

Of Precarity and Conspiracy: Introducing A Socio-Functional Model of Conspiracy Beliefs

Jais Adam-Troian^{*1}, Maria Chayinska², Maria Paola Paladino³, Özden Melis Uluğ⁴, Jeroen Vaes³, and Pascal Wagner-Egger⁵

¹ School of Psychology, Keele University, UK

² School of Psychology, Pontific Catholic University, Chile

³ Department of Psychology and Cognitive Science, University of Trento, Italy

⁴ School of Psychology, University of Sussex, UK

⁵ Department of Psychology, University of Fribourg

*Corresponding author information: Jais Adam-Troian, 1.11 Dorothy Hodgkin Building, Keele University, Keele, Newcastle ST5 5BG, UK (e-mail: j.adam-troian@keele.ac.uk).

Abstract:

Conspiracy Beliefs (CB) are a key vector of violent extremism, radicalism and unconventional political events (e.g. Brexit). So far, social-psychological research has extensively documented how cognitive, emotional and intergroup factors can promote CB. Evidence also suggests that adherence to CB moves along social class lines: low-income and low-education are among the most robust predictors of CB (Uscinski, 2020; van Prooijen, 2017). Yet, the potential role of precarity – the *subjective* experience of permanent insecurity stemming from *objective* material strain – in shaping CB remains largely unexplored. In this paper, we propose for the first time a socio-functional model of CB. We test the hypothesis that precarity could foster increased CB because it undermines trust in government and the broader political “elites”. Data from the World Value Survey (n = 21,650; Study 1, electoral CB) and from representative samples from polls conducted in France (n = 1760, Study 2a, conspiracy mentality) and Italy (n = 2196, Study 2b, COVID-19 CB), corroborate a mediation model whereby precarity is directly and indirectly associated with lower trust in authorities and higher CB. In addition, these links are robust to adjustment on income, self-reported SES and education. Considering precarity allows for a truly social psychological understanding of CB as the by-product of structural issues (e.g. growing inequalities). Results from our socio-functional model suggest that implementing solutions at the socio-economic level could prove efficient in fighting CB.

Keywords:

Precarity, Conspiracy Beliefs, Socio-functional, Ontological Insecurity, Trust

Data availability statement: Supplementary materials, analyses and all data underlying our findings can be openly accessed and downloaded through the Open Science Framework platform at

https://osf.io/93f5d/?view_only=1b927686808346e385d5e2dedbede4be.

Introduction

The 2010-2020 decade has affected Western societies with political events propelled by fake news and conspiracy beliefs (CB). CB can be defined as explanations of events involving a plot organized by powerful individuals pursuing a malevolent agenda (Keeley, 1999). Research on the renewal of domestic far-right and Islamist terrorism (START, 2021), the election of hardline right-populist leaders in several countries (e.g., Hungary, Poland, US), UK's 2016 referendum leading to its breakaway from the EU (i.e., "Brexit") and the unprecedented wave of "Yellow Vests" riots that shook France in 2018 (Mahfud et al., 2020) systematically highlighted the key role of CB. These typically involve corrupt Jewish bankers, the "Satanistic" global elite or an alleged planned "Great Replacement" of European natives by Muslim immigrants orchestrated by pro-immigration politicians (Barbier et al., 2021; Jolley et al., 2021; Kofta et al., 2020; Obaidi et al., 2021; Rousis et al., 2020). The 2021 Capitol attack in the US was also motivated by the belief that the 2020 elections were rigged in favor of the Democratic party (Barry et al., 2021).

Social-psychological research has demonstrated that CB can be seen as the by-product of intuitive reasoning (Swami et al., 2014), conflictual intergroup relations (Biddlestone et al., 2020), maladaptive coping strategies (Marchlewska et al., 2021), uncertainty, distrust (Chayinska et al., in press; van Mulukom et al., 2021) and cultural environments that promote these factors (Adam-Troian et al., 2020b).

Yet, adherence to these various conspiracy theories seem to be polarized along social class lines (Douglas et al., 2019). This is reflected in the finding that low-income and low-education are among the most robust predictors of CB (Uscinski, 2020; van Prooijen, 2017). Although crucial to understand support for populist leaders and measures (e.g., anti-immigration policies, but see Muis et al., 2017), unconventional political movements (e.g., the Yellow Vests, Adam-Troian et al., 2021a) and even COVID-19 vaccine skepticism (Callaghan et al., 2020), these social class features of CB remain largely underexplored by social-psychological research.

In this paper, we explore for the first time how the experience of *precarity*, an important yet overlooked factor, might contribute to promoting CB in the West and beyond.

The Social Psychology of Precarity

One of the first conceptualizations of precarity comes from early sociological studies of Algerian laborers' conditions in French Algeria (Bourdieu & Abdelmalek, 1964). Bourdieu et al.'s (1964) analysis relied on interview data from Algerian workers during the colonial period, and led to the identification of two prototypical categories of labor as perceived and experienced by workers. A first "traditional" type of labor summarized the condition of Algerian peasants, characterized by objective self-sufficiency, but more importantly maybe, by a subjective sense of stability and predictability due to the activity's reliance on seasonal rhythms. Opposed to this conception of work judged as ideal by participants was the so-called "precarious" employment, experienced by uprooted Algerian rural employees. This precarious employment was defined as characterized by isolation from one's relatives, dependency on employer and a permanent sense of uncertainty (see Millar, 2017).

From early on, precarity was therefore conceived as through a social-psychological prism, marked by a heightened sense of personal uncertainty and unpredictability in life circumstances, hence theoretically distinct from poverty exclusively (although the two are empirically correlated, see Lemke, 2016). Precarity is best defined as the *subjective* experience of permanent social and psychological insecurity, stemming from *objective* conditions of affiliative and economic deprivation. These objective conditions emerge from labor characteristics (i.e., precarious work) such as job insecurity (e.g., part-time, short term), lack of benefits, low prestige and income (Castel, 2003; Kalleberg, 2011). Precarity is thus associated with a sense of ontological insecurity and existential threat (Jonas & Fritzsche, 2013; Kinnvall & Mitzen, 2020), which ultimately affect the way individuals project themselves in the future.

The increase in socio-economic inequalities brought about by intense global macro-economic reforms (beginning in the 80s; Piketty & Saez, 2014) has led to a generalization of precarity within WEIRD societies (Agius et al., 2020; Henrich et al., 2010). Because of this increase in prevalence, sociologists and demographers have considered the theoretical relevance of using novel social classifications based on the experience of precarity. Instead of the traditional socio-economic classifications (i.e., low, middle, high SES), some researchers conceptualized the existence of a whole new class – defined by a lack of work-

related security (e.g., no stable income, social safety net, upward social mobility), strong feelings of alienation and anger towards upper-classes (the “precariat,” Standing, 2011).

Thus, precarity – as an *objective* life condition and a *subjective* life experience – can be thought of as an encompassing psychosocial syndrome. In fact, precarity allows for theoretically disentangling empirically distinct constructs, namely economic deprivation (i.e., poverty) from experience of permanent insecurity. This is important because several analyses have highlighted how right-wing populist parties and measures do not really appeal to individuals in the poorest income brackets, but to those just above them (see Archibugi et al., 2019 regarding the Brexit vote). In the U.S. for instance, Trump votes in 2016 were driven by increased support from the “squeezed middle”: the average American worker who earned a similar income in 2009 than in 1975 (Gifford, 2021). In France, the Yellow Vests movement grew out of the larger population of those just above the poverty line, under constant threat of falling below at any point (Mahfud et al., 2019).

To the extent that precarity increases people’s feelings of anxiety, powerlessness, hopelessness and perceptions of anomie (Adam-Troian et al., 2020a; Sprong et al., 2019), it may be a potent driver of political extremism. As such, we argue that precarity is a crucial variable to understand the formation of populist and radical socio-political attitudes, especially with regards to one of their most common forms: adherence to conspiracy theories.

From Precarity to Conspiracy?

Decades of research about CB identified three main classes of vectors for such beliefs (Wagner-Egger, 2021): a) societal-political, b) cognitive-psychological, and c) communicational. The communicational dimension encompasses internet access and social media, while dozens of studies have shown that cognitive biases, emotions (e.g. anxiety) and intuitive thinking are associated with CB (Douglas et al., 2019). Regarding the societal-political dimension, research indicates that people who are disadvantaged in society (lower SES, ethnic minorities) endorse more CB. In these regards, CB be defined as serious accusations of conspiracy without “sufficient proofs”, very often targeting the elites (Wagner-Egger, 2021). There are thus reasons to consider CB as a irrational discourse of revenge for being in

disadvantaged social positions. These disadvantaged social positions may be characterized *objectively* and *subjectively*.

Studies have repeatedly indicated that *objective* factors, such as lower education, are related to greater CB endorsement (Davis et al., 2018; Douglas et al., 2016; Garrett & Weeks, 2017; Goertzel, 1994; Green & Douglas, 2018; Herek & Capitanio, 1994; Mancosu et al., 2017; Oliver & Wood, 2014a; Radnitz & Underwood, 2015; Stempel et al., 2007; Swami, Furnham et al., 2016; Uscinski & Parent, 2014; Van Prooijen, 2017; Van Prooijen et al., 2015). Therefore, it is likely that precarity could exert a remote influence on CB through decreased access to the economic and educational resources required to succeed academically (Croizet et al., 2019; Goudeau et al., 2017).

