Personality and Individual Differences 264 (2027) 114049

Contents lists available at ScienceDirect

Personality and Individual Differences

journal homepage: www.elsevier.com/locate/paid

Perceived descriptive norms and longitudinal change in conspiracy beliefs

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ARTICLE INFO

Keywords:
Perceived descriptive norms
Conspiracy beliefs
Social influence
Projection
False consensus
Longitudinal design
Paranormal beliefs

ABSTRACT

Belief in conspiracy theories represents a common and potentially rigid belief system that may be influenced by perceived social consensus. It remains unclear whether perceived social norms predict changes in personal conspiracy belief, or whether such associations reflect projection processes whereby individuals infer consensus from their own views. In a two-wave study of UK adults ($N = 1430$) conducted six weeks apart, we examined whether perceived conspiracy belief norms prospectively predicted residualised change in conspiracy belief. Hierarchical regression analyses controlled for baseline belief levels and demographic covariates, and reciprocal analyses tested whether beliefs predicted subsequent norm perceptions. Parallel analyses were conducted for paranormal beliefs as a secondary test of domain generality. Conspiracy beliefs demonstrated high temporal stability. However, perceived conspiracy norms at Time 1 predicted increases in conspiracy beliefs at Time 2, even after accounting for baseline beliefs. Reciprocal effects were observed but were smaller in magnitude. Normative effects for paranormal beliefs were substantially weaker. These findings suggest that even relatively stable belief systems remain partially responsive to perceived social consensus, highlighting the potential value of normative feedback interventions aimed at correcting exaggerated perceptions of conspiratorial consensus.

1. Introduction

When individuals face uncertainty about what is true, they often rely on social information to guide belief formation. Perceptions of what most other people think and believe, *perceived descriptive norms* (i.e., beliefs about what others do or believe, as distinct from *injunctive norms*, which reflect what others approve of), provide a powerful heuristic cue when evaluating one's own behaviours and attitudes (Dempsey et al., 2018; Dempsey & Wood, 2025; McDonald & Crandall, 2015). However, descriptive norms' role in broader belief systems, particularly ideological and epistemic beliefs concerning the interpretation of social reality, remains less clearly understood. These belief systems differ from behavioural outcomes in that they involve abstract judgements about reality, truth, and social meaning. It remains unclear whether perceived descriptive norms predict change in strongly held beliefs, particularly those that are socially shared or ideologically embedded, or reflect projection and false consensus processes.

Belief in conspiracy theories represents one of the most widely studied contemporary belief systems (Enders et al., 2021). These beliefs involve powerful actors secretly coordinating events for malevolent purposes (Uscinski & Enders, 2023). Although conspiracy beliefs have been linked to traits, cognitive styles, and ideological orientations (Dagnall et al., 2015; Sutton & Douglas, 2020; Swami et al., 2016), they are also socially embedded and frequently discussed within interpersonal and online contexts (Douglas et al., 2019). Conspiracy beliefs show temporal stability (Williams et al., 2024), suggesting enduring belief systems. Emerging evidence, however, suggests that conspiracy beliefs may be sensitive to perceived social consensus (Alper et al., 2023; Cookson et al., 2021b, 2021a). Because conspiracy beliefs are both highly stable and socially visible, they provide a stringent test of whether perceived descriptive norms are associated with residualised change over time.

Paranormal beliefs provide a useful comparison domain for examining the generality of prospective normative associations across belief systems. Like conspiracy beliefs, paranormal beliefs involve claims about hidden or non-obvious aspects of reality and can function as broader interpretive frameworks through which individuals make sense of uncertainty and unusual experiences (Dagnall et al., 2017b; Hart

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https://doi.org/10.1016/j.paid.2026.114049
Received 31 March 2026; Received in revised form 18 August 2026; Accepted 20 August 2026
Available online 29 August 2026
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et al., 2013). Paranormal beliefs involve endorsement of phenomena that extend beyond conventional scientific explanation (Dagnall et al., 2026), such as extrasensory perception or psychokinesis (Tobacyk, 2004). Although paranormal beliefs can be socially discussed and culturally transmitted (Clark et al., 2025; Markovsky & Thye, 2001), they may rely more heavily on subjective experiences and personal interpretations than collective socio-political narratives (Dagnall et al., 2015, 2017b, 2025). Although conspiracy and paranormal beliefs share similarities in terms of relating to alternative non-conventional perceptions of reality, they each have their own unique characteristics and determinants (Dagnall et al., 2017a).

