025). Comparable rises have occurred over that period in New Zealand (Stats NZ, 2024) and the United Kingdom (UK; Office for National Statistics, 2024). Within Australia, surveys and reports suggest that this is having an impact on many adults, with lower-income individuals most severely affected (Heap, 2024); households on low incomes struggling to afford essential expenses such as household rent due to increases of more than 50% since 2020 (Anglicare Australia, 2024). Furthermore, this increased cost-of-living is having a disproportionate impact on younger Australians by increasing financial stress and insecurity through decreased housing affordability and employment opportunities (Monash Centre for Youth Policy and Education Practice et al., 2024). These conditions surrounding employment, housing, and generally making ends meet offer fertile ground for growing material strain and subjective feelings of permanent insecurity, or precarity.

Conspiracy theories emerge during times of great social and political upheaval (van Prooijen & Douglas, 2017), and many contain some kernel of truth that make them plausible and appealing. For instance, talk of a “Great Reset” conspiracy theory—alleging that the global elite including the World Economic Forum (WEF) is using crises such as the Covid-19 pandemic, climate change, and economic instability to restructure the world economy and impose one global government (Christensen & Au, 2023)—can likely be traced back to several key events. These events include the presentation of an essay at the 2016 WEF by a Danish politician entitled “Welcome to 2030. I own nothing, have no privacy, and life has never been better” (Auken, 2016), and the subsequent self-promotion of “The Great Reset” by the WEF following their 2020 forum (Schwab & Malleret, 2020). Perceived implications of this conspiracy include a loss of social and financial control through efforts to restrict personal freedoms through policies involving mass surveillance, digital IDs, and centralised digital currency. A recent large survey in the UK reported that approximately one-third of individuals endorsed statements containing various elements of the “Great Reset” as true (Duffy & Dacombe, 2023).

Precarity is often most prevalent right above the poverty line as many individuals may experience constant stress and uncertainty of falling below it (Adam-Troian et al., 2023). Cost-of-living impacts are likely to exacerbate structural (Webster & Neal, 2022) and health inequalities (Broadbent et al., 2023), and increase feelings of precarity. The current research uses the present-day context of a cost-of-living crisis to assess the cause-and-effect relationship between precarity and conspiracy beliefs with three studies.

The present research: testing causal models of precarity and conspiracy belief

The socio-functional model of conspiracy beliefs provides a plausible account that precarity increases belief in conspiracy theories. However, no prior study has tested this proposition with methods that permit credible causal inferences. In this paper we therefore present two longitudinal studies and one experiment testing the proposition that precarity causes conspiracy belief.

The first and second study used a longitudinal panel design to gather evidence for the temporal ordering of these variables. In line with the socio-functional model of conspiracy theories (Adam-Troian et al., 2023), we hypothesised that increased changes in precarity will be associated with future increased changes in conspiracy belief, but also tested the reverse, that increased changes in conspiracy belief will be associated with future increased changes in precarity. This reverse direction is plausible, as studies have indicated that increases in conspiracy belief sometimes precede increases in feelings of anxiety and existential threat (Liekefett et al., 2023) and low personal control (Albath et al., 2024; Coelho et al., 2022). Studies 1 and 2 consider precarity as the subjective experience associated with financial security, with the first study measuring general belief in conspiracy theories and the second using a single item focused on a cost-of-living conspiracy theory. The third study used an experimental design to experimentally manipulate the felt experience of financial precarity to investigate its effect on belief in conspiracy theories, as mediated through increased institutional distrust. Specific hypotheses are provided prior to each study.

Data analysis and preregistration

Data were analysed using R version 4.4.2 (R Core Team, 2024; see Supplementary Online Materials [SOM] for specific package details). We set alpha at $p < .05$ and report unstandardised effects with frequentist 95% confidence intervals (CI_{95}). Structural equation models (e.g., RI-CLPM) were fitted using a maximum likelihood estimator with robust standard errors to account for skew in the data (Yuan & Bentler, 2000). The fit was assessed using the comparative fit index (*CFI*), root mean square error of approximation (*RMSEA*), and standardised root mean square residual (*SRMR*). Fit indices values of $CFI > .90$, $RMSEA \leq .06$, and $SRMR \leq .08$ indicate that the model is a good fit with the data (Hu & Bentler, 1999). As missing data are unavoidable in longitudinal research, full information maximum likelihood was used. This approach is ideal as it does not impute missing data (Enders, 2001), yields unbiased parameter estimates, and effectively avoids Type 1 errors and convergence failures (Enders & Bandalos, 2001).

Our results are interpreted using standard effect size conventions (Cohen, 1992). All data, syntax, and study materials including codebooks are available on the Open Science Framework: https://osf.io/nq3y7/?view_only=aa452b009ef542c6a2fb26eb39f6f5dc. All study aims, hypotheses, materials, sample size calculation, and inferential analyses and criteria were preregistered (Study 1: https://aspredicted.org/5V8_56Z; Study 2: https://osf.io/p672z?view_only=ddd5dd5778a44fefa8167aeaca55ee76; Study 3: https://aspredicted.org/HR1_1YM).

Study 1

Study 1 had two hypotheses: H1a) Increased changes in precarity will be associated with future increased changes in conspiracy beliefs; and, H1b) Increased changes in conspiracy beliefs, will be associated with future increased changes in precarity.

Method

Data analysis and power analysis

A stationary RI-CLPM was used to investigate the temporal ordering of conspiracy belief and precarity across four subsequent timepoints over 3 months. A Monte Carlo analysis for longitudinal data with 1,000 replications determined a sample of N = 650 participants were required to yield sufficient power ($1–\beta$ = .80) to identify within-person cross-lagged associations ($B \geq .30$) between the variables of interest across four-timepoints (see SOM for more details).

Participants

Participants were recruited through Prolific, an online-based crowdsourcing database for social research (Douglas et al., 2023). A total of 651 participants were sampled at Time 1, but 14 were excluded from the analysis for failing one or more preregistered attention checks. This left 637 Australian residents aged 18-85 at T1 (M_{age} = 35.4, SD = 12.35) with a balanced sex quota (50% men, 49% women, 1% nonbinary). The sample was highly educated: 78% completed a tertiary degree. For a complete list of demographics see the SOM.

Materials

Precarity. Five items were adapted from prior research (Adam-Troian et al., 2023; Vives et al., 2015) to assess precarity, focusing on participants' subjective experiences of economic and labour factors over the past month. Participants responded on a 7-point scale (1 = *Strongly disagree*, 7 = *Strongly agree*). An example item was “In the last month, how often have you been: Concerned about making ends meet at the end of each month”. Previous research reports precarity has a small to moderate positive association with distrust in government (*r*s .07–.25) indicating reasonable convergent validity (Adam-Troian et al., 2023). As items were chosen for this study, an exploratory factor analysis was conducted across each timepoint and indicated all items loaded onto a single factor (see SOM). Items were averaged together to form a scale with excellent reliability across all timepoints (Chronbach’s $\alpha T1$-$\alpha T4$ = .93).

Conspiracy Belief. A shortened 5-item version of the Generic Conspiracist Belief (GCB) scale (Brotherton et al., 2013) was used (GCB-5; Kay & Slovic, 2023). All items were answered on a 7-point scale (1 = *Strongly disagree*, 7 = *Strongly agree*). An example item was “Certain significant events have been the result of the activity of a small group who secretly manipulate world events”. The GCB-5 demonstrates good convergent and divergent validity as it is positively associated with constructs including paranoia and anomie which should be theoretically related, and negatively associated with trustworthiness (Kay & Slovic, 2023). It also demonstrates good concurrent validity with established scales including the Conspiracy Mentality Questionnaire (Bruder et al.,

2013) and Belief in Conspiracy Theories scale (Swami et al., 2011). All items were averaged together to form a scale with acceptable reliability across all timepoints (αT1-αT4 = .85–.89).

Demographics. Participants answered demographic items regarding their age, gender, education level, income, location (state and area), religion and political ideology (see SOM for wording of items and scales).

Procedure

Ethics approval was granted by the <redacted> Human Ethics Committee (HEC23118). Online data collection occurred at four timepoints, four weeks apart between May 12th and August 11th, 2023. Australian residents aged 18+ were invited through Prolific to participate in an online questionnaire hosted on QuestionPro. After providing consent, participants completed the above-mentioned scales. This questionnaire was part of a larger research study including three additional measures (see https://osf.io/sbmpt/?view_only=015355f098db4782b24380b3a1e8ead4). Measures were presented in a random order at each timepoint to reduce unintended order effects influencing the interpretation of the temporal ordering of variables.

Participants who did not meet any preregistered exclusions were invited back to participate in subsequent timepoints. Exclusion criteria included a nonsense attention check, manipulation check, and completing the survey in under 80 seconds as it takes at least 2 seconds to attentively complete an item (Goldammer et al., 2020; Huang et al., 2012). At T1 the survey remained open until 650 participants completed it. Subsequent surveys remained open for 1 week to ensure participants had adequate time to complete it. Survey completion took approximately 6 minutes at T1 (including demographics), and 4 minutes for subsequent timepoints. Participants were paid a minimum hourly rate in accordance with Prolific guidelines in British pounds (£). Participants received £0.90 at T1, and £0.50 for subsequent timepoints.

Results

Descriptive Statistics. Descriptive statistics are presented in Table 1 and correlations between all variables are in the SOM (see Table S1a).

Table1. Descriptive Statistics for Precarity and General Conspiracy Beliefs.

