



# Kent Academic Repository

**Nera, Kenzo, Douglas, Karen, Bertin, Paul and Klein, Olivier (2025) *Does being confronted with internal attributions for an ingroup's sufferings foster the endorsement of conspiracy theories?* Collabra: Psychology, 11 (1). ISSN 2474-7394.**

## Downloaded from

<https://kar.kent.ac.uk/111495/> The University of Kent's Academic Repository KAR

## The version of record is available from

<https://doi.org/10.1525/collabra.147339>

## This document version

Publisher pdf

## DOI for this version

## Licence for this version

CC BY (Attribution)

## Additional information

## Versions of research works

### Versions of Record

If this version is the version of record, it is the same as the published version available on the publisher's web site. Cite as the published version.

### Author Accepted Manuscripts

If this document is identified as the Author Accepted Manuscript it is the version after peer review but before type setting, copy editing or publisher branding. Cite as Surname, Initial. (Year) 'Title of article'. To be published in **Title of Journal**, Volume and issue numbers [peer-reviewed accepted version]. Available at: DOI or URL (Accessed: date).

### Enquiries

If you have questions about this document contact [ResearchSupport@kent.ac.uk](mailto:ResearchSupport@kent.ac.uk). Please include the URL of the record in KAR. If you believe that your, or a third party's rights have been compromised through this document please see our [Take Down policy](https://www.kent.ac.uk/guides/kar-the-kent-academic-repository#policies) (available from <https://www.kent.ac.uk/guides/kar-the-kent-academic-repository#policies>).

Social Psychology

# Does Being Confronted With Internal Attributions for an Ingroup's Sufferings Foster the Endorsement of Conspiracy Theories?

Kenzo Nera<sup>1,2</sup><sup>a</sup>, Karen M. Douglas<sup>3</sup><sup>b</sup>, Paul Bertin<sup>1,2,4</sup>, Olivier Klein<sup>1</sup><sup>b</sup><sup>1</sup> Center for Social and Cultural Psychology, Université libre de Bruxelles, Brussels, Belgium, <sup>2</sup> Fonds de la Recherche Scientifique (FRS-FNRS), Brussels, Belgium, <sup>3</sup> School of Psychology, University of Kent, Kent, UK, <sup>4</sup> Institute of Psychology, University of Lausanne, Lausanne, Switzerland

Keywords: conspiracy theories, causal attribution, inequalities, conspiracy attributions

<https://doi.org/10.1525/collabra.147339>

---

## Collabra: Psychology

Vol. 11, Issue 1, 2025

---

Conspiracy theories are often viewed as a means to externally attribute ingroup sufferings by blaming them on the actions of powerful groups. Building on this assumption, we tested the hypothesis that the threat induced by facing an internal (vs. external) attribution for an ingroup's sufferings would result in increased endorsement of an alternative, conspiracy attribution. We also examined how being confronted with an internal attribution for an ingroup's sufferings impacts people's sympathy for the author of a conspiracy attribution. In five preregistered experiments ( $N_{total} = 2,695$ ), being confronted with an internal attribution for an ingroup's sufferings did not increase the endorsement of conspiracy attributions ( $BF_{01} = 37.88$ , very strong evidence for the null), sympathy for the conspiracy advocate ( $BF_{01} = 4.38$ , some evidence for the null), or self-reported agreement with them ( $BF_{01} = 17.70$ , strong evidence for the null). A potential explanation for these results is the social stigma surrounding conspiracy beliefs – which may result in participants being reluctant to endorse conspiracy attributions. In contrast, stable propensities to internally attribute inequalities (political orientation in Study 1, meritocracy beliefs in Studies 2–3) were negatively associated with all three dependent variables.

Conspiracy theories – “claims that the public is being pervasively deceived to enable some group(s) to enact a harmful, self-serving agenda” (Nera & Schöpfer, 2023) – are more prevalent among members of disadvantaged groups (e.g., Douglas et al., 2019; Uscinski & Parent, 2014). A common explanation for this finding is that conspiracy beliefs are a means to externally attribute one's own group's sufferings, by blaming them on the secret actions of powerful groups (e.g., Moscovici, 1987; Popper, 1963/2002). Under this assumption, the argument that “conspiracy theories are for losers” (Uscinski & Parent, 2014) can be interpreted as a tendency for people to externally attribute the negative outcomes they experience (e.g., their failures) to preserve their self-image (Bradley, 1978). A corollary of this line of reasoning is that the appeal of conspiracy theories may vary depending on whether they constitute an alternative to identity threatening attributions for an ingroup's suffering that are salient in one's environment.

In this contribution, we empirically test the hypothesis that when confronted with an internal (vs. external) attribution for an ingroup's sufferings, people are more drawn to a conspiracy attribution for these sufferings. In addition,

building on research suggesting that conspiracy theories can be used to rally communities of individuals sharing common beliefs and values (Marie & Petersen, 2022; Wagner-Egger et al., 2022), we hypothesized that being confronted with an internal attribution for an ingroup's sufferings would increase individuals' sense of connectedness with the source of a conspiracy attribution.

### Conspiracy Theories as External Attributions for One's Sufferings

Individuals tend to internally attribute their successes (i.e., to consider themselves personally responsible, Heider, 1958), and externally attribute their failures (e.g., Bradley, 1978; Campbell & Sedikides, 1999; Shepperd et al., 2008). Such a self-serving bias (Bradley, 1978) helps individuals preserve a positive self-image (Dufner et al., 2019; Shepperd et al., 2008). Because conspiracy theories tend to explain events or circumstances by referring to the hidden causal role of small groups acting in secrecy (Douglas et al., 2019; Keeley, 1999), they may be conceptualized as external attributions for negative events (e.g., losing elections) and circumstances (e.g., poverty) experienced by an

---

<sup>a</sup> Correspondence concerning this article should be addressed to Kenzo Nera, Université libre de Bruxelles CP 122, 1050 Bruxelles, Belgium. E-mail: [kenzo.nera@ulb.be](mailto:kenzo.nera@ulb.be).

ingroup. We henceforth discuss such conspiracy theories as conspiracy attributions (on the conceptualization of conspiracy theories as attributions, see Nera et al., 2024). This idea is not new: Research examining the role of conspiracy theorizing in scapegoating dynamics corroborate this approach, as these studies assume that conspiracy theories are used to blame minorities for an ingroup's sufferings (e.g., Bilewicz & Krzeminski, 2010; Moscovici, 1987). Moreover, Nera et al. (2024) has shown that conspiracy beliefs are associated with reduced internal attributions for the situation of privileged outgroups and reduced belief meritocracy beliefs – which may help protect the image of disadvantaged groups.

Internal attributions for an ingroup's sufferings, on the other hand, can have deleterious consequences on the image of disadvantaged groups.<sup>1</sup> For instance, endorsing internal attributions for the fate of a disadvantaged ingroup is associated with reduced wellbeing (e.g., Quinn & Crocker, 1999). Thus, conspiracy theories that externally attribute one's ingroup sufferings (i.e., conspiracy attributions) might be protective for members of disadvantaged groups, especially in contexts where internal attributions for their situation are salient. We therefore hypothesize that when confronted with an internal attribution for an ingroup's sufferings, individuals will be more likely to endorse a conspiracy attribution.

### Attributions for One's Sufferings and the Perception of Conspiracy Advocates

Conspiracy theories are social in nature. Not only are they grounded in existing intergroup relations (Biddlestone et al., 2020; Nera, Bertin, et al., 2022; van Prooijen & van Lange, 2014), but they also shape specific, opinion-based intergroup relations (Franks et al., 2017; Nera, Jetten, et al., 2022, on the general concept of opinion-based groups, see Bliuc et al., 2007). Wagner-Egger et al. (2022) proposed that individuals' engagement with conspiracy theories may be a form of social signalling with the goal to show one's rejection of "the elites". Doing so may enable conspiracy theory advocates to form communities of individuals sharing similar beliefs and values. According to this approach, expressing one's endorsement of conspiracy theories is a way to build and strengthen bonds between (potential) conspiracy believers (see also Marie & Petersen, 2022).

If true, it is likely that the rallying function of conspiracy theories will be bolstered if one is confronted with an internal attribution for an ingroup's sufferings. Indeed, considering that members of a group are responsible for their situation is not a neutral assessment of the reasons why this group is suffering: It also hints to the fact that the author of the attribution has negative attitudes towards this group. For instance, internally attributing poverty is associated with prejudice against disadvantaged groups (e.g., Christopher & Mull, 2006; Cozzarelli et al., 2001; Crandall, 1994;

Katz & Hass, 1988). As a result, being confronted with an internal attribution for an ingroup's suffering may convey the impression that the author of the attribution is hostile to one's ingroup. In such a context, authors of a conspiracy attribution may be perceived as offering a counter-narrative challenging a hostile outgroup. This perception may strengthen the bonds between the target of the internal attribution and the conspiracy advocate, because they share a willingness to challenge the hostile outgroup and therefore have a similar understanding of the situation (Kashima et al., 2007).

In sum, exposure to internal attributions may make an "us" versus "them" intergroup setting salient, thus facilitating group formation and identification among those who feel disparaged (Branscombe et al., 1999). For this reason, we examine the impact of internal attributions for an ingroup's sufferings on the perception of the source of the conspiracy attribution, in addition to the endorsement of the conspiracy attribution itself. In other words, we examine if telling individuals that their ingroup is responsible for its disadvantaged situation makes them more likely to feel connected to those who instead blame it on a conspiracy.

### Overview of the Studies

Across five preregistered experiments, we manipulated exposure to internal (vs. external) causal attribution for an ingroup's sufferings. We examined how such an exposure impacted participants' endorsement of a conspiracy attributions for their sufferings, as well as their perception of connectedness with the source of the conspiracy attribution.