Compared with conspiracy beliefs, paranormal beliefs are typically less publicly contested and less prominent within mainstream social discourse. For example, research suggests that paranormal beliefs are more strongly associated with anomalous perceptual experiences (e.g., perceiving forces, energies, or 'seeing ghosts'), whereas conspiracy beliefs are more related to perceived connections between events in the social environment (Müller & Hartmann, 2023). As a result, perceived social consensus may carry less informational value for paranormal beliefs, potentially leading to weaker prospective normative associations than those observed for conspiracy beliefs. More broadly, these contrasts suggest that susceptibility to normative influence may depend partly on the extent to which belief systems are socially negotiated and publicly validated versus grounded in subjective or experiential interpretation.

A challenge in interpreting associations between perceived norms and belief endorsement is identifying the directionality of these relationships. Although norms may influence individuals' beliefs through informational and conformity processes, individuals may also infer social consensus from their own existing positions (Dalege et al., 2025). Such projection-based processes are consistent with false consensus or false uniqueness effects, in which the prevalence of beliefs is overestimated (Ross et al., 1977; Suls et al., 1988; Suls & Wan, 1987). As a result, cross-sectional associations cannot establish whether normative perceptions influence belief endorsement or whether individuals infer norms from their existing beliefs (Cookson et al., 2021b). Longitudinal designs that account for prior beliefs are necessary to examine whether perceived descriptive norms are associated with belief change over time, over and above projection-based explanations (Neighbors et al., 2006).

The present study examined whether perceived descriptive norms are associated with longitudinal change in conspiracy belief endorsement. Participants completed measures of conspiracy beliefs and perceived conspiracy norms at two time points approximately six weeks apart. We tested whether perceived norms at Time 1 accounted for residualised change in conspiracy beliefs at Time 2, controlling for baseline belief levels and key demographic covariates. We also examined the reciprocal relationship to address questions of directionality, whether initial conspiracy beliefs were associated with subsequent change in perceived norms. This design provides a stringent test of prospective normative associations by separating these effects from projection-based accounts. Parallel analyses were also conducted for paranormal beliefs to examine whether prospective normative associations generalised across belief systems that differ in social visibility and contestation.

We hypothesised that: (1) baseline (T1) conspiracy belief scores would be positively associated with conspiracy beliefs at Time 2 (T2), reflecting the expected temporal stability of conspiracy beliefs; (2) stronger perceived conspiracy belief norms at T1 would be associated with residualised increases in conspiracy beliefs at T2; and (3) reciprocal positive associations were expected to emerge between baseline conspiracy beliefs and subsequent perceived norms, although these effects were expected to be weaker than the prospective norms-to-beliefs pathway. Parallel exploratory analyses were also conducted for paranormal beliefs, with weaker associations expected given these beliefs may rely less heavily on perceived social consensus and more on subjective experiential interpretations than conspiracy beliefs.

2. Methods

2.1. Participants

A sample of 1430 UK adults (Mean age = 52.15 years; Range 18–79 years) from a larger-scale paranormal beliefs and wellbeing project were included in the present study. The sample was recruited via an online survey panel provider (Bilendi) and participants received modest financial reimbursement for completing each survey. In terms of gender, 682 participants identified as male, 743 female, 1 non-binary, and 4 participants declined to provide a response.