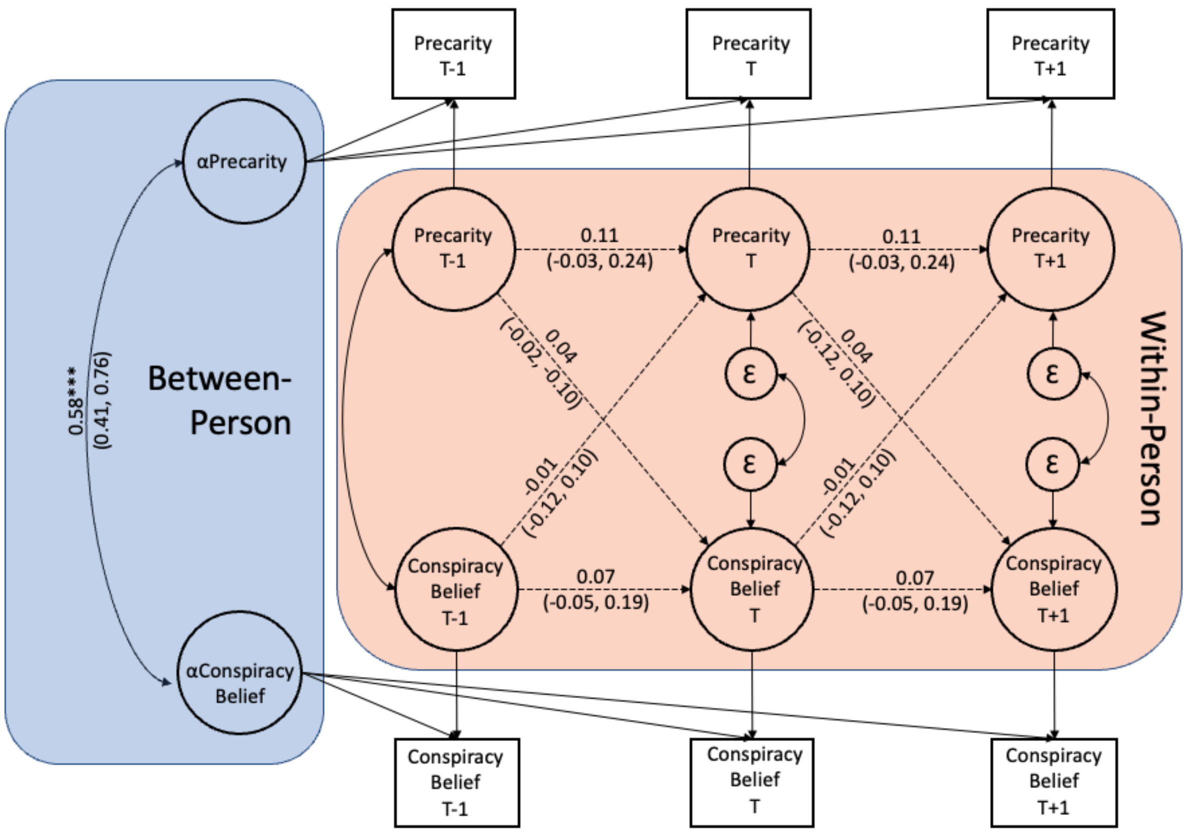
	Time 1 (n = 637)		Time 2 (n = 514)		Time 3 (n = 485)		Time 4 (n = 457)	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Precarity	4.35	1.76	4.43	1.76	4.37	1.77	4.33	1.82
Conspiracy belief	2.78	1.39	2.78	1.39	2.80	1.48	2.82	1.55

Note. Theoretical range for all scales = 1-7, where higher scores indicate greater level of that construct.

Temporal Ordering of Conspiracy Belief and Precarity. The stationary RI-CLPM, where lagged regression coefficients (autoregressive and cross-lagged) were invariant over time, of conspiracy belief (T-1) and precarity (T-1) to conspiracy belief (T) and precarity (T) is presented in Figure 1. The model was an excellent fit with the data $\chi^2(19) = 62.09$, $p < .001$, $CFI = .99$, $SRMR = .04$, $RMSEA = .06$ (CI_{90} = .04,.08).

Of importance to the aims were the within-person associations between conspiracy belief and precarity to assess the temporal ordering of variables. The within-person cross-lagged effect of conspiracy belief on precarity ($B = -0.01$, CI_{95} [-0.12,0.10], $p = .86$) and precarity on conspiracy belief ($B = 0.04$, CI_{95} [-0.12,0.10], $p = .20$) were nonsignificant. This suggested that increases in conspiracy belief were not significantly associated with future increases in precarity, or vice-versa. The between-person components indicated a significant positive association between conspiracy belief and precarity (*Cov* = 0.58, CI_{95} [0.41, 0.76], $p < .001$). The autoregressive for conspiracy belief ($B = 0.07$, CI_{95} [-0.05,0.19], $p = .24$) and precarity ($B = 0.11$, CI_{95} [-0.03,0.24], $p = .11$) did not reach statistical significance. Most of the variance occurred at the between-person level.

Figure 1. Random Intercepts Cross-Lagged Panel Model of the Association Between Conspiracy Theory Beliefs and Precarity.



Notes. Coefficients are unstandardised (with frequentist 95% confidence intervals). Dashed lines reflect nonsignificant paths. *$p < .05$, ** $p < .01$, ***$p < .001$.

Discussion

This study tested the reciprocal associations between precarity and conspiracy belief in a sample of Australian adults using a longitudinal RI-CLPM design over 3-months during a cost-of-living crisis. Results indicated a positive significant between-person association between precarity and CB, but no within-person lagged associations. Therefore, there was no support for our hypotheses that increased changes in precarity would precede increased changes in conspiracy belief, or vice versa. However, the results suggested that people who reported higher levels of precarity also generally reported higher levels of conspiracy belief over time.

The lack of significant within-person lagged associations do not support previous findings of the socio-functional model of conspiracy belief which suggests that precarity is an antecedent of conspiracy belief (Adam-Troian et al., 2023; Adamus et al., 2024). A strength of the current study was the use of the RI-CLPM which allowed for the separation of between and within-person variance. This approach revealed that most change over time occurred at the between-person level. By separating the between and within-person variance, we also reduced the risk of confounding estimated parameters occurring from the between-person level found in traditional CLPMs (Hamaker et al., 2015)[4].

With any single study there are limitations. First, the 3-month duration of the study may have been insufficient to capture within-person variability with our measures. Evidence for this is reflected in the high intraclass correlations indicating

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[4] When not properly partitioning the between-person stability from the within-person change as modelled in an RI-CLPM, a CLPM shows that increases in precarity predicted future increases in conspiracy belief (see SOM).

that only 14%-15% of the variance over time was explained by within-person fluctuations (see SOM); with all else being equal, this reduces power to detect effects (Mulder, 2023). Second, our general measure of conspiracy belief may not have been sensitive to capture changes in belief associated with cost-of-living conspiracy theories. In a follow-up study, we addressed these limitations by using a more precise indicator of cost-of-living conspiracy theories and measured for changes over one year to test for the temporal ordering of these variables in a larger and more diverse sample of participants.

Study 2

Study 2 had two hypotheses. It was predicted that: H2a) Economic precarity has a positive cross-lagged effect on belief in a conspiracy theory about the cost-of-living crisis; and, H2b) Belief in a conspiracy theory about the cost-of-living crisis has a positive cross-lagged effect on economic precarity.

Method

Data analysis and power analysis

A stationary RI-CLPM was used to investigate the temporal ordering of conspiracy belief and precarity across 12 monthly waves. No power calculation was calculated for this study, as the sample size was determined by the size of the sample as part of an ongoing longitudinal project. This consisted of 994 participants who prior to this study had completed 12 monthly waves over one year as part of a larger project.

Participants

A total of 832 participants from Prolific (374 women, 457 men, 6 non-binary, and 1 who preferred not to respond) completed at least two waves of the survey and were aged 18-85 (T1; M_{age} = 41.15, *SD* = 13.03). To be eligible to take part, participants needed to reside either in the UK (48.65%), Australia (37.4%), or New Zealand (13.9%). The sample was highly educated with 77.5% indicating a tertiary education and left-leaning on political ideology (*M* = 4.10, *SD* = 1.97, *n* = 779; 11-point scale from 0 = *Extreme left*, 10 = *Extreme right*). For a complete list of demographics see the SOM.

Materials

Precarity. Three items were selected and adapted from Study 1 to assess precarity over the past three weeks. An example item was "Over the last 3 weeks, I have been worried about my financial situation due to increases in living expenses". Participants responded on a 5-point scale (1 = *Strongly disagree*, 5 = *Strongly agree*). An exploratory factor analysis across each timepoint suggested all items consistently loaded onto a single factor (see SOM). Items were averaged together to form a scale with excellent reliability (αT1-αT12 = .92–.96).

Belief in a specific conspiracy theory. A single item was used to assess belief in a specific economic conspiracy theory. Participants responded on a 5-point scale (1 = *Strongly disagree*, 5 = *Strongly agree*) to the statement, "The cost-of-living crisis is a government plot to control the public". This item was adapted from a report which suggested a sizeable minority of the public endorse such a statement (Duffy & Dacombe, 2023).

Demographics. Participants answered demographic items regarding their age, gender, education level, income, marital status, employment status, ethnicity, and political ideology (see SOM).

Procedure

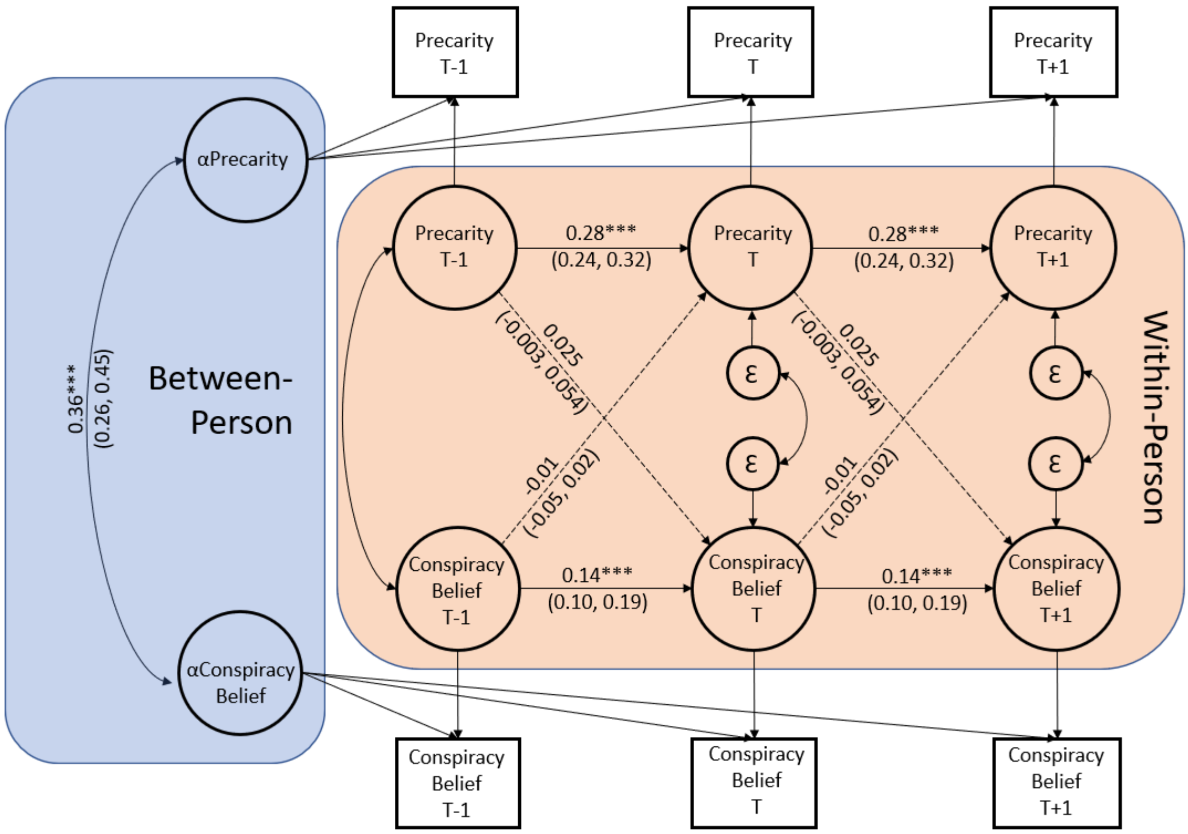
Ethics approval was granted by the <redacted> Human Ethics Committee (SOA 22/42). The data reported here as collected in the second year of a larger longitudinal project that began in October 2023. Online data collection occurred at 12 timepoints each a month apart between November 3rd 2023 and October 9th 2024. Participants were invited through Prolific to participate in an online survey hosted on Qualtrics. After participants provided consent they completed the above-mentioned scales, as well as other measures included as part of the larger study. Measures were presented in a random order at each timepoint, and participants who did not provide at least two survey waves were excluded from the sample as they would provide no relevant information to estimate within-person parameters. Exclusion criteria also included duplicate submissions, a nonsense attention check and a manipulation check, as well as completing the survey in a duration of less than the sum of the number of items in the survey multiplied by 2 seconds (Goldammer et al., 2020; Huang et al., 2012). For a complete list of study exclusion criteria see the preregistration. Survey waves remained open for 1 week to ensure participants had adequate time to complete it.