Objectively low economic resources are also related to a higher level of CB (Freeman & Bentall, 2017; Radnitz & Underwood, 2015; Uscinski & Olivella, 2017; Uscinski & Parent, 2014). In fact, the economic aspects of precarity may impact individual adherence to CB their effects on various dimensions of personality, cognition and health. For instance, Obschonka et al. (2018) have demonstrated how historical deindustrialization processes generate – through intergenerational exposure to precarity and unemployment – increased population anxiety and depression in former coal-mining areas. Likewise, research highlighted the role of precarity in shaping mental health issues, including psychotic symptoms, in the US (see Wickham et al., 2014). These results show how precarity may foster conspiracism through increased symptoms of anxiety, schizotypy and paranoid ideation, which are consistent predictors of CB (Bruder, et al., 2013; Fenigstein & Venable, 1992).

In addition, the *subjective* dimensions of precarity may affect CB. It is a well-established finding that perceptions of anomie fuel CB through distrust toward politicians and authorities, feelings of loss of control and powerlessness, dissatisfaction in life, political alienation (Abalakina-Paap et al., 1999; Brotherton et al., 2013; Bruder et al., 2013; Goertzel, 1994; Green & Douglas, 2018; Imhoff & Bruder, 2014; Imhoff et al., 2018; Leman & Cinnirella, 2007; Moulding et al., 2016; Swami, 2012; Swami et al., 2010, 2011, 2012; Swami & Furnham, 2012; Wagner-Egger & Bangerter, 2007; Wood et al., 2012).

Due to its constant shaping of insecurity in several life domains, precarity hence taps into the motivational processes at work behind CB. CB help individuals cope with uncertain situations (Marchlewska, Cichocka, & Kossowska, 2018) and stressful life experiences (Marchlewska et al., 2021; see Douglas et al., 2017 for a review). Some studies showed that experiencing loss of control and threats to one's identity is related to CB (e.g., Graeupner & Coman, 2017; van Prooijen & Acker, 2015; Whitson & Galinsky, 2008). Moreover, individual need for safety has been shown as a positive predictor of conspiracy mentality and adherence to various conspiracy theories (Abalakina-Paap, 1999; Swami, 2012).

In a similar way, the effects of precarity on physical health may well translate into increased CB through death-related anxiety (Newheiser et al., 2011) through their impact on *subjective* SES for instance (Cundiff et al., 2017). Likewise, poverty and low-social status are associated with more interdependent conceptions of the self and collectivistic values (Iacoviello et al., 2019), which has been shown to directly predict CB (Adam-Troian et al., 2020b; van Prooijen et al., 2021).

The Present Research: A Socio-functional Model of Conspiracy Beliefs

This brief overview of the literature suggests that both *objective* and *subjective* features of precarity could foster CB endorsement. By considering for the first time the potential role of precarity, we aim to lay the basis for a socio-functional theory of CB (see Figure 1), to explain why despite their irrational content, CB are still attractive to individuals. The socio-functional theory states that CB may provide people with (1) an explanation of why they are disadvantaged in society, (2) liable individuals or groups for that disadvantage (scapegoating), and (3) a feeling of revenge, with the belief that in the future, conspirators will be caught and punished.

In this perspective, we argue that the exact actors, intentionality or details of a plot in a conspiracy narrative do not matter much to the believers, at least not so much as the meta-narrative, which is that some groups at the top are trying to deceive or harm the (perceived) precarious ingroup. This view fits recent evidence showing that the actual information value of a conspiracy narrative does not influence individuals' adherence to it (Meuer et al., 2021). Instead, we argue that feelings of trust - rather than perceptions of

meaning - may play an important role in understanding how precarity might relate to CB (van Mulukom et al., 2020).

According to our model, the experience of precarity should generate strong feelings of distrust (Smith & Bohm, 2008). This distrust is thus based upon the perception that individuals' precarious situation is intentionally caused by other outgroups. In line with research showing that CB are intergroup representations that foster prejudice and negative outgroup attitudes – especially in conflictual contexts (Chayinska et al., 2018; Jolley et al., 2020; Sapountzis et al., 2013; Sternisko et al., 2020), we propose that precarity would foster greater CB through a sense of distrust of the “elites” (i.e., non-precariat members, or individuals perceived as such) and related institutions.

This is indirectly corroborated by the fact that, although anti-minority (downwards) CB may vary along with conservative ideology, anti-elite (upwards) CB are a common feature of both left- and right-wing extremists (which tend to be more prevalent among lower-SES; Nera et al., 2021). More directly, well-established evidence positively linking poverty and distrust (whether interpersonal or political; De Courson et al., 2021; Herring, 2021) indicates that precarity and distrust may display similar associations. In a socio-functional view, most CB should be understood as extended intuitions and abusive generalizations stemming from a “gut feeling” that may actually have a kernel of truth.

For instance, despite the fact that increases in economic inequality are due to an interplay between complex factors, it is still partially true that inequality and precarity are caused – in part – by the collective intentional behavior of corporate institutions and high-income individuals in society (e.g., tax-evasion, see Stiglitz, 2021). Thus, although CB may seem irrational and exaggerated (e.g., far from tax-evasion), the group-level prevalence of such beliefs may objectively reflect the group's decreasing socio-economic status and political power. Far from innocuous (Douglas et al., 2021), precarity-induced CB can actually foster radical forms of political and collective action, in attempts to actively challenge the status-quo (Imhoff et al., 2021; Rottweiler et al., 2021).

In light of these elements, we wished to empirically test our model to provide first evidence of a potential role of precarity-induced distrust in shaping CB. As shown in Figure 1, we hypothesized that

precarity should be positively linked with CB (H1), negatively with trust in actors related to the conspiracy (H2), which itself would be negatively linked to CB (H3). Our analyses should yield a positive indirect effect so that increases in precarity levels would lead to increases in CB through decreased trust in actors related to the conspiracy (H4). A crucial question we also sought to address when testing our model was to find out whether the *subjective* experience of precarity could be related to CB, independently of *objective* life circumstances (e.g., income, education, etc.).

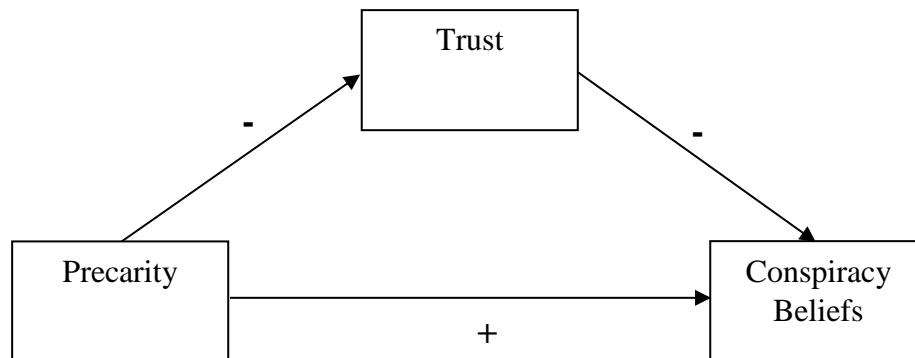


Figure 1. Theoretical mediation model of Precarity’s effect on Conspiracy Mentality through Trust in institutions.

STUDY 1

In order to test our theoretical model of CB based on precarity, we conducted three cross-sectional studies using various representative samples across several continents. The first study made use of the latest (2017-2021) World Values Survey wave (WVS wave 7; Haerpfer et al., 2020). Although CB are not measured in the WVS, we could construct an index of CB by analysing agreement on items regarding perceptions of electoral fraud but exclusively restricting our analysis on countries with objectively high indices of electoral, liberal, and direct democratic freedoms where such fraud is less likely to occur.

Studies 2a (France) and 2b (Italy) were analyses of poll data, this time including validated scales for measuring both conspiracy beliefs and mentality, regarding the COVID-19 pandemic and other alleged plots (e.g., 9/11). This strategy would allow us to establish robust correlational findings across a range of ecologically valid stimuli (Wells et al., 1999), guaranteeing strong external validity and generalizability beyond so-called WEIRD samples (Henrich et al., 2010; Muthukrishna et al., 2020).

The studies were all conducted in accordance with the 1964 Helsinki declaration (WMO, 1964) and the APA Code of Conduct (APA, 2017). Supplementary materials, analyses and all data underlying our

findings can be openly accessed and downloaded through the Open Science Framework platform at https://osf.io/93f5d/?view_only=1b927686808346e385d5e2dedbede4be.

Method

In this first study, we decided to analyse data collected in the context of the 2017-2021 WVS, which included a substantial number of measures relevant to our theoretical model. Data collection procedure as well as content of the questionnaire in each country is extensively detailed on the WVS website¹.

Participants

Given the specific methodological choices we made to calculate our CB score (see section Measures below), our analysis focused on a fraction only of the WVS data. It included 21,649 participants from 16 countries (46.9% male; $M_{age} = 47.3$, $SD_{age} = 17.5$), guaranteeing sufficient power to detect small direct and indirect effects as well as to provide for stable correlation estimates (Schönbrodt et al., 2013).

Measures

Our study used indicators and measures computed as detailed below. Country-specific descriptive statistics are available on the OSF project page (under Study 1 WVS).

Precarity. To measure precarity, we decided to average five items. These items asked how often participants or their family had “*gone without enough food to eat*,” “*felt unsafe from crime in [their] home*,” “*gone without medicine or medical treatment that [they] needed*,” “*gone without a cash income*” and “*gone without a safe shelter over [their] head*” over the last 12 months. This indicator hence taps into feelings of insecurity and uncertainty in several areas of life such as health, food, finance and was deemed an adequate proxy for measuring experience of precarity overall (questions 51 to 55; 4-point Likert, from 1 ‘*never*’ to 4 ‘*often*’, $M = 1.44$, $SD = .57$, $\alpha = .77$).