We hypothesised that when facing an internal (vs. external) attribution for an ingroup's sufferings, participants would be more likely to endorse an attribution to a conspiracy (H1). This prediction maps onto theorizations of conspiracy theories as a means to externally attribute an ingroup's sufferings. To our knowledge, only Nera et al. (2024) have tested a similar – yet distinct – hypothesis. They provided experimental evidence that conspiracy beliefs reduce individuals' propensity to internally attribute intergroup inequalities.

Moreover, we expected that when facing such an internal attribution, participants would report more connectedness with the author of a conspiracy attribution – operationalized as self-reported sympathy (H2), and agreement with the author (H3). These hypotheses are rooted in the aforementioned research highlighting the social function of conspiracy beliefs, which are used to mobilize communities of like minded individuals. Authors of conspiracy attributions might be viewed as allies when facing internal (vs. external) attributions, thereby strengthening sympathy and perception that one agrees with them.

To increase the external validity of our research, we tested our hypotheses on two disadvantaged groups:

<sup>1</sup> Note that the identity protective virtues of external attributions for inequalities does not exclude the possibility that they could have negative consequences as well – but the question goes beyond the scope of the paper.

women in the context of gender inequalities (Studies 1, 2a, 3a), and poor people in the context of economic inequalities (Study 2b and 3b). We chose to test our hypotheses on these groups because they were easily accessible for recruitment.

### Open Practices

All raw data, analyses scripts, pre-registration forms including hypotheses, planned analyses, sample sizes and exclusion criteria are publicly available at the following link: <https://osf.io/dt7mb/>. All studies were preregistered before data collection and follow the preregistered analysis plan – except in Study 1, in which we do not report preregistered hypotheses 4–6 for the sake of brevity – results for these hypotheses are however displayed in [Table 1](#). Preregistration forms are directly accessible at the following links:

- Study 1: <https://aspredicted.org/pmgm-2wrc.pdf>
- Study 2a: <https://aspredicted.org/8x43-qc7t.pdf>
- Study 2b: <https://aspredicted.org/m36t-cj7r.pdf>
- Study 3a: <https://aspredicted.org/gwyf-wqmh.pdf>
- Study 3b: <https://aspredicted.org/578g-d769.pdf>

### Preliminary Results

We ran three preliminary studies ( $n_s = 294, 230, 317$ ) between April 9 and May 3, 2021, which served as the basis for the studies reported below. In the first study, participants were recruited among the student pool of a British university and on Prolific following the depletion of the student pool. In the two subsequent studies, we recruited participants among 1st year psychology students at the Université libre de Bruxelles (Belgium).

In Study 1, participants were introduced to a fictional setting in which they adopted the perspective of a low status group member (see Nera et al., 2024). They then read a bogus newspaper containing a declaration of the (fictitious) prime minister, that either contained an internal or external attribution for the situation of the disadvantaged ingroup. Participants then read a conspiracy attribution for their situation uttered by a “controversial political figure”.

The method of the two other studies was almost identical to the one of the studies detailed below. Participants first read a Facebook status that either internally or externally attributed the disadvantaged situation of an ingroup (women in preliminary Study 2, students suffering from COVID-19 lockdown in Study 3). They then read a comment that responded to this initial attribution with a conspiracy attribution.

In the three studies, participants were asked to report if they endorsed the conspiracy attribution, had sympathy for its author, and if they agreed with them. These studies returned null results for the endorsement of conspiracy attributions,  $\mu^2 = 0.08$ ,  $SD = 0.08$ ,  $95\%$  *credibility interval* = [0.003, 0.29],  $BF_{01} = 36.46^3$  (i.e., the aggregated data is 36.46 times more probable under the null than under the hypothesis of a positive effect). However, they did return significant meta-analytic effects for sympathy toward the author of the conspiracy attribution, *random effect meta analytic intercept* = 0.38 ( $SE = 0.10$ ),  $95\%$  *CI* [0.19, 0.56],  $z = 3.83$ ,  $p < .001$ , and self-reported agreement with the author of the conspiracy attribution, *random effect meta analytic intercept* = 0.37 ( $SE = 0.10$ ),  $95\%$  *CI* [0.18, 0.56],  $z = 3.76$ ,  $p < .001$ . Detailed descriptions of these studies and their results are available on the OSF.

Participants reported a more positive perception of the author of this conspiracy attribution when previously exposed to an internal (vs. external) attribution for their ingroup's situation. The critical difference between these studies and the studies presented below lies in a methodological confound: in the preliminary studies, the text in which the conspiracy attribution was included began with an attack against the initial internal or external attribution (e.g., “You are wrong!”). Thus, rather than corroborating some of our hypotheses, these initial results may reflect that participants disagreed more with internal than with external attributions for their situation and sided with the person who challenged the internal attribution accordingly. Addressing this confound was the starting point of the studies reported below.

## Study 1

### Method

#### Participants

We recruited 669 British participants (planned  $n = 660$ ) identifying as women on Prolific. Six hundred and forty remained after applying the preregistered exclusion criteria, that is, failure to the attention check<sup>4</sup> and seriousness check<sup>5</sup> ( $M_{age} = 43.3$ ,  $SD = 13.6$ ,  $M_{Ideology} = 4.21$ ,  $SD = 1.66$ ,  $min = 1$  [far left],  $max = 9$  [far right]). This enabled us to detect a minimum mean difference of  $d = .26$  with a power of .90, using two-tailed tests.

<sup>2</sup>  $\mu$  designate the meta-analytic effect size – which in this case, aggregates the standardized mean differences between experimental conditions across studies. The standardized mean differences were extracted using the `escalc()` R function from the “metafor” R package (Viechtbauer, 2010).

<sup>3</sup> Prior distribution was set at the default setting, which is a Cauchy distribution (0, 0.707), with a lower bound truncated at 0.

<sup>4</sup> “This is a control of your attention. Please tick the box “somewhat disagree”.”

<sup>5</sup> “Did you take this study seriously, and took the time to read every question before answering?” Yes/No.

## Materials and Procedure

Participants first read a fake Facebook status<sup>6</sup> summarising gender pay inequalities in the UK, with the comment section cropped out:

“In 2023 the difference between average hourly earnings for men and women in the United Kingdom for all workers was 14.3%” (source: <https://www.statista.com/statistics/280710/uk-gender-pay-gap/>)  
Why do you think the gender pay gap persists after all those years?”

The status was accompanied by an infographic showing the persistence of pay inequalities in the UK throughout the years. Participants were then shown an anonymized Facebook comment, that was presented as a response to the status. In the “internal attribution” condition, the author of the comment said the following:

“This difference would disappear if women were more persistent in their careers. The problem is not the system, it is by working hard that women will improve their situation”.

In the “external attribution” condition, the author of the comment argued the following:

“This difference would not disappear even if women were more persistent in their careers. The problem is the system, and it is the system that needs to be changed to improve the situation for women.”

Among other filler items (e.g., “I am angry at this person”), participants were asked the extent to which they believed that the person considered women to be responsible for their disadvantaged situation compared to men, which was the manipulation check (1 = not at all; 5 = completely).

Participants were then shown the status a second time, with the comment section visible. Two comments were visible: the initial attribution (internal or external), and the conspiracy attribution. Participants were asked to read the latter:

“Gender inequalities are the result of a conscious, concerted plan by those in power. Masculinists are everywhere, secretly working to maintain these inequalities to control women.”

As a control, we additionally manipulated whether the conspiracy attribution was a response to the internal (or external) attribution. For half of the participants, the conspiracy attribution was a direct response to the first attribution. For the other half, it was unrelated to the initial attribution (i.e., it was posted before). We controlled this factor in the statistical analyses (“conspiracy as a response” variable). Participants completed the following scales. Unless mentioned otherwise, participants answered all questions

on a 5-point Likert scale ranging from 1 (not at all) to 5 (completely).

**Gender inequalities conspiracy beliefs** were measured with a single item (“Gender inequalities in society are actively perpetuated by powerful masculinist groups operating in secret.”). Participants answered on a 5-point Likert scale ranging from 1 (Completely disagree) to 5 (Completely agree).

**Sympathy for the author of the attribution to conspiracy.** We created three items to assess participants’ sympathy for the author of the conspiracy attribution: “I feel close to this person”; “I have sympathy for this person”; “I am grateful to this person” ( $\alpha = .89$ ). Participants answered on a 5-point Likert scale ranging from 1 (Not at all) to 5 (Extremely).

**Agreement with the attribution to conspiracy** was also measured with a single item: “I agree with this person”.

Finally, participants reported their age, gender (man/woman/other), political orientation (“What is your political orientation?” with 1, 5 and 9 labelled as “far left”, “centre”, and “far right” respectively), and occupation. Participants were debriefed and thanked for their participation.

## Results and Discussion

Participants in the internal attribution condition correctly reported that the author of the attribution considered that women were more responsible for the gender pay gap than in the external attribution condition,  $t(599) = -39.79, p < .001$  ( $M_{\text{external attribution}} = 1.65, SE = .05, M_{\text{internal attribution}} = 4.57, SE = .05$ , Cohen’s  $d = 3.15$ ). Participants moreover reported less agreement with the author of the internal attribution,  $t(597) = 28.81, p < .001$  ( $M_{\text{external attribution}} = 1.43, SE = .06, M_{\text{internal attribution}} = 3.71, SE = .06$ , Cohen’s  $d = 2.28$ ).

Results are displayed in [Table 1](#). We controlled for participants’ political orientation, and following the recommendation of Yzerbyt et al. (2004) we also controlled for the interaction between political orientation and the manipulated variables (political orientation  $\times$  exposure to an internal attribution; political orientation  $\times$  position in the discussion).