Results

Descriptive statistics. On average, the sample were below the midpoint for conspiracy belief and around the midpoint for precarity across all timepoints. Full descriptive statistics across each timepoint are in the SOM (see Table S2a and S2b).

Temporal Ordering of Conspiracy Belief and Precarity. The preregistered model (see Figure 2) was a good fit with the data, $\chi^2(267) = 427.97$, $p < .001$, $CFI = .99$, $SRMR = .04$, $RMSEA = .03$ ($CI_{90} = .02,.03$). There were no within-person associations between precarity and conspiracy belief over time. The within-person cross-lagged effect of precarity on conspiracy belief ($B = 0.025$, CI_{95} [-0.003,0.054], $p = .08$) and conspiracy belief on precarity ($B = -0.01$, CI_{95} [-0.05,0.02], $p = .54$) were nonsignificant. This suggested that increases in precarity were not significantly associated with future increases in conspiracy belief, or vice-versa. The between-person components indicated a medium and significant positive association between precarity and conspiracy belief ($Cov = 0.36$, CI_{95} [0.26,0.45], $p < .001$). The autoregressive within-person deviations from the trait-level means were significantly positively associated over time for precarity ($B = 0.28$, CI_{95} [0.24,0.32], $p < .001$), and conspiracy belief ($B = 0.14$, CI_{95} [0.10,0.19], $p < .001$).

Figure 2. Random Intercepts Cross-Lagged Panel Model of the Association Between Conspiracy Belief and Precarity.



Notes. Coefficients are unstandardised (with frequentist 95% confidence intervals). Dashed lines reflect nonsignificant paths. *p < .05, ** p < .01, ***p < .001.

Discussion

This study used an RI-CLPM to assess the dynamics of a cost-of-living conspiracy and precarity over one-year in a sample of adults from Australia, New Zealand, and the UK. There was no support for either hypothesis predicting a within-person positive effect from precarity to conspiracy belief, or vice-versa. Unlike Study 1, there were significant within-person auto-regressive effects, suggesting that increases in precarity and conspiracy belief predicted respective increases from a person's trait-level mean approximately one-month later. In line with Study 1, there was a positive between-person association between variables, suggesting that over time individuals who report higher levels of precarity also generally report higher levels of conspiracy belief.

Studies 1 and 2 had several strengths. They were both preregistered studies using large samples, longitudinal designs, and an analysis method (the RI-CLPM) that established temporal precedence and rules out time-invariant confounding variables. As such, both studies permitted credible (but not conclusive) tests for causal effects. Neither study found evidence consistent with the hypothesis that precarity causes subsequent conspiracy beliefs (or vice versa).

However, these studies were observational, and still subject to some threats to internal validity. Specifically, our estimates of causal effects could have been biased if time-variant confounding variables were present (see Rohrer & Murayama, 2023). They could likewise be biased if precarity and conspiracy beliefs exert causal effects on one another that happen more slowly or more quickly than implicitly assumed by our 4-week (Study 1) and one-month (Study 2) periods between waves. A further limitation of our longitudinal studies was that they did not directly test the hypothesis that precarity affects conspiracy belief via institutional trust[5]. Consequently, in Study 3 we applied a true experimental design in which we manipulated the subjective experience of precarity. That is, using a between-subjects design we randomly allocated participants to read a vignette asking them to imagine themselves in a society where we

[5] An exploratory cross-lagged panel model (not RI-CLPM) found evidence for this mediation effect in Study 1 (see SOM).

manipulated level of financial precarity, then measured trust in the government for dealing with cost-of-living, and associated conspiracy theories.

Study 3

The Study 3 hypotheses were: H3a) that individuals exposed to a text describing a fictitious society with high levels of financial precarity will report lower levels of trust in government, and H3b), higher levels of belief in conspiracy theories when compared to those who read a low precarity text. H3c), it was hypothesised that lower levels of trust in institutions will be associated with higher levels of conspiracy belief. Finally, H4), an indirect effect was also hypothesised from exposure to the high precarity text through decreased trust in government to an increased level of belief in conspiracy theories.

Method

Data analysis and power analysis

We determined a sample of 257 was required using MedPower (Kenny, 2017) to detect the minimum effect size of interest (i.e., the indirect effect between the experimental condition and conspiracy belief through government trust) with $\alpha = .05$ and power $(1-\beta) = .90$ using a path analysis. This effect size was set from the meta-analytic findings of the indirect effect between precarity and conspiracy belief through trust ($B = .09$; Adamus et al., 2024). We oversampled ($n = 303$) accounting for budgetary constraints and likely exclusions ($n = 18$) from preregistered attention checks.

Participants

The final sample included 285 Australian residents with a balanced sex quota (139 women, 142 men, 4 non-binary), recruited online via Prolific. Ages ranged from 18 to 83 years (M_{age} = 34.8, *SD* = 11.7). Most participants were tertiary educated (63.5%). Overall, participants identified as more politically left-wing than right-wing (1 = *Left-wing*, 7 = *Right wing*; *M* = 3.34, *SD* = 1.18), and the median weekly household income before tax being for those who responded (*n* = 255) was $1,500-$1,749 weekly ($78,000-$90,999 annual).

Materials

Self-imagine precarity vignettes. Two self-imagine vignettes were created to manipulate subjective feelings of financial precarity. These were adapted from previous research using imagine-self paradigms used to induce victimhood (Bertin, 2024) and economic inequality (Jetten et al., 2022). Broadly, the high-precarity vignette asked participants to imagine themselves in a society where the increase in cost-of-living was not consistent with an increase in yearly salary, creating financial strain. The low-precarity vignette asked participants to imagine themselves in a society where the cost-of-living was consistent with an increase in yearly salary. See the SOM for full texts.

Precarity. A manipulation check of the precarity condition was assessed with five items adapted from previous research (Adam-Troian et al., 2023). Participants rated 5 statements about financial precarity related to their experience reading the vignette (e.g., "I won't be able to make ends meet at the end of the month") on a 5-point scale (1 = *Strongly disagree*, 5 = *Strongly agree*). As the scale was created for this study, an exploratory factor analysis was conducted and indicated a single factor (see SOM). Items were averaged together and were reliable (α = .94).

Trust in Government. Trust in the government was assessed using a 9-item scale validated by Grimmelikhuijsen and Knies (2017) that can be adapted to a specific target and public administration context. Here, the scale measured trust in the Australian Federal Government "when it comes to managing the rising cost-of-living". Participants rated their agreement with three facets of trust (competence, benevolence, and integrity) on a 5-point scale (1=*Strongly disagree*, 5=*Strongly agree*). An example competence item was "The Australian Federal Government carries out its duty very well". The scale is often treated as unidimensional (Grimmelikhuijsen et al., 2021), and an exploratory factor analysis suggested a single factor (see SOM), so items were averaged together (α = .94).

Cost-of-Living Conspiracy Beliefs. Conspiracy belief was assessed with an adapted scale focused on the cost-of-living crisis. Five items were generated from previous research (e.g., Duffy & Dacombe, 2023). Participants rated their agreement with items (e.g., "The cost-of-living crisis is a government plot to control the public") on a 5-point scale (1 = *Strongly disagree*, 5 = *Strongly agree*). An exploratory factor analysis indicated the final item loaded onto a second factor (see SOM), however, given the low eigenvalue for the second factor (<1.0) a single factor solution was suitable. All items were averaged together (α = .84).

Demographics. Participants answered demographic items regarding their age, gender, education level, income, and political ideology (see SOM).

Procedure

The <redacted> Human Ethics Committee granted ethics approval (HEC24319). Data collection happened on August 13th 2024. Eligible participants from Prolific who were Australian residents were invited to take part in the online survey hosted on

QuestionPro. After providing informed consent, they were randomly allocated to read either the low- or high-precarity vignette. Participants were held on this page for a minimum of 30 seconds to ensure they did not skip past. All participants then answered the precarity items (experimental manipulation check), government trust items, and conspiracy belief items, followed by basic demographic items. As a study attention check, participants were then asked to indicate what the earlier vignette described[6], then debriefed to the true nature of the study and given the opportunity to withdraw their data with no financial or other penalty. Participants were paid £0.90GB for their time (~5 minutes).

Results

Manipulation check. A Welch's t-test (unequal variances) was used to determine whether the experimental manipulation had the intended effect across conditions. Precarity was significantly higher in the high precarity condition as compared to the low-precarity condition (d = -2.84; see Table 2). The experimental manipulation was therefore successful.

Hypothesis testing. Descriptive statistics across conditions are reported in Table 2.

Table 2. Study 3 Means, Standard Deviations, and t-tests for Precarity, Trust in Government, and Conspiracy Belief Across Conditions.

	Low precarity (n = 143)		High precarity (n = 142)				
Variable	*M*	*SD*	*M*	*SD*	*t*	*p*	Cohen's *d*
Precarity (manipulation check)	2.43	0.82	4.36	0.49	24.0	<.001	-2.84
Trust in Government	2.86	0.81	2.77	0.80	0.87	.383	0.11

[6] A sizeable majority of participants in both the low (76.9%) and high precarity condition (97.9%) correctly identified the vignette they read, $\chi^2(1) = 163.53$, $p < .001$.

Conspiracy belief	2.52	0.88	2.61	0.92	0.82	.411	0.10

Note. Theoretical range for all scales = 1-5, where higher scores indicate greater level of that construct.

A path analysis where conspiracy belief was regressed on the experimental condition and the mediator government trust failed to support the main hypothesis. The analysis also showed no significant difference between conditions on conspiracy belief (B = 0.06, CI_{95} [-0.14,0.25], p = .58), nor trust (B =-0.08, CI_{95} [-0.28,0.10], p = .38). However, there was a significant association between trust and conspiracy belief with a medium effect size (B = -0.40, CI_{95} [-0.52,-0.28], p < .001) suggesting that lower levels of trust were associated with higher levels of conspiracy belief. There was, however, no predicted significant indirect effect from condition through government trust (B = 0.03, CI_{95} [-0.04,0.11], p = .36)[7].

Discussion

Study 3 investigated the effect of the subjective experience of financial precarity on conspiracy belief, and whether it was mediated by institutional trust. There was no support for the hypotheses that the experimental condition would have a significant effect on trust in the Australian Federal Government responding to the cost-of-living crisis, or cost-of-living conspiracy belief. There was also no support for an indirect effect through government trust to conspiracy belief. There was, however, support for

[7] Given no difference across conditions on trust or conspiracy belief, we examined the zero-order correlations collapsed across conditions. Consistent with expected directions, increased precarity (manipulation check) had a weak significant positive association with conspiracy belief (r[285]=.15, p = .02), and a weak negative but non-significant association with trust (r[285] = -.10, p = .09). Trust had a negative and medium association with conspiracy belief (r[285] = -.36, p < .001).

the hypothesised negative association between trust and conspiracy belief. While previous research has supported a direct effect between precarity and conspiracy belief (Adam-Troian et al., 2023; Adamus et al., 2024), the present study failed to replicate these findings experimentally. A general discussion and implications are outlined below.

