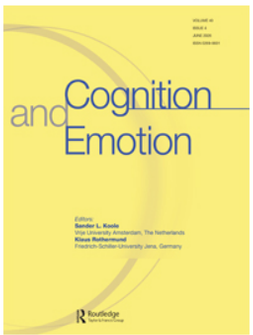

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Sad but true: how emotions and political ideology shape perceptions of information

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ABSTRACT

Political and economic challenges, amplified by social media algorithms, are increasingly polarising how people receive and evaluate information. This study examines how political views and immediate emotional reactions shape the perceived trustworthiness of information. We conducted a preregistered laboratory experiment in which participants evaluated politically charged statements while their emotional responses were assessed in real time. Facial expressions were recorded to identify seven discrete emotions, while galvanic skin response and heart rate were measured to capture physiological arousal and reaction intensity. Consistent with expectations and prior research, we observed a clear political confirmation bias: ideologically congruent statements were rated as more trustworthy, with the strongest effect among the most conservative participants. Increases in anger and sadness were positively associated with trust ratings across the sample, whereas joy was linked to reduced confirmation bias. Among conservatives, multiple emotions predicted overall trust and the extent of confirmation bias. Machine-learning models incorporating physiological data likewise identified anger and joy as the most informative emotional predictors; however, physiological measures did not improve predictive performance beyond the baseline model, contrary to our expectation. By integrating behavioural and real-time physiological measures, the findings highlight how emotional and cognitive processes interact to shape trust in political information.

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Introduction

Pervasive social media algorithms and far-reaching economic and political challenges define our era. Although information is more accessible than ever, its interpretation has become increasingly polarised. Misinformation specifically designed to manipulate opinions and voting decisions based on biased or inaccurate premises has influenced election results in the US and Europe (Allcott & Gentzkow, 2017; Grinberg et al., 2019; Thaler, 2024). Emotionally and morally charged messages thrive on social media, resonating strongly with like-minded individuals and deepening political divides (Brady et al., 2017). Critically, fake news, often simplistic in content but strategically designed to provoke emotional reactions, spreads more rapidly and widely than factual news (Horne & Adali, 2017; Vosoughi et al., 2018). Recent evidence shows that populist politicians and alternative media can systematically mobilise anger and other strong emotions to polarise discourse and

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The experiment was conducted at the Aalto Behavioral Laboratory, Aalto University, Finland.

disseminate ideologically motivated misinformation (Humprecht et al., 2024).

While provoking emotional reactions can help increase visibility on social media platforms, little is known about how individuals' immediate emotional responses to polarising content shape their cognitive evaluation of its trustworthiness. Previous research has established that individuals are biased toward accepting information that aligns with their pre-existing beliefs (Nickerson, 1998). This tendency is often explained by theories of motivated reasoning (Kunda, 1990; Taber & Lodge, 2006) and reflects a broader pattern known as confirmation bias, whereby individuals are more likely to accept information that aligns with their existing beliefs and to scrutinise or reject opposing views. The evidence on harnessing emotions to spread misinformation raises the question of how emotions interact with confirmation bias. Could emotional responses amplify, override, or modulate this bias?

The affect-as-information framework (Clore, 1992; Schwarz, 2012; Schwarz & Clore, 1983, 1996) proposes that emotions serve as information during judgment and decision-making processes. That is, people may use their affective states to gauge whether information is trustworthy, particularly when content is ambiguous or politically charged. Yet empirical research on how individuals' immediate emotional responses to polarising content influence trust evaluations is scarce, and existing studies have largely relied on self-reported assessments of specific emotions (Dickinson, 2025; Martel et al., 2020). Using physiological measurements in a laboratory experiment, our study complements this research by measuring affective responses during information processing rather than before or after it. This approach allows emotional reactions to be recorded in real time and captures a wide range of emotions unobtrusively without interrupting the task or extending the duration of the experiment.

Our behavioural experiment was designed to examine how emotions evoked by politically polarising content interact with ideological orientation to shape perceptions of trust. In the experiment, participants evaluated short excerpts – both true and false – without knowing their origins. The excerpts addressed polarising topics, such as economic policy, immigration, and climate change. While participants rated the trustworthiness of each excerpt, we recorded their physiological responses. Changes in skin conductance and heart rate were measured as indicators of arousal and intensity of emotional engagement. Additionally, we videotaped participants' faces during the experiment and used facial expression analysis software to detect subtle changes and patterns indicative of their emotional reactions. This method provides real-time estimates of seven discrete emotions – anger, contempt, disgust, fear, joy, sadness, and surprise – enabling the examination of both distinct and potentially co-occurring affective states. Combining arousal measures with emotion-specific indicators allowed us to capture spontaneous emotional responses at the moment of exposure to politically charged content, providing valuable insights into the affective processes that may influence trust judgments. This framework also allowed us to examine whether and how immediate affective reactions interact with individuals' political confirmation bias.

wOur design distinguishes between momentary emotional reactions, captured via physiological and facial-expression measures during stimulus exposure, and broader affective tendencies, assessed through self-report outside the task. Specifically, participants completed the Affect Intensity Measure (AIM; Larsen, 1984) prior to the main experiment, indexing stable individual differences in affect intensity, and the Positive and Negative Affect Schedule (PANAS; Thompson, 2007; Watson et al., 1988) after task completion, in which participants rated the extent to which they had experienced different emotions during the past few days. These self-report measures do not assess stimulus-specific emotional responses but instead provide complementary information about participants' general emotional disposition and mood, allowing us to examine whether observed physiological effects are independent of broader affective tendencies.

To account for individual differences in conservatism, we measured participants' ideological orientation using two approaches: a traditional single-item self-assessment and the 13-item Social and Economic Conservatism Scale (SECS; Everett, 2013), adapted and validated in the Finnish political context in a pilot study (see Supplementary Methods). This multidimensional scale captures variation in both social and economic conservatism, allowing for a more fine-grained analysis of ideological orientation than a single-item measure. To control for other psychological and ideological factors that might influence trust evaluations, participants also completed questionnaires measuring general positive and negative affect (Larsen, 1984;

Thompson, 2007), as well as populist attitudes (Akkerman et al., 2014; Schultz et al., 2018).

Drawing on the affect-as-information framework (Clore, 1992; Schwarz, 2012; Schwarz & Clore, 1983, 1996) and research on motivated reasoning (Taber & Lodge, 2006), we tested whether immediate emotional responses to politically polarised information interact with participants' ideological orientations in shaping perceived trustworthiness. As a foundational check, we expected that (1) true information would be rated as more trustworthy than false information, reflecting basic sensitivity to factual accuracy. Building on this, we hypothesised that (2) ideologically congruent statements would be judged as more trustworthy than incongruent ones, consistent with political confirmation bias. We further hypothesised that (3) discrete emotional reactions would be associated with trust ratings, particularly among individuals with stronger ideological leanings. Finally, we examined whether (4) incorporating emotional response variables captured through physiological and facial expression data improved the predictive accuracy of trustworthiness ratings beyond baseline models.

Our results supported these expectations: higher levels of conservatism were associated with increased trust in pro-conservative statements, and specific emotional responses were significantly related to trustworthiness ratings. These associations were particularly pronounced among the most conservative participants. Taken together, the findings highlight how ideological orientation and affect interact in shaping evaluations of politically charged information.

Related literature

Our study builds on three strands of research: how political ideology shapes trust in information, how emotional responses influence information processing, and how these two dimensions interact in polarised contexts. While each of these areas has received attention independently, few studies have examined how immediate emotional reactions interact with ideological orientations to shape perceptions of trustworthiness. By integrating these perspectives and capturing emotional responses as they unfold, our study contributes to a more nuanced understanding of the psychological mechanisms underlying political information processing in polarised environments.