Conspiracy Beliefs. As mentioned earlier, the WVS does not contain measures of CB per se. To assess participants’ level of CB, we thus took advantage of the presence of items assessing participants’ perceptions

¹ <https://www.worldvaluessurvey.org/WVSDocumentationWV7.jsp>.

of electoral fairness (questions 224 to 233). Electoral fairness is the cornerstone of democratic practices. We thus decided to focus only on those countries displaying a level of democratic and political freedom high enough as to make sure that any perceptions of electoral unfairness would be at odds with the country's political reality. To do so, we selected countries ranked as "Free" by the Freedom House Project index (<https://freedomhouse.org/countries/freedom-world/scores>, this index was also coded as a country characteristic in the WVS itself). This left us with the following 16 countries: Andorra, Argentina, Australia, Brazil, Chile, Cyprus, Germany, Greece, Japan, New Zealand, Peru, South Korea, Romania, Taiwan, Tunisia and the US.

Still, some of the electoral fairness items were ambiguous. For instance, question 233 asked if "*women have equal opportunities to run the office*." Given the existing gender gap in politics in favor of men, one could completely agree with the item and be in line with results from social science research (e.g., Grant et al., 2018). Question 229 asks if "*election officials are fair*," which is a broad subjective statement. Likewise, it may be objected that question 230 "*rich people buy elections*" reflects evidence showing how political donations from high income individuals and corporations affect electoral outcomes and policy making (Bekkouche et al., 2020; Cage, 2020; Muttakin et al., 2021).

For these reasons, we only retained items related to unambiguous political practices that are very unlikely to occur in democratic contexts. These items were questions 225-227 "*opposition candidates are prevented from running*," "*TV news favors the governing party*" and "*voters are bribed*" as well as question 231 "*voters are threatened with violence at the polls*" (4-point Likert, from 1 '*never*' to 4 '*often*', $M = 2.15$, $SD = .66$, $\alpha = .68$).

Electoral Trust. To avoid noise and remain domain-specific in our assessment we decided to measure electoral distrust using the single-item question 76 "*could you tell me how much confidence you have in elections?*" (4-point Likert, from 1 '*a great deal*' to 4 '*none at all*', $M = 2.66$, $SD = .98$, reverse coded to obtain a measure of trust).

Covariates. In addition to our constructs of interest, we computed indices to be used as covariates to rule out alternative explanations for our model and potential confounds. For these robustness checks, we first

sought to capture religiosity (question 76; atheist vs. all other denominations, 11.6%), political ideology (question 240; 10-point Likert, from 1 ‘*left*’ to 10 ‘*right*’, $M = 5.30$, $SD = 2.27$) and political extremism (derived from ideology, distance from the scale center, 5-points, $M = 1.96$, $SD = 1.17$), which are all important predictors of CB (Douglas et al., 2019; Nera et al., 2021).

Second, we wished to demonstrate the specificity of precarity as a predictor of trust and CB. To do so, our robustness checks would need to rule out heavy confounds such as physical health (subjective, question 47, “*how would you describe your state of health these days?*”, 5-point Likert, from 1 ‘*very poor*’ to 5 ‘*very good*’, $M = 3.85$, $SD = .85$), life satisfaction (question 49, 10-point Likert, from 1 ‘*completely dissatisfied*’ to 10 ‘*completely satisfied*’, $M = 7.14$, $SD = 2.03$), economic satisfaction (question 50, 10-point Likert, from 1 ‘*completely dissatisfied*’ to 10 ‘*completely satisfied*’, $M = 5.00$, $SD = 2.32$), education (also a predictor of CB, see van Prooijen, 2017; question 275, 8-points from 1 ‘*no education*’ to 8 ‘*doctorate*’, $M = 3.93$, $SD = 1.82$), subjective socio-economic status (question 287, “*would you describe yourself as belonging to the...*”, 5-points from 1 ‘*upper class*’ to 5 ‘*lower class*’, $M = 2.78$, $SD = .93$) and income (question 288, 10-points income scale from 1 ‘*lowest income group*’ to 10 ‘*highest income group*’, $M = 4.89$, $SD = 2.01$). Age and sex of participants would also be included in the robustness checks.

Results

Correlations

Due to the structure of WVS data (individuals nested in countries, see Schielzeth et al., 2013) it is not possible to compute Pearson correlation coefficients. These would yield biased estimates due to clustering. Rather, it is recommended to use repeated measure correlations, which can be computed one by one (pairwise) manually using the openly accessible R package “*rmcorr*” (see Bakdash et al., 2017 for more details). Given the large number of potential correlations between the constructs involved ($n = 84$), we decided to report such correlations exclusively between our constructs of interest, for the sake of parsimony.

In line with H1, precarity was positively linked with CB, $r(16945) = .13$, $p < .001$, 95%CI [.11, .14]. Supporting H2 and H3 respectively, precarity was negatively related to electoral trust, $r(20887) = -.07$, $p <$

.001, 95%CI [-.08, -.06], and trust was negatively associated with CB, $r(16774) = -.19, p < .001$, 95%CI [-.21, -.18].

Robustness Checks

Because *rmcorr* cannot compute partial correlations, we then turned to multilevel modelling using the GAMLj module for JAMOV (The Jamovi Project, 2021) to assess whether the links between our constructs of interests were robust to adjustment on covariates. Full models can be seen on the OSF project page in the relevant section (Study 1 WVS).

These analyses confirmed that our results were robust. Again, in line with H1, precarity still positively predicted CB, $t(14149) = 12.36, \beta = .07, p < .001$, 95%CI [.06, .08]. Supporting H2 and H3 once more, precarity negatively predicted electoral trust, $t(16698) = 2.52, \beta = -.02, p = .012$, 95%CI [-.04, -.01], and trust negatively predicted CB, $t(14147) = 22.45, \beta = -.12, p < .001$, 95%CI [-.13, -.11].

Multilevel Mediation Analysis

Due to the clustering of individuals within countries, it was not possible to implement traditional mediation tests relying on OLS regressions (e.g., Hayes et al., 2017). We therefore used the R “*mediation*” (Tingley et al., 2014) package to conduct analyses based on non-parametric estimates (see Imai et al., 2010 for more details).

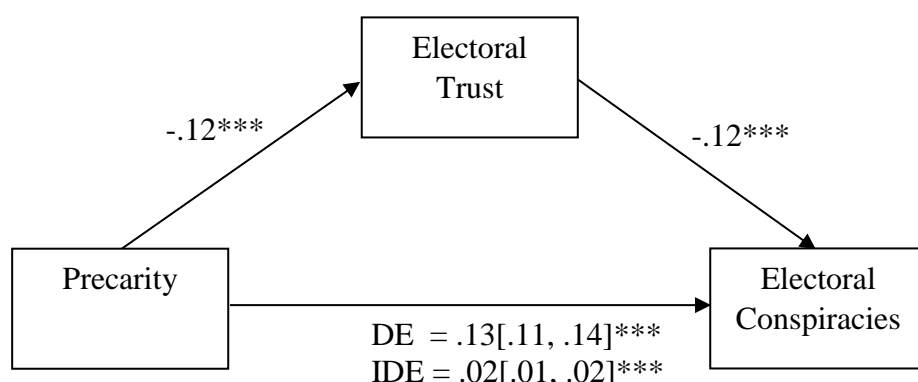


Figure 2. Partial mediation model of Precarity’s effect on Electoral Conspiracy Beliefs through Electoral Trust. *** $p < .001$, numbers represent *beta* coefficients for each path. Numbers between brackets indicate lower and upper bounds for coefficients’ 95%CI. DE = Direct Effect, IDE = Indirect Effect.

These analyses ($N_{\text{bootstrap}} = 1000$) corroborated a model (see Figure 2) including the presence of both direct, $\beta = .13, p < .001, 95\% \text{CI} [.11, .14]$ and indirect effects of precarity on CB through trust, $\beta = .02, p < .001, 95\% \text{CI} [.01, .02]$. This indirect effect amounted to approximately 10% of the model's total effect, $\beta = .14, p < .001, 95\% \text{CI} [.12, .16]$.

Discussion

This first series of results provided support for our hypothesized model. We successfully established the presence of a robust link between precarity and CB, across several model specifications, including a host of relevant covariates. This link is furthermore generalizable to a substantial sample of democratic countries spanning several continents. On the other hand, the link between precarity and trust was much weaker when adjusted, which may explain why the consequent indirect effects of precarity through trust were also relatively small ($\beta = -.02$). This may be due to the single-item trust measure (i.e. noisy), but could also reflect low adequacy between the mediation model and the data. Moreover, we could not provide strong construct validity for our indicators (although see Houston, 2004), which were not properly validated scales. For all these reasons, we decided to replicate our results using two further representative survey datasets collected in France and Italy.

STUDY 2

Method

This second set of studies aimed at replicating results from Study 1 using more valid and precise measures of both trust and CB. To do so, we used cross-sectional survey data collected in France (2a, pre-pandemic) and Italy (2b, during pandemic) using representative samples. The countries were chosen partly for convenience reasons and because they were not included in the WVS study, therefore allowing for a proper confirmatory test with non-overlapping samples and cultural contexts. Study 2a was part of a multi-study data collection effort. Study 2b is an original analysis of a subset of indicators from data collected in Italy during the COVID-19 pandemic. The data collection method for each study is detailed below.