General Discussion

Across three preregistered studies we examined the cause-and-effect relationship between subjective precarity and conspiracy belief using longitudinal and experimental designs. Overall, the hypotheses across all studies testing precarity as a cause of conspiracy belief were not supported, nor was there evidence for precarity as a consequence of conspiracy belief.

The socio-functional model conspiracy belief proposes that some conspiracy theories help disadvantaged individuals explain their feelings of ontological insecurity (Adam-Troian et al., 2023). Despite our efforts to detect a causal effect from precarity to conspiracy belief in two longitudinal studies and an experiment, we found no evidence for a direct or indirect effect through government trust. The longitudinal studies employing RI-CLPMs indicated positive between-person associations between precarity and conspiracy belief over time but revealed no within-person cross-lagged associations[8]. In study 3, in which precarity was experimentally manipulated, we found no evidence for causal effects. Taken together our findings suggest that increased

[8] In exploratory CLPM models that did not separate between- and within- person variance over time, results suggested increased precarity predicted increased conspiracy belief in Study 1 but not in Study 2.

feelings of precarity and conspiracy belief co-occur at and over-time, but there is insufficient evidence to conclude that they have effects on one another.

There are several implications of our study findings. First, while the association between precarity and conspiracy belief seems robust, the cause of this relationship is less clear. It is theorised that reducing precarity should lead to decreases in conspiracy belief (Adam-Troian et al., 2023), but it may still be worth considering whether there are reverse or reciprocal effects between these variables over longer time periods. For example, in another study using annual waves, decreases in personal control had reciprocal effects with increases in conspiracy belief (Albath et al., 2024); this may suggest that feelings of insecurity from financial or material strain which overlap with control motives (Jetten et al., 2022) require longer periods to develop. However, and critically, our longitudinal studies show that the covariance between these variables were predominately across people and not within people over time. The absence of within-person cross-lagged effects indicate “third-variable effects” that cause precarity and conspiracy belief to co-vary in our samples over time.

A strength of our research is the use of a longitudinal modelling approach and an experimental design to determine cause-and-effect. The use of RI-CLPMs enabled us to reduce the risk of confounding estimates of lagged parameters by separating the between-person trait-like variance from the focal interest of within-person change over time. Assessing the temporal ordering of precarity and conspiracy belief in a more naturalistic setting increased external validity, and altering the time-period and measurement of variables, provided greater construct validity. While external validity was reduced in an abstracted imagine-self paradigm used in Study 3, the increased internal validity provided a strong test of the average *effect* of the subjective experience of precarity on conspiracy belief.

There are limitations that should be acknowledged. The use of longitudinal data with RI-CLPMs were advantageous in assessing the temporal ordering of variables, however, our estimates may be biased by unmeasured time-varying confounds (Rohrer & Murayama, 2023). Furthermore, our convenience samples consisted of highly-educated individuals, a characteristic often associated with decreased belief in conspiracy belief (e.g., van Prooijen, 2017) and precarity (Adam-Troian et al., 2023). As discussed earlier, it is unknown over what time-period precarity may exert a causal effect on conspiracy belief. So, our measurement intervals over 4-weeks and one-month spanning 3 and 12 months, respectively, may have been limited in capturing these processes which may occur at a different speed or timeframe. Future research may consider these factors in developing longitudinal studies to test the socio-functional model, including the need for larger samples to detect small effects (Orth et al., 2022). Finally, while our manipulation check in Study 3 did show a large effect on felt precarity, there is some uncertainty about the size of this effect given participants imagined themselves in a fictitious society.

Conspiracy beliefs may indeed be more prevalent amongst disadvantaged individuals. The socio-functional model offers an explanation of this relationship, suggesting that precarity causes conspiracy beliefs, and that addressing this root causes should decrease conspiracy belief. These are appealing propositions, and the latter remains to be tested. In this research we provided tests for producing credible estimates of this causal effect with two longitudinal studies and one experiment during a cost-of-living crisis, but did not find any evidence in support of our predictions. As such, the question remains at large: what is the cause-and-effect relationship between precarity and conspiracy belief?

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Supplementary Online Materials

Study packages 46
Study 1 47
Power Analysis 47
Demographics 47
Attrition Analysis 48
Descriptive statistics 48
Robustness checks 49
Study 2 52
Demographics 52
Attrition Analysis 52
Additional Descriptive Statistics 54
Exploratory Factor Analyses for Precarity Scale 57
Robustness check: Exploratory Cross-lagged Panel Model 58
Study 3 59
Exploratory Factor Analyses of multi-item scales 59
Robustness check: Models including specified covariates 60
Materials For All Studies 62
Study 1 62
Study 2 71
Study 3 73
References 4

Study packages

Study 1, Study 2 and 3 data were analysed using R version 4.4.2 (R Core Team, 2024). Mplus version 8.8 (Muthén & Muthén, 2017) was used for power calculation for Study 1. All study descriptive and inferential statistics were generated with the following packages: *tidyverse* package version 2.0.0 (Wickham et al., 2019), *rstatix* package version 0.7.2 (Kassambara, 2023), apaTables version 2.0.8 (Stanley, 2018), and *psych* package version 2.4.12 (Revelle, 2024). The *stringr* package version 1.5.1 (Wichman, 2023) was used to recode string variables into time codes. The *sjPlot* package version 2.8.17 (Lüdecke, 2024) was used to generate codebooks. The *lavaan* version 0.6.19 (Rosseel, 2012) package were also used to generate the output for RI-CLPMs and path analyses. The *here* package version 1.0.1 was also used (Müller, 2017).

Study 1

Power Analysis

A Monte Carlo analysis for longitudinal data with 1,000 replications was conducted using Mplus that determined a sample of *N* = 650 participants were required to yield sufficient power ($1 – \beta = .80$) to identify within-person cross-lagged associations ($B \geq .30$) between the variables of interest across four-timepoints. This method draws several samples from a hypothesised population model and power is evaluated by examining the percentages of replications for which the null hypothesis is rejected for non-zero parameters. Plausible population values for residual variances of observed variables (.51), variances, (1.00) and covariances (.40) of random intercepts, and covariances between residuals of within-person components (.10) were inputted based on similar RI-CLPMs (Coelho et al., 2022; Liekefett et al., 2023). Results suggested that power for a medium-sized within-person cross-lagged association (.30) was sufficient (.88-.96). Additionally, bias in parameter estimates (-.04-.02) and standard errors (-.04-.10) were small as they did not exceed .10 (Muthén & Muthén, 2002). Therefore, this increased confidence that the sample size was sufficient.

Demographics

The sample was highly educated, with the majority indicating a tertiary degree (Doctoral degree = 4.9%, Postgraduate degree = 8.8%, Masters degree = 17.0, Undergraduate Bachelors degree = 40.0%, Other tertiary qualification = 0.5%), with a sizeable minority indicating Completed high school / secondary school (18.7%), and the remainder with an Advanced Diploma (7.2%), High School (18.7%) or less than High School (3.0%). The sample was left-leaning on social and economic indicators of political ideology (*M* =

3.10, SD = 1.19; 7-point scale from 1 = *Extremely Progressive*, 7 = *Extremely Conservative*).

Attrition Analysis

A Poisson regression using the Time 1 measures precarity and conspiracy belief, as well as demographic variables including age, gender (woman, man), university-level education (no, yes), and location (suburban, rural), was used to predict the number of subsequent timepoints participants completed. The analysis suggested that conspiracy belief (B = -0.026, CI_{95} = [-0.078, 0.035], p = .399), precarity (B = -0.15, CI_{95}= [-0.063, 0.033], p = .529), gender (B = 0.081, 95% CI_{95}= [-0.072, 0.234], p = .298), and area (B = -0.186, CI_{95}= [-0.385, 0.013], p = .067) were not associated with the number of subsequent timepoints participants completed. However, being younger (B = 0.015, CI_{95}= [0.009, 0.021], p < .001) and less educated (B = 0.217, CI_{95}= [0.031, 0.403], p = .022) were associated with the number of subsequent timepoints completed.

Descriptive statistics

The average stability over the four-timepoints for conspiracy belief (r = .87, p < .001) and precarity (r = .86, p < .001) were high. Furthermore, calculated intraclass correlation coefficients suggested that for conspiracy belief, 85% of the variance was explained by stable between-person differences, and 15% was explained by within-person fluctuations over time. For precarity, 84% of the variance was explained by stable between-person differences, whereas 16% was due to within-person fluctuations over time. On average the sample was below the mid-point on general conspiracy belief and above the mid-point on precarity. Assumptions were checked including normality and outliers[9].

Table S1a. Zero-Order Correlations for Random-Intercepts Cross-Lagged Panel Model of General Conspiracy Theory Beliefs and Precarity

	1	2	3	4	5	6	7
1. General Conspiracy Belief	-						
2. General Conspiracy Belief	.84	-					
3. General Conspiracy Belief	.83	.88	-				
4. General Conspiracy Belief	.84	.88	.89	-			
5. Precarity T1	.25	.24	.24	.25	-		
6. Precarity T2	.23	.25	.24	.24	.86	-	
7. Precarity T3	.20	.20	.24	.24	.84	.84	-
8. Precarity T4	.21	.23	.23	.25	.82	.84	.86

Notes. N = 637. All values are significant at p < .001.

Robustness checks

Exploratory RI-CLPM including trust in institutions as a mediator. The model was a good fit with the data, $\chi^2(45) = 111.44$, $p < .001$, $CFI = .99$, $SRMR = .04$, $RMSEA = .05$ (CI_{90} = .04, .06). The between-person components indicated a medium and significant positive association between precarity and conspiracy belief ($Cov = 0.58$, CI_{95} = [0.40,0.76], $p < .001$), and significant and negative associations between conspiracy belief and trust ($Cov = -0.39$, CI_{95} = [-0.49,-0.30] , $p < .001$) as well as precarity and trust ($Cov = -0.30$, CI_{95} = [-0.42,-0.19], $p < .001$). The autoregressive within-person deviations from the trait-level means were not statistically significant for precarity ($B = 0.12$, CI_{95} = [-0.02,0.26] $p = .10$), trust ($B = 0.11$, CI_{95} = [-0.02,0.24], $p = .09$), or conspiracy belief (B = 0.07, CI_{95} = [-0.04,0.19], $p = .21$). There were no within-person associations from

[9] Conspiracy belief and precarity were significantly negatively skewed. While transforming variables did reduce skew, results are presented with untransformed data, as the pattern and significance of results were no different to transformed data.

precarity to trust (*B* = -0.02, CI_{95} = [-0.08,0.04], *p* = .45) or to conspiracy belief (*B* = 0.04, CI_{95} = [-0.02,0.10], *p* = .20). Neither were there associations from conspiracy belief to trust (*B* = -0.01, CI_{95} = [-0.07,0.05], *p* = .74) or precarity (*B* = -0.02, CI_{95} = [-0.13,0.09], *p* = .74). Finally there was a small significant negative associations from trust to precarity (*B* = -0.16, CI_{95} = [-0.31,-0.01], *p* = .04), however, there was no association from trust to conspiracy belief (*B* = -0.01, CI_{95} = [-0.10,0.08], *p* = .86). Overall, these findings did not support any evidence for precarity preceding conspiracy belief, nor trust in institutions.