We did not observe an effect of exposure to an internal (vs. external) attribution for the situation of women on the endorsement of the gender inequality conspiracy theory,  $p = .30$  ( $M_{\text{external attribution}} = 2.51, SE = .07, M_{\text{internal attribution}} = 2.61, SE = .07$ , see [Figure 1](#)), sympathy for the author of the comment,  $p = .28$  ( $M_{\text{external attribution}} = 2.19, SE = .06, M_{\text{internal attribution}} = 2.27, SE = .06$ ), or agreement with the comment,  $p = .36$  ( $M_{\text{external attribution}} = 2.71, SE = .07, M_{\text{internal attribution}} = 2.62, SE = .07$ ). Thus, none of the hypotheses were corroborated.

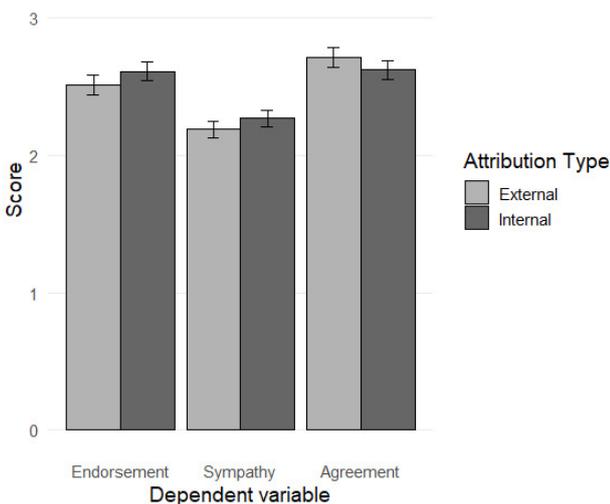
While these findings were not part of preregistered hypotheses, we might note that none of these effects were

6 The Facebook status was created using the free online app Zeoob, at <https://zeoob.com/generate-facebook-status-post/>

**Table 1. Impact of exposure to internal (vs. external) attribution on gender inequality conspiracy beliefs, sympathy for the conspiracy advocate, and reported agreement with the conspiracy advocate.**

| Predictor                              | Gender inequalities conspiracy |          |                       | Sympathy                     |          |                       | Agreement                    |          |                       |
|--|--------------------------------|----------|-----------------------|------------------------------|----------|-----------------------|------------------------------|----------|-----------------------|
|  | <i>b</i><br>95%<br>CI          | <i>t</i> | <i>R</i> <sup>2</sup> | <i>b</i>                     | <i>t</i> | <i>R</i> <sup>2</sup> | <i>b</i>                     | <i>t</i> | <i>R</i> <sup>2</sup> |
| (Intercept)                            | 2.56**<br>[2.47,<br>2.65]      | 55.08    |                       | 2.23**<br>[2.15,<br>2.31]    | 56.53    |                       | 2.23**<br>[2.15,<br>2.31]    | 54.29    |                       |
| Exposure to<br>internal<br>attribution | 0.05<br>[-0.04,<br>0.14]       | 1.04     |                       | 0.04<br>[-0.04,<br>0.12]     | 1.07     |                       | 0.04<br>[-0.04,<br>0.12]     | -0.92    |                       |
| Conspiracy as a<br>response            | 0.08<br>[-0.01,<br>0.17]       | 1.80     |                       | 0.07<br>[-0.01,<br>0.14]     | 1.66     |                       | 0.07<br>[-0.01,<br>0.14]     | 1.80     |                       |
| Political<br>orientation               | -0.09**<br>[-0.14,<br>-0.03]   | -3.15    |                       | -0.09**<br>[-0.13,<br>-0.04] | -3.66    |                       | -0.09**<br>[-0.13,<br>-0.04] | -3.63    |                       |
| Exposure ×<br>response                 | -0.02<br>[-0.11,<br>0.08]      | -0.33    |                       | 0.01<br>[-0.07,<br>0.09]     | 0.28     |                       | 0.01<br>[-0.07,<br>0.09]     | 1.26     |                       |
| Exposure ×<br>orientation              | 0.04<br>[-0.01,<br>0.10]       | 1.53     |                       | 0.00<br>[-0.04,<br>0.05]     | 0.10     |                       | 0.00<br>[-0.04,<br>0.05]     | 1.57     |                       |
| Response ×<br>orientation              | 0.01<br>[-0.04,<br>0.07]       | 0.37     |                       | -0.01<br>[-0.05,<br>0.04]    | -0.24    |                       | -0.01<br>[-0.05,<br>0.04]    | 0.52     |                       |
|  |                                |          | .028**                |                              |          | .029**                |                              |          | .029**                |

Note. Exposure to internal attribution was binary coded -1 (exposure to an external attribution) and +1 (exposure to an internal attribution). "Conspiracy as a response" was coded -1 (conspiracy attribution as an unrelated comment) and +1 (conspiracy attribution as a response). \*  $p < .05$ , \*\*  $p < .01$ .



**Figure 1. Impact of exposure to internal (vs. external) attributions for inequalities on endorsement of conspiracy attributions, sympathy for the conspiracy advocate, and self-reported agreement with the conspiracy advocate (Study 1).**

moderated by political orientation,  $p_{Conspiracy\ attribution} = .128$ ,  $p_{Sympathy} = .918$ ,  $p_{Agreement} = .208$ . However, a right-

wing political orientation was associated with lower gender conspiracy beliefs,  $p = .001$ , lower sympathy for the conspiracy advocate,  $p < .001$ , and lower agreement with the conspiracy advocate,  $p < .001$  (see Table 1).

### Studies 2a & 2b

In Study 1, we did not find support for our hypotheses. In Studies 2a and 2b, we tested the same hypotheses. Additionally, we examined the moderating role of ideological beliefs susceptible to facilitate (or hinder) the endorsement of a conspiracy attribution for an ingroup's disadvantage – namely, meritocracy beliefs (see Nera et al., 2024). We hypothesized that the effect of the experimental manipulation would be stronger among participants low in meritocracy beliefs, because these participants would be less reluctant to endorse an external attribution for inequalities.

We conducted Study 2 on two disadvantaged groups: women (confronted with an internal attribution for gender inequalities in Study 2a) and people with low income (confronted with an internal attribution for poverty in Study 2b). The procedure was identical, but the materials were adapted accordingly.

## Method

### Participants

**Study 2a.** Eight hundred and eight (planned  $n = 800$ ) women were recruited on Prolific, out of which 791 remained after applying the preregistered exclusion criteria ( $M_{age} = 42.1$ ,  $SD = 15.2$ ,  $M_{political\ orientation} = 4.11$ ,  $SD = 1.76$ ,  $min = 1$ ,  $max = 9$ ).

**Study 2b.** Eight hundred and two people with low income were recruited on prolific academic, out of which 789 remained after applying the preregistered exclusion criteria ( $M_{age} = 42.6$ ,  $SD = 13.7$ ,  $M_{political\ orientation} = 4.10$ ,  $SD = 1.68$ ,  $min = 1$ ,  $max = 9$ ).

The exclusion criteria were the same as in Study 1. Both sample sizes enabled us to detect minimum mean differences of  $d = .23$  with a power of .90, using two-tailed tests.

### Procedure and Materials

The procedure was the largely the same as in Study 1, with a few minor changes. Participants first read a Facebook status with the comment section cropped. The status provided numbers regarding gender pay inequalities in Study 2a, and poverty in the UK in Study 2b. Since the written materials used in Study 2a are the same as in Study 1, we detail the materials used in Study 2b (experimental materials for both studies are available on the OSF).

In Study 2b, the Facebook status started with a quotation from a website documenting poverty in the UK:

“More than one in five people in the UK (22%) were in poverty in 2021/2022 – 14.4 million people. Of these, 8.1 million were working age adults, 4.2 million were children, and 2.1 million were pensioners. To put it another way, around two in every ten adults are in poverty in the UK, with about three in every ten children being in poverty (source: <https://www.jrf.org.uk/uk-poverty-2024-the-essential-guide-to-understanding-poverty-in-the-uk>)”.

Contrary to Study 1, the internal (or external) attribution was embedded at the end of the Facebook status, rather than in a comment. In the “internal attribution” condition of Study 2b, the status continued as follows:

“The problem of poverty could be addressed if poor people worked harder. The issue does not lie with the system; only by working hard and persevering will the disadvantaged improve their situation.”

In the “external attribution” condition, the status continued as follows:

“The problem of poverty has nothing to do with poor people not working hard enough. The issue lies with the system; it is the system that we need to change to improve the situation of the disadvantaged.”

As a manipulation check, participants were asked the extent to which they believed that the person considered poor people to be responsible for their disadvantaged situation

on a scale ranging from 1 (not at all) to 5 (completely). The filler items were the same as in Study 1.

Then, participants were shown the Facebook status again, this time with the comment section visible. There was only one comment, which included the conspiracy attribution:

“Poverty is part of a conscious, concerted plan. Economic inequalities are maintained by those in power to control the population. Politicians and the media are complicit in hiding the truth from the public.”

Sympathy for the author of the conspiracy comment ( $\alpha_{Study\ 2a} = .87$ ,  $\alpha_{Study\ 2b} = .83$ ) and agreement with the comment were measured with the same items as in Studies 2-5. Meritocracy beliefs were measured using the 4-item scale developed by McCoy et al. (2002, e.g., “We live in an open society where everyone can achieve a higher social status”,  $\alpha_{Study\ 2a} = .76$ ,  $\alpha_{Study\ 2b} = .75$ ).

In Study 2a, the endorsement of the conspiracy explanation of gender inequalities was measured with the same item as in Study 1. In Study 2b, endorsement of the conspiracy attribution was measured with a single item (“Economic inequalities and poverty are perpetuated by powerful groups acting in secrecy”).