Participants completed measures online via Qualtrics at two time points separated by approximately six weeks (Time 1, August–September 2025; Time 2, October–November 2025). A six-week interval was selected to balance the need to capture short-term change in beliefs while minimising attrition and maintaining participant engagement, consistent with prior longitudinal work on belief stability (Williams et al., 2024). Only those participants who completed all items at both time points were included in the analyses.

The project was conducted in line with our institutional research ethics and governance guidance and the British Psychological Society Code of Human Research Ethics. Participant responses and identities were kept confidential through sampling using Bilendi's survey panels, a provider of participant survey samples approved by the host institution. The researchers did not process or store any personally identifiable information, with responses at timepoints matched via a random alphanumeric ID code which was removed from datasets upon completion of the surveys. The stored datasets for analysis were fully anonymised. All participants provided their explicit informed consent via an electronic consent form before completing the survey timepoints. Institutional research ethics approval was obtained from (Faculty of Health and Education Research Ethics and Governance Committee, Manchester Metropolitan University; Reference: 79268; Date of Approval: 9th April 2025).

2.2. Measures

Participants completed a series of demographic items and the 5-item version of the *Generic Conspiracist Beliefs Scale* (GCBS-5; Kay & Slovic, 2023), an established measure of global beliefs in conspiracies (Dagnall et al., 2023). Each item captures a key conspiracy belief (e.g., "*The government permits or perpetrates acts of terrorism on its own soil, disguising its involvement*"). Items were rated on a 5-point Likert scale (1 = definitely not true to 5 = definitely true) and totalled so that higher scores reflected stronger endorsement. Internal consistency was high at Time 1 ($\alpha = 0.87$) and Time 2 ($\alpha = 0.88$). Participants also completed a perceived norms version of the GCBS-5, with each item answered according to whether participants thought that the majority of other UK adults believed or didn't believe in each GCBS-5 conspiracy statement (binary yes/no response). The perceived norms items demonstrated high internal consistency at Time 1 ($\alpha = 0.83$) and Time 2 ($\alpha = 0.85$). Binary perceived norms items were used to ensure conceptual alignment with the GCBS-5 items (each conspiracy statement requiring a dichotomous endorsement) and to reduce cognitive load in belief–norm comparisons. Although binary indicators provide less granularity, they offer a direct test of whether individuals believe 'most others' endorse each belief.

The 26-item *Revised Paranormal Belief Scale* (RPBS: Tobacyk, 2004) was used to assess individual differences in paranormal beliefs. Each item captures a unique paranormal belief (e.g., "*A person's thoughts can influence the movement of a physical object*") and is rated on a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree). Scores across items were totalled for analysis. Whilst the RPBS contains several subscales, overall scores were analysed. Internal consistency was high at Time 1 ($\alpha = 0.96$) and Time 2 ($\alpha = 0.96$). Two items assessed perceived norms regarding whether the majority of UK adults (>50%) had experienced paranormal events or possessed paranormal abilities.

2.3. Analysis

Analyses were conducted using standard ordinary least squares regression models using SPSS v.29. To examine whether perceived norms were associated with longitudinal change in beliefs, we used hierarchical regression in which demographic covariates (age, gender) were entered in the first step, Time 1 belief scores were entered in the second step, and perceived norms at Time 1 were entered in the final step to investigate their associations with Time 2 beliefs. Reciprocal models were estimated to assess directionality by predicting Time 2 perceived norms from Time 1 norms and Time 1 belief scores. This enabled comparison of the relative strength of the norms-to-belief versus belief-to-norm pathways. Multicollinearity was assessed using variance inflation factors (VIF) for both models, with all values below 1.7 (most values being close to 1), indicating no concerns regarding shared variance among predictors.