Exploratory Cross-lagged Panel Model. A cross-lagged panel model with lagged regression and covariance constraints, was an acceptable fit with the data $\chi^2(22)$ = 322.14, *p* < .001, *CFI* = .91, *SRMR* = .05, *RMSEA* = .15 (CI_{90} = .14, .16). The autoregressive effects were both statistically significant revealing that precarity (*B* = 0.86, CI_{95} = [0.84,0.89], *p* < .001,) and conspiracy belief (*B* = 0.90, CI_{95} = [0.87,0.92], *p* < .001) were stable over time. The cross-lagged association from conspiracy belief to precarity was non-significant (*B* = 0.01, CI_{95} = [-0.01,0.04], *p* = .31), however, the association from precarity to conspiracy belief was significant (*B* = 0.02, CI_{95} = [0.003,0.041], *p* = .02). This suggested that when not properly partitioning the between-person stability from the within-person change as modelled in an RI-CLPM, that increases in precarity predicted future increases in conspiracy belief.

Exploratory Cross-lagged Panel Model including trust in institutions as a mediator. A cross-lagged panel model with lagged regression and covariance constraints, was an acceptable fit with the data $\chi^2(51)$ = 532.41, *p* < .001, *CFI* = .90, *SRMR* = .05, *RMSEA* = .12 (CI_{90} = .11, .13). The autoregressive effects were statistically significant, revealing that precarity (*B* = 0.85, CI_{95} = [0.83,0.88], *p* < .001), conspiracy belief (*B* = 0.88, CI_{95} =

[0.85,0.91], $p < .001$), and trust ($B = 0.77$, $CI_{95} = [0.73,0.81]$, $p < .001$) were stable over time. The cross-lagged association from precarity to trust was significant ($B = -0.02$, $CI_{95} = [-0.031,-0.001]$, $p = .03$) as was the association from trust to conspiracy belief ($B = -0.09$, $CI_{95} = [-0.126,-0.048]$, $p < .001$), consistent with the indirect effect proposed in the socio-functional model. There was also a significant effect from conspiracy belief to trust ($B = -0.05$, $CI_{95} = [-0.07,-0.03]$, $p < .001$), and from trust to precarity ($B = -0.11$, $CI_{95} = [-0.16,-0.07]$, $p < .001$). Precarity was not associated with conspiracy belief ($B = 0.02$, $CI_{95} = [-0.002,0.035]$, $p = .09$), nor was conspiracy belief with precarity ($B = -0.01$, $CI_{95} = [-0.034,0.023]$, $p = .71$). This suggested that when not properly partitioning the between-person stability from the within-person change as modelled in an RI-CLPM, that trust may have indirectly mediated the effect from precarity to conspiracy belief, or vice-versa.

Study 2

Demographics

The sample was highly educated, with the majority indicating a tertiary degree (Doctoral degree = 3.9%, Postgraduate degree = 16.4%, Undergraduate degree = 42.4%, Other tertiary qualification = 14.8%), with a sizeable minority indicating Completed high school / secondary school (20.3), and the remainder with some high school / secondary school (2.1%). Approximately 20% of participants in New Zealand and Australia indicated the lowest personal income (Less than $20,000), while 13% indicated the lowest option in the UK (Less than £10,000). Over half of the sample indicated working full-time (55.1%), with the rest indicating part-time (22.1%) unemployed and looking for work (3.9%), homemaker (4.8%), student (5.4%), retired (5.8%) or other (3.5%). A sizeable minority indicated being married (41.2%), never married (29.2%), living with a partner (19.8%), divorced/separated (8.7%), or widowed (1.1%).

Survey completion time and payment are presented below in Table S2a

Supplementary Table S2a. *Payments to Participants and Survey Durations*

Wave	Payment (£)	Advertised duration (minutes)	Observed median duration[a] (seconds)	*n*
14	2.00	11	629	680
15	0.90	5	264	660
16	0.90	5	255	666
17	0.90	5	262	674
18	0.90	5	254	654
19	1.00	5	238	680
20	1.00	5	241	654
21	1.00	5	239	668
22	1.00	5	234	628
23	1.00	5	239	626
24	1.00	5	242	635
25	1.00	5	253	623

Notes. [a]Calculated using Qualtrics meta-data. [b]Calculated based on observed median durations. The lengths of the surveys varied across waves due to other measures not analysed in this manuscript.

Attrition Analysis

A Poisson regression using the Time 1 measures precarity and conspiracy belief, as well as demographic variables including age, gender (woman, man), university-level education (no, yes), country (Australia vs. other; United Kingdom vs. other), and employment status (fulltime vs. other, part-time vs. other, unemployed vs. other), was used to predict the number of timepoints participants completed. The analysis suggested no associations between precarity (B = -0.003, CI_{95} = [-0.023, 0.015], p = .688), conspiracy belief (B = -0.021, CI_{95} = [-0.042, 0.0001], p = .052) , gender (B = 0.02, CI_{95} = [-0.03, 0.07], p = .384), education (B = 0.01, CI_{95} CI = [-0.05, 0.07], p = .720), country (Australia vs. other: B = 0.01, CI_{95} = [-0.07, 0.09], p = .785; United Kingdom vs. other: B = 0.05, CI_{95} = [-0.03, 0.12], p = .240), and employment status (Fulltime vs. other: B = 0.005, CI_{95} = [-0.06, 0.07], p = .875; Part-time vs. other: B = 0.03, CI_{95} = [-0.04, 0.11], p

= .389; Unemployed vs. other: B = 0.05, CI_{95} = [-0.10, 0.19], p = .489) with the number of subsequent timepoints participants completed. However, there was a small significant effect of being younger (B = 0.004, CI_{95} = [0.002, 0.006], $p < .001$) with fewer timepoints completed.

Additional Descriptive Statistics

The average stability over the 12-timepoints for conspiracy belief (r = .86, $p < .001$) and precarity (r = .87, $p < .001$) were high. Calculated intraclass correlation coefficients suggested that for conspiracy belief, 83% of the variance was explained by stable between-person differences, and 17% was explained by within-person fluctuations over time. For Precarity, 82% of the variance was explained by stable between-person differences, whereas 18% was due to within-person fluctuations over time.

Table S2b. Study 2 Descriptive Statistics for Precarity and General Conspiracy Beliefs.

	T14	T15	T16	T17	T18	T19	T20	T21	T22	T23	T24	T25
	M(*SD*)	*M*(*SD*)	*M*(*SD*)	*M*(*SD*)	*M*(*SD*)	*M*(*SD*)	*M*(*SD*)	*M*(*SD*)	*M*(*SD*)	*M*(*SD*)	*M*(*SD*)	*M*(*SD*)
Precarity	3.00 (1.33)	3.04 (1.38)	3.00 (1.38)	2.96 (1.38)	3.02 (1.38)	2.99 (1.43)	2.96 (1.41)	2.99 (1.40)	2.98 (1.40)	2.92 (1.41)	2.97 (1.42)	2.92 (1.44)
Conspiracy Belief	1.978 (1.188)	1.948 (1.189)	1.931 (1.21)	1.911 (1.173)	1.968 (1.211)	1.96 (1.247)	1.93 (1.208)	1.955 (1.22)	1.93 (1.218)	1.936 (1.23)	1.954 (1.256)	1.96 (1.267)

Notes. *Ns* = 623-680. Theoretical range for all scales = 1-5, where higher scores indicate greater level of that construct.

Table S2c. Study 2 Zero-Order Correlations of General Conspiracy Theory Beliefs and Precarity

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1. Conspiracy Belief T14	1.00																						
2. Conspiracy Belief T15	.80	1.00																					
3. Conspiracy Belief T16	.81	.84	1.00																				
4. Conspiracy Belief T17	.83	.84	.83	1.00																			
5. Conspiracy Belief T18	.83	.80	.81	.85	1.00																		
6. Conspiracy Belief T19	.84	.81	.83	.87	.90	1.00																	
7. Conspiracy Belief T20	.82	.85	.85	.83	.84	.86	1.00																
8. Conspiracy Belief T21	.85	.83	.85	.88	.89	.89	.88	1.00															
9. Conspiracy Belief T22	.83	.81	.83	.87	.87	.90	.87	.89	1.00														
10. Conspiracy Belief T23	.84	.79	.84	.88	.86	.88	.83	.89	.88	1.00													
11. Conspiracy Belief T24	.84	.82	.84	.86	.88	.89	.87	.91	.89	.89	1.00												
12. Conspiracy Belief T25	.84	.80	.82	.84	.87	.89	.88	.88	.88	.89	.92	1.00											
13. Precarity T14	.23	.24	.25	.23	.24	.23	.26	.25	.22	.21	.22	.24	1.00										
14. Precarity T15	.20	.24	.24	.23	.23	.22	.26	.23	.22	.20	.19	.21	.85	1.00									
15. Precarity T16	.25	.26	.27	.24	.24	.24	.28	.25	.24	.23	.22	.24	.83	.86	1.00								
16. Precarity T17	.19	.23	.22	.21	.22	.21	.25	.22	.21	.20	.20	.20	.80	.87	.90	1.00							
17. Precarity T18	.23	.26	.24	.24	.24	.23	.27	.25	.22	.22	.23	.23	.82	.86	.88	.90	1.00						
18. Precarity T19	.30	.27	.28	.28	.30	.28	.30	.29	.30	.27	.27	.27	.84	.85	.86	.87	.90	1.00					
19. Precarity T20	.28	.29	.28	.25	.29	.27	.32	.30	.28	.26	.27	.27	.80	.82	.85	.87	.87	.90	1.00				
20. Precarity T21	.25	.26	.26	.25	.26	.24	.28	.26	.25	.25	.24	.25	.83	.83	.87	.87	.87	.89	.90	1.00			
21. Precarity T22	.24	.25	.22	.22	.24	.22	.28	.24	.24	.21	.22	.23	.81	.82	.84	.85	.86	.86	.87	.89	1.00		
22. Precarity T23	.23	.24	.21	.23	.24	.22	.27	.25	.22	.23	.23	.23	.80	.84	.86	.88	.89	.88	.88	.89	.90	1.00	
23. Precarity T24	.28	.29	.26	.26	.29	.26	.31	.29	.28	.24	.29	.27	.80	.80	.81	.83	.85	.87	.84	.87	.86	.89	1.00
24. Precarity T25	.23	.24	.20	.22	.23	.23	.26	.24	.23	.22	.23	.22	.80	.81	.83	.85	.86	.88	.85	.88	.88	.90	.90

Notes. N = 528-680. All values are significant at $p < .001$

Exploratory Factor Analyses for Precarity Scale

Table S2d. Exploratory Factor Analysis of Study 2 Precarity Scale

	T14 F1	T15 F1	T16 F1	T17 F1	T18 F1	T19 F1	T20 F1	T21 F1	T22 F1	T23 F1	T24 F1	T25 F1
Precarity 1	.885	.893	.908	.907	.916	.924	.935	.910	.920	.923	.921	.919
Precarity 2	.909	.933	.926	.917	.915	.939	.931	.934	.934	.932	.957	.954
Precarity 3	.921	.928	.934	.923	.937	.945	.941	.909	.951	.946	.923	.942
SS loadings	2.457	2.528	2.554	2.515	2.553	2.630	2.626	2.525	2.623	2.617	2.616	2.641
Proportion of Variance	.819	.843	.851	.838	.851	.877	.875	.842	.874	.872	.872	.880

Notes. *Ns* = 623-680. Maximum likelihood extraction method.