## Results

### Study 2a

**Manipulation Check.** As expected, participants in the “internal attribution” were more likely to view the author of the attribution as considering women as responsible of their disadvantaged situation,  $t(686) = -49.58$ ,  $p < .001$  ( $M_{external\ attribution} = 1.59$ ,  $SE = .04$ ,  $M_{internal\ attribution} = 4.61$ ,  $SE = .05$ , Cohen's  $d = 3.58$ ).

**Analyses.** Detailed statistics are displayed in Table 2. We did not observe any impact of exposure to an internal attribution for the ingroup's disadvantage on endorsement of the gender conspiracy,  $p = .97$  ( $M_{external\ attribution} = 2.64$ ,  $SE = .06$ ,  $M_{internal\ attribution} = 2.65$ ,  $SE = .06$ , see Figure 2), sympathy for the conspiracy advocate,  $p = .055$  ( $M_{external\ attribution} = 2.28$ ,  $SE = .05$ ,  $M_{internal\ attribution} = 2.42$ ,  $SE = .05$ ), or agreement with the conspiracy advocate,  $p = .98$  ( $M_{external\ attribution} = 2.77$ ,  $SE = .06$ ,  $M_{internal\ attribution} = 2.78$ ,  $SE = .06$ ). Against our predictions, none of these effects were moderated by participants' meritocracy beliefs,  $p_{Conspiracy\ attribution} = .944$ ,  $p_{Sympathy} = 0.281$ ,  $p_{Agreement} = .387$ .

While these findings were not part of preregistered hypotheses, meritocracy beliefs were associated with lower gender conspiracy beliefs,  $p = .01$ , lower sympathy for the conspiracy advocate,  $p = .003$ , and lower agreement with the conspiracy advocate,  $p < .001$  (see Table 2).

### Study 2b

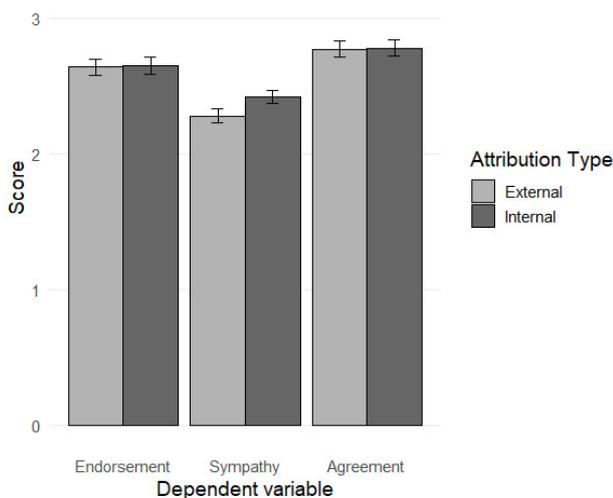
**Manipulation check.** Participants in the “internal attribution” were more likely to view the author of the attribution as internally attributing the situation of poor people,  $t(774) = -50.41$ ,  $p < .001$  ( $M_{external\ attribution} = 1.45$ ,  $SE = .04$ ,  $M_{internal\ attribution} = 4.58$ ,  $SE = .05$ , Cohen's  $d = 3.15$ ).

**Table 2. Impact of exposure to internal (vs. external) attribution on gender inequality conspiracy beliefs, sympathy for the conspiracy advocate, and reported agreement with the conspiracy advocate (Study 2a)**

| Predictor                        | Gender inequalities conspiracy |          |                       | sympathy                  |          |                       | Agreement                 |          |                       |
|----------------------------------|--------------------------------|----------|-----------------------|---------------------------|----------|-----------------------|---------------------------|----------|-----------------------|
|                                  | <i>b</i><br>95% CI             | <i>t</i> | <i>R</i> <sup>2</sup> | <i>b</i><br>95% CI        | <i>t</i> | <i>R</i> <sup>2</sup> | <i>b</i><br>95% CI        | <i>t</i> | <i>R</i> <sup>2</sup> |
| (Intercept)                      | 2.65**<br>[2.56, 2.73]         | 62.22    |                       | 2.35**<br>[2.28, 2.43]    | 63.61    |                       | 2.77**<br>[2.69, 2.86]    | 62.22    |                       |
| Exposure to internal attribution | 0.00<br>[-0.08, 0.08]          | 0.03     |                       | 0.07<br>[-0.00, 0.14]     | 1.92     |                       | 0.00<br>[-0.09, 0.09]     | 0.03     |                       |
| Meritocracy beliefs              | -0.14**<br>[-0.25, -0.03]      | -3.98    |                       | -0.15**<br>[-0.24, -0.05] | -2.96    |                       | -0.24**<br>[-0.35, -0.12] | -3.98    |                       |
| Exposure × meritocracy beliefs   | 0.00<br>[-0.10, 0.11]          | -0.87    |                       | -0.05<br>[-0.15, 0.04]    | -1.08    |                       | -0.05<br>[-0.17, 0.07]    | -0.87    |                       |
|                                  |                                |          | .008                  |                           |          | .017**                |                           |          | .021**                |

Note. Exposure to internal attribution was binary coded -1 (exposure to an external attribution) and +1 (exposure to an internal attribution).

\*  $p < .05$ , \*\*  $p < .01$ .



**Figure 2. Impact of exposure to internal (vs. external) attributions for inequalities on endorsement of conspiracy attributions, sympathy for the conspiracy advocate, and self-reported agreement with the conspiracy advocate (Study 2a).**

**Analyses.** In line with Studies 1 and 2a, the experimental manipulation had no impact on the endorsement of the conspiracy attribution for the situation of the ingroup,  $p = .97$  ( $M_{\text{external attribution}} = 2.99$ ,  $SE = .06$ ,  $M_{\text{internal attribution}} = 2.99$ ,  $SE = .06$ ), and sympathy for the author of the conspiracy attribution,  $p = .35$  ( $M_{\text{external attribution}} = 2.61$ ,  $SE = .05$ ,  $M_{\text{internal attribution}} = 2.54$ ,  $SE = .05$ , see Figure 3). Surprisingly, participants in the “internal attribution” condition reported less agreement with the author of the conspiracy comment,  $p = .002$  ( $M_{\text{external attribution}} = 3.29$ ,  $SE = .06$ ,  $M_{\text{internal attribution}} = 3.03$ ,  $SE = .06$ ). None of these rela-

tionships were moderated by participants’ meritocracy beliefs,  $p_{\text{Conspiracy attribution}} = .14$ ,  $p_{\text{Sympathy}} = 0.369$ ,  $p_{\text{Agreement}} = .586$ . Detailed statistics are displayed in Table 3.

Meritocracy beliefs were associated with lower economic inequalities conspiracy beliefs,  $p < .001$ , lower sympathy for the conspiracy advocate,  $p < .001$ , and lower agreement with the conspiracy advocate,  $p < .001$  (see Table 3). These findings were not part of preregistered hypotheses.

In sum, in Studies 1, 2a and 2b, we again failed to find support for our hypotheses. Some results were even opposite from our predictions in Study 2b. We also did not observe any moderation by participants’ meritocracy beliefs. Instead, meritocracy beliefs were negatively associated with all three dependent variables.

Conspiracy beliefs are deeply rooted in intergroup relations (Sternisko et al., 2020; van Prooijen & van Lange, 2014). It is possible that an “Us” vs. “Them” intergroup context is necessary to trigger the hypothesized effects (see Jetten et al., 2004). Therefore, in Studies 3a and 3b, we indicated the group memberships of the authors of the attributions (on how levels of social categorizations affect information processing and behaviour, see Turner et al., 1987).

### Studies 3a & 3b

Studies 3a and 3b closely replicated Studies 2a and 2b, except that the source of the internal attribution was explicitly an outgroup member and the source of the conspiracy attribution an ingroup member.

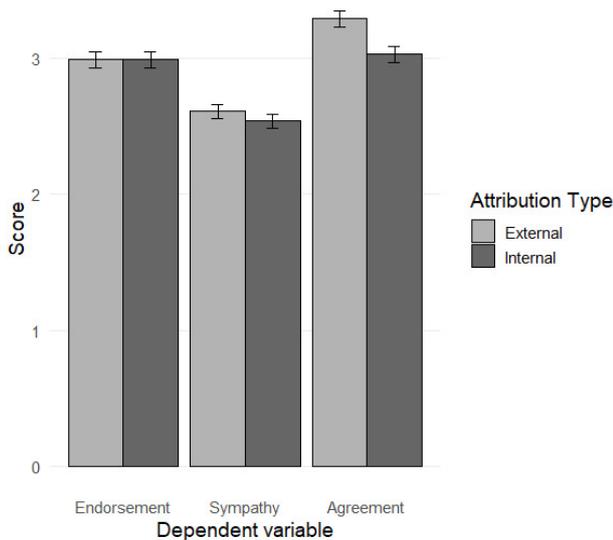
These studies tested the same hypotheses as in previous studies, and also examined the moderating role of meritocracy beliefs.