Confirmation bias reflects motivated reasoning, in which individuals process information in ways that support their ideological preferences (Redlawsk, 2002; Taber & Lodge, 2006; Thaler, 2024). In political contexts, this tendency is especially salient because attitudes are tied to identity, values, and affective evaluations. Research suggests that conservatism may be particularly shaped by motivational needs, such as uncertainty avoidance or threat sensitivity, which can heighten responsiveness to ideologically congruent or emotionally evocative information (Jost et al., 2018). Exposure to congruent content may reinforce existing attitudes, while discordant information is often dismissed or met with skepticism (Garrett et al., 2016; Stroud, 2010). Moreover, partisan identity shapes not only what individuals believe but whom they consider credible. People often align their opinions and beliefs with peer groups (Asch, 1955; Cialdini & Goldstein, 2004; Muthukrishna et al., 2016) and are more likely to accept information from politically ingroup sources (Earle & Hodson, 2022; Iyengar et al., 2019). Affective polarisation can further reduce belief accuracy by increasing trust in misinformation that aligns with one's partisan group, even among politically sophisticated individuals (Jenke, 2024). Similarly, Garrett et al. (2016) found that consuming ideologically slanted news fosters false but identity-consistent beliefs, deepening partisan divides. Politically polarised environments thus produce divergent perceptions of truth, particularly on contentious issues such as immigration or climate change. Such divergence is also observable at the neural level: recent neuroimaging research examining responses to immigration-related political narratives reports polarised neural activity even among individuals with relatively subtle ideological differences (Zebarjadi et al., 2026). Our study builds on this literature by examining how ideological congruence influences trust judgments and by testing whether these biases are shaped or amplified by individuals' emotional responses.

According to the affect-as-information framework (Clore, 1992; Schwarz, 2012; Schwarz & Clore, 1983, 1996), people use their affective states as a source of information when evaluating external stimuli, particularly under uncertainty. This framework is conceptually distinct from the Affect Infusion Model (AIM; Forgas, 1995, 2013), which emphasises how mood can permeate judgment processes depending on the complexity and openness of the task. Both perspectives highlight the influence of affect in cognition (Blanchette & Richards, 2010). The appraisal-tendency framework (Han et al., 2007; Lerner & Keltner, 2000) complements these perspectives by proposing that

discrete emotions, such as anger, fear, and sadness, influence judgment through their associated cognitive appraisals (e.g. certainty, control, responsibility), which in turn shape how individuals process subsequent information.

Political messages, particularly those that are emotionally or morally charged, frequently evoke affective responses that can serve both as informational cues and as motivational forces that guide cognitive processing. Prior research has highlighted distinct roles for specific emotions: anger is often associated with heuristic and ideologically congruent evaluations, whereas fear and anxiety may encourage more critical engagement (Brader & Marcus, 2013; Lerner & Tiedens, 2006; MacKuen et al., 2010; Suhay & Erisen, 2018; Weeks, 2015). Sadness, in turn, has been linked to heightened attention to detail and greater information-processing effort (Han et al., 2007; Lerner et al., 2004). Recent media research points to a "sadness bias" in political news sharing: news that elicited sadness were more likely to be shared on Facebook, possibly because they invite collective reflection or emotional alignment without provoking social conflict (De León & Trilling, 2021).

Moral emotions such as anger and disgust are also shaped by social identity, often producing stronger reactions toward out-group members (Lopez et al., 2021). Expressions of moral disgust often contain elements of both disgust and anger, suggesting that these emotions may jointly contribute to politically charged evaluations (van der Eijk & Columbus, 2023). Disgust, a withdrawal-oriented emotion that evolved to protect against physical contamination and moral transgression, and higher disgust sensitivity has been linked to conservative values emphasising purity and social order (Inbar et al., 2009; Tybur et al., 2009).

In a recent study, Dickinson (2025) examined the role of emotions in confirmation bias using self-reported ratings of specific emotions collected at discrete points during a survey. The findings showed that dissonant information triggered stronger negative emotions and led to weaker belief adjustments. Similarly, Martel et al. (2020) explored the role of emotion in susceptibility to fake news, finding that individuals experiencing intense emotions were more likely to believe fake news, while their ability to discern real news remained unaffected. Martel et al. (2020) used the Positive and Negative Affect Schedule (PANAS; Thompson, 2007; Watson et al., 1988), a self-report tool measuring broad dimensions of affect, to assess participants' emotional states. In both studies, participants rated their emotions either before and after information exposure (Dickinson, 2025), or prior to viewing the headlines (Martel et al., 2020).

In contrast to the studies by Dickinson (2025) and Martel et al. (2020), our study captures emotional reactions in real time using physiological data, specifically facial expression analysis. While self-reports can be affected by experimenter demand effects and conscious bias, our approach captures a wider range of discrete emotions, such as anger, joy, sadness, and fear, at the precise moment they are elicited. This provides a more immediate and objective assessment of affective responses during information processing. Bakker et al. (2021) similarly demonstrated that political rhetoric evokes strong emotional reactions, measured through both self-reports and physiological indicators. Their findings show that these reactions vary across individuals and political issues, underscoring the emotionally charged nature of political communication. Unlike their focus on the link between affective reactions and opinion change, our study examines how discrete emotions shape trust in political information.

By capturing emotional responses *at the moment of exposure to politically polarising content*, we examine not only how individuals react emotionally to political messages, but also how these reactions, in interaction with political ideology, shape trust judgments about the information itself. This interplay has not been systematically addressed in previous research.

Methods

Research design and sample

For the main experiment, we created 64 different statements, organised into 32 matched pairs that addressed the same subject area but differed in truth value. Each pair consisted of one true and one false version. True statements were adapted from reputable news sources and research reports, and false versions were generated by subtly altering factual details. The topics covered politically divisive issues, such as immigration, taxation, climate policy, and welfare. Approximately half of the statements favoured conservative political views, while the other half favoured liberal political views.[1] We then formed four subsets of 32 statements, ensuring that no pair (i.e. the true and false version of the same statement) appeared within the same subset. Each subset included a balanced mix of conservative and

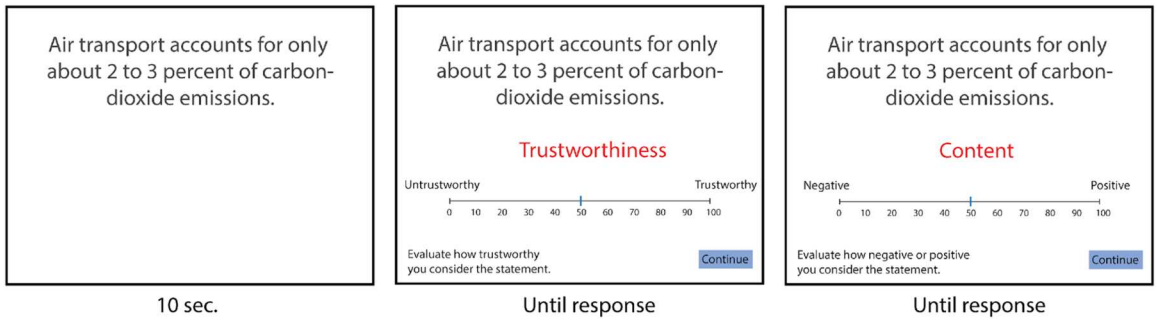

Figure 1. Trial structure and timing.

Note: Each trial comprised three parts. First, a statement was displayed for 10 s. Next, participants rated its trustworthiness and then how positive or negative they found its content (i.e. valence). There was no time limit for the evaluations. The slider started at 50, but participants had to move it before proceeding to prevent automatic responses.

liberal content. Every participant evaluated one of these randomly assigned subsets Figure 1.