Robustness check: Exploratory Cross-lagged Panel Model

A cross-lagged panel model with lagged regression and covariance constraints was not an acceptable fit with the data $\chi^2(270) = 2741.27$, $p < .001$, $CFI = .83$, $SRMR = .19$, $RMSEA = .13$ ($CI_{90} = .10, .11$). Due to the poor model fit these results cannot be interpreted with any confidence.

The autoregressive effects were both statistically significant revealing that precarity ($B = 0.88$, $CI_{95} = [0.86,0.89]$, $p < .001$) and conspiracy belief ($B = 0.87$, $CI_{95} = [0.85,0.88]$, $p < .001$) were stable over time. The cross-lagged association from conspiracy belief to precarity was significant ($B = 0.03$, $CI_{95} = [0.02,0.04]$, $p < .001$), as was the association from precarity to conspiracy belief ($B = 0.03$, $CI_{95} = [0.02,0.04]$, $p < .001$). This suggested that when not properly partitioning the between-person stability from the within-person change as modelled in an RI-CLPM, that increases in conspiracy belief predicted future increases in precarity, and vice-versa.

Study 3

Exploratory Factor Analyses of multi-item scales

Table S3a. Exploratory Factor Analysis of Study 3 Precarity Scale

	F1
Precarity 1	.820
Precarity 2	.806
Precarity 3	.912
Precarity 4	.869
Precarity 5	.937
SS loadings	3.788
Proportion of Variance	.758

Notes. N = 285. Maximum likelihood extraction method.

Table S3b. Exploratory Factor Analysis of Study 3 Government Trust Scale

	F1
Trust 1	.725
Trust 2	.730
Trust 3	.844
Trust 4	.783
Trust 5	.791
SS loadings	3.531
Proportion of Variance	.588

Notes. N = 285. Maximum likelihood extraction method.

Table S3c. Exploratory Factor Analysis of Study 3 Conspiracy Belief Scale

	F1	F2
Conspiracy Belief 1	.830	
Conspiracy Belief 2	.739	
Conspiracy Belief 3	.932	
Conspiracy Belief 4	.837	
Conspiracy Belief 5		.997
SS loadings	2.774	1.044
Proportion of Variance	.555	.209

Notes. *N* = 285. Maximum likelihood extraction method.

Robustness check: Models including specified covariates

A preregistered model including covariates (gender [woman, man], income [below median, above median], education [no tertiary, tertiary], political ideology [left to right]) was also tested. Being more educated (B = -0.40, CI_{95} = [-0.61,-0.19], p < .001) and being more right-wing on political ideology (B = 0.17, CI_{95} = [0.09,0.26], p < .001) was associated with conspiracy belief, as was being more educated with trust (B = 0.29, CI_{95} = [0.08,0.51], p = .007). However, there was no significant effect between conditions on trust (B = -0.05, CI_{95} = [-0.18,0.08], p = .43). However, there was a significant association between trust and conspiracy belief with a medium effect size (B = -0.35, CI_{95} = [-0.46,-0.25], p < .001) suggesting that lower levels of trust were associated with higher levels of conspiracy belief. The analysis also showed no significant difference between conditions on conspiracy belief (*B* = 0.06, CI_{95} = [-0.07,0.18], *p* = .37). There was no significant indirect effect from condition through institutional trust (*B* = 0.02, CI_{95} = [-0.03,0.06], *p* = .43).

Materials For All Studies

Study 1

Prolific Invitation

In this study, we'll be asking about your beliefs in Australian society over a period of approximately 3 months. We will be following up on these beliefs in later surveys to see how stable or malleable they are.

There is one attention check in the study and an open-worded item, and failing to respond sincerely and accurately may result in your responses being rejected.

Eligibility: Australian residents aged 18+

Questions: 39 MCQs, one single-word open ended item

Data management: de-identified data shared openly on osf.io

Contact researchers: <REDACTED>

Ethics contact: <REDACTED>

Participant Information Consent

Form

Beliefs about Australian society

The following researchers will be conducting the study:

Role	**Name:**	**Organisation:**
Chief Investigator	<REDACTED>	<REDACTED> <REDACTED>
Student Investigators	<REDACTED> <REDACTED> <REDACTED>	<REDACTED> <REDACTED> <REDACTED>
Research Funder:	This research is funded by the <REDACTED>	

PARTICIPANT INFORMATION STATEMENT

Background Information:

You are invited to take part in a study investigating beliefs in Australia society over a period of approximately 3 months. Understanding the characteristics of these beliefs, and individual differences in personality and attitudes can help inform future studies related to science education and communication.

Voluntary Nature of the Study:

Participation in this study is completely voluntary. If you would like to be involved in the study, please read the information below carefully and decide at the end if you do or do not want to participate. Your decision whether or not to participate in this study will not affect any current or future relations with<REDACTED>, or the researchers in any way. By completing the questionnaire, you give your consent to participate in the study.

Procedure:

In order to participate in this study you must be **18 years or older, proficient in English and be an Australian resident**. If you choose to participate, you will be asked to respond to a series of questions relating to health beliefs, public health attitudes, and to answer some questions about your personality. **You may be invited to participate in a similar survey every month thereafter, for a total of 4 times.** The current study is not expected to take longer than 7 minutes, and subsequent studies approximately 4 minutes. For your time you will be paid £.90 GBP (first 7 minute study) and £.50GBP (for each subsequent 4 minute study).

Risks and Benefits of Being in the Study:

Participating in this study may allow you to report your views towards some issues in today's society. We are not aware of any risks involved in taking part in the survey, however, do acknowledge that for some participants responding to survey may affect their level of discomfort. If this arises for you, and you feel the need to speak to someone about issues raised as a result of this survey, you can reach out to LifeLine Australia (https://www.lifeline.org.au/ ; tel: 13 11 14) or the Commonwealth Financial Counselling service (https://ndh.org.au/ ; tel: 1800 007 007). If you have any concerns or questions relating to the study please contact the chief investigator, <REDACTED>. If you choose to submit your data there may be an opportunity to erase and withdraw only while the study data are being collected (end of August). More information is provided below in the "If you change your mind section".

Confidentiality:

Your anonymity is completely ensured throughout all stages of the project: there is no possible way that you can be identified by your responses. This means you cannot be identified in any type of publication from this study. At the end of the study today, you will be given the opportunity to destroy and/or erase any data you contribute. Data collected in the study will be stored indefinitely. Data are stored indefinitely, given that it is a common requirement now as part of Open Science practices to provide access to data following publication (or during peer review). We will collect and store the data in accordance with <REDACTED> Universities Research Data Management Policy which can be viewed online using the following link: <REDACTED>

Results:

The results of the study will be used as data for honours research projects in psychology at <REDACTED> and may be used for publication in a scientific journal or conference presentations (only group data will be reported). Given that no identifying information will be linked to your data, individual results are not available. However, if you would like a summary of the group results after completion of the study please contact the chief investigator listed above after 1 December, 2023.

If you change your mind:

At any time you may choose to no longer be a part of the study. If you do not want to complete or submit the questionnaire, simply close the web browser. If you change your mind after clicking on the 'Submit' button, you can withdraw your responses by contacting the chief investigator listed above during the time in which the study is being run (before the end of August). As this is a longitudinal study (4 timepoints), data will be linked following each data collection (~ monthly) using participants' Prolific.co ID. At the end of the data collection, these Prolific.co ID's will be replaced with a number. Participants will remain anonymous, and there is no way to determine who these participants are, either through their responses or through the Prolific.co website. This means that once you have submitted the survey, thus giving consent for your data to be used, it will not be possible to withdraw your data because of its anonymous nature.

Contacts and Questions:

Any questions regarding this project may be directed to the chief investigator <REDACTED> of the <REDACTED>.

Complaints:

If you have any complaints or concerns that the investigators have not been able to answer to your satisfaction, you may contact the Senior Human Ethics Officer, Ethics and Integrity, Research Office, <REDACTED>. Please quote the application reference number <REDACTED>.

You can download a copy of this information by saving this page to your device, or using the print function. Thank you kindly for participating in this study, it is very much appreciated.

CONSENT FORM – DECLARATION BY PARTICIPANT

I (the participant) have read and understood the **participant information statement and consent form**, and any questions I have asked of the researchers have been answered to my satisfaction. I agree to participate in this project, realising I can stop participating in the study at any time. I understand that if I submit my completed survey it will not be possible to remove my data from the study as is an anonymous survey, and thus cannot be linked to me. I understand that research data provided by me may be presented at conferences and published in journals and that neither my name nor any other identifying information will be used, retained indefinitely and given for the use in any future research.

I agree, start the questionnaire

Generic Conspiracist Beliefs Scale – 5

There is often debate about whether or not the public is told the whole truth about various important issues. This brief survey is designed to assess your beliefs about some of these subjects. Please indicate the degree to which you agree with each statement on the following scale:

Strongly Disagree Strongly Agree

1 2 3 4 5 6 7

1. The government permits or perpetrates acts of terrorism on its own soil, disguising its involvement.
2. Evidence of alien contact is being concealed from the public.
3. New and advanced technology which would harm current industry is being suppressed.
4. Certain significant events have been the result of the activity of a small group who secretly manipulate world events.
5. Experiments involving new drugs or technologies are routinely carried out on the public without their knowledge or consent

Precarity Scale

Please indicate your level of agreement with each of the statements below using the following rating scale

Strongly Disagree						Strongly Agree
1	2	3	4	5	6	7

In the last month, how often have you been:

1. Concerned about making ends meet at the end of each month.
2. Concerned about going without a disposable income.
3. Worried about my financial situation due to increases in living expenses.
4. Worried about not working enough or being unemployed.
5. Concerned about having money for unexpected expenses

Demographic Information

What is your age in years?

What is your gender?

- Male
- Female
- Not listed above

What Australian State or Territory do you live in?

Which of the following best describes the area you live in?

- Metropolitan / Urban
- Rural
- Remote

What is the highest level of education you have achieved **to date**?

- High school not completed
- High school graduate, or the equivalent
- Advanced Diploma
- Bachelors degree, Graduate Diploma and Certificate
- Postgraduate Diploma and Certificate, Bachelor Honours Degree
- Masters degree
- Doctorate degree
- Other

What is your average annual income?