3. Results

3.1. Preliminary analyses

Descriptive statistics and correlations are presented in Table 1. Conspiracy beliefs and perceived conspiracy norms were moderately-to-strongly correlated at Time 1 ($r = 0.63$, $p < .001$) and at Time 2 ($r = 0.64$, $p < .001$). Paranormal beliefs and corresponding perceived norms were moderately correlated ($rs = 0.27$–0.45, $ps < 0.001$). Paired-samples *t*-tests indicated that participants perceived conspiracy beliefs to be slightly more prevalent among other UK adults than they personally endorsed at both Time 1, $t(1429) = -3.31$, $p < .001$, $d = 0.09$, and Time 2, $t(1429) = -4.17$, $p < .001$, $d = 0.11$. The participants therefore demonstrated a small but reliable overestimation of the prevalence of conspiracy beliefs. Both conspiracy beliefs ($r = 0.80$) and paranormal beliefs ($r = 0.89$) demonstrated high temporal stability across the six-week interval. These strong cross-wave associations indicate that both belief systems were highly stable across waves, leaving relatively limited residual variance available for prospective associations with perceived norms. Although we refer to residualised change for simplicity, these findings reflect prospective associations rather than causal effects. Attrition analyses comparing participants who completed both waves with those who completed only Time 1 revealed several statistically significant baseline differences; however, effect sizes were uniformly small, suggesting limited attrition bias. Participants retained at Time 2 were slightly older and reported somewhat lower paranormal and conspiracy belief scores at baseline. Given the use of a quota-based survey panel, some attrition likely reflected quota closure procedures rather than participant withdrawal or disengagement.

3.2. Longitudinal associations between norms and conspiracy beliefs

Hierarchical regression analyses were conducted to test whether perceived descriptive norms were associated with residualised change in conspiracy beliefs (Table 2). In Model 1, age and gender accounted for a small proportion of variance in Time 2 conspiracy beliefs ($R^2 = 0.018$). In Model 2, Time 1 conspiracy beliefs were added and were strongly associated with Time 2 conspiracy beliefs, $\beta = 0.72$, $p < .001$. Age remained significantly associated with Time 2 conspiracy beliefs, whereas gender was no longer significant. This model explained 53.6% of the variance. In Model 3, perceived conspiracy norms at Time 1 were added. Perceived norms were significantly associated with residualised increases in conspiracy beliefs after controlling for baseline beliefs and demographic factors, $\beta = 0.22$, $p < .001$, and explained an additional 2.7% of variance ($\Delta R^2 = 0.027$, $p < .001$), representing a modest but statistically significant increase in explained variance. Age but not gender was significantly associated with Time 2 conspiracy beliefs in the final model. Thus, perceived descriptive norms were associated with longitudinal change in conspiracy belief endorsement over and above prior beliefs and demographic factors.

3.3. Reciprocal effects between beliefs and norm perceptions?

To examine directionality, the reverse model was estimated, predicting Time 2 perceived conspiracy norms from Time 1 norms and Time 1 conspiracy beliefs. Time 1 perceived norms were strongly associated with Time 2 perceived norms, $\beta = 0.58$, $p < .001$. Importantly, Time 1 conspiracy beliefs were also associated with increases in perceived norms, $\beta = 0.17$, $p < .001$, accounting for an additional 1.6% of variance ($\Delta R^2 = 0.016$). Although reciprocal associations were observed, the prospective association between perceived norms and subsequent conspiracy beliefs ($\beta = 0.22$; $\Delta R^2 = 0.027$) was larger than the reverse path from beliefs to perceived norms ($\beta = 0.17$; $\Delta R^2 = 0.016$), consistent with a modest asymmetry favouring a normative influence interpretation.

Table 2
Hierarchical regression analyses for Time 2 conspiracy beliefs.

Variable	Model 1 β	Model 2 β	Model 3 β
Age	−0.13***	−0.06***	−0.06***
Gender	−0.06*	−0.02	−0.03
T1 Conspiracy Beliefs		0.72***	0.58***
T1 Conspiracy Norms			0.22***
Model fit	R^2 = 0.018***	R^2 = 0.536*** (ΔR^2 = 0.519***)	R^2 = 0.563*** (ΔR^2 = 0.027)

Note: Standardised coefficients (β) are reported. ΔR^2 reflects change from the previous model.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

Table 1
Means, standard deviations, and intercorrelations among study variables ($N = 1430$).