**Table 3. Impact of exposure to internal (vs. external) attribution on poverty conspiracy beliefs, sympathy for the conspiracy advocate, and reported agreement with the conspiracy advocate (Study 2b)**

| Predictor                              | Poverty conspiracy           |          |                       | Sympathy                     |          |                       | Agreement                    |          |                       |
|--|------------------------------|----------|-----------------------|------------------------------|----------|-----------------------|------------------------------|----------|-----------------------|
|  | <i>b</i><br>95%<br>CI        | <i>t</i> | <i>R</i> <sup>2</sup> | <i>b</i><br>95%<br>CI        | <i>t</i> | <i>R</i> <sup>2</sup> | <i>b</i><br>95%<br>CI        | <i>t</i> | <i>R</i> <sup>2</sup> |
| (Intercept)                            | 2.99**<br>[2.91,<br>3.08]    | 69.97    |                       | 2.35**<br>[2.28,<br>2.43]    | 63.61    |                       | 3.16**<br>[3.08,<br>3.25]    | 72.32    |                       |
| Exposure to<br>internal<br>attribution | -0.00<br>[-0.09,<br>0.08]    | -0.04    |                       | 0.07<br>[-0.00,<br>0.14]     | 1.92     |                       | -0.13**<br>[-0.22,<br>-0.05] | -3.06    |                       |
| Meritocracy<br>beliefs                 | -0.34**<br>[-0.45,<br>-0.23] | -6.25    |                       | -0.15**<br>[-0.24,<br>-0.05] | -2.96    |                       | -0.56**<br>[-0.67,<br>-0.45] | -9.94    |                       |
| Exposure ×<br>meritocracy<br>beliefs   | 0.08<br>[-0.03,<br>0.19]     | 1.48     |                       | -0.05<br>[-0.15,<br>0.04]    | -1.08    |                       | 0.03<br>[-0.08,<br>0.14]     | 0.55     |                       |
|  |                              |          | .050**                |                              |          | .017**                |                              |          | .120**                |

Note. Exposure to internal attribution was binary coded -1 (exposure to an external attribution) and +1 (exposure to an internal attribution).

\*  $p < .05$ , \*\*  $p < .01$ .



**Figure 3. Impact of exposure to internal (vs. external) attributions for inequalities on endorsement of conspiracy attributions, sympathy for the conspiracy advocate, and self-reported agreement with the conspiracy advocate (Study 2b).**

## Method

### Participants

**Study 3a.** Two hundred and fifty 1<sup>st</sup> year psychology students (planned  $n = 250$ ) completed the study in exchange of a course credit, out of which 190 remained after excluding participants who did not identify as women, failed the attention or seriousness checks ( $M_{Age} = 19.8$ ,  $SD = 2.56$ ,  $M_{political\ orientation} = 4.12$ ,  $SD = 1.46$ ). The sample size enabled us to detect minimum mean differences of  $d = .47$  with a power of .90, using two-tailed tests.

**Study 3b.** Three hundred and three low-income participants (planned  $n = 300$ ) were recruited on Prolific, out of which 285 remained after applying the preregistered exclusion criteria (218 women, 5 non-binary;  $M_{Age} = 41.8$ ,  $SD = 15.4$ ,  $M_{political\ orientation} = 4.11$ ,  $SD = 1.63$ ). The sample size enabled us to detect minimum mean differences of  $d = .39$  with a power of .90, using two-tailed tests.

### Procedure and Materials

Studies 3a and 3b were identical to Studies 2a and 2b, with one difference: in the questionnaire, the author of the internal attribution was presented as an outgroup member (a person from a wealthy family in Study 3a, a man in Study 3b), and the author of the conspiracy attribution was presented as an ingroup member (a low-income person in Study 3a, a woman in Study 3b).

Meritocracy beliefs ( $\alpha_{Study\ 3a} = .73$ ;  $\alpha_{Study\ 3b} = .75$ ), sympathy for the author of the conspiracy attribution ( $\alpha_{Study\ 3a}$

= .85;  $\alpha_{Study\ 3b} = .83$ ), were measured with the same measures as in Studies 2a-2b<sup>7</sup>.

Gender conspiracy attribution was measured with the same item as in Study 2a. In Study 3b, poverty conspiracy attributions were measured with three averaged items (“Economic inequalities and poverty are perpetuated by powerful groups acting in secrecy”; “Big corporation CEOs willingly perpetuate unemployment to thwart the unionisation of workers”; “The persistence of poverty in our society is due to the secret action of powerful groups who benefit from poverty.”  $\alpha_{Study\ 3b} = .90$ ).

## Results

### Study 3a

**Manipulation check.** Participants in the internal attribution condition correctly indicated that the author of the attribution considered women as responsible of their disadvantaged situation,  $t(185.5) = -23.79$ ,  $p < .001$  ( $M_{external\ attribution} = 1.69$ ,  $SE = .14$ ,  $M_{internal\ attribution} = 6.33$ ,  $SE = .14$ , Cohen's  $d = 3.45$ ).

**Analyses.** Participants in the internal attribution condition did not report stronger endorsement of the gender inequalities conspiracy theory,  $p = .37$  ( $M_{Internal\ attribution} = 3.11$ ,  $SE = .11$ ,  $M_{External\ attribution} = 2.97$ ,  $SE = .11$ , see Table 4). They did report stronger sympathy with the author of the conspiracy comment,  $p = .033$  ( $M_{Internal\ attribution} = 3.93$ ,  $SE = .15$ ,  $M_{External\ attribution} = 3.46$ ,  $SE = .15$ ), but not stronger agreement,  $p = .56$  ( $M_{Internal\ attribution} = 4.40$ ,  $SE = .11$ ,  $M_{External\ attribution} = 4.25$ ,  $SE = .11$ ). These effects were not moderated by meritocracy beliefs,  $p_{Conspiracy\ attribution} = .94$ ,  $p_{Sympathy} = .681$ ,  $p_{Agreement} = .443$ .

Meritocracy beliefs were significantly associated with lower gender conspiracy beliefs,  $p = .001$ , lower sympathy for the conspiracy advocate,  $p = .012$ , but not with lower agreement with the conspiracy advocate,  $p = .079$ . These findings were not part of preregistered hypotheses.

### Study 3b

**Manipulation check.** Participants in the internal attribution condition correctly indicated that the author of the attribution considered poor people as responsible for their disadvantaged situation,  $t(280.52) = -29.79$ ,  $p < .001$  ( $M_{external\ attribution} = 1.41$ ,  $SE = .08$ ,  $M_{internal\ attribution} = 4.50$ ,  $SE = .07$ , Cohen's  $d = 3.50$ ).

**Analyses.** Participants in the internal attribution condition did not report stronger conspiracy beliefs about economic inequalities,  $p = .26$  ( $M_{external\ attribution} = 2.92$ ,  $SE = .10$ ,  $M_{internal\ attribution} = 3.07$ ,  $SE = .09$ ), sympathy for the author of the conspiracy attribution,  $p = .68$  ( $M_{external\ attribution} = 2.73$ ,  $SE = .09$ ,  $M_{internal\ attribution} = 2.79$ ,  $SE = .09$ ), or agreement with the author of the conspiracy attribution,  $p$

= .50 ( $M_{external\ attribution} = 3.3$ ,  $SE = .11$ ,  $M_{internal\ attribution} = 3.2$ ,  $SE = .10$ ). These effects were not moderated by meritocracy beliefs,  $p_{Conspiracy\ attribution} = .518$ ,  $p_{Sympathy} = 0.589$ ,  $p_{Agreement} = .973$ . Detailed statistics are displayed in Table 5.

Contrary to previous studies, meritocracy beliefs were not significantly associated with lower gender conspiracy beliefs,  $p = .061$ , nor with lower sympathy for the conspiracy advocate,  $p = .08$  (see Table 5). It was however associated with lower agreement with the conspiracy advocate,  $p < .001$ . These findings were not part of preregistered hypotheses.

## Internal Meta-Analysis

To draw more robust conclusions from the five studies, we ran a series of internal meta-analyses for the different dependent variables. Experimental group means were extracted based on preregistered statistical models. Given the diversity of intergroup settings and identities investigated, we ran random effect meta-analysis accounting for variations between studies. Standardized effect sizes and associated standard deviations were extracted using the `escalc` R function from the ‘metafor’ R package (Viechtbauer, 2010).

For the the main hypotheses and the interaction between the experimental manipulation and meritocracy beliefs, we ran random effect Bayesian meta-analyses on JASP (JASP Team, 2020), as frequentist statistics are not adequate to draw conclusion regarding an absence of effect based on non-significant results. We used the default Cauchy prior distribution (location = 0, scale = .707). This prior centred on zero assumes that small effects are more likely than large effects, while remaining open to the latter if supported by the data. For the main hypotheses, we constrained positive random effects, because we had directional hypotheses. For the significant relationship between meritocracy beliefs, we ran a frequentist, random effect meta-analysis with the restricted maximum likelihood method, using JASP.

### Effect of Internal Attribution on the Dependent Variables

#### Conspiracy Attributions

The analysis returned strong support for the null,  $\mu = 0.07$  ( $SD = .05$ ), 95% CI[0.004, 0.18],  $BF_{01} = 37.88$ . In other words, the data is 37.88 times more likely under the null than under our hypothesis of a positive effect of internal attribution on conspiracy beliefs. Since odds greater than 30 are considered the threshold for “very strong evidence” (Lee & Wagenmakers, 2013), our results can be interpreted as very strong support for the null against the directional effect hypothesis.

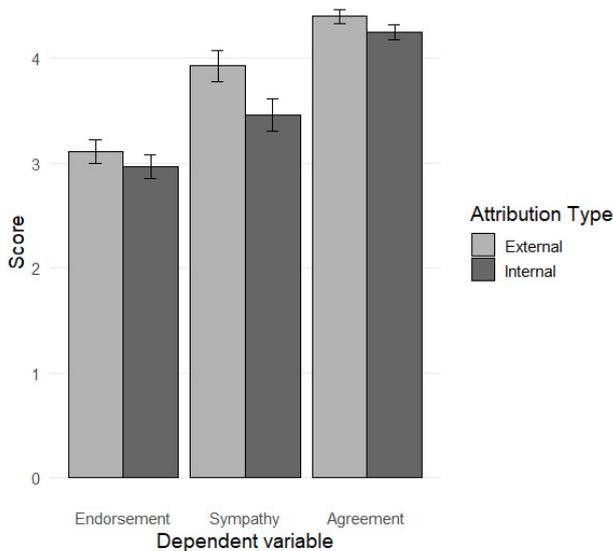
<sup>7</sup> In Study 3a, sympathy for the author of the attribution and agreement with them were measured on a 7-point scale, instead of a 5-point scale like in the other studies – hence the use of standardized effect sizes in the internal meta-analysis.