- $0 – $9,999
- $10,000 – $19,999
- $20,000 – $29,999
- $30,000 – $39,999
- $40,000 – $49,999
- $50,000 – $59,999

- $60,000 – $69,999
- $70,000 – $79,999
- $80,000 – $89,999
- $90,000 – $99,999
- $100,000 - $149,999
- More than $150,000
- Rather not to say

How important do you consider religion and/or spirituality in your life?

Not at all important 1 2 3 4 5 6 7 Extremely important

Please rate how politically conservative versus progressive you see yourself as being on economic issues:

1 Extremely Progressive

2 Very Progressive

3 Somewhat Progressive

4 Neither Progressive nor Conservative

5 Somewhat Conservative

6 Very Conservative

7 Extremely Conservative

Please rate how politically conservative versus progressive you see yourself as being on social issues:

1 Extremely Progressive

2 Very Progressive

3 Somewhat Progressive

4 Neither Progressive nor Conservative

5 Somewhat Conservative

6 Very Conservative

7 Extremely Conservative

Manipulation Check and Attention Check

Measures

Manipulation Check Question

To what degree do you agree with the following statement: (1 = strongly disagree, 7 = strongly agree):

Every morning I run up Mount Everest to eat breakfast.

Attention Check Question

The city test you are about to take part in is very simple. When asked for your favourite city you must write “Pawnee”.

Based on the text you read above, what is your favourite city? ________________________

Study 2

Prolific Invitation (Time 14)

This survey is part of a longitudinal study. You are being invited because you previously completed a study called “Beliefs in official explanations”.

In today’s survey you will be asked to answer 98 questions in total. The questions will cover topics including emotions, news consumption, economic security, attitudes towards evidence, and beliefs in official explanations for events. Although we have previously asked you some of these questions, we would like to know how you would answer these now. So please read and answer each question carefully and honestly.

We do not think it is likely that you will find any of the questions distressing, but just in case we have included information about relevant mental health support services within our survey. You are also very welcome to message me if you have any concerns.

When we publish our findings we will share the data from this study openly online so that other researchers and member of the public can check our analyses. Before doing this we will remove your IP address and Prolific ID number so that the data is fully anonymous.

We aim to approve payments within 2 working days of submissions being made. In doing so we will carefully Prolific's policies on approvals, rejections, & returns. As such, it should be very unlikely that your submission is rejected. You do not have to complete follow-up surveys to receive payment for this one.

Note: If you have difficulties opening our survey you might need to disable your adblocker.

Prolific Invitation (Time 15-25)

This survey is part of a longitudinal study. You are being invited because you previously completed a study called "Beliefs in official explanations".

In today's survey you will be asked to answer 44 questions in total. The questions will cover topics including emotions, news consumption, economic security, and beliefs in official explanations for events. Although we have previously asked you most of these questions, we would like to know how you would answer these now. So please read and answer each question carefully and honestly.

We do not think it is likely that you will find any of the questions distressing, but just in case we have included information about relevant mental health support services within our survey. You are also very welcome to message me if you have any concerns.

When we publish our findings we will share the data from this study openly online so that other researchers and member of the public can check our analyses. Before doing this we will remove your IP address and Prolific ID number so that the data is fully anonymous.

We aim to approve payments within 2 working days of submissions being made. In doing so we will carefully Prolific's policies on approvals, rejections, & returns. As such, it should be very unlikely that your submission is rejected. You do not have to complete follow-up surveys to receive payment for this one.

Note: If you have difficulties opening our survey you might need to disable your adblocker.

Participant Information Sheet (Time 14)

Researcher introduction My name is <redacted>. I am a <redacted> in the <redacted> at <redacted>. My co-researchers on this project are <redacted>, <redacted>, <redacted>, <redacted>, <redacted>, and <redacted>.

Project description: We are conducting a longitudinal study designed to investigate the extent to which people agree with a set of contentious claims about current and historical events, and how (and why) their beliefs might change over time. You are being invited to participate in today's survey because you previously participated in an earlier wave (time point) of this study. Although we have previously asked you most of these questions, we would like to know how you would answer these now. So please read and answer each question carefully and honestly.

Project procedures If you choose to participate, you will be asked to answer a range of questions about topics including emotions, news consumption, economic security, attitudes towards evidence, and beliefs in official explanations for events. The survey will include **98** questions in total, and take around **11** minutes. If you complete the survey attentively, you will receive **£2** via Prolific.

I do not anticipate that completing this survey will cause you any discomfort or harm. If you do experience distress, you can find information about accessing mental health support services and contact numbers in Australia on the Mental Health Australia website, in New Zealand on the Ministry of Health NZ website, and in the United Kingdom on the NHS website. You are also welcome to message me if you have questions or concerns.

Data management Initially, the raw data will be password-protected and only accessible to the research team (as named above). This raw data will not contain any directly identifying information, although it will contain your Prolific ID and IP address. Once we have analysed the data to answer our research questions, we will remove your Prolific ID and your IP address, and then share the data openly on the Open Science Framework (where it will be stored indefinitely). This means that other researchers and members of the public will be able to access the data to check our analyses, and potentially answer new research questions.

Participant rights You are under no obligation to accept my invitation to take part in this research. If you decide to participate, you have the right to decline to answer any particular question, or to stop answering questions at any time.

Project contacts If you have any questions about this research you are welcome to contact me at <redacted> or by using the Prolific messaging system.

Project funding This project is funded by a <redacted>.

Ethics statement *This project has been reviewed and approved by the* <redacted>. *If you have any concerns about the conduct of this research, please contact* <redacted>*, Chair,* <redacted>*Human Ethics Committee:* <redacted> *telephone* <redacted>*, email* <redacted>

If you would like to save a pdf copy of this information sheet, click here.

Having read the information sheet above, do you consent to participate in this study?

Yes / No

Participant Information Sheet (Time 15-25)

Researcher introduction My name is <redacted>. I am a <redacted> in the <redacted> at <redacted>. My co-researchers on this project are <redacted>, <redacted>, <redacted>, <redacted>, <redacted>, and <redacted>.

Project description: We are conducting a longitudinal study designed to investigate the extent to which people agree with a set of contentious claims about current and historical events, and how (and why) their beliefs might change over time. You are being invited to participate in today's survey because you previously participated in an earlier wave (time point) of this study. Although we have previously asked you most of these questions, we would like to know how you would answer these **now**. So please read and answer each question carefully and honestly.

Project procedures If you choose to participate, you will be asked to answer a range of questions about topics including emotions, news consumption, economic security, attitudes towards evidence, and beliefs in official explanations for events. The survey will include 44 questions in total, and take around 5 minutes. If you complete the survey attentively, you will receive **£0.90** via Prolific.

I do not anticipate that completing this survey will cause you any discomfort or harm. If you do experience distress, you can find information about accessing mental health support services and contact numbers in Australia on the Mental Health Australia website, in New Zealand on the Ministry of Health NZ website, and in the United Kingdom on the NHS website. You are also welcome to message me if you have questions or concerns.

Data management Initially, the raw data will be password-protected and only accessible to the research team (as named above). This raw data will not contain any directly identifying information, although it will contain your Prolific ID and IP address. Once we have analysed the data to answer our research questions, we will remove your Prolific ID and your IP address, and then share the data openly on the Open Science Framework (where it will be stored indefinitely). This means that other researchers and members of the public will be able to access the data to check our analyses, and potentially answer new research questions.

Participant rights You are under no obligation to accept my invitation to take part in this research. If you decide to participate, you have the right to decline to answer any particular question, or to stop answering questions at any time.

Project contacts If you have any questions about this research you are welcome to contact me at <redacted> or by using the Prolific messaging system.

Project funding This project is funded by a <redacted>.

Ethics statement *This project has been reviewed and approved by the* <redacted>. *If you have any concerns about the conduct of this research, please contact* <redacted>*, Chair,* <redacted>*Human Ethics Committee:* <redacted> *telephone* <redacted>*, email* <redacted>

If you would like to save a pdf copy of this information sheet, click here.

Having read the information sheet above, do you consent to participate in this study?

Yes / No

consp_costliving The cost of living crisis is a government plot to control the public.

- Strongly disagree (1)
- Somewhat disagree (2)
- Neither agree nor disagree (3)
- Somewhat agree (4)
- Strongly agree (5)

precarity_1 Over the last 3 weeks, I have been concerned about making ends meet at the end of each month.

- Strongly disagree (1)
- Somewhat disagree (2)
- Neither agree nor disagree (3)
- Somewhat agree (4)
- Strongly agree (5)

precarity_2 Over the last 3 weeks, I have been worried about my financial situation due to increases in living expenses.

- Strongly disagree (1)
- Somewhat disagree (2)
- Neither agree nor disagree (3)
- Somewhat agree (4)
- Strongly agree (5)

precarity_3 Over the last 3 weeks, I have been concerned about having money for unexpected expenses.

- Strongly disagree (1)
- Somewhat disagree (2)
- Neither agree nor disagree (3)

◯ Somewhat agree (4)

◯ Strongly agree (5)

Time 14 att_check I am a robot.

- Strongly disagree (1)
- Somewhat disagree (2)
- Somewhat agree (3)
- Strongly agree (4)

Time 15 att_check I am currently completing a survey.

- Strongly disagree (1)
- Somewhat disagree (2)
- Somewhat agree (3)
- Strongly agree (4)

Closing

Thanks for participating in this survey! A reminder: You can find information about accessing mental health support services and contact numbers in Australia on the Mental Health Australia website, in New Zealand on the Ministry of Health NZ website, and in the United Kingdom on the NHS website.

Feedback ***Optional:*** If you experienced any problems completing this survey, please let me know here. You're also very welcome to send me a message using Prolific if you prefer.

____

Study 3

Prolific Invitation

In this study, we'll be asking you about your views after reading about a fictitious society.

Eligibility: Australian residents aged 18+

Payment: We aim to approve payments within 5 working days of submissions being made. In doing so we will carefully follow Prolific's policies on approvals, rejections, & returns. If you answer carefully and honestly it should be very unlikely that your submission is rejected.

Questions: You will be asked to read a short text and will be asked 25 MCQs in response to the text. This will take approximately 6 minutes to complete.

Data management: de-identified data shared openly on osf.io

Contact researchers: <REDACTED>

Ethics contact: <REDACTED>

Ethics Reference Number: <REDACTED>

Participant Information and Consent Form

How Australians Develop Attitudes and Beliefs Towards Other Societies

Who is conducting and funding this research?

Principal Investigator: <REDACTED>
Student Investigator: <REDACTED>

This research is being funded by <REDACTED>

What is the study about?

You are invited to participate in a short study of societal attitudes and beliefs in Australia. We hope to learn more about how Australians develop attitudes and emotions when reading about societies other than their own, whether that be fictional or non-fictional. It is sometimes essential for the validity of research results not to disclose the true purpose of the research to participants. If this occurs participants will be debriefed as soon as possible and at that time given the opportunity to withdraw from the research and have data arising from their participation not used in the research project.

Do I have to participate?

Being part of this study is voluntary. If you want to be part of the study, we ask that you read the information below carefully.