#	Variable	M	SD	1	2	3	4	5	6	7	8	9	10
1	Conspiracy Beliefs T1	14.63	4.86	–									
2	Conspiracy Beliefs T2	14.69	4.99	0.80***	–								
3	Conspiracy Norms T1	1.96	1.88	0.63***	0.60***	–							
4	Conspiracy Norms T2	1.99	1.92	0.57***	0.64***	0.69***	–						
5	Paranormal Beliefs T1	85.55	34.82	0.55***	0.52***	0.36***	0.32***	–					
6	Paranormal Beliefs T2	85.25	34.54	0.51***	0.56***	0.34***	0.33***	0.89***	–				
7	Paranormal Experience Norm T1	0.26	0.44	0.29***	0.31***	0.35***	0.30***	0.45***	0.43***	–			
8	Paranormal Ability Norm T1	0.09	0.29	0.19***	0.21***	0.26***	0.24***	0.28***	0.27***	0.43***	–		
9	Paranormal Experience Norm T2	0.24	0.43	0.26***	0.30***	0.25***	0.36***	0.40***	0.41***	0.61***	0.33***	–	
10	Paranormal Ability Norm T2	0.08	0.28	0.23***	0.26***	0.25***	0.34***	0.27***	0.28***	0.34***	0.46***	0.45***	–

Note: Values are Pearson correlations.
*** $p < .001$.

3.4. Longitudinal prediction of paranormal beliefs

Parallel analyses were conducted for paranormal beliefs (Table 3). In Model 1, age and gender accounted for a small proportion of variance in Time 2 paranormal beliefs ($R^2 = 0.057$). In Model 2, Time 1 paranormal beliefs were strongly associated with Time 2 paranormal beliefs, $\beta = 0.88$, $p < .001$. In Model 3, perceived norms regarding the prevalence of paranormal experiences and paranormal abilities were entered simultaneously. Perceived norms that most adults have had a paranormal experience were associated with small residualised increases in paranormal beliefs over time, $\beta = 0.04$, $p = .004$. In contrast, perceived norms that most adults possess paranormal abilities were not a significant predictor, $\beta = 0.01$, $p = .66$. Overall, normative effects were substantially smaller for paranormal beliefs than for conspiracy beliefs.

4. Discussion

This study examined whether perceived descriptive norms are associated with longitudinal change in conspiracy beliefs, a belief system typically characterised by high temporal stability. Across a large two-wave sample, perceived conspiracy norms at Time 1 were prospectively associated with residualised increases in conspiracy beliefs six weeks later, even when accounting for baseline beliefs. Although this prospective association was modest, it was consistent, statistically robust, and meaningfully larger than the reciprocal pathway from initial conspiracy beliefs to subsequent norm perceptions. In contrast, normative effects for paranormal beliefs were substantially smaller and limited to perceived norms regarding paranormal experiences. The strong cross-wave associations indicate that only modest residual variance remained available for prospective associations with perceived norms. These findings suggest that relatively stable belief systems remain responsive to perceived social consensus.

Conspiracy beliefs are frequently linked to individual-level factors (Dagnall et al., 2015; Sutton & Douglas, 2020; Swami et al., 2016) and tend to be highly stable over time (Williams et al., 2024). However, stability does not imply belief rigidity. The present results suggest that perceived belief consensus functions as a social calibration signal, contributing to variation in personal beliefs over time even within relatively enduring belief systems. Conspiracy beliefs may not simply be fixed expressions of dispositional tendencies; rather, they are dynamically embedded within social environments. That conspiracy beliefs are changeable presents opportunities for interventional approaches, particularly through social norms feedback (Cookson et al., 2021a).