**Table 4. Impact of exposure to internal (vs. external) attribution on gender inequalities conspiracy beliefs, sympathy for the conspiracy advocate, and reported agreement with the conspiracy advocate (Study 3a)**

| Predictor                        | Gender inequalities conspiracy |          |                       | Sympathy                    |          |                       | Agreement                 |          |                       |
|----------------------------------|--------------------------------|----------|-----------------------|-----------------------------|----------|-----------------------|---------------------------|----------|-----------------------|
|                                  | <i>b</i><br>95% CI             | <i>t</i> | <i>R</i> <sup>2</sup> | <i>b</i><br>95% CI          | <i>t</i> | <i>R</i> <sup>2</sup> | <i>b</i><br>95% CI        | <i>t</i> | <i>R</i> <sup>2</sup> |
| (Intercept)                      | 3.04**<br>[2.89,<br>3.20]      | 38.43    |                       | 3.70**<br>[3.48,<br>3.91]   | 34.15    |                       | 4.33**<br>[4.07,<br>4.59] | 33.11    |                       |
| Exposure to internal attribution | 0.07<br>[-0.09,<br>0.23]       | 0.89     |                       | 0.23*<br>[0.02,<br>0.45]    | 2.15     |                       | 0.08<br>[-0.18,<br>0.33]  | 0.58     |                       |
| Meritocracy beliefs              | -0.35**<br>[-0.57,<br>-0.14]   | -3.23    |                       | -0.38*<br>[-0.68,<br>-0.09] | -2.55    |                       | -0.32<br>[-0.68,<br>0.04] | -1.76    |                       |
| Exposure × meritocracy beliefs   | 0.01<br>[-0.21,<br>0.22]       | 0.08     |                       | -0.06<br>[-0.36,<br>0.23]   | -0.41    |                       | -0.14<br>[-0.50,<br>0.22] | -0.77    |                       |
|                                  |                                |          | .06**                 |                             |          | .07**                 |                           |          | .02                   |

Note. Exposure to internal attribution was binary coded -1 (exposure to an external attribution) and +1 (exposure to an internal attribution).

\*  $p < .05$ , \*\*  $p < .01$ .



**Figure 4. Impact of exposure to internal (vs. external) attributions for inequalities on endorsement of conspiracy attributions, sympathy for the conspiracy advocate, and self-reported agreement with the conspiracy advocate (Study 3a).**

### Sympathy for the Conspiracy Advocate

The analysis returned some support for the null,  $\mu = 0.10$  ( $SD = .06$ ), 95% credible interval [0.008, 0.23],  $BF_{01} = 4.38$ . These odds can be interpreted as “some evidence” in favour of the null.

### Agreement with the Conspiracy Advocate

The analysis returned strong support for the null,  $\mu = 0.04$  ( $SD = .05$ ), 95% credible interval [0.05, 0.17],  $BF_{01} =$

17.70. These odds can be interpreted as “strong evidence” in favour of the null.

## Meritocracy Beliefs and Dependent Variables

### Meritocracy Beliefs × Experimental Manipulation

Since we did not have any expectations regarding the direction of the interaction, we did not truncate the prior distribution. The meritocracy × exposure to internal attribution meta analytic effect was not significant for endorsement of the conspiracy attribution,  $\mu = 0.02$  ( $SD = 0.05$ ), 95% credible interval [-0.09, 0.12],  $BF_{01} = 17.08$ . Neither was it significant for sympathy for the conspiracy advocate,  $\mu = -0.02$  ( $SD = 0.05$ ), 95% credible interval [-0.12, 0.08],  $BF_{01} = 18.60$ , nor for agreement with the conspiracy advocate,  $\mu = -0.01$  ( $SD = 0.05$ ), 95% credible interval [-0.11, 0.08],  $BF_{01} = 20.79$ . The odds indicate strong evidence for the null for all three dependent variables.

### Effect of Meritocracy Beliefs on the Dependent Variables

Meritocracy beliefs were associated with decreased endorsement of the conspiracy attribution for the situation of the ingroup, *meta analytic intercept* = -0.16 ( $SE = 0.04$ ),  $z = -4.26$ ,  $p < .001$  (heterogeneity significant,  $Q(3) = 8.04$ ,  $p = .045$ ), decreased sympathy for the conspiracy advocate, *random meta analytic intercept* = -0.17 ( $SE = 0.05$ ),  $z = -3.74$ ,  $p < .001$  (heterogeneity significant,  $Q(3) = 13.39$ ,  $p = .004$ ), and decreased agreement with the conspiracy advocate, *random meta analytic intercept* = -0.21 ( $SE = 0.05$ )  $z = -4.14$ ,  $p < .001$  (heterogeneity significant,  $Q(3) = 17.94$ ,  $p < .001$ ).

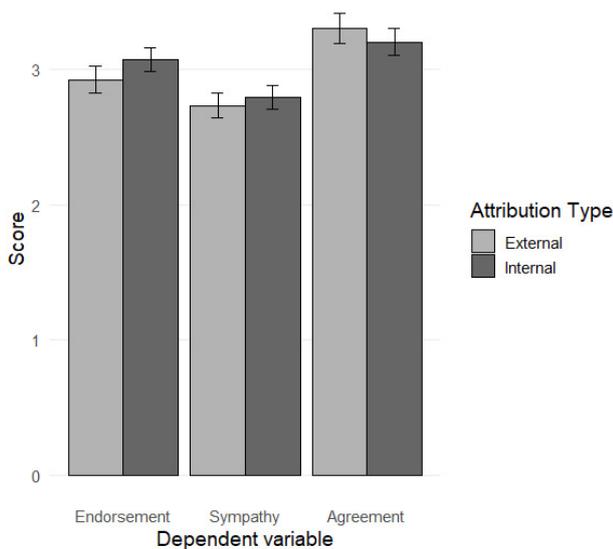
A summary of the confirmatory and exploratory findings is displayed in [Table 6](#).

**Table 5. Impact of exposure to internal (vs. external) attribution on poverty conspiracy beliefs, sympathy for the conspiracy advocate, and reported agreement with the conspiracy advocate (Study 3b)**

| Predictor                        | Poverty conspiracy        |          |                       | Sympathy                  |          |                       | Agreement                    |          |                       |
|----------------------------------|---------------------------|----------|-----------------------|---------------------------|----------|-----------------------|------------------------------|----------|-----------------------|
|                                  | <i>b</i><br>95%<br>CI     | <i>t</i> | <i>R</i> <sup>2</sup> | <i>b</i><br>95%<br>CI     | <i>t</i> | <i>R</i> <sup>2</sup> | <i>b</i><br>95%<br>CI        | <i>t</i> | <i>R</i> <sup>2</sup> |
| (Intercept)                      | 2.99**<br>[2.86,<br>3.12] | 45.35    |                       | 2.76**<br>[2.63,<br>2.89] | 42.88    |                       | 3.25**<br>[3.10,<br>3.39]    | 43.87    |                       |
| Exposure to internal attribution | 0.08<br>[-0.05,<br>0.20]  | 1.14     |                       | 0.03<br>[-0.10,<br>0.15]  | 0.41     |                       | -0.05<br>[-0.20,<br>0.10]    | -0.68    |                       |
| Meritocracy beliefs              | -0.16<br>[-0.33,<br>0.01] | -1.88    |                       | -0.15<br>[-0.31,<br>0.02] | -1.76    |                       | -0.35**<br>[-0.54,<br>-0.16] | -3.61    |                       |
| Exposure × meritocracy beliefs   | 0.06<br>[-0.11,<br>0.23]  | 0.65     |                       | 0.05<br>[-0.12,<br>0.21]  | 0.541    |                       | 0.00<br>[-0.19,<br>0.19]     | 0.03     |                       |
|                                  |                           |          | .018                  |                           |          | .012                  |                              |          | .046**                |

Note. Exposure to internal attribution was binary coded -1 (exposure to an external attribution) and +1 (exposure to an internal attribution).

\*  $p < .05$ , \*\*  $p < .01$ .



**Figure 5. Impact of exposure to internal (vs. external) attributions for inequalities on endorsement of conspiracy attributions, sympathy for the conspiracy advocate, and self-reported agreement with the conspiracy advocate (Study 3b).**

## General Discussion

Building on research examining how conspiracy beliefs impact the perception of intergroup inequalities (Nera et al., 2024), we examined how contextually salient explanations for an ingroup's disadvantaged situation impact the reception of conspiracy theories aimed at explaining that situation. Specifically, we expected that exposure to an internal attribution for an ingroup's suffering would foster the endorsement of a conspiracy attribution for this suffering, as such attributions can be viewed as external attribu-

tions that preserve the image of the ingroup. We also expected internal attributions for an ingroup's disadvantage to foster increased agreement with and sympathy for the conspiracy advocate.

We ran five studies examining two group memberships – women in the context of gender inequalities, and people with low-income in the context of economic inequalities – to test these hypotheses. None of the studies returned the expected effects – except for Study 3b, where participants reported more sympathy for the conspiracy advocate when confronted with the internal attribution. While these findings could be viewed – optimistically – as some support for our hypothesis on a different type of sample (i.e., a student sample, while other studies relied on Prolific samples), it may as well be a false positive due to testing the same hypotheses multiple times across studies. Regardless of how we view these final results, a random effect Bayesian meta-analysis returned strong support for the null for the endorsement of the conspiracy attribution and agreement with its author, and “some evidence” for the null regarding sympathy towards the conspiracy advocate. Furthermore, none of these effects were moderated by stable tendencies to internally attribute inequalities, namely, political ideology (in Study 1) and meritocracy beliefs (in subsequent studies). The overall conclusion we may draw from these results is that being situationally exposed to an internal attribution for an ingroup's disadvantage is not in and of itself sufficient to foster the endorsement of a conspiracy attribution for the ingroup's situation, nor to improve the perception of a person who advocates a conspiracy explanation for this situation.