You can read the information below and decide at the end if you do not want to participate. If you decide not to participate this won't affect your relationship with <REDACTED> University or any of the researchers.

Who is being asked to participate?

You have been asked to participate because: You have indicated that you are aged 18 years or older, residents of Australia, and are fluent in English.

What will I be asked to do?

If you want to take part in this study, we will ask you to read a short text and complete an online questionnaire in response to it. It will take approximately 6 minutes of your time, and you will be paid 0.90 GBP.

Data collected in the study will remain anonymous and will be stored indefinitely on an open repository. These data may be used for future research.

What are the benefits?

The benefit of you taking part in this study is that you will be contributing to scientific understanding of how beliefs and attitudes towards other societies are developed.

What are the risks?

With any study there are (1) risks we know about, (2) risks we don't know about, and (3) risks we don't expect. If you experience something that you aren't sure about, please contact us immediately so we can discuss the best way to manage your concerns.

Name/Organisation: <REDACTED>

This survey contains questions that may cause discomfort for some participants. If you no longer wish to participate you may close the browser window at any time. It's not expected that you will experience any distress or discomfort from this survey, but if you do, please contact Lifeline's free national counselling service on 13 11 14.

What will happen to information about me?

By clicking on the 'I agree, start questionnaire' button, this tells us you want to take part in the study.

We will collect information about you in ways that will not reveal who you are. We will store information about you in ways that will not reveal who you are.

We will publish information about you in ways that will not be identified in any type of publication from this study.

Anonymous data collected in the study will be stored indefinitely and made publicly available on the Open Science Framework (osf.io). These data may be used for future research.

By completing the survey and clicking on the ‘Submit’ button, you are consenting for your anonymous data to be stored and used in this way.

The storage, transfer and destruction of your data will be undertaken in accordance with the Research Data Management Policy <REDACTED>.

Will I hear about the results of the study?

Given that no identifying information will be linked to your data, individual results are not available. However, if you would like a summary of the group results after completion of the study please contact the principal investigator, <REDACTED> after 1 November, 2024.

What if I change my mind?

If you no longer want to complete the questionnaire, simply close the web browser.

At the end of the data collection, your Prolific ID will be replaced with a coded number. Participants will remain anonymous, and there is no way to determine who these participants are, either through their responses or through the Prolific website. This means that once you have submitted the survey and given consent for your data to be used, it will not be possible to withdraw your data because at a later point.

Your decision to withdraw at any point will not affect your relationship with <redacted> University or any of the researchers.

Who can I contact for questions or want more information?

If you would like to speak to us, please use the contact details below:

<REDACTED>

What if I have a complaint?

If you have a complaint about any part of this study, please

contact: Ethics Reference Number: <REDACTED>

<REDACTED>

You can download a copy of this information by saving this page to your device or using the print function.

Consent Form – Declaration by Participant

I (the participant) have read understood the Participant Information Statement, and any questions have been answered to my satisfaction. I agree to participate in the study, I know I can withdraw at any time until I submit my data. I agree information provided by me or with my permission during the project may be included in a report, a presentation, published in journals, and stored indefinitely on an open repository on the condition that I cannot be identified.

I agree

High Precarity Self-Imagine Paradigm

You will be held on the next page for 30 seconds. On this page you will be asked to read a small text about a fictitious society called Althea. Please read this text carefully. After you have completed reading, click next and you will be asked a few questions about what you read.

High Precarity (title not shown):

Imagine you live in a fictitious country. This country is called Althea and is quite small with a population of approximately 2 million people. Althea is a democratic society where elections are held every four years. President Garcia is in his second term as prime minister of Althea.

In Althea, you work a standard 9 to 5 job where you get paid fortnightly. Back when you started your job in 2014, you had a yearly salary of $70,000. Now in 2024, your yearly salary has increased to $77,000. This is a 10% increase in yearly salary. During these 10 years, the cost of living has also suddenly increased. Now in 2024 the cost of living is up by 50% as compared to 2014. This increase in the cost of living can be attributed to the increasing cost of groceries and utility bills such as gas and electricity. The government has put a series of measures in place to attempt to control what has been labelled a "cost-of-living crisis" and prevent it from worsening, however, has not been very successful.

You must now be very cautious when doing your weekly grocery shop as you worry that if you do not buy items on sale, you might have to do without certain essentials, or may struggle to feed your family. This has caused you and your family a lot of stress because any unexpected expenses such as medical emergencies may mean that you will have to decide between your health and buying food.

At the coming weekend you have been invited by your friends to dine at Villa Toscana, the nicest restaurant in Althea, however, you must decline. You worry that if you spend money eating out, it may cause you to go without living essentials throughout the week.

Low Precarity (title not shown):

Imagine you live in a fictitious country. This country is called Althea and is quite small with a population of approximately 2 million people. Althea is a democratic society where elections are held every four years. President Garcia is in his second term as prime minister of Althea.

In Althea, you work a standard 9 to 5 job where you get paid fortnightly. Back when you started your job in 2014, you had a yearly salary of $70,000. Now in 2024, your yearly salary has increased to $95,000. This an approximate 35% increase in yearly salary. During these 10 years, the cost of living has also steadily increased. Now in 2024 the cost of living is up by 30% as compared to 2014. This increase in the cost of living can be attributed to the increasing cost of groceries and utility bills such as gas and electricity. The government has put a series of measures in place to attempt to control what has been labelled a “cost-of-living crisis.”

You can regularly do your weekly shopping without concern and are financially stable enough to wear any unexpected costs such as medical emergencies without having to decide between food and your health. You often have disposable income and can buying nice things for yourself and your family and have the financial freedom to engage in luxury activities such as going out for dinner.

At the coming weekend you have been invited by your friends to dine at Villa Toscana, the nicest restaurant in Althea and you have accepted. This is the first time you will be dining there, and you are looking forward to it.

Felt Precarity

Please rate how much you agree with the following statements:

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

1. I won't be able to make ends meet at the end of the month.
2. I am worried about the current economic climate in Althea.
3. I am worried that I won't have enough money for my family needs.
4. I ate breakfast on Mars this morning.
5. I am worried and uncertain about my future because of the increase in the cost-of-living.
6. My financial situation in Althea is causing me stress and worry.

Measure of Government

Trust

Please rate how much you agree with the following statements:

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

When it comes to managing the rising cost-of-living:

1. The Australian Federal Government is capable.
2. The Australian Federal Government is expert.
3. The Australian Federal Government carries out its duty very well.
4. If citizens need help, the Australian Federal Government will do its best to help them.
5. Please select Strongly Agree for this question.
6. The Australian Federal Government acts in the interest of its citizens.
7. The Australian Federal Government is genuinely interested in the well-being of citizens.
8. The Australian Federal Government approaches citizens in a sincere way.
9. The Australian Federal Government is sincere.
10. The Australian Federal Government is honest.

Measure of Conspiracy Belief

Please rate how much you agree with the following statements:

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

1. The cost-of-living crisis is a government plot to control the public.
2. Elite and powerful groups have manufactured the cost-of-living crisis.
3. The cost-of-living crisis was created to justify higher taxes and government control.
4. The cost-of-living crisis is being used to move towards a cashless society so governments can track how you spend your money.
5. Large organisations use the cost-of-living crisis to increase their profit margins for shareholders at the expense of customers.

Demographic Questions

What is your age in years? ________________

What is your gender identity?

- o Woman
- o Man
- o Non-binary
- o I identify as _______

What is the highest level of education you have achieved **<u>to date</u>**?

- Below Year 12, including Certificate I & II
- Year 12 or equivalent
- Certificate III, IV or Diploma
- Undergraduate degree
- Postgraduate degree

What is your weekly household income before tax and other deductions? (Note the value in parentheses shows the annual amount)

- Nil or negative income
- $1-$149 weekly ($1-$7,799 annual)
- $150-$299 weekly ($7,800-$15,599 annual)
- $300-$399 weekly ($15,600-$20,799 annual)
- $400-$499 weekly ($20,800-$25,999 annual)
- $500-$649 weekly ($26,000-$33,799 annual)
- $650-$799 weekly ($33,800-$41,599 annual)
- $800-$999 weekly ($41,600-$51,999 annual)
- $1,000-$1,249 weekly ($52,000-$64,999 annual)
- $1,250-$1,499 weekly ($65,000-$77,999 annual)
- $1,500-$1,749 weekly ($78,000-$90,999 annual)
- $1,750-$1,999 weekly ($91,000-$103,999 annual)
- $2,000-$2,499 weekly ($104,000-$129,999 annual)
- $2,500-$2,999 weekly ($130,000-$155,999 annual)
- $3,000-$3,499 weekly ($156,000-$181,999 annual)

- $3,500-$3,999 weekly ($182,000-$207,999 annual)
- $4,000-$4,499 weekly ($208,000-$233,999 annual)
- $4,500-$4,999 weekly ($234,000-$259,999 annual)
- $5,000-$5,999 weekly ($260,000-$311,999 annual)
- $6,000-$7,999 weekly ($312,000-$415,999 annual)
- $8,000 or more weekly ($416,000 or more annual)
- Don't know
- Prefer not to say

Please rate how politically left-wing versus right-wing you see yourself as being:

Extremely left-wing 1 2 3 4 5 *Extremely right-wing*

Experimental Manipulation Check

Earlier you read a text about a fictitious society. What was it describing?

- A worsening cost-of-living crisis which has caused financial uncertainty.
- A slight, but manageable increase in the cost-of-living.
- Unsure

Debriefing Form

Your contribution to the study is greatly appreciated. We would like to remind you that the questions in this survey represent general beliefs only and should not be taken as allegations or facts in any way.

At the beginning of the survey, you were advised that the study would be investigating how people develop beliefs about other societies. The true purpose of this study was to investigate the relationship between the experience of financial precarity and belief in conspiracy theories as mediated by institutional distrust. To ensure that responses from participants were not biased and that the results obtained were not biased, this information was withheld to conceal the true purpose of the study.

We did not reveal that our main focus was on asking individuals about their belief in conspiracy theories, as research has shown that this can affect the reliability of responses provided. Sometimes, when it is disclosed that a study is measuring belief in conspiracy theories, people feel as if they cannot answer honestly without judgement. We want to stress that there is no right or wrong answer to these questions, and people's responses typically fall on a continuum.

All the information we collected in today's study is anonymous and will be confidential, and there will be no way of identifying your responses in the data. We are not interested in any one individual's responses; we want to look at the general patterns that emerge when the data are aggregated together.

Contacts and Questions: Any questions regarding this project may be directed to the project supervisor <REDACTED>

Complaints: If you have any complaints or concerns that the investigators have not been able to answer to your satisfaction, you may contact the Senior Human Ethics Officer, Ethics and Integrity, Research Office <REDACTED>. Please quote the application reference number <REDACTED>.

Again, thank you kindly for participating in this study. It is very much appreciated.

Following this debrief, do you wish to withdraw your data? If so, select Yes below and type Withdraw in the text box. You will still be paid for your participation if you wish to withdraw your data.

Yes / No

Please input your prolific ID below if not already filled (if it's correctly displayed already, you can move to the next question).

Thank you. That now completes this survey. You will now be redirected back to the Prolific site to complete the study.

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