The reciprocal analyses further clarify the interpretation of these effects. Consistent with projection-based accounts (Krueger, 2007), initial conspiracy beliefs were also associated with subsequent increases in perceived norms, reflecting a degree of false consensus. However, the pathway from perceived norms to later beliefs was stronger than the reverse pathway, indicating modest asymmetry consistent with normative influence rather than purely projection-based explanations. This pattern aligns with informational social influence processes whereby perceived consensus signals the plausibility or legitimacy of beliefs (Deutsch & Gerard, 1955). These findings reinforce the value of longitudinal designs, given that cross-sectional correlations between norms and beliefs cannot disentangle social projection from social influence. The reciprocal effects observed here suggest that projection and normative influence likely operate alongside one another rather than representing competing explanations.

Whereas perceived norms concerning conspiracy beliefs were reliably associated with belief change, normative effects for paranormal beliefs were small and limited to perceptions that others had experienced paranormal events. Perceived norms regarding paranormal abilities were not associated with belief change. One possible interpretation is that susceptibility to normative influence varies across belief domains depending on their social visibility, collective negotiation, and relevance to shared social realities. Conspiracy beliefs are frequently discussed within politicised and socially networked environments (Douglas et al., 2019), where perceived consensus may serve as an important cue regarding the credibility and legitimacy of contested claims (Cookson et al., 2021b). Conspiracy beliefs are also frequently shared, debated, and reinforced within online and interpersonal networks, potentially increasing the social salience of perceived consensus cues (Douglas et al., 2019; Enders et al., 2023).

In contrast, paranormal beliefs may be transmitted more passively through cultural exposure, personal anecdotes, or subjective interpretation of unusual experiences, making perceived consensus less central to belief validation (Dagnall et al., 2025; Markovsky & Thye, 2001). Belief systems that are more publicly contested, socially visible, and tied to group-based narratives, such as conspiracy beliefs, may be especially susceptible to normative calibration processes because perceived consensus provides informational validity cues, signals social legitimacy, and reinforces group-based identity processes under conditions of uncertainty (Deutsch & Gerard, 1955; Hogg, 2000; McDonald & Crandall, 2015). Future research could examine more directly whether factors such as public contestation, perceived falsifiability, social identity relevance, or communicative visibility influence the extent to which belief systems are responsive to perceived descriptive norms.

The study's findings have broader implications for understanding how such beliefs change over time. Belief systems that are often treated as stable and dispositional may be sensitive to perceived descriptive norms. From a social influence perspective, misperceptions of consensus could incrementally reinforce beliefs over time (Dempsey et al., 2018). Although the short-term ΔR^2 of 2.7% is modest, such normative effects may accumulate over longer periods, particularly within echo-chamber environments where perceived consensus is repeatedly reinforced. Other factors could also be important influences over time, such as the type of social norm, an individual's need to feel unique, or level of social identification with the normative reference group (Cookson et al., 2021b; Dempsey & Wood, 2025; McDonald & Crandall, 2015; Rinker & Neighbors, 2014). Even small effects may be consequential in socially networked environments where perceived consensus is repeatedly encountered and reinforced.

Contemporary social media environments may further amplify these processes by increasing the visibility and perceived prevalence of conspiratorial content (Bunker & Varnum, 2021; Enders et al., 2023). Algorithmically curated online environments can facilitate repeated exposure to apparent consensus, potentially strengthening false consensus perceptions and inflating the perceived social legitimacy of conspiratorial beliefs (Bunker & Varnum, 2021). In this context, descriptive norms may become especially influential during periods of uncertainty or societal crisis, such as pandemics, political instability, or public health emergencies, where individuals actively seek informational cues regarding what others believe (Dempsey et al., 2018). Even modest normative effects may therefore have broader societal

Table 3
Hierarchical regression analyses for Time 2 paranormal beliefs.