Participants

Study 2a (France). A survey on a representative sample of the French population was conducted between December 21st and December 23rd, 2018 by the *Institut Français d'Opinion Publique* (IFOP) on behalf of the *Fondation Jean-Jaurès*² and *Conspiracy Watch*³.

The representativeness of the overall sample was ensured by the quota method, for three criteria: gender, age, and profession, after stratification by region and socio-professional categories ($n = 1506$). A group of 254 French people aged between 18 and 35 were added to this sample, and were surveyed in parallel between December 21st and December 23rd. The final sample thus resulted in a total of 1760 participants (44.80% males; $M_{\text{age}} = 46.10$, $SD_{\text{age}} = 18.40$). This was done - according to IFOP - to obtain a larger subsample of young people, who are especially sensitive to conspiracy theories in France. We performed the statistical analyses on the full sample for reasons of commodity, but we verified that the results were identical when weighting participants for representativeness.

Study 2b (Italy). A nationally representative survey study was conducted in Italy between December 27, 2020 – January 7, 2021. The current study was part of a larger questionnaire that aimed at studying public opinion about the pandemic-related issues (e.g., respondents' physical status, psychological status, subjective probability of contracting COVID-19, opinions about COVID-19's dangerousness).

Participants were recruited via a quota sampled cohort of Italian adults. Quotas were based on the Italian National Institute of Statistics population estimate data for gender and income. A total of 2204 participants took part in the survey. Participants ($n = 344$) who did not answer all questions related to the current research were excluded from the subsequent analysis. The final sample comprised 1860 participants (52.5% males; $M_{\text{age}} = 28.33$, $SD_{\text{age}} = 11.34$).

Again, both these sample sizes guaranteed sufficient power to detect small direct and indirect effects as well as to provide for stable correlation estimates (Schönbrodt et al., 2013).

Measures

² <https://www.jean-jaures.org/>

³ <https://www.conspiracywatch.info/>

Precarity. Thus, in both countries, our precarity measures were made of indicators focusing on economic matters. This indicator would be more limited than the broader measure from Study 1. Yet, as the experience of precarity in the literature is tied to economic and labor issues (Millar, 2017), we decided to opt for a stricter test of our theoretical proposition in Studies 2a and 2b.

Study 2a (France). Highlighting a subjective sense of financial insecurity and struggle, precarity was measured in France using an item asking if participants “*manage to make ends meet at the end of the month*” (5-point Likert, from 1 ‘*easily*’ to 5 ‘*very hardly*,’ $M = 2.92$, $SD = 1.10$).

Study 2b (Italy). Three items adapted and modified from prior research (see Adam-Troian et al., 2021c) were used to assess the extent experienced precarity related to the COVID-19 outbreak: *I am “worried about losing my job,” “worried that I will not have enough money for my family needs,”* and *“concerned that my financial situation may be adversely affected”* (5-point Likert, from 1 ‘*completely disagree*’ to 5 ‘*completely agree*,’ $M = 3.05$, $SD = 1.06$, $\alpha = .86$).

Conspiracy Beliefs. CB in both studies pertained to different contexts. While the survey in France was conducted pre-COVID-19 and included “classic” CB (e.g., about the 9/11) as well as a general measure of conspiracy mentality, the Italian survey contained mostly CB related to the pandemic.

Study 2a (France). The survey comprised two sets of conspiracy-related outcomes. First, we analyzed respondents’ endorsement of ten particular conspiracy theories: *the CIA controls global drug trafficking, 9/11 was an “inside job,” “Big Pharma” and governments promote dangerous vaccines, the Illuminati manipulate the masses, there are hidden signs for the New World Order on banknotes and video clips, Zionists conspire for world domination, there is an organized “Great Replacement” of EU natives by immigrants, Lady Diana’s car crash was not accidental, the Apollo landing on the moon was fake and planes spread so-called “Chemtrails” for secret reasons* (5-point Likert, from 1 ‘*not agree at all*’ to 5 ‘*completely agree*,’ $M = 1.96$, $SD = .81$, $\alpha = .94$).

Second, we also made use of the survey’s standardized generic conspiracy beliefs scale (Conspiracy Mentality Questionnaire, 5 items; see Bruder et al., 2013 for the full item list, which includes generic statements such as “*There are secret organizations that greatly influence political decisions*”). Contrary to the

original paper, the scale was downsized by IFOP to 5 points (instead of 10) for practical reasons (from 1 ‘*absolutely not true*’ to 5 ‘*completely true*,’ $M = 3.03$, $SD = .69$, $\alpha = .86$)

Study 2b (Italy). Five items adapted from Oleksy et al. (2021) were used to assess the extent to which participants endorsed diverse conspiracy theories related to the COVID-19 outbreak: “*The media pay disproportionate attention to negative news to sow panic in our society*,” “*The pharmaceutical industry is taking advantage of the COVID-19 pandemic to make money*,” “*The government is deceiving us and hiding information about the Coronavirus*,” “*The problems facing the pandemic in Italy are the product of the corruption of government officials who squandered the money*” and “*The pharmaceutical industry is making a fortune from the pandemic by selling more medicines than ever*” (5-point Likert, from 1 ‘*completely disagree*’ to 5 ‘*completely agree*,’ $M = 3.24$, $SD = .87$, $\alpha = .82$).

Trust.

Study 2a (France). In France, a broad inclusive trust measure was created by reverse-coding and averaging questions assessing distrust towards five institutions (the police, justice system, military, education and the media; 5-point Likert, from 1 ‘*very confident*’ to 5 ‘*not confident at all*,’ $M = 2.61$, $SD = .54$, $\alpha = .75$; reverse-coded).

Study 2b (Italy). In Italy, six items were adapted and modified from Teymoori et al. (2016) to measure the extent to which respondents trusted political authorities: “*The government represents the majority of the population*,” “*The government works for the welfare of the people*,” “*Authorities protect vulnerable and weak people*,” “*Government laws and policies are effective*,” “*People approve of the government’s agenda*,” and “*People can trust the authorities*” (5-point Likert, from 1 ‘*completely disagree*’ to 5 ‘*completely agree*,’ $M = 2.69$, $SD = .87$, $\alpha = .92$).

Covariates. As in Study 1, we included a number of covariates (in addition to age and sex) to assess the robustness of our results.

Study 2a (France). Again, we measured religiosity (no religion vs. all other denominations, 40.3%), political ideology (5-point, from 1 ‘*far-left*’ to 5 ‘*far-right*,’ $M = 3.13$, $SD = 1.36$; coded from the candidate

they voted for in 2017) and political extremism (derived from ideology, distance from the scale center, 3-points, $M = 1.11$, $SD = .79$). Education was measured using a 11-point ranking (highest diploma earned, from 1 = ‘None’ to 11 = ‘Doctorate,’ $M = 8.59$, $SD = 2.24$), and monthly income with a 6-point scale (from 1 = ‘Less than 1000€’ to 6 = ‘4000€ and more,’ $M = 8.59$, $SD = 2.24$). Likewise, we made use of a measure of life satisfaction (“would you say that you succeeded in life?”; 5-point Likert, from 1 = ‘Not at all’ to 5 = ‘Completely,’ $M = 2.75$, $SD = .67$).

Study 2b (Italy). Due to survey length constraints, less covariates were available in the Italian study, although still enough to conduct proper robustness checks. Political ideology was included (9-point Likert, from 1 ‘far-left’ to 9 ‘far-right,’ $M = 5.01$, $SD = 1.95$) and political extremism was, again, derived from it (4-points, $M = 1.45$, $SD = 1.31$). Education was also measured through highest diploma earned (7 ranks from 1 = ‘None’ to 7 = ‘Doctorate,’ $M = 4.38$, $SD = 1.31$), and subjective income level on a 5-point scale (relative to the average Italian, from 1 = ‘much lower than average’ to 5 = ‘much more than average,’ $M = 3.29$, $SD = .82$). As a proxy for life and economic satisfaction, we also included a single item measure of past-relative deprivation (“would you say your life has improved or worsened compared to before?” 5-point Likert, from 1 = ‘improved a lot’ to 5 = ‘worsened a lot,’ $M = 2.45$, $SD = .82$).

Results

Correlations

Bivariate Pearson correlation coefficients between our variables of interest were computed (see Table 1). In France, and in line with H1, precarity was positively linked with both CB, $r(770) = .30$, $p < .001$, 95%CI [.23, .36] and conspiracy mentality, $r(1372) = .25$, $p < .001$, 95%CI [.20, .30]. Supporting H2 and H3 respectively, precarity was negatively related to institutional trust, $r(1616) = -.25$, $p < .001$, 95%CI [-.30, -.20], which in turn was negatively associated with both CB, $r(761) = -.33$, $p < .001$, 95%CI [-.39; -.26] and conspiracy mentality, $r(1326) = -.36$, $p < .001$, 95%CI [-.40, -.31].

Likewise in Italy, in line with H1, precarity was positively linked with COVID-19 CB, $r(1848) = .22$, $p < .001$, 95%CI [.17, .26]. Supporting H2 and H3 respectively, precarity was negatively related to political

trust, $r(1849) = -.15, p < .001, 95\%CI [-.19, -.10]$, which was in turn negatively associated with COVID-19 CB, $r(1848) = -.46, p < .001, 95\%CI [-.50, -.42]$.