Given the strong effect sizes on the manipulation checks, these null results are unlikely to be caused by failed experimental inductions. A potential explanation for these results is that individuals might be reluctant to endorse socially stigmatized beliefs such as conspiracy theories (Lantian et al., 2018). Indeed, individuals tend to have deroga-

| Study                 | Confirmatory   |  |   | Exploratory   |  |  |
|-----------------------|--|--|---|---|--|--|
|                       | Impact of exposure to internal (vs. external) attribution for an ingroup's disadvantaged situation |  |   | Relationship between meritocracy beliefs and the dependent variables – and interaction with exposure to internal (vs. external) attributions for inequalities |  |  |
|                       | Conspiracy attribution (H1)  | Sympathy for the conspiracy advocate (H2)    | Agreement with the conspiracy advocate (H3)   | Conspiracy attribution  | sympathy   | Agreement  |
| Study 1               | ×  | ×  | ×   | /   | /  | /  |
| Study 2a              | ×  | ×  | ×   | ✓ (interaction <i>ns</i> )  | ✓ (interaction <i>ns</i> )   | ✓ (interaction <i>ns</i> )   |
| Study 2b              | ×  | ×  | ✓ <sup>1</sup>                                | ✓ (interaction <i>ns</i> )  | ✓ (interaction <i>ns</i> )   | ✓ (interaction <i>ns</i> )   |
| Study 3a              | ×  | ×  | ×   | ✓ (interaction <i>ns</i> )  | ✓ (interaction <i>ns</i> )   | ×  |
| Study 3b              | ×  | ×  | ×   | ×   | ×  | ×  |
| Meta-analytic effects | $\mu = 0.07$ (SD = 0.05)<br>$BF_{01} = 37.88$  | $\mu = 0.10$ (SD = 0.06)<br>$BF_{01} = 4.38$ | $\mu = 0.04$ (SD = 0.05)<br>$BF_{01} = 17.70$ | $\beta = -0.16$ (SE = 0.04), $p < .001$   | $\beta = -0.17$ (SE = 0.05), $p < .001$                            | $\beta = -0.21$ (SE = 0.05), $p < .001$                            |
|                       |  |  |   | $\mu_{\text{moderation}} = 0.02$ (SD = 0.05)<br>$BF_{01} = 17.08$   | $\mu_{\text{moderation}} = -0.02$ (SD = 0.05)<br>$BF_{01} = 18.60$ | $\mu_{\text{moderation}} = -0.01$ (SD = 0.05)<br>$BF_{01} = 20.79$ |

**Table 6. Summary of the confirmatory and exploratory findings, with meta-analytic effects**

**Note.** Crosses indicate a non-significant result ( $p > .05$ ), while check marks indicate significance ( $p < .05$ ).  $BF_{01}$  interpretation of evidence in favour of the null over the hypothesis of an effect: 1-3 = anecdotal; 3-10 = moderate; 10-30 = strong; 30-100 = very strong; > 100 = extreme (Lee & Wagenmakers, 2013).

<sup>1</sup>While significant, this effect was in the opposite direction as the one hypothesized.

tory representations of conspiracy theories and conspiracy theory believers (Leveaux et al., 2022; see also Douglas et al., 2022). The social stigma associated with conspiracy theories may make most people reluctant to openly embrace a conspiracy theory to preserve the image of the ingroup – because the cost of such endorsement may subjectively outweigh its benefits.

By contrast, stable tendencies to internally attribute inequalities – such as a right-wing political orientation (in Study 1) or meritocracy beliefs (in subsequent studies) – were associated with decreased endorsement of conspiracy attributions, decreased sympathy for the conspiracy advocate, and decreased agreement with the conspiracy advocate. The negative association between conspiracy beliefs and meritocracy beliefs corroborates recent research (Nera et al., 2024). These findings stress the relevance of analyzing (some) conspiracy theories through the lens of causal attribution.

It is worth noting that throughout all studies, participants reported more disagreement with, and more anger towards, the author of the internal (vs. external) attribution. Hence, the endorsement of internal attributions for the situation of their ingroup by participants is unlikely to explain why we did not observe the hypothesized effects.

### Limitations and Conclusion

First, we relied on paradigms in which internal attributions took the form of Facebook statuses or comments. While manipulation checks showed that this method successfully impacted exposure to internal (vs. external) attributions for the situation of two different groups across studies, future research examining how attributions (or other social discourses) impact conspiracy beliefs may benefit from diversifying experimental manipulations.

Second, as argued in the introduction, an external or internal attribution for a group's suffering is informative about the author's attitudes toward the group. Indeed, an internal attribution indicates that the author of the attribution has a negative view of the group, whereas an external attribution indicates the opposite. In such a situation, it is unclear if what we manipulated was someone's attitude towards one's ingroup, or exposure to internal or external attribution for the situation of one's ingroup. Future studies might attempt to develop methods that enable researchers to dissociate the internal attribution from its evaluative aspect (on the broader issue of "fat handed" interventions, see Eronen, 2020). Note however that this confound makes our null results even more surprising because it arguably plays in favour of the hypothesized effect.

Third, the absence of an experimental manipulation of group membership saliency in Studies 3a and 3b prevents us from ruling out the possibility that our attempt to make the intergroup context salient was unsuccessful. Although the manipulation was straightforward (i.e., explicitly characterizing the authors of the internal and conspiracy attributions as outgroup and ingroup members, respectively), stronger manipulations may be required for the effect to emerge. Similarly, we did not measure ingroup identification across studies. It is plausible that participants react

differently to being confronted with an internal attribution for an ingroup's situation depending on whether they strongly or weakly identify with their ingroup. Future research may examine how the hypothesized effects may be conditioned on intergroup factors such as group identification.

Fourth, our studies only investigated two disadvantaged groups: women and poor people. Generalizability to other groups should not be assumed and should be tested in future research. Ideally, more robust generalizations would require testing our hypotheses in a larger variety of intergroup settings, so that the effect of exposure to internal attributions for inequalities can be assessed over and above specific intergroup settings – with the latter treated as a random factor (see Yarkoni, 2022). Testing our hypotheses on many intergroup settings to allow generalization is an avenue for a broader research program.

Finally and relatedly, the results showing that the propensity to internally attribute inequalities predicts decreased endorsement of conspiracy attributions should be cautiously interpreted. First, these results, while relatively consistent, were exploratory, which increases the risk of type 1 error. Second, there are many different ways to measure tendency to internally attribute inequalities. While meritocracy beliefs are a straightforward candidate to measure such a tendency, other conceptualizations of similar constructs might yield different results – such as belief in a just world (García-Sánchez et al., 2022) or stable personality traits like attributional style (e.g., Peterson et al., 1982).

### Conclusion

Once one approaches conspiracy theories as narratives that people adopt to fulfil important psychological needs (e.g., Douglas et al., 2017; Douglas & Sutton, 2023), they ought to examine how those needs relate to other narratives broadcasted in the social environment. The appeal of conspiracy theories may vary depending on what kind of discourses people have been confronted with beforehand. This is the broad claim that we attempted to investigate in this article. While we failed to find evidence that exposure to an internal attribution for an ingroup's sufferings increases individuals' willingness to endorse conspiracy narratives, we hope that researchers will continue to examine how prominent and socially accepted discourses may influence the appeal of conspiracy theories – as these narratives do not exist in an ideological vacuum.

### Competing Interests

None of the authors have any conflict of interest to declare.

### Ethics Statement

The authors confirm that this article is in line with the APA Code of Conduct ethical guidelines, as well as the national ethics guidelines of Belgium. The reported studies

were approved by the university's ethics committee. The use of the LLM (ChatGPT) was restricted to grammar checking and providing R code for figures.

### Funding

This work was supported by a grant (PDR 0253.19) from the Belgian National Fund for Scientific Research (FRS-FNRS).

### Data Accessibility Statement

Data, analyses scripts, and materials are available at <https://osf.io/dt7mb/>.

Editors: Ruida Zhu (Associate Editor)

Submitted: September 18, 2024 PST. Accepted: October 04, 2025 PST. Published: December 15, 2025 PST.



This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CCBY-4.0). View this license's legal deed at <http://creativecommons.org/licenses/by/4.0> and legal code at <http://creativecommons.org/licenses/by/4.0/legalcode> for more information.