Each statement was displayed on the screen for 10 s. Immediately afterward, participants rated its trustworthiness, followed by its emotional valence.[2] There were no time limits for these ratings.

Experimental procedure

Sixty-two participants (19 male, 40 female, three undisclosed) took part in the study. The target sample size was determined by a power analysis of pilot data (see Supplementary Methods), indicating a minimum of 50 participants for 80% and 65 for 90% power. Most of the participants were young adults (M = 31.7, SD = 10.6). A few days before the main experimental session, participants filled out an online questionnaire, which measured their affect intensity (Larsen, 1984) and basic demographics (age, gender, education). To ensure anonymity, participants created a unique participant code during this phase, which they used throughout the study.

We conducted the experiment at the Aalto Behavioral Laboratory (Aalto University, Finland). All participants were studied individually. After being welcomed and briefed, each participant was directed to a separate research room**,** where they received written instructions and provided informed consent. They then attached ECG electrodes to their skin and GSR sensors to the forefinger and middle finger of their non-dominant hand (see Supplementary Methods). The ECG and GSR data were recorded using MegaWin (ME6000, MegaElectronics), with data collected at 1,000 samples per second. Participants were informed that their faces would be videotaped and were instructed to keep their faces directed toward the camera and to avoid covering any part of them with their hands during the experiment. Once signal quality was confirmed, the experiment began with brief instructions and a practice trial.

After completing the task, participants filled out a questionnaire about their feelings during the experiment, along with questionnaires measuring positive and negative affect (Thompson, 2007; Watson et al., 1988), conservatism (Everett, 2013), populistic attitudes (Akkerman et al., 2014), reactionism (Capelos et al., 2025), and political affiliation. Participants received a fixed fee of 20 euros and reimbursement for travel expences. The session lasted approximately 60 min. The study was approved by the Ethics Committee of the University of Helsinki and conducted in accordance with the Declaration of Helsinki. The design was preregistered on the Open Science Framework (https://osf.io/y9uta).

Variables and measures

We conducted a comprehensive assessment of participants' cognitive and emotional reactions to the decision-making task by measuring a wide range of variables, including self-report measures, biometric measures, and demographic variables. This section describes in detail the variables measured and how they were analyzed, which is crucial for interpreting the findings of our study.

Trustworthiness of information

The primary dependent variable was the rating of perceived trustworthiness of each statement. Participants

were instructed to evaluate how trustworthy they considered each statement and to indicate their judgment on a continuous scale ranging from 0 ("extremely untrustworthy") to 100 ("extremely trustworthy"). These ratings served as the main outcome variable and were intended to capture participants' subjective beliefs about the credibility of the information.

Independent variables

Our analysis included three primary independent variables. First, *truth* value indicated whether a statement was factually correct (1) or false (0). Second, we classified each statement by its ideological alignment, indicating whether it supported conservative or liberal views. This binary variable was coded as 1 for *pro-conservative* statements and 0 for pro-liberal statements, allowing us to assess how ideological congruence between participants and content shaped trust judgments.

Third, participants' ideological orientation was measured primarily with the 13-item Social and Economic Conservatism Scale (SECS; Everett, 2013), adapted for the Finnish context (see Supplementary Methods). This scale includes 13 items covering a range of conservative values, including abortion, the family unit, religion, traditional marriage, traditional values, patriotism, military and national security, business, welfare benefits, taxation, immigration, climate change mitigation, and gun ownership. Each item was rated on a 0–100 feeling thermometer (0 = very negative, 100 = very positive), and the average of these ratings formed a continuous measure of *conservatism*, with higher scores indicating stronger conservative leanings. As a secondary measure, participants located themselves on a 0–10 ideological scale (0 = very conservative, 10 = very liberal), which we reverse-coded so that higher scores represented greater conservatism.

Physiological response variables

To capture participants' immediate emotional reactions to each statement, we used two types of biometric measures: changes in facial expressions and physiological arousal recorded during statement presentation. Facial expressions were analyzed from video recordings using Affectiva software (version 4), which provides frame-by-frame estimates of seven discrete emotions – anger, contempt, disgust, fear, joy, sadness, and surprise – as well as two valence indicators (positive and negative). For each statement, *emotional response variables* were calculated as the difference between the average emotion score during the first five seconds of the 10-second reading period and the baseline, defined as the average emotional state in the few seconds immediately preceding stimulus onset. These scores represent continuous outputs from Affectiva's automated facial-expression analysis, which estimates the degree to which facial muscle movements correspond to prototypical patterns associated with specific emotions. They can take positive or negative values depending on whether the *facial-expression evidence value* increased or decreased relative to baseline.

Physiological arousal was assessed using electrocardiogram (ECG) and galvanic skin response (GSR). ECG data reflect changes in cardiovascular activity associated with both general arousal and regulatory processes. We used Kubios HRV Scientific (v. 4.0.0) to preprocess the ECG data and correct artifacts (Tarvainen et al., 2014, 2022). From the artifact-corrected time series, we calculated average heart rate (HR) and the root mean square of successive differences (RMSSD) during the 10-second reading periods, providing indicators of immediate physiological response. RMSSD is a widely used index of heart-rate variability that captures short-term physiological stress and emotional regulation. We also examined HR and RMSSD across longer intervals (entire stimulus time, beginning, end) to assess general physiological state throughout the task.

GSR data reflect changes in skin electrical conductivity associated with emotional arousal. We analyzed these data using Ledalab, a Matlab-based tool (Benedek, 2016; Benedek & Kaernbach, 2010), applying a low-pass filter (cutoff at 25 Hz) and smoothing over ten samples. Our focus was on phasic electrodermal activity (EDA peaks) triggered by the statements, quantified as base-to-peak responses within a 10-second window starting 0.5 s after stimulus onset and ending 0.5 s after offset. Positively skewed conductance values were normalised using a square-root transformation, following standard psychophysiological practice (Dawson et al., 2007; FeldmanHall & Shenhav, 2019). This normalisation process ensures a more homogeneous variance across the dataset, improving the suitability of the statistical models used in the analysis.

Recordings from four participants contained irreversible artifacts, caused, for example, by sensor malfunction, participant movement, or environmental

interference. These participants were therefore excluded from analyses that included HR or GSR variables.

Control variables

In addition to the primary variables of interest, we included a set of control variables to account for individual differences that could influence trustworthiness ratings independently of the experimental manipulations. These controls comprised (i) statement-level emotional valence ratings, (ii) task-related overconfidence, (iii) affective dispositions and recent mood (AIM and PANAS), (iv) additional ideological orientation measures (populism, pluralism, elitism, and reactionism), (v) political engagement and news-following measures, and (vi) demographic characteristics (age, gender, and education).

After rating the trustworthiness of each statement, participants assessed its emotional valence on a continuous 0–100 scale (0 = extremely negative, 100 = extremely positive). Although not a focal variable in our hypotheses, valence ratings were included in robustness checks to account for potential confounding effects of emotional tone on trustworthiness judgments.

Based on previous studies linking overconfidence to ideological extremism and political behaviour (Ortoleva & Snowberg, 2015; Stone, 2019), we measured participants' confidence in their task performance. After completing the main task, participants were asked to estimate how many statements they believed they had evaluated correctly when trustworthiness ratings below 50 were interpreted as "false" and ratings above 50 as "true". Following common approaches (e.g. Niederle & Vesterlund, 2007), overconfidence was calculated as the difference between perceived and actual task performance. In addition, participants rated how well they thought they had performed compared to other participants and to the average Finnish citizen.