Robustness Checks

Partial correlation coefficients adjusting for the covariates available in each country were then computed (see Table 1). In France, precarity was still positively linked with conspiracy mentality scores, $r(684) = .15, p < .001, 95\%CI [.07, .22]$ but the relationship with CB disappeared, $r(410) = .08, p = .11, 95\%CI [-.02, .18]$, providing mixed evidence for H1. Still, supporting H2 and H3 respectively, precarity was negatively related to trust in institutions, $r(776) = -.11, p = .004, 95\%CI [-.18, -.04]$, in turn negatively associated with both CB, $r(407) = -.24, p < .001, 95\%CI [-.33, -.15]$ and conspiracy mentality, $r(671) = -.24, p < .001, 95\%CI [-.31, -.17]$.

Table 1.

Summary of Bivariate and Partial Correlation Analyses between Precarity, Trust and Conspiracy Belief measures from studies 2a (France, $N = 1760$) and 2b (Italy, $N = 1860$).

	1	2	3	4
<i>Study 2a (France)</i>				
<i>Bivariate</i>				
Precarity	-			
Trust	-.25***	-		
CB	-.30***	-.33***	-	
CMQ	-.25***	-.36***	.60***	-
<i>Partial</i>				
Precarity	-			
Trust	-.11**	-		
CB	.08	-.24***	-	
CMQ	.15***	-.24***	.47***	-
<i>Study 2b (Italy)</i>				

Bivariate

Precarity	-			
Trust	-.15***	-		
COVID-19 CB	.22***	-.46***	-	-

Partial

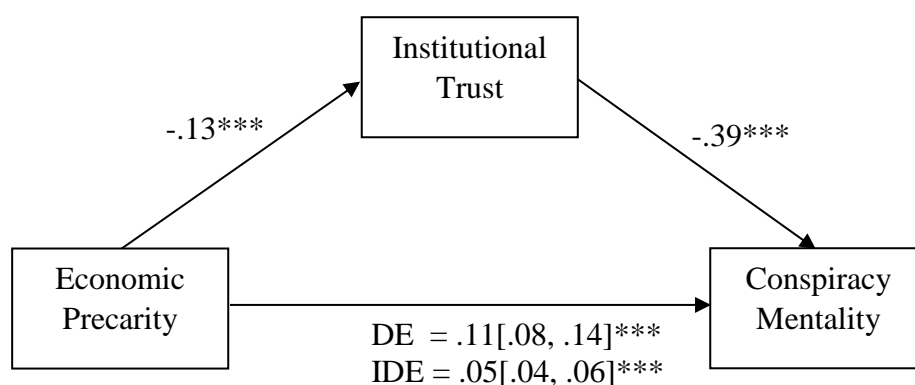
Precarity	-			
Trust	-.07**	-		
COVID-19 CB	.12***	-.40***	-	-

Note. Control variables for partial correlations are the covariates available in each country survey, see methods, measures section. ** $p < .01$, *** $p < .001$.

In Italy, all links held to adjustment. As per H1, precarity was still positively linked with COVID-19 CB, $r(1819) = .12$, $p < .001$, 95%CI [.08, .17]. Supporting H2 and H3 respectively, precarity was also negatively related to political trust, $r(1820) = -.07$, $p = .005$, 95%CI [-.11, -.02], and political trust was negatively associated with COVID-19 CB, $r(1819) = -.40$, $p < .001$, 95%CI [-.43, -.36].

Mediation Analysis

To test H4 this time, we could implement mediation tests relying on OLS regressions (see Hayes et al., 2017 for more details). We used the GLM Mediation package from JAMOVİ (The Jamovi Project, 2021; $N_{\text{bootstrap}} = 1000$) to compute two mediation models (see Figure 3) with COVID-19 beliefs as the outcome in Italy and focusing on conspiracy mentality in France (since CB were not robust to adjustment). Full model tables can be accessed in the corresponding OSF web page folder.



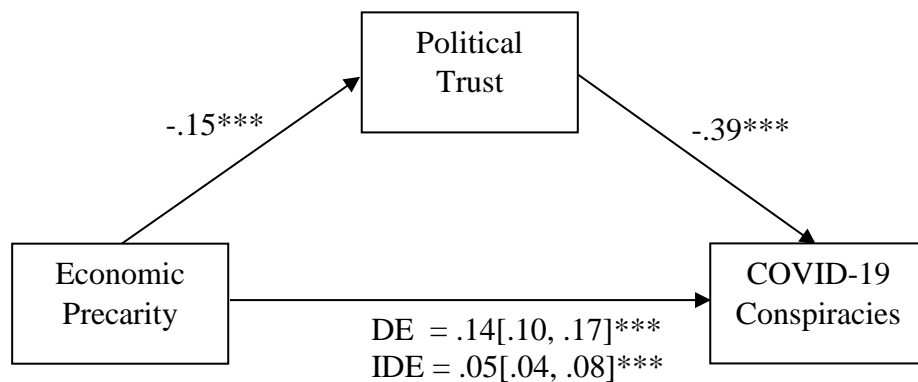


Figure 3. Partial mediation model of Precarity's effect on Conspiracy Beliefs through Trust in France (upper figure) and Italy (lower figure). *** $p < .001$, numbers represent *beta* coefficients for each path. Numbers between brackets indicate lower and upper bounds for coefficients' 95%CI. DE = Direct Effect, IDE = Indirect Effect.

Again, the analyses corroborated a model including the presence of a direct, $\beta = .12$, $p < .001$, 95%CI [.09, .16] and an indirect effect of precarity on CB through institutional trust, $\beta = .05$, $p < .001$, 95%CI [.04, .07] in France. This indirect effect amounted to approximately 28% of the model's total effect, $\beta = .18$, $p < .001$, 95%CI [.21, .26]. In Italy, analyses also detected the presence of both direct, $\beta = .14$, $p < .001$, 95%CI [.10, .17] and indirect effects of precarity on CB through political trust, $\beta = .05$, $p < .001$, 95%CI [.04, .08], the latter amounting to approximately 26% of the model's total effect, $\beta = .19$, $p < .001$, 95%CI [.15, .23].

Discussion

This second series of studies further corroborated the plausibility of a socio-functional model of CB based on precarity. Across a range of different operationalizations of all constructs involved, we successfully replicated results from Study 1. Moreover, the size of coefficients and proportions of indirect relative to total effects in Italy was strikingly similar to those obtained in France. On the other hand, we also observed that some of the CB measures (e.g., "classic" CB in France), were not robustly associated with precarity.

General Discussion

In this set of studies, we sought to examine the structural determinants of CB by laying the foundations for a socio-functional approach to CB. Drawing on existing theories of precarity, we predicted that experience of a permanent sense of ontological insecurity – especially in the financial domain – could explain individuals' increased tendency to endorse CB. Our hypothesis was that perceived precarity, through

its effect on trust towards institutions and “elites,” could be a factor to understand the observable class divide surrounding CB. Across three population-based survey studies conducted in both Global North and Global South countries, we found consistent evidence for a predictive power of precarity upon CB directly and indirectly through different types of trust.

An important feature of our results is that – for the first time – we demonstrate that precarity is robustly associated with CB, regardless of how precarity is operationalized (Study 1: physical and economic safety; Study 2a: subjective feelings of “*making ends meet*”; Study 2b: worry of financial insecurity due to the pandemic) or how CB are measured (beliefs related to electoral, conspiracy mentality, COVID-19 CB). In fact, the indicators we used to operationalize precarity, although imperfect, could be the basis for future psychometric precarity scales to be tested and validated properly (see Boateng et al., 2018). Moreover, the links we observed were systematically robust to adjustment on known predictors of CB and on actual financial variables (income, SES). This is revealing of how precarity can still predict CB because of its psycho-social component, in line with conceptions of precarity as an experience that transcends traditional class boundaries (see Standing, 2011).

Still, one may argue that these results cannot be generalized to all types of CB. Indeed, Study 2a showed that adjustment made the link between precarity and “classic” CB disappear, suggesting that precarious individuals do not believe in these more than non-precarious ones. Although this could be due to statistical issues (e.g., power, N dropped to 407 on this outcome), we believe this result to corroborate our hypothesis further. When taking a closer look at the items, these “classic” conspiracies (e.g., the fake moon landing, the chemtrails or the Illuminatis; see Robertson, 2016) are the ones that could be considered the most out of touch with reality (or irrational). Interestingly, there is also evidence that the apparently high prevalence of these CB (e.g., QAnon, micro-chips in the COVID-19 vaccine) may be due to methodological biases which tend to inflate self-reported adherence (Clifford et al., 2019; Sutton et al., 2020).

Our overall results may therefore suggest that precarity may shape CB about “relevant” political and social groups involved in the management of economy and society (e.g., government, decision-makers, multinational corporations) likely to (or have the potential to) influence the condition of precarious individuals. Findings from the current research may therefore be extended to explain related phenomena

such as people's engagement in or support for unconventional political movements like the Brexit in the UK or the Yellow Vests movement in France. As previous research has documented, these social movements were driven by precarious middle-class individuals more than by those at the very bottom of the socio-economic ladder (Blavier, 2021; Hobolt, 2016).

Theoretically grounding CB within the broader framework of precarity allows to approach a field too empirically driven (Goreis et al., 2019) with a solid background. Doing so shows that, although conspiracy narratives are irrational, adherence to them obeys to a rational social and intergroup logic, in line with a socio-functional perspective. The current investigation can be considered the first social-psychological attempt to directly examine association between precarity and CB through (dis)trust towards political and social institutions. Accordingly, we were able to pinpoint that between 10 and 30% of precarity's effect on CB could operate through trust, meaning that between 70 to 90% remain open to parallel or alternative pathways to consider.