## References

- Biddlestone, M., Cichočka, A., & Žeželj, I. (2020). Conspiracy theories and intergroup relations. In M. Butter & P. Knight (Eds.), *The Routledge Handbook of Conspiracy Theories*. Routledge. [https://doi.org/10.4324/9780429452734-2\\_6](https://doi.org/10.4324/9780429452734-2_6)
- Bilewicz, M., & Krzeminski, I. (2010). Anti-Semitism in Poland and Ukraine: The belief in Jewish control as a mechanism of scapegoating. *International Journal of Conflict and Violence (IJCV)*, 4(2), 234–243. <https://doi.org/10.4119/ijcv-2828>
- Bliuc, A. M., McGarty, C., Reynolds, K., & Muntele, D. (2007). Opinion-based group membership as a predictor of commitment to political action. *European Journal of Social Psychology*, 37(1), 19–32. <https://doi.org/10.1002/ejsp.334>
- Bradley, G. W. (1978). Self-serving biases in the attribution process: A reexamination of the fact or fiction question. *Journal of Personality and Social Psychology*, 36(1), 56–71. <https://doi.org/10.1037/0022-3514.36.1.56>
- Branscombe, N. R., Schmitt, M. T., & Harvey, R. D. (1999). Perceiving pervasive discrimination among African Americans: Implications for group identification and well-being. *Journal of Personality and Social Psychology*, 77(1), 135–149. <https://doi.org/10.1037/0022-3514.77.1.135>
- Campbell, W. K., & Sedikides, C. (1999). Self-threat magnifies the self-serving bias: A meta-analytic integration. *Review of General Psychology*, 3(1), 23–43. <https://doi.org/10.1037/1089-2680.3.1.23>
- Christopher, A. N., & Mull, M. S. (2006). Conservative ideology and ambivalent sexism. *Psychology of Women Quarterly*, 30, 223–230. <https://doi.org/10.1111/j.1471-6402.2006.00284.x>
- Cozzarelli, C., Wilkinson, A. V., & Tagler, M. J. (2001). Attitudes Toward the Poor and Attributions for Poverty. *Journal of Social Issues*, 57(2), 207–227. <https://doi.org/10.1111/0022-4537.00209>
- Crandall, C. S. (1994). Prejudice against fat people: Ideology and self-interest. *Journal of Personality and Social Psychology*, 66(5), 882–894. <https://doi.org/10.1037/0022-3514.66.5.882>
- Douglas, K. M., & Sutton, R. M. (2023). What Are Conspiracy Theories? A Definitional Approach to Their Correlates, Consequences, and Communication. *Annual Review of Psychology*, 74. <https://doi.org/10.1146/annurev-psych-032420-031329>
- Douglas, K. M., Sutton, R. M., & Cichočka, A. (2017). The psychology of conspiracy theories. *Current Directions in Psychological Science*, 26(6), 538–542. <https://doi.org/10.1177/0963721417718261>
- Douglas, K. M., Uscinski, J. E., Sutton, R. M., Cichočka, A., Nefes, T., Ang, C. S., & Deravi, F. (2019). Understanding Conspiracy Theories. *Political Psychology*, 40(S1), 3–35. <https://doi.org/10.1111/pops.12568>
- Douglas, K. M., van Prooijen, J. W., & Sutton, R. M. (2022). Is the label 'conspiracy theory' a cause or a consequence of disbelief in alternative narratives? *British Journal of Psychology*, 113(3), 575–590. <https://doi.org/10.1111/bjop.12548>
- Dufner, M., Gebauer, J. E., Sedikides, C., & Denissen, J. J. A. (2019). Self-Enhancement and Psychological Adjustment: A Meta-Analytic Review. *Personality and Social Psychology Review*, 23(1), 48–72. <https://doi.org/10.1177/1088868318756467>
- Eronen, M. I. (2020). Causal discovery and the problem of psychological interventions. *New Ideas in Psychology*, 59, 100785. <https://doi.org/10.1016/j.newideapsych.2020.100785>
- Franks, B., Bangerter, A., Bauer, M. W., Hall, M., & Noort, M. C. (2017). Beyond “Monologicality”? Exploring Conspiracist Worldviews. *Frontiers in Psychology*, 8(861), 1–16. <https://doi.org/10.3389/fpsyg.2017.00861>
- García-Sánchez, E., Correia, I., Pereira, C. R., Willis, G. B., Rodríguez-Bailón, R., & Vala, J. (2022). How fair is economic inequality? Belief in a just world and the legitimation of economic disparities in 27 European countries. *Personality and Social Psychology Bulletin*, 48(3), 382–395. <https://doi.org/10.1177/01461672211002366>
- Heider, F. (1958). *The psychology of interpersonal relations*. John Wiley & Sons Inc. <https://doi.org/10.1037/10628-000>
- JASP Team. (2020). *JASP (Version 0.14.1)* [Computer software].
- Jetten, J., Spears, R., & Postmes, T. (2004). Intergroup Distinctiveness and Differentiation: A Meta-Analytic Integration. *Journal of Personality and Social Psychology*, 86(6), 862–879. <https://doi.org/10.1037/0022-3514.86.6.862>
- Kashima, Y., Klein, O., & Clark, A. E. (2007). Grounding: Sharing Information in Social Interaction. In K. Fiedler (Ed.), *Social communication* (pp. 27–77). Psychology Press.
- Katz, I., & Hass, R. G. (1988). Racial ambivalence and American value conflict: Correlational and priming studies of dual cognitive structures. *Journal of Personality and Social Psychology*, 55, 893–905. <https://doi.org/10.1037/0022-3514.55.6.893>
- Keeley, B. L. (1999). Of Conspiracy Theories. *Journal of Philosophy*, 96(3), 109–126. <https://doi.org/10.2307/2564659>
- Lantian, A., Muller, D., Nurra, C., Klein, O., Berjot, S., & Pantazi, M. (2018). Stigmatized beliefs: Conspiracy theories, anticipated negative evaluation of the self, and fear of social exclusion. *European Journal of Social Psychology*, 48(7), 939–954. <https://doi.org/10.1002/ejsp.2498>
- Lee, M. D., & Wagenmakers, E.-J. (2013). *Bayesian cognitive modeling: A practical course*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139087759>

- Leveaux, S., Nera, K., Fagnoni, P., & Klein, P. P. (2022). Defining and explaining conspiracy theories: comparing the lay representations of conspiracy believers and non-believers. *Journal of Social and Political Psychology, 10*(1), 335–352. <https://doi.org/10.5964/jsp.6201>
- Marie, A., & Petersen, M. B. (2022). Political conspiracy theories as tools for mobilization and signaling. *Current Opinion in Psychology, 48*, 101440. <https://doi.org/10.1016/j.copsyc.2022.101440>
- Moscovici, S. (1987). The conspiracy mentality. In C. Graumann & S. Moscovici (Eds.), *Changing conceptions of conspiracy* (pp. 151–169). Springer-Verlag. [https://doi.org/10.1007/978-1-4612-4618-3\\_9](https://doi.org/10.1007/978-1-4612-4618-3_9)
- Nera, K., Bertin, P., & Klein, O. (2022). Conspiracy Theories as Opportunistic Attributions of Power. *Current Opinion in Psychology, 101381*. <https://doi.org/10.1016/j.copsyc.2022.101381>
- Nera, K., Douglas, K., Bertin, P., Delouvée, S., & Klein, O. (2024). *Conspiracy beliefs and the perception of intergroup inequalities*. Accepted for publication in *Personality and Social Psychology Bulletin*. <https://doi.org/10.1177/01461672241279085>
- Nera, K., Jetten, J., Biddlestone, M., & Klein, O. (2022). “Who wants to silence us”? Perceived discrimination of conspiracy theory believers increases ‘conspiracy theorist’ identification when it comes from powerholders—But not from the general public. *British Journal of Social Psychology, 10.1111/bjso.12536*
- Nera, K., & Schöpfer, C. (2023). What is so special about conspiracy theories? Conceptually distinguishing beliefs in conspiracy theories from conspiracy beliefs in psychological research. *Theory & Psychology, 33*(3), 287–305. <https://doi.org/10.1177/09593543231155891>
- Peterson, C., Semmel, A., Von Baeyer, C., Abramson, L. Y., Metalsky, G. I., & Seligman, M. E. (1982). The attributional style questionnaire. *Cognitive Therapy and Research, 6*(3), 287–299. <https://doi.org/10.1007/BF01173577>
- Popper, K. (2002). *Conjectures and Refutations: The Growth of Scientific Knowledge*. Routledge. (Original work published 1963)
- Quinn, D. M., & Crocker, J. (1999). When ideology hurts: Effects of belief in the Protestant ethic and feeling overweight on the psychological well-being of women. *Journal of Personality and Social Psychology, 77*(2), 402–414. <https://doi.org/10.1037/0022-3514.77.2.402>
- Shepperd, J., Malone, W., & Sweeny, K. (2008). Exploring causes of the self-serving bias. *Social and Personality Psychology Compass, 2*(2), 895–908. <https://doi.org/10.1111/j.1751-9004.2008.00078>
- Sternisko, A., Cichočka, 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. <https://doi.org/10.1016/j.copsyc.2020.02.007>
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Basil Blackwell.
- Uscinski, J. E., & Parent, J. M. (2014). *American Conspiracy Theories*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199351800.001.0001>
- van Prooijen, J. W., & van Lange, P. A. M. (2014). The Social Dimension of Belief in Conspiracy Theories. In *Power, Politics, and Paranoia: Why People Are Suspicious of Their Leaders*. <https://doi.org/10.1017/CBO9781139565417.017>
- Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software, 36*(3), 1–48. <https://doi.org/10.18637/jss.v036.i03>
- Wagner-Egger, P., Bangerter, A., Delouvée, S., & Dieguez, S. (2022). Awake together: Sociopsychological processes of engagement in conspiracist communities. *Current Opinion in Psychology, 101417*. <https://doi.org/10.1016/j.copsyc.2022.101417>
- Yarkoni, T. (2022). The generalizability crisis. *Behavioral and Brain Sciences, 45*, e1. <https://doi.org/10.1017/S0140525X20001685>
- Yzerbyt, V. Y., Muller, D., & Judd, C. M. (2004). Adjusting researchers’ approach to adjustment: On the use of covariates when testing interactions. *Journal of Experimental Social Psychology, 40*(3), 424–431. <https://doi.org/10.1016/j.jesp.2003.10.001>

## Supplementary Materials

### Peer Review Communication

Download: [https://collabra.scholasticahq.com/article/147339-does-being-confronted-with-internal-attributions-for-an-ingroup-s-sufferings-foster-the-endorsement-of-conspiracy-theories/attachment/310409.docx?auth\\_token=fHLBj59jp7LDsph5jf9X](https://collabra.scholasticahq.com/article/147339-does-being-confronted-with-internal-attributions-for-an-ingroup-s-sufferings-foster-the-endorsement-of-conspiracy-theories/attachment/310409.docx?auth_token=fHLBj59jp7LDsph5jf9X)

---