We also measured participants' emotional dispositions and recent mood states. Affect intensity was assessed using the 40-item Affect Intensity Measure (AIM; Larsen, 1984), which describes emotional reactions to common life situations (e.g. "When I am excited over something, I want to share my feelings with everyone"). Participants rated the frequency of such experiences on a 1–6 scale (1 = never, 6 = always). The AIM yields four subscales: positive affectivity, positive intensity, negative intensity, and negative reactivity (see Weinfurt et al., 1994; Williams, 1989). General affect was assessed using the 10-item short-form Positive and Negative Affect Schedule (PANAS; Thompson, 2007; Watson et al., 1988). Participants rated how strongly they had experienced each of ten affective states over the past few days (1 = very little or not at all, 5 = very much). Positive affect items included active, determined, attentive, inspired, and alert; negative affect items included afraid, upset, hostile, ashamed, and nervous.

To assess ideological orientations beyond conservatism, we used the 14-item populism scale (Akkerman et al., 2014), which includes items such as "Diversity limits my freedom", rated from 1 (completely disagree) to 5 (completely agree). The scale covers three dimensions: populism, pluralism, and elitism. Participants also completed the 5-item reactionism scale (Capelos et al., 2025), which includes items such as "If only we could live today as we used to", rated on a 1–7 scale. Political affiliation was measured by participants' reported votes in the most recent Finnish parliamentary (2019), municipal (2021), and provincial (2022) elections. We constructed a cumulative indicator ("Voted for left/green"), ranging from 0 to 3, reflecting the number of these elections in which participants reported voting for the Left Alliance or the Greens, two parties positioned close to each other in the left–liberal quadrant of the two-dimensional ideological space in Finland.

The post-experiment questionnaire further assessed political engagement and media use. Participants rated their interest in politics and social issues (1 = not at all interested, 4 = very interested) and their political knowledge (1 = very poor, 5 = very good). They also reported how frequently they followed political news (never, monthly, less than weekly, weekly, daily) and, since data collection began in late 2022, whether their news consumption habits had changed due to the war in Ukraine (i.e. whether they followed news related to politics and social issues much less often, a little less often, as often as before, a little more often, or much more often than before).

Finally, we included demographic controls – age, gender, and education level – in the behavioural models to account for potential confounding effects and ensure that the estimates reflected the influence of the main independent variables rather than broader sociodemographic differences.

Results

Descriptive statistics

Participant characteristics

Table 1 presents the key descriptive statistics for the 62 participants in our experiment.[3] The mean age was 31.73 years (SD = 10.64), and 44% held a bachelor's degree. On the traditional self-placement scale, participants rated their general conservatism relatively low, with a mean of 2.56 (SD = 1.96). To gain a more comprehensive understanding of conservatism, we used the Social and Economic Conservatism Scale (SECS), which measures conservatism across 13 different dimensions. The mean SECS score was 40.06 (SD = 15.61), with Figure 2 illustrating the distribution and highlighting meaningful intra-individual variation in ideological profiles. Notably, participants rated their economic conservatism significantly higher than their social conservatism (49.31 vs. 21.55, two-sided paired t-test, $p < 0.001$).

With respect to political attitudes, participants scored higher in pluralism (mean = 4.44) than in populism (mean = 2.86) or elitism (mean = 2.41), with both differences statistically significant (paired t-tests, $p < .001$). The mean reactionism score was 2.29 (SD = 0.77), indicating generally low levels of nostalgic or status quo-oriented beliefs. In terms of voting behaviour, 31% of participants reported voting for the Left Alliance or the Greens in none of the three most recent elections, 11% in one election, 40% in two elections, and 18% in all three elections.

Participants had a mean score of 3.64 (SD = 0.55) on the Affect Intensity Measure (AIM), which assesses the degree to which individuals experience emotions intensely. On the Positive and Negative Affect Schedule (PANAS), participants rated their positive affect significantly higher than their negative affect (3.02 vs. 2.07, two-sided paired t-test, $p < 0.001$). On average, participants rated 17.23 (SD = 3.85) statements correctly, but believed they had correctly rated slightly more, with a mean of 18.45 (SD = 5.47). Overconfidence, calculated as the difference between perceived and actual correct ratings, had a mean score of 1.23 (SD = 6.04).

Descriptive statistics for the emotional response variables are reported in Table S3. On average, change scores are close to zero across all emotions, reflecting that increases and decreases relative to baseline largely balance out in the aggregate. However, the standard deviations and observed ranges indicate substantial within-sample variability in facial-expression evidence during statement exposure. This dispersion suggests that while mean shifts are small, individual emotional reactions to statements vary considerably, providing meaningful variation for the statistical analyses.

Table 1. Descriptive statistics for participant characteristics ($N = 62$).

Variable	Mean	SD
Age	31.73	10.64
Bachelor's degree	0.44	0.50
Conservatism, general	2.56	1.96
SECS, all	40.06	15.61
SECS, factor 1	49.31	18.93
SECS, factor 2	21.55	16.54
Populism	2.86	0.53
Pluralism	4.44	0.43
Elitism	2.41	0.61
Reactionism	2.29	0.77
Voted for left/green	1.45	1.11
AIM, general	3.64	0.55
PANAS, positive	3.02	0.75
PANAS, negative	2.07	0.72
Correct ratings, real	17.23	3.85
Correct ratings, beliefs	18.45	5.47
Overconfidence	1.23	6.04

Notes: Sixty-two participants took part in the experiment; three did not disclose their gender. General conservatism was self-rated on a 0–10 scale (reverse-scored), and SECS scores ranged from 0 to 100. Populist attitudes were measured on a 1–5 scale, reactionism on a 1–7 scale, voted for left/greens on a 1–3 scale, AIM on a 1–6 scale, and PANAS on a 1–5 scale. Correct ratings ranged from 0 to 32, and overconfidence was calculated as the difference between perceived and actual correct ratings.

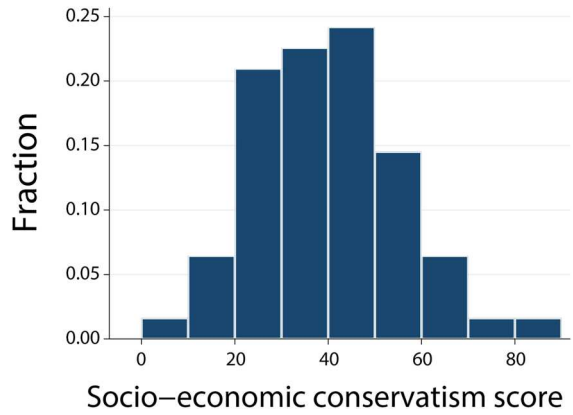

Figure 2. Distribution of Socio-Economic Conservatism Scale (SECS) scores.

Note: The histogram shows SECS scores for 62 participants (M = 40.06, SD = 15.61). Participants rated 13 conservative values – abortion, the family unit, religion, traditional marriage, traditional values, patriotism, military and national security, business, welfare benefits, taxation, immigration, climate change mitigation, and gun ownership – on a "feeling thermometer" scale from 0 (very negative) to 100 (very positive). Each participant's SECS score was calculated as the average rating across items.

The post-experiment questionnaire revealed that a considerable number of participants demonstrated a keen interest in politics and social issues. Specifically, 33% of respondents reported being "very interested" and understanding these areas at least "quite well". Moreover, the majority of participants, 84%, stated that they followed news related to politics and society at least once a week, with 52% doing so on a daily basis. We also inquired whether the ongoing situation in Ukraine had affected their news consumption: 31% reported an increase, while 18% reported a decrease. The findings suggest that a substantial proportion of the sample was highly engaged with politics and social issues.