This mediation process, however, remains to be tested further. For instance, indirect effect sizes from all three studies were all small. While this type of effect may matter in the long run (e.g., when exposure is chronic, see Funder et al., 2019), this small size indicates that a substantial part of the mechanism linking precarity with CB remains to be explained. For instance, the constant anxiety and uncertainty generated by precarity could negatively impact people's cognitive ability by increasing their cognitive load, leading to increased CB (Farah et al., 2017; Haushofer et al. 2014). Nonetheless, given the scope and representativeness of the samples investigated, our results favor plausible key effects of precarity on socio-political attitudes (trust and CB), which may have important applied implications.

The introduction of precarity in social psychology allows for opening novel intervention avenues, especially in the present domain of CB. For now, interventions regarding CB disproportionately focus on eliminating fake-news sharing behavior, prompting more analytical mindsets and inoculating individuals with counter-arguments before exposure to CB-related content (Bago et al., 2020; Bonetto et al., 2018). In other words, interventions targeting CB aim to correct flawed logic and reasoning among irrational individuals, whereas their immediate environment – and related chronic exposure factors – remain

untouched. This may explain why effect sizes remain small and inconsistent from one study to another (e.g., Roozenbeek et al., 2021), a consequence maybe of a strong cognitive take on CB (Sampson, 1981).

Alternatively, a focus on (economic) precarity suggests that implementing solutions at the socio-economic level could prove efficient in fighting CB. Within the boundaries of our studies' limitations, we therefore propose that using tools derived from applied economics (e.g., systematic targeted randomized field studies with income allocations, see Duflo et al., 2011) may help to radically fight the current spread of vaccine skepticism, fake news and xenophobic populism.

References

- Abalakina-Paap, M., Stephan, W. G., Craig, T., & Gregory, W. L. (1999). Beliefs in conspiracies. *Political Psychology*, 20(3), 637–647. <https://doi.org/10.1111/0162-895X.00160>
- Adam-Troian, J., & Bagci, C. (2021c). The pathogen paradox: Evidence that perceived COVID-19 threat is associated with both pro- and anti-immigrant attitudes. *International Review of Social Psychology*, 34(1), 11. DOI: <http://doi.org/10.5334/irsp.469>
- Adam-Troian, J., Bonetto, E., Araujo, M., Baidada, O., Celebi, E., Dono Martin, M., ... & Yurtbakan, T. (2020a). Positive associations between anomia and intentions to engage in political violence: Cross-cultural evidence from four countries. *Peace and Conflict: Journal of Peace Psychology*, 26(2), 217.
- Adam-Troian, J., Mahfud, Y., Urbanska, K., & Guimond, S. (2021b). The role of social identity in the explanation of collective action: An intergroup perspective on the Yellow Vests movement. *Journal of Applied Social Psychology*.
- Adam-Troian, J., Wagner-Egger, P., Motyl, M., Arciszewski, T., Imhoff, R., Zimmer, F., Klein, O., Babinska, M., Bangerter, A., Bilewicz, M., Blanuša, N., Bován, K., Bužarovska, R., Cichocka, A., Çelebi, E., Delouvée, S., Douglas, K. M., Dyrendal, A., Gjoneska, B., ... van Prooijen, J-W. (2020b). Investigating the links between cultural values and belief in conspiracy theories: The key roles of collectivism and masculinity. *Political Psychology*, 42(4), 597-618. <https://doi.org/10.1111/pops.12716>
- Agius, C., Bergman-Rosamond, A., & Kinnvall, K. (2021). Populism, ontological insecurity and Gendered nationalism: Masculinity, climate denial and COVID-19. *Politics, Religion and Ideology*, 21(4), 432–450. <https://doi.org/10.1080/21567689.2020.1851871>
- Archibugi, M. & Sorace, M. (2019, March). Is Brexit a contest between low-earning Leaver and high-earning Remainers? *LSE Brexit Blog*. <https://blogs.lse.ac.uk/brexit/2019/03/18/is-brexit-a-contest-between-low-earning-leavers-and-high-earning-remainers/> Accessed September, 30th, 2021.
- Bago, B., Rand, D. G., & Pennycook, G. (2020). Fake news, fast and slow: Deliberation reduces belief in false (but not true) news headlines. *Journal of experimental psychology: general*, 149(8), 1608.
- Bakdash, J. Z., & Marusich, L. R. (2017). Repeated measures correlation. *Frontiers in psychology*, 8, 456.
- Barbier, M., Monaco, G. L., & Delouvée, S. (2021). Social identification with the “Yellow Vests”: An exploratory study in France. *PsyArXiv*. <https://psyarxiv.com/rgy84/>

- Barry, & Frenkel. (2021). 'Be There. Will be Wild!': Trump all but Circled the Date. *New York Times*. <https://www.nytimes.com/2021/01/06/us/politics/capitol-mob-trump-supporters.html> Accessed September, 30th, 2021.
- Bekkouche, Y., Cagé, J., & Dewitte, E. (2020). The Heterogeneous Price of a Vote: Evidence from Multiparty Systems, 1993-2017. *SSRN*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3674939
- Biddlestone, M., Cichocka, A., Žeželj, I., & Bilewicz, M. (2020). *Conspiracy Theories and Intergroup Relations*. In: Butter, Michael and Knight, Peter, eds. Routledge Handbook of Conspiracy Theories.
- Biddlestone, M., Green, R., & Douglas, K. M. (2020). Cultural orientation, power, belief in conspiracy theories, and intentions to reduce the spread of COVID-19. *British Journal of Social Psychology*, 59(3), 663-673. <https://doi.org/10.1111/bjso.12397>
- Blavier, P. (2021). The yellow vests roundabout revolt, seen through the lens of household budgets. *Socio-Economic Review*.
- Boateng, G. O., Neilands, T. B., Frongillo, E. A., Melgar-Quinonez, H. R., & Young, S. L. (2018). Best practices for developing and validating scales for health, social, and behavioral research: a primer. *Frontiers in public health*, 6, 149.
- Bonetto, E., Troïan, J., Varet, F., Lo Monaco, G., & Girandola, F. (2018). Priming resistance to persuasion decreases adherence to conspiracy theories. *Social Influence*, 13(3), 125-136.
- Bourdieu, P., & Abdelmalek, S. (1964). *Le déracinement. La crise de l'agriculture traditionnelle en Algérie. Uprooting*. [The crisis of traditional agriculture in Algeria] Paris, Éditions de Minuit.
- Brotherton, R., French, C. C., & Pickering, A. D. (2013). Measuring belief in conspiracy theories: The Generic Conspiracist Beliefs scale. *Frontiers in Psychology*, 4, Article 279. <https://doi.org/10.3389/fpsyg.2013.00279>
- Bruder, M., Haffke, P., Neave, N., Nouripanah, N., & Imhoff, R. (2013). Measuring individual differences in generic beliefs in conspiracy theories across cultures: Conspiracy Mentality Questionnaire. *Frontiers in Psychology*, 4, 225. <https://doi.org/10.3389/fpsyg.2013.00225>
- Cagé, J. (2020). *The Price of Democracy*. Harvard University Press.
- Callaghan, T., Moghtaderi, A., Lueck, J. A., Hotez, P. J., Strych, U., Dor, A., ... & Motta, M. (2020). Correlates and disparities of COVID-19 vaccine hesitancy. *Available at SSRN 3667971*.
- Castel, R. (2003). *From Manual Workers to Wage Laborers: The Transformation of the Social Question*. London: Transaction Publishers.
- Clifford, S., Kim, Y., & Sullivan, B. W. (2019). An improved question format for measuring conspiracy beliefs. *Public Opinion Quarterly*, 83(4), 690-722.
- Croizet, J. C., Autin, F., Goudeau, S., Marot, M., & Millet, M. (2019). Education and social class: Highlighting how the educational system perpetuates social inequality. In *The social psychology of inequality* (pp. 139-152). Springer, Cham.
- Cundiff, J. M., & Matthews, K. A. (2017). Is subjective social status a unique correlate of physical health? A meta-analysis. *Health Psychology*, 36(12), 1109.
- Douglas, K. M., Sutton, R. M., Callan, M. J., Dawtry, R. J., & Harvey, A. J. (2016, 2016/01/02). Someone is pulling the strings: hypersensitive agency detection and belief in conspiracy theories. *Thinking & Reasoning*, 22(1), 57-77. <https://doi.org/10.1080/13546783.2015.1051586>