Variable	Model 1 β	Model 2 β	Model 3 β
Age	−0.19***	−0.04**	−0.03**
Gender	0.12***	0.01	0.01
T1 Paranormal Beliefs		0.88***	0.86***
T1 Experience Norm			0.04**
T1 Ability Norm			0.01
Model fit	R^2 = 0.057***	R^2 = 0.789*** (ΔR^2 = 0.731***)	R^2 = 0.790*** (ΔR^2 = 0.002*)

Note: Standardised coefficients (β) are reported. ΔR^2 reflects change from the previous model.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

implications if repeated exposure to perceived consensus incrementally reinforces conspiratorial belief systems over time. These findings highlight the potential value of social norms interventions aimed at correcting exaggerated perceptions of conspiratorial consensus (Cookson et al., 2021a).

Several limitations with this study need consideration. First, although the longitudinal design strengthens inference relative to cross-sectional approaches, the two-wave design does not permit full cross-lagged panel modelling of belief dynamics. Moreover, it cannot disentangle stable between-person differences from within-person change processes, limiting conclusions about dynamic belief change and causal directionality. Although baseline-adjusted regression provides a stringent test of prospective associations, it does not establish causal relationships, and more advanced longitudinal designs (e.g., cross-lagged panel models) would provide stronger tests of directionality. Second, the six-week interval captures shorter-term change and cannot address longer-term developmental trajectories in beliefs or perceived norms. Third, perceived norms and belief endorsement were both assessed via self-report, which may introduce shared method variance. Fourth, the paranormal norm measures were binary indicators, potentially constraining variability and attenuating effect sizes. Fifth, conspiracy and paranormal beliefs demonstrated substantial temporal stability over time, limiting the amount of residual variance available to be explained by other factors, including perceived social norms.

There may also be important intermediate mechanisms and moderating factors that influence the relationship between perceived descriptive norms and belief systems. For example, future research could examine whether uncertainty reduction, perceived informational validity, or social identity processes mediate the association between perceived norms and conspiracy belief endorsement. Trait-level individual differences, such as need for uniqueness, thinking styles, intolerance of uncertainty, or identity-related factors, may also moderate the extent to which individuals are responsive to perceived consensus cues. Examining these processes directly would help clarify why some belief systems, and some individuals, appear more susceptible to normative calibration than others. Finally, although the asymmetry observed is consistent with a normative influence interpretation, definitive causal conclusions cannot be drawn. Experimental research manipulating perceived descriptive norms would provide a stronger test of causal directionality and help establish whether changes in perceived consensus directly produce subsequent changes in conspiracy belief endorsement. Such designs could also examine the durability of normative effects across repeated exposures and assess whether corrective normative feedback can reduce conspiracy belief endorsement over time.

In conclusion, this study demonstrates that perceived descriptive norms were prospectively associated with changes in conspiracy beliefs, above and beyond projection processes and strong baseline stability. Although normative effects were smaller and more selective for paranormal beliefs, our overall findings provide evidence that norms are associated with belief calibration within socially embedded informational environments. These findings offer theoretical and applied insights, suggesting that perceptions of social consensus play a meaningful role in shaping belief systems that have significant personal and societal consequences.

CRediT authorship contribution statement

Robert C. Dempsey: Writing – review & editing, Writing – original draft, Visualization, Validation, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Andrew Denovan:** Writing – review & editing, Conceptualization. **Kenneth Drinkwater:** Writing – review & editing, Project administration, Methodology, Investigation, Data curation. **R. Stephen Walsh:** Writing – review & editing. **Neil Dagnall:** Writing – review & editing, Software, Resources, Project administration, Methodology, Investigation, Funding acquisition, Data curation, Conceptualization.

Funding

This work was supported by a BIAL Foundation grant awarded to the first and last authors [grant number PT/FB/BL-2024-106]. The funder had no role or influence in the conduct of the study or in the preparation of this article.

Declaration of competing interest

There are no known completing financial interests or personal relationships that could influence the work reported in this paper.

Data availability

Data will be made available on request.

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