Initial differences in trust ratings

Table 2 presents descriptive statistics for the trustworthiness ratings. Across all conditions, participants provided a total of 1,943 ratings, with a mean of 50.66 (SD = 26.22). This mean is close to the midpoint of the scale, but the relatively high standard deviation indicates a wide range of responses, reflecting diverse perceptions of trustworthiness across statements.

As expected, participants rated true statements as significantly more trustworthy than false statements, with mean ratings of 56.66 and 44.59, respectively (two-sided t-test, $p < 0.001$). This supports the hypothesis that people, on average, distinguish between factual and non-factual information in their trust evaluations. Statements were also classified based on their ideological alignment as either pro-conservative or pro-liberal. On average, participants rated pro-liberal statements as more trustworthy than pro-conservative statements (54.28 vs. 47.01; two-sided t-test, $p < 0.001$). Despite differences in mean values, the similar standard deviations across all categories indicate consistent variability in participants' ratings, reflecting diverse opinions regardless of statement type.

Table 2. Means and standard deviations of participants' ratings.

	Trustworthiness		Valence	
	Mean	SD	Mean	SD
All statements	50.66	26.22	49.31	29.66
True	56.66	25.94	50.29	30.14
False	44.59	25.10	48.33	29.15
Pro-conservative	47.01	26.43	46.15	29.48
Pro-liberal	54.28	25.53	52.49	29.51

Notes: Participants provided a total of 1,943 trustworthiness ratings: 977 for true statements and 966 for false; 967 for pro-conservative and 976 for pro-liberal statements. There were 1,870 ratings for valence: 934 for true statements and 936 for false; 938 for pro-conservative and 932 for pro-liberal statements.

We also examined valence ratings, which reflect the emotional tone participants attributed to the statements. True statements were rated slightly more positively than false ones (50.29 vs. 48.33), but this difference was not statistically significant ($p = 0.153$). However, pro-liberal statements were rated as significantly more positive than pro-conservative statements (52.49 vs. 46.15; $p < 0.001$).[4]

Predictors of trustworthiness ratings

First, we tested the basic expectations outlined in our preregistered analysis plan: (1) that true statements would be rated as more trustworthy than false ones, and (2) that participants would evaluate ideologically congruent statements as more trustworthy than incongruent ones, a pattern consistent with political confirmation bias. Each participant evaluated 32 political statements, producing a dataset with repeated measures nested within individuals. To appropriately account for this structure and capture both within- and between-subject variation, we employed a random-effects generalised least squares (GLS) panel model. This approach assumes that individual-specific effects are uncorrelated with the predictors and allows simultaneous modelling of statement-level and participant-level variables. Standard errors were clustered at the participant level to adjust for within-individual correlation and potential heteroscedasticity (see Moffatt, 2020).

Table 3 reports the results of the random-effects GLS panel regression models predicting trustworthiness ratings. Model 1 includes only the main experimental predictors: the truthfulness of the statement, its ideological alignment, the participant's SECS score, and the interaction between SECS and ideological alignment. Model 2 adds controls for broader political attitudes, including scores on the populism, pluralism, and elitism subscales (Akkerman et al., 2014), the reactionism scale (Capelos et al., 2025), and self-reported voting behaviour in recent elections. Model 3 further extends this specification by including psychological characteristics: affect intensity (AIM), general positive and negative affect (PANAS), and overconfidence. Finally, Model 4 incorporates demographic controls, including age, gender, and educational attainment.[5]

The results show a strong and consistent effect of truthfulness on trustworthiness ratings across all model specifications. The coefficients for truthfulness were positive and statistically significant in every

Table 3. Predictors of trustworthiness ratings, all participants.

	Model 1	Model 2	Model 3	Model 4
True	11.660***	11.657***	11.646***	11.485***
	(1.395)	(1.396)	(1.397)	(1.436)
SECS score	−0.126	−0.156	−0.191	−0.264
	(0.087)	(0.147)	(0.149)	(0.136)
Pro-conservative	−22.110***	−22.152***	−22.192***	−23.086***
	(3.118)	(3.104)	(3.105)	(3.164)
SECS score × Pro-conservative	0.385***	0.386***	0.386***	0.406***
	(0.072)	(0.072)	(0.072)	(0.072)
Constant	53.136***	42.716**	55.425**	66.497***
	(3.814)	(14.945)	(21.392)	(19.382)
Observations	1943	1943	1943	1881
Number of participants	62	62	62	60

Note: Regression coefficients for trustworthiness ratings were estimated using random-effects generalised least squares panel models. Robust standard errors, clustered by participant, are shown in parentheses. *True* is a binary variable (1 = true statement, 0 = false). *Pro-conservative* is a binary variable (1 = statement favoured conservative views, 0 = liberal). Conservatism was measured using the *SECS score* (0–100). Wald χ^2 tests indicated good overall model fit (model 1: 131.04, model 2: 40.08, model 3: 155.35, model 4: 181.15, all $p < 0.0001$). Significance levels: *** for $p < 0.01$ and ** for $p < 0.05$.

model, indicating that participants, on average, distinguished true from false statements. While the SECS score, a measure of general conservatism, did not independently predict trustworthiness ratings, its interaction with a binary indicator for pro-conservative statements was positive and statistically significant throughout. This interaction supports the presence of political confirmation bias: participants with higher SECS scores were more likely to rate ideologically aligned (i.e. pro-conservative) statements as trustworthy. Importantly, including control variables for participants' populist and political attitudes, affective traits, and background characteristics had only a modest effect on these relationships, underscoring the robustness of the main findings.[6] In addition, the coefficients for statement truthfulness, ideological alignment, and the interaction between SECS score and pro-conservative statements remained statistically significant and of comparable magnitude across all model specifications (Models 1–4 in Table 3).

We observed the same phenomenon when assessing trust disparities, calculated as the difference in trustworthiness ratings between true and false statements, and between pro-conservative and pro-liberal statements (see Figure S3). A positive trust-disparity value indicates that, on average, individuals assigned greater trustworthiness to true statements over false statements or to pro-conservative statements compared to pro-liberal ones. These analyses revealed that more conservative participants exhibited smaller differences in trust between true and false statements, and a stronger tendency to trust pro-conservative content over pro-liberal content. These patterns are consistent with our regression findings and support the presence of ideological asymmetries in trust evaluations.

Immediate emotions and political bias interaction

Following our preregistered analysis plan, we subsequently examined the association between emotional reactions and political confirmation bias across all participants. Specifically, we added each emotional-response variable and its interaction with the political confirmation bias term to the baseline model from Table 3 (Model 1), estimating separate models for each emotion. Results for anger, joy, and sadness are presented in Table 4. These analyses reveal nuanced relationships between emotional reactions, political orientation, and perceived trustworthiness of information.[7]

In the overall sample, increased expressions of anger and sadness were directly and positively associated with trustworthiness ratings, suggesting that these emotions are linked to greater trust. Substantively, however, these effects were modest: a one-unit increase in the facial-expression evidence value of anger or sadness corresponded to roughly a 0.3-point increase in trust. Given that the standard deviations of these change scores are approximately 3–4 units, a one standard deviation increase translates into only about a 1–1.5 point shift in perceived trustworthiness on the 0–100 trust scale. However, with the exception of joy, the interactions between emotional responses and political confirmation bias were not statistically significant. The negative and

Table 4. Emotional responses as predictors of trustworthiness ratings and political bias, models for anger, joy, and sadness, all participants.