- Douglas, K. M., Uscinski, J. E., Sutton, R. M., Cichocka, A., Nefes, T., Ang, C. S., & Deravi, F. (2019). Understanding conspiracy theories. *Political Psychology*, 40(Suppl 1), 3–35. <https://doi.org/10.1111/pops.12568>
- Duflo, E., & Banerjee, A. (2011). Poor economics. *Public Affairs*, 619.
- Fenigstein, A., & Venable, P. A. (1992). Paranoia and self-consciousness. *Journal of Personality and Social Psychology*, 62(1), 129–138. <https://doi.org/10.1037/0022-3514.62.1.129>
- Freeman, D., & Bentall, R. P. (2017). The concomitants of conspiracy concerns. *Social Psychiatry and Psychiatric Epidemiology*, 52, 595–604. <https://doi.org/10.1007/s00127-017-1354-4>
- Funder, D. C., & Ozer, D. J. (2019). Evaluating effect size in psychological research: Sense and nonsense. *Advances in Methods and Practices in Psychological Science*, 2(2), 156–168.
- Garrett, R. K., & Weeks, B. E. (2017). Epistemic beliefs' role in promoting misperceptions and conspiracist ideation. *PLoS ONE*, 12(9): e0184733. <https://doi.org/10.1371/journal.pone.0184733>
- Gifford, C. (2021). Brexit and Trump: contesting new cleavage formation. *Journal of Contemporary European Studies*, 29(3), 309–321.
- Goertzel, T. (1994). Belief in Conspiracy Theories. *Political Psychology*, 15(4), 731–742. <https://doi.org/10.2307/3791630>
- Goreis, A., & Voracek, M. (2019). A systematic review and meta-analysis of psychological research on conspiracy beliefs: Field characteristics, measurement instruments, and associations with personality traits. *Frontiers in psychology*, 10, 205.
- Goudeau, S., & Croizet, J. C. (2017). Hidden advantages and disadvantages of social class: How classroom settings reproduce social inequality by staging unfair comparison. *Psychological science*, 28(2), 162–170.
- Graeupner, D., & Coman, A. (2017). The dark side of meaning-making: How social exclusion leads to superstitious thinking. *Journal of Experimental Social Psychology*, 69, 218–222. <https://doi.org/10.1016/j.jesp.2016.10.003>
- Grant, I., Kesternich, I., Steckenleiter, C., & Winter, J. (2018). Historic sex-ratio imbalances predict female participation in the market for politicians. *Journal of Economic Behavior & Organization*, 156, 144–165.
- Green, R., & Douglas, K. M. (2018). Anxious attachment and belief in conspiracy theories. *Personality and Individual Differences*, 125, 30–37. <https://doi.org/10.1016/j.paid.2017.12.023>
- Haerpfer, C., Inglehart, R., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano J., M. Lagos, P. Norris, E. Ponarin & B. Puranen et al. (eds.). 2020. World Values Survey: Round Seven – Country-Pooled Datafile. Madrid, Spain & Vienna, Austria: JD Systems Institute & WWSA Secretariat. doi.org/10.14281/18241.1
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences*, 33(2-3), 61–83. doi: 10.1017/S0140525X0999152X
- Herek, G. M., & Capitanio, J. P. (1994). Conspiracies, contagion, and compassion: Trust and public reactions to AIDS. *AIDS Education and Prevention*, 6(4), 365–375.
- Hobolt, S. B. (2016). The Brexit vote: a divided nation, a divided continent. *Journal of European Public Policy*, 23(9), 1259–1277.
- Houston, M. B. (2004). Assessing the validity of secondary data proxies for marketing constructs. *Journal of Business Research*, 57(2), 154–161.

- Iacoviello, V., & Lorenzi-Cioldi, F. (2019). Collectivism and individualism in status hierarchies: socialization and social identity explanations. *International Review of Social Psychology*, 32(1).
- Imai, K., Keele, L., & Tingley, D. (2010). A General Approach to Causal Mediation Analysis. *Psychological Methods*, 15(4), 309–334.
- Imhoff, R., & Bruder, M. (2014). Speaking (un-)truth to power: Conspiracy mentality as a generalised political attitude. *European Journal of Personality*, 28(1), 25–43. <https://doi.org/10.1002/per.1930>
- Imhoff, R., Lamberty, P., & Klein, O. (2018). Using Power as a Negative Cue: How Conspiracy Mentality Affects Epistemic Trust in Sources of Historical Knowledge. *Personality Social Psychology Bulletin*, 44(9), 1364-1379. <https://doi.org/10.1177/0146167218768779>
- Johnson-Schlee, S. (2019). Playing cards against the state: Precarious lives, conspiracy theories, and the production of ‘irrational’ subjects. *Geoforum*, 101, 174-181.
- Jolley, D., Douglas, K. M., Leite, A. C., & Schrader, T. (2019). Belief in conspiracy theories and intentions to engage in everyday crime. *British Journal of Social Psychology*, 58(3), 534-549.
- Jolley, D., Douglas, K. M., Marchlewska, M., Cichocka, A., & Sutton, R. M. (2021). Examining the links between conspiracy beliefs and the EU “Brexit” referendum vote in the UK: Evidence from a two-wave survey. *Journal of Applied Social Psychology*. Advance online publications. <https://doi.org/10.1111/jasp.12829>
- Jonas, E., & Fritzsche, I. (2013). Destined to die but not to wage war: How existential threat can contribute to escalation or de-escalation of violent intergroup conflict. *American Psychologist*, 68(7), 543–558. <https://doi.org/10.1037/a0033052>
- Kalleberg, A. L. (2011). *Good Jobs, Bad Jobs: The Rise of Polarized and Precarious Employment Systems in the United States, 1970s-2000s*. Russell Sage Foundation. <http://www.jstor.org/stable/10.7758/9781610447478>
- Keeley, B. L. (1999). Of Conspiracy Theories. *The Journal of Philosophy*, 96(3), 109-126. <https://doi.org/10.2307/2564659>
- Kelly, G., & Bernstein, J. (2013). *The squeezed middle: The pressure on ordinary workers in America and Britain* (S. Parker, Ed.; 1st ed.). Bristol University Press. <https://doi.org/10.2307/j.ctt9qgsk9>
- Kinnvall, C., & Mitzen, J. (2020). Anxiety, fear, and ontological security in world politics: Thinking with and beyond Giddens. *International Theory*, 12(2), 240-256. doi:10.1017/S175297192000010X
- Kinnvall, C., Manners, I., & Mitzen, J. (Eds.). (2020). *Ontological Insecurity in the European Union*. Routledge.
- Kofta, M., Soral, W., & Bilewicz, M. (2020). What breeds conspiracy antisemitism? The role of political uncontrollability and uncertainty in the belief in Jewish conspiracy. *Journal of Personality and Social Psychology*, 118(5), 900.
- Kofta, M., Soral, W., & Bilewicz, M. (2020). What Breeds Conspiracy Antisemitism? The Role of Political Uncontrollability and Uncertainty in the Belief in Jewish Conspiracy. *Journal of Personality and Social Psychology*, 1(999), 1–19. <https://doi.org/10.1037/pspa0000183>
- Leman, P. J., & Cinnirella, M. (2013). Beliefs in conspiracy theories and the need for cognitive closure. *Frontiers in Psychology*, 4, Article 378. <https://doi.org/10.3389/fpsyg.2013.00378>
- Lemke, S. (2016). *Inequality, Poverty and Precarity in Contemporary American Culture*. New York: Palgrave Macmillan.

- Mahfud, Y., & Adam-Troïan, J. (2019). "Macron demission!": Loss of significance generates violent extremism for the Yellow Vests through feelings of anomia. *Group Processes & Intergroup Relations*, 24 (1), 108-124. <https://doi.org/10.1177/1368430219880954>
- Mancosu, M., Vassallo, S., & Vezzoni, C. (2017) Believing in Conspiracy Theories: Evidence from an Exploratory Analysis of Italian Survey Data. *South European Society and Politics*, 22(3), 327-344. <https://doi.org/10.1080/13608746.2017.1359894>
- Marchlewska, M., Cichocka, A., & Kossowska, M. (2018). Addicted to answers: Need for cognitive closure and the endorsement of conspiracy beliefs. *European Journal of Social Psychology*, 48(2), 109–117. <https://doi.org/10.1002/ejsp.2308>
- Marchlewska, M., Green, R., Cichocka, A., Molenda, Z., & Douglas, K. M. (2021). From bad to worse: Avoidance coping with stress increases conspiracy beliefs. *British Journal of Social Psychology*.
- Meuer, M., Oeberst, A., & Imhoff, R. (2021). Believe It or Not—No Support for an Effect of Providing Explanatory or Threat-Related Information on Conspiracy Theories' Credibility. *International Review of Social Psychology*. Advance Online Publication.
- Millar, K. M. (2017). Toward a critical politics of precarity. *Sociology Compass*, 11(6), e12483.
- Moulding, R., Nix-Carnell, S., Schnabel, A., Nedeljkovic, M., Burnside, E. E., Lentini, A. F., & Mehzabin, N. (2016). Better the devil you know than a world you don't? Intolerance of uncertainty and worldview explanations for belief in conspiracy theories. *Personality and Individual Differences*, 98, 345-354. <https://doi.org/10.1016/j.paid.2016.04.060>.
- Muis, J., & Immerzeel, T. (2017). Causes and consequences of the rise of populist radical right parties and movements in Europe. *Current Sociology*, 65(6), 909-930.
- Muthukrishna, M., Bell, A. V., Henrich, J., Curtin, C. M., Gedranovich, A., McInerney, J., & Thue, B. (2020). Beyond Western, Educated, Industrial, Rich, and Democratic (WEIRD) psychology: Measuring and mapping scales of cultural and psychological distance. *Psychological science*, 31(6), 678-701.
- Muttakin, M. B., Mihret, D. G., & Rana, T. (2021). Electoral system, corporate political donation, and carbon emission intensity: Cross-country evidence. *Business Strategy and the Environment*, 30(4), 1767-1779.
- Nera, K., Wagner-Egger, P., Bertin, P., Douglas, K., & Klein, O. (2021). A Power-Challenging Theory of Society, or a Conservative Mindset? Upward and Downward Conspiracy Theories as Ideologically Distinct Beliefs. *European Journal of Social Psychology*.
- Obaidi, M., Kunst, J. R., Ozer, S., & Kimel, S. (2021). The "Great Replacement" conspiracy: How the perceived ousting of Whites can evoke violent extremism and Islamophobia. *Group Processes & Intergroup Relations*. Advance online publications. <https://doi.org/10.1177/13684302211028293>
- Obschonka, M., Stuetzer, M., Rentfrow, P. J., Shaw-Taylor, L., Satchell, M., Silbereisen, R. K., Potter, J., Gosling, S. D. (2018). In the shadow of coal: How large-scale industries contributed to present-day regional differences in personality and well-being. *Journal of Personality and Social Psychology*, 115(5), 903-927. <https://doi.org/10.1037/pspp0000175>
- Oliver, J. E., & Wood, T. (2014). Medical conspiracy theories and health behaviors in the United States. *JAMA Internal Medicine*, 174(5), 817-818. <https://doi.org/10.1001/jamainternmed.2014.190>
- Piketty, T., & Saez, E. (2014). Inequality in the long run. *Science*, 344(6186), 838–843. <https://doi.org/10.1126/science.1251936>
- Radnitz, S., & Underwood, P. (2017). Is Belief in Conspiracy Theories Pathological? A Survey Experiment on the Cognitive Roots of Extreme Suspicion. *British Journal of Political Science*, 47(1), 113-129. <https://doi.org/10.1017/S0007123414000556>