	(1) Anger	(2) Joy	(3) Sadness
True	11.674***	11.641***	11.665***
	(1.393)	(1.394)	(1.392)
SECS score	−0.127	−0.126	−0.126
	(0.086)	(0.087)	(0.087)
Pro-conservative	−22.154***	−21.888***	−22.253***
	(3.154)	(3.075)	(3.114)
SECS score × Pro-conservative	0.384***	0.383***	0.388***
	(0.073)	(0.071)	(0.071)
Emotional response	0.292****	0.006	0.353**
	(0.081)	(0.151)	(0.168)
Emotional response × SECS score × Pro-conservative	−0.003	−0.018***	−0.001
	(0.002)	(0.006)	(0.003)
Constant	53.235***	53.159***	53.103***
	(3.811)	(3.813)	(3.826)
Observations	1943	1943	1943
Number of participants	62	62	62

Note: Regression coefficients for trustworthiness ratings were estimated using random-effects generalised least squares panel models. Robust standard errors, clustered by participant, are shown in parentheses. *True* is a binary variable (1 = true statement, 0 = false). *Pro-conservative* is a binary variable (1 = statement favoured conservative views, 0 = liberal). Conservatism was measured using the *SECS score* (0–100). *Emotional-response* variables were calculated as the difference between the mean emotion score during the first 5 s of statement presentation and the baseline mean, separately for each emotion. Significance levels: *** for $p < 0.01$ and ** for $p < 0.05$.

significant interaction of joy suggests that higher levels of this positive emotion might reduce political confirmation bias, acting as a buffer against entrenched partisan perspectives.

To assess whether emotional responses differentially affected trust in true versus false information, we extended the models reported in Table 4 by including interactions between emotional responses and statement truth value (see Table S12). The inclusion of emotional response × truth value interaction terms had minimal effects on the main results reported in Table 4. In particular, anger and sadness remained significantly associated with higher trustworthiness ratings for both true and false statements, and no statistically significant emotional response × truth value interactions were observed for these emotions. This pattern indicates that anger and sadness were related to increased trustworthiness judgments in a general manner rather than selectively increasing belief in false information. In the case of joy, the association between emotional response and political confirmation bias remained negative and statistically significant, and, interestingly, the emotional response also exhibited a significant negative interaction with truth value. That is, higher joy responses were associated with lower trustworthiness ratings for true statements especially.

Given that liberals did not exhibit a consistent political confirmation bias in their trust judgments (see Table S10), we conducted a separate analysis of the most conservative quartile of participants. The results, presented in Table 5, show that several emotional reactions were significantly associated with trustworthiness ratings within this group.[8] Disgust and sadness were positively associated with trust ratings, while fear showed a negative association. Contempt was also positively linked to trust. Substantively, these effects were considerably larger than in the overall sample. A one standard deviation increase in disgust corresponded to roughly a 4-point increase in trust on the 0–100 scale, while a similar increase in contempt was associated with close to a 10-point increase. By contrast, a one standard deviation increase in fear was linked to an approximately 4-point decrease in trust. Notably, both joy and contempt reduced political confirmation bias, suggesting that certain emotions may mitigate the influence of ideological alignment. In contrast, anger, sadness, and engagement were not significantly associated with this bias, highlighting heterogeneity in how specific emotions may shape the trust evaluations of individuals with conservative leanings.

The role of emotional reactions in predicting trustworthiness

The final goal in our preregistered analysis plan was to examine whether incorporating all physiological response variables improves the prediction of participants' trustworthiness ratings beyond the baseline models. To this end, we applied machine learning techniques to analyze data derived from facial expressions, heart rate, and galvanic skin response. This approach is particularly well suited to physiological data, as it can accommodate a large number of potentially correlated variables and identify the most informative predictors from high-dimensional input (see e.g. Camerer et al., 2017; Halko et al., 2021). Unlike traditional statistical models, which evaluate variables individually or in small sets, machine learning methods can consider all available physiological signals simultaneously, allowing for the detection of complex interactions that might otherwise go unnoticed. Our goal was to test

Table 5. Emotional responses as predictors of trustworthiness ratings and political bias, the most conservative participants.

	(2) Contempt	(3) Disgust	(4) Fear	(5) Joy	(6) Sadness	(7) Surprise
True	8.520**	8.410**	8.701**	8.870**	8.804**	8.664**
	(3.471)	(3.372)	(3.381)	(3.468)	(3.490)	(3.379)
SECS score	−0.096	−0.120	−0.126	−0.111	−0.112	−0.113
	(0.299)	(0.298)	(0.298)	(0.298)	(0.300)	(0.298)
Pro-conservative	−17.108*	−18.112*	−20.435**	−17.568*	−18.548**	−22.535***
	(9.381)	(9.514)	(10.156)	(9.065)	(9.271)	(7.818)
SECS score × Pro-conservative	0.348**	0.365***	0.398***	0.358***	0.375***	0.402***
	(0.136)	(0.137)	(0.147)	(0.132)	(0.135)	(0.115)
Emotional response	3.217***	1.563***	−0.695***	−0.182	0.643***	−0.136
	(0.834)	(0.318)	(0.179)	(0.201)	(0.212)	(0.139)
Emotional response × SECS score × Pro-conservative	−0.052***	0.008	−0.005	−0.016***	−0.003	0.020***
	(0.016)	(0.025)	(0.006)	(0.003)	(0.005)	(0.002)
Constant	50.299***	52.039***	52.725***	51.172***	51.108***	51.621***
	(17.794)	(17.789)	(17.845)	(17.786)	(17.885)	(17.945)
Observations	505	505	505	505	505	505
Number of participants	16	16	16	16	16	16

Note: Regression coefficients for trustworthiness ratings were estimated using random-effects generalised least squares panel models. Robust standard errors, clustered by participant, are shown in parentheses. *True* is a binary variable (1 = true statement, 0 = false). *Pro-conservative* is a binary variable (1 = statement favoured conservative views, 0 = liberal). Conservatism was measured using the *SECS score* (0–100). *Emotional-response* variables were calculated as the mean emotion score during the first 5 s of statement presentation minus the baseline mean, separately for each emotion. Significance levels: *** for $p < 0.01$ and ** for $p < 0.05$.

whether the inclusion of these response variables improves out-of-sample predictive performance and to determine which specific responses were most strongly associated with participants' trust evaluations.

We implemented a nested cross-validation procedure with LASSO-regularized logistic regression (see Supplementary Methods and Figure S1). To evaluate predictive performance using standard classification metrics and to avoid predictions beyond the bounded 0–100 trust scale, we modelled a binary version of the outcome variable. Specifically, the original trust ratings were coded as 1 if a participant's rating exceeded 50 and 0 otherwise, thereby distinguishing higher versus lower trust evaluations. We estimated two models. The baseline model included the same predictors as our main regression: statement truthfulness, ideological alignment, and participants' SECS scores. The extended model added all available physiological measures, including changes in facial expressions during the first 5 s after stimulus onset, heart rate and heart-rate variability, and changes in skin conductance during the full 10-second reading window.

We evaluated the predictive performance of our models using receiver operating characteristic (ROC) curves, which plot the trade-off between true positive and false positive rates when classifying high versus low trust evaluations across classification thresholds (see Supplementary Methods). The overall accuracy of each model was assessed using the area under the ROC curve (AUC), a standard metric that ranges from 0.5 (no better than random classification of high vs. low trust ratings) to 1.0 (perfect classification). As shown in Figure 3 (Panel A), both models outperformed the random baseline. However, the extended model that included variables measuring physiological and emotional reactions did not outperform the simpler baseline model. The baseline model, which included only the truthfulness of the statement, its ideological alignment, and participants' SECS scores, achieved an AUC of 0.603 (95% CI: 0.577–0.629). The extended model, which incorporated biometric measures, produced a similar AUC of 0.593 (95% CI: 0.566–0.619), indicating no significant improvement in predictive accuracy.

Since both the baseline and extended models outperformed the random baseline, it is still informative to examine the physiological predictors included in the extended model, even though it did not improve predictive accuracy over the baseline. To assess the contribution of specific predictors, we analyzed marginal effects derived from the logistic regression model with the highest predictive accuracy (see Supplementary Methods). Figure 3 (Panel B) illustrates the marginal effects of the variables selected by the LASSO procedure from the full set of physiological predictors. This model incorporated not only the basic variables but also changes in the emotions of anger, fear, and joy, as well as variations in heart rate and

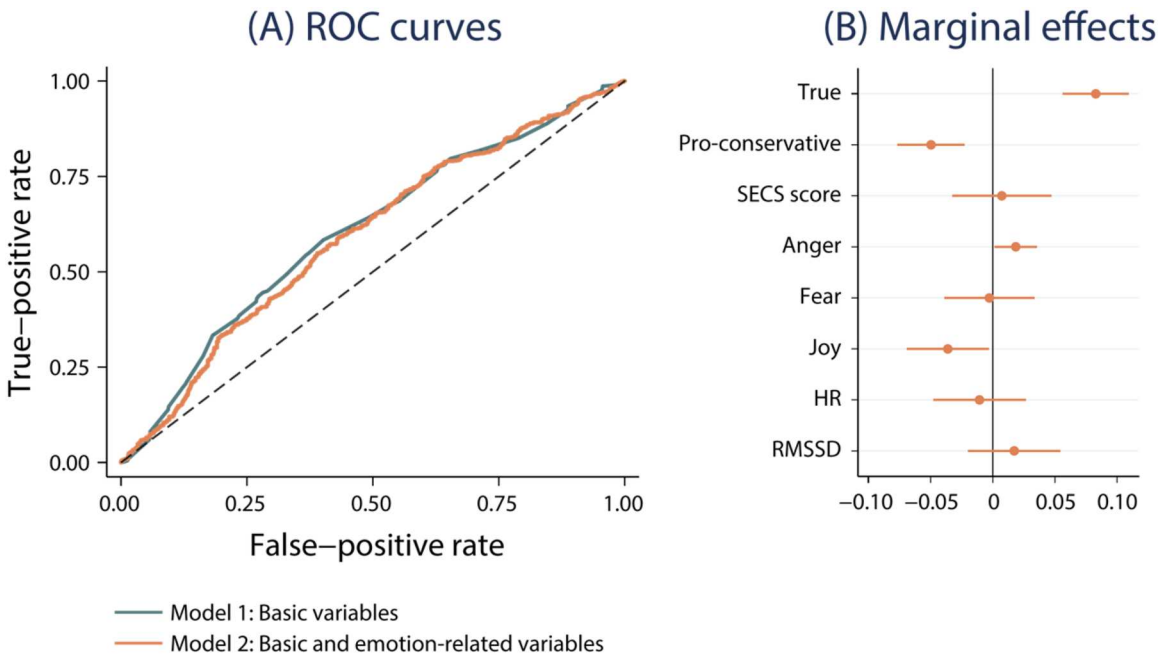

Figure 3. Predictive models for high trust and emotion-related responses.

Note: Panel A: ROC curves predicting participants' high versus low trust evaluations in the overall sample. The dependent variable, *trust*, was binary, coded 1 when a participant's trust rating exceeded 50, and 0 otherwise. Both models outperformed the random baseline (dashed 45-degree line). Panel B: Panel B depicts the average marginal effects with 95% confidence intervals, derived from logistic regression models predicting trustworthiness ratings (clustered standard errors). These models incorporated basic variables alongside fluctuations in anger, fear, and joy, as well as variations in heart rate and heart-rate variability.

heart-rate variability. Notably, the findings indicate a positive association between an elevation in the expression of anger and trustworthiness ratings. Conversely, an increase in the expression of joy is negatively associated with trustworthiness ratings. Although sadness was positively associated with trustworthiness ratings in the separate regression models (Table 4), it was not retained in the penalised multivariate model and therefore does not appear in Figure 3.

The predictive analysis confirmed that specific emotional responses, particularly anger and joy, were systematically associated with trustworthiness ratings across all participants. The positive association between anger and perceived trustworthiness, and the negative association with joy, mirrored the patterns observed in our regression models (see Table 4), where each emotional response was examined separately. Notably, these same emotional variables were also selected as the most predictive by the machine learning models, highlighting consistency across analytical approaches. This suggests that emotional responses shape perceptions of trustworthiness through a complex interplay of psychological disposition and ideological orientation. Importantly, the use of machine learning enhanced our ability to detect such patterns by handling high-dimensional, correlated data in ways that traditional models cannot. While the overall predictive gain from adding biometric measures was modest, the approach enabled us to isolate emotional signals with meaningful influence on trust decisions. Although ECG and GSR are established methods in emotion research (e.g. Appelhans & Luecken, 2006), and the best-performing model included heart rate-related variables (HR, RMSSD), their individual predictive contributions were not statistically significant, possibly reflecting the limited sensitivity of these measures within the short 10-second reading window. However, our findings underscore the promise of combining physiological data with computational modelling to advance research on political cognition and emotion.

Discussion

This study investigated how emotional responses interact with political ideology to shape trust in

political information. Drawing on behavioural measures together with real-time physiological responses, we examined whether discrete emotional reactions predicted the perceived trustworthiness of politically charged statements and whether these associations varied by individuals' ideological orientation. Results confirmed the hypothesis that people perceive ideologically congruent statements as more trustworthy, consistent with political confirmation bias. Increased expressions of anger and sadness were positively associated with trust ratings across all participants, whereas joy showed a negative association with political confirmation bias. Among the most conservative participants, several emotional responses were linked to both trustworthiness ratings and confirmation bias, suggesting that ideological leanings may intensify the interplay between emotion and perceived credibility.

In addition to the regression analyses, we conducted preregistered machine learning analyses to examine whether physiological responses improve the prediction of high trust and to assess which emotional signals are most informative when all measures are considered simultaneously. While the inclusion of biometric variables did not meaningfully improve overall out-of-sample predictive accuracy beyond the baseline model, the model with the highest predictive accuracy selected anger as a positive predictor and joy as a negative predictor. This convergence across analytical approaches strengthens confidence that these specific emotional responses are systematically related to perceived trustworthiness, even if their incremental predictive contribution beyond ideological alignment is limited.

Confirmation bias is well documented in psychological research, where individuals have been shown to process information in line with their pre-existing beliefs (e.g. Nickerson, 1998). This tendency is part of a broader self-serving bias in which positive outcomes are attributed to oneself and negative outcomes to external factors (Mezulis et al., 2004). In political contexts, confirmation bias often manifests as individuals attributing greater trustworthiness to information that aligns with their ideological identity – a phenomenon linked to the intertwining of self-concept and political beliefs (Lodge & Taber, 2013; Taber & Lodge, 2006). Our findings extend this research by demonstrating that political confirmation bias operates not only in electoral contexts, where voters accept favourable information about preferred candidates (Redlawsk, 2002), but also in the evaluation of policy-related content. Specifically, we found that conservatism was associated with the perceived trustworthiness of ideologically congruent statements, echoing findings reported by Jost et al. (2018).

Theoretical perspectives on affect and judgment help explain these patterns. The affect-as-information framework (Clore, 1992; Schwarz, 2012; Schwarz & Clore, 1983, 1996) posits that people draw on their current affective states as informational cues, especially under conditions of uncertainty. The Affect Infusion Model (Forgas, 1995, 2013) extends this view by suggesting that the degree to which affect shapes judgment depends on the openness and complexity of the evaluative task, conditions likely present when assessing politically charged but brief statements. The appraisal-tendency framework (Han et al., 2007; Lerner & Keltner, 2000) adds that discrete emotions influence judgment through their characteristic appraisals, such as certainty, control, or responsibility.