- Robertson, D. G. (2016). *UFOs, conspiracy theories and the new age: Millennial conspiracism*. Bloomsbury Publishing.
- Roozenbeek, J., Freeman, A. L., & van der Linden, S. (2021). How accurate are accuracy-nudge interventions? A preregistered direct replication of Pennycook et al.(2020). *Psychological science*, 09567976211024535.
- Rousis, G. J., Richard, D., & Wang, D. (2020) The truth is out there: The prevalence of conspiracy theory use by radical violent extremist organizations. *Terrorism and political violence*. Advance online publications. <https://doi.org/10.1080/09546553.2020.1835654>
- Sampson, E. E. (1981). Cognitive psychology as ideology. *American psychologist*, 36(7), 730.
- Sprong, S., Jetten, J., Wang, Z., Peters, K., Mols, F., Verkuyten, M., Bastian, B., Ariyanto, A., Autin, F., Ayub, N., Badea, C., Besta, T., Butera, F., Costa-Lopes, R., Cui, L., Fantini, C., Finchilescu, G., Gaertner, L., Gollwitzer, M., ... Wohl, M. J. A. (2019). "Our Country Needs a Strong Leader Right Now": Economic Inequality Enhances the Wish for a Strong Leader. *Psychological Science*, 30(11), 1625-1637. <https://doi.org/10.1177/0956797619875472>
- Standing, G. (2011). *The Precariat: The New Dangerous Class*. London: Bloomsbury Academic. pp. 198. Retrieved from [https://www.hse.ru/data/2013/01/28/1304836059/Standing.%20The_Precariat_The_New_Dangerous_Class_-Bloomsbury_USA\(2011\).pdf](https://www.hse.ru/data/2013/01/28/1304836059/Standing.%20The_Precariat_The_New_Dangerous_Class_-Bloomsbury_USA(2011).pdf)
- START (2021). *Global Terrorism Index 2020*. <https://visionofhumanity.org/wp-content/uploads/2020/11/GTI-2020-web-1.pdf>. Accessed September, 30th, 2021.
- Stempel, C., Hargrove, T., & Stempel, G. H. (2007). Media Use, Social Structure, and Belief in 9/11 Conspiracy Theories. *Journalism & Mass Communication Quarterly*, 84(2), 353-372. <https://doi.org/10.1177/107769900708400210>
- Sternisko, A., Cichocka, A., & Van Bavel, J. J. (2020). The dark side of social movements: Social identity, non-conformity, and the lure of conspiracy theories. *Current opinion in psychology*, 35, 1-6.
- Stiglitz, J. E. (2021). Globalization in the aftermath of the pandemic and trump. *Journal of Policy Modeling*.
- Sutton, R. M., & Douglas, K. M. (2020). Agreeing to disagree: Reports of the popularity of covid-19 conspiracy theories are greatly exaggerated. *Psychological Medicine*, 1–3. <https://doi.org/10.1017/S0033291720002780>
- Swami, V., & Barron, D. (2020). Analytic thinking, rejection of coronavirus (COVID-19) conspiracy theories, and compliance with mandated social-distancing: Direct and indirect relationships in a nationally representative sample of adults in the United Kingdom.
- Swami, V., Barron, D., Weis, L., & Furnham, A. (2018). To Brexit or not to Brexit: The roles of Islamophobia, conspiracist beliefs, and integrated threat in voting intentions for the United Kingdom European Union membership referendum. *British Journal of Psychology*, 109(1), 156–179. <https://doi.org/10.1111/bjop.12252>
- Swami, V., Coles, R., Stieger, S., Pietschnig, J., Furnham, A., Rehim, S., & Voracek, M. (2011). Conspiracist ideation in Britain and Austria: Evidence of a monological belief system and associations between individual psychological differences and real-world and fictitious conspiracy theories. *British Journal of Psychology*, 102(3), 443–463. <https://doi.org/10.1111/j.2044-8295.2010.02004.x>
- Swami, V., Furnham, A., Smyth, N., Weis, L., Lay, A., & Clow, A. (2016). Putting the stress on conspiracy theories: Examining associations between psychological stress, anxiety, and belief in conspiracy

theories. *Personality and Individual Differences*, 99, 72–76.
<https://doi.org/10.1016/j.paid.2016.04.084>

- Swami, V., Voracek, M., Stieger, S., Tran, U. S., & Furnham, A. (2014). Analytic thinking reduces belief in conspiracy theories. *Cognition*, 133, 572–585. <https://doi.org/10.1016/j.cognition.2014.08.006>
- Teymoori, A., Jetten, J., Bastian, B., Ariyanto, A., Autin, F., Ayub, N., ... & Wohl, M. (2016). Revisiting the measurement of anomie. *PloS one*, 11(7), e0158370.
- The jamovi project (2021). *jamovi* (Version 1.6) [Computer Software]. Retrieved from <https://www.jamovi.org>
- Tingley, D., Yamamoto, T., Hirose, K., Keele, L., & Imai, K. (2014). Mediation: R package for causal mediation analysis.
- Uscinski, J. E. (2020). *Conspiracy theories: A primer*. Rowman & Littlefield Publishers.
- Uscinski, J. E., & Olivella, S. (2017). The conditional effect of conspiracy thinking on attitudes toward climate change. *Research & Politics*, 4(4), 1-9. <https://doi.org/10.1177/2053168017743105>
- Uscinski, J.E., & Parent, J.M. (2014). *American Conspiracy Theories*. New York: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199351800.001.0001>
- van Mulukom, V., Pummerer, L., Alper, S., Cavojoja, V., Farias, J. E. M., Kay, C. S., ... & Zezelj, I. (2020). Antecedents and consequences of COVID-19 conspiracy theories: a rapid review of the evidence. *PsyArXiv*. <https://psyarxiv.com/u8yah>
- van Prooijen, J.-W. (2017). Why education predicts decreased belief in conspiracy theories. *Applied Cognitive Psychology*, 31(1), 50-58. <https://doi.org/10.1002/acp.3301>
- van Prooijen, J.-W., & Acker, M. (2015). The influence of control on belief in conspiracy theories: conceptual and applied extensions. *Applied Cognitive Psychology* 29, 753–761. <https://doi.org/10.1002/acp.3161>
- van Prooijen, J.-W., Krouwel, A. P. M., & Pollet, T. V. (2015). Political extremism predicts belief in conspiracy theories. *Social Psychological and Personality Science*, 6(5), 570-578. <https://doi.org/10.1177/1948550614567356>
- Wagner-Egger, P. & Bangerter, A. (2007). La vérité est ailleurs: corrélats de l'adhésion aux théories du complot. The truth lies elsewhere: Correlates of belief in conspiracy theories. The Truth Lies Elsewhere: Correlates of Belief in Conspiracy Theories. *Revue internationale de psychologie sociale*, 20, 31-61.
- Wagner-Egger, P. (2021). *Psychologie des croyances aux théories du complot: Le bruit de la conspiration*. [Psychology of Conspiracy Theory Beliefs: The Noise of the Conspiracy]. Grenoble: Presses Universitaires de Grenoble. <https://www.pug.fr/produit/1917/9782706149825/psychologie-des-croyances-aux-theories-du-complot>
- Wagner-Egger, P., Bronner, G., Delouvée, S., Dieguez, S., & Gauvrit, N. (2019). Why ‘Healthy Conspiracy Theories’ Are (Oxy) morons: Statistical, Epistemological, and Psychological Reasons in Favor of the (Ir) Rational View. *Social Epistemology Review and Reply Collective*, 8(3), 50-67.
- Wells, G. L., & Windschitl, P. D. (1999). Stimulus sampling and social psychological experimentation. *Personality and Social Psychology Bulletin*, 25(9), 1115-1125.
- Whitson, J. A., & Galinsky, A. D. (2008). Lacking control increases illusory pattern perception. *Science*, 322.

- Wickham, S., Taylor, P., Shevlin, M., & Bentall, R. P. (2014) The Impact of Social Deprivation on Paranoia, Hallucinations, Mania and Depression: The Role of Discrimination Social Support, Stress and Trust. *PLOS ONE*, 9(8), e105140. <https://doi.org/10.1371/journal.pone.0105140>
- Wood, M. J., Douglas, K. M., & Sutton, R.M. (2012). Dead and Alive: Beliefs in Contradictory Conspiracy Theories. *Social Psychological and Personality Science*, 3(6), 767-773. <https://doi.org/10.1177/1948550611434786>