Our results illustrate these mechanisms in distinct ways. For example, anger, often tied to certainty and perceived injustice or norm violations, was associated with higher trust in political statements, potentially because it reinforces pre-existing views. In contrast, sadness, linked in prior research to greater attention to detail and deeper processing (Han et al., 2007; Lerner et al., 2004), was also associated with higher trust ratings, echoing research on the "sadness bias" in political news sharing on social media platforms. De León and Trilling (2021) found that political news stories eliciting sadness were more likely to be shared on Facebook, perhaps because such stories invite collective reflection or emotional alignment without provoking social conflict. By comparison, joy was associated with reduced confirmation bias, possibly reflecting a broadened, less defensive processing style. Together, these patterns suggest that discrete emotions influence not only the intensity but also the direction and quality of political information processing.

Our results further revealed that among the most conservative participants, emotional responses were more strongly associated with both trust evaluations and political confirmation bias than among liberals or the overall sample. Earlier research has established that emotions influence political judgment, with fear and anxiety typically fostering a more deliberative approach and a willingness to consider new information (Marcus et al., 2000). Our findings diverge

from this established understanding. Among conservative participants, higher fear responses were associated with lower trust ratings. This suggests that fear may function differently in this context, potentially as a signal to reject information perceived as threatening or incongruent with pre-existing beliefs, rather than encouraging deliberation or openness.

Disgust also emerged as a noteworthy predictor among conservatives. Heightened disgust responses were positively associated with trust ratings, a pattern consistent with evolutionary psychological theories. Disgust, often characterised as a withdrawal-oriented emotion, evolved to protect against threats such as physical contamination and has since extended into the moral and social domains (Tybur et al., 2009). Recent evidence shows that expressions of moral disgust often contain elements of both disgust and anger (van der Eijk & Columbus, 2023). This blended response may intensify defensive evaluations when individuals encounter ideologically relevant content, particularly among those high in disgust sensitivity, a trait linked to conservative values emphasising purity and order (Inbar et al., 2009).

Taken together, our findings suggest that physiological emotional responses operate as part of the evaluative process rather than merely as by-products of it. Consistent with affect-as-information and appraisal-based accounts, momentary emotional reactions appear to provide cues that can subtly shape trust judgments, particularly when ideological commitments are strong. While these affective influences are modest in the aggregate sample, their stronger associations among the most conservative participants indicate that emotional signals may become more consequential under conditions of heightened motivational investment. This pattern aligns with motivated reasoning theory, which posits that affect and prior beliefs jointly structure political evaluation, such that emotional reactions can reinforce or attenuate ideologically driven judgments depending on context (Lodge & Taber, 2013; Taber & Lodge, 2006).

Several limitations merit consideration. First, a methodological consideration concerns the measurement of emotional responses and participants' prior familiarity with individual statements. We aimed to keep the stimulus presentation as simple as possible and to allow participants to focus on their primary evaluative task. Emotional reactions were assessed using physiological and facial-expression measures recorded in real time during stimulus exposure. We did not collect concurrent self-reported emotion ratings or statement-level familiarity ratings during the task. Repeatedly prompting participants to reflect on their emotional states can alter emotional processing and physiological responses (Lieberman et al., 2007; Mauss & Robinson, 2009), and prompting reflection on prior exposure could have shifted attention from trustworthiness judgments to memory retrieval. Instead, self-reported measures were collected to capture broader affective tendencies outside the main task: affect intensity (AIM), indexing stable individual differences in emotional responsiveness, was measured prior to the experiment, and recent affective state (PANAS) was assessed after task completion. Robustness analyses indicate that the main findings are not attributable to these broader affective tendencies (see Tables S5–S8).

Prior exposure to specific political claims could influence trustworthiness evaluations and therefore represents a potential unmeasured confounder. However, we included measures of political interest, political knowledge, and news following as broader proxies for exposure. While these variables do not fully substitute for direct familiarity assessments, their inclusion suggests that differential prior exposure is unlikely to explain the core findings (see Table S8).

Second, although our 62 participants provided nearly 2,000 trust evaluations in a repeated-measures design, the a priori determined sample size may be considered modest relative to large-scale survey studies relying solely on self-reported measures. This may particularly limit the interpretability of the subgroup analyses. At the same time, despite the relative homogeneity of the sample in terms of education and voting background, the SECS scale showed a near-normal distribution of conservatism. While this relative homogeneity in education and voting background may constrain strong generalisations about conservative-specific effects, it is also possible that a more ideologically heterogeneous sample could yield more pronounced ideological asymmetries. Future research should extend this design to more ideologically heterogeneous and field-based settings in order to examine whether these patterns replicate in broader and more diverse populations.

Third, participants were also aware that they were evaluating both true and false statements, which may have influenced their judgments. In real-world settings, where accuracy cues are less explicit, evaluative processes may unfold differently. Fourth, as in any

laboratory study involving human participants, informed consent required explaining the task and the use of physiological and facial-expression recording. This transparency may have increased self-awareness and dampened emotional expressions, but we sought to minimise experimenter demand effects through anonymity and neutral instructions (see Supplementary Material). Any such dampening would likely bias results toward underestimating, rather than inflating, emotional effects. Moreover, while we interpret emotional reactions as shaping trust evaluations, we acknowledge the possibility of reverse or bidirectional effects, whereby perceived trustworthiness could also influence emotional expression. However, because emotional measures were recorded in real time during stimulus exposure, before the explicit trustworthiness rating, it is plausible that these expressions reflect immediate affective responses rather than post hoc rationalizations.

Finally, the experiment took place in Finland, which has a multi-party political system in which parties differ along both economic and social dimensions, from progressive to conservative. Unlike binary systems, such diversity may moderate the polarising effects of misinformation (Dalton et al., 2011; Lijphart, 1999). However, recent evidence shows a steady rise in affective polarisation among Finnish citizens, particularly between ideological extremes, accompanied by more confrontational political communication (Herkman et al., 2024; Kawecki, 2022). Notably, recent neuroimaging research conducted in Finland demonstrates that neural polarisation can emerge even when self-reported ideological differences are relatively subtle (Zebarjadi et al., 2026). While Zebarjadi et al. focus specifically on immigration-related narratives and neural synchrony and our study examines emotional and psychophysiological predictors of trust evaluations across a broader range of politically charged topics, both lines of work point to the sensitivity of political information processing to comparatively small ideological variations. Future research could examine these dynamics across different political systems to better understand how institutional context influences the perception and spread of misinformation.

Our results show that both ideology and emotion shape how people evaluate information. People do not act as neutral judges of political content; rather, they interpret information through the lens of their prior beliefs and emotional reactions. Importantly, emotions such as anger and sadness can reinforce trust in political statements – even when those statements may be misleading. Understanding political trust therefore requires attention not only to what people believe, but also to how they feel when encountering information. Combating misinformation and polarisation therefore calls for strategies that address both cognition and emotion.

Notes

1. The full set of political statements used in the experiment is provided in Table S1.
2. For a similar approach, see Stanley et al., 2011.
3. Table S2 in the Supplementary Material provides a more detailed breakdown of descriptive statistics, including values for male and female participants separately. As the dataset includes both participant-level and statement-level variables, a unified correlation matrix would not be meaningful. Table S4 presents Pearson correlation coefficients among key participant-level variables.
4. On average, participants rated the true and false statements equally positively (or negatively). In addition to participants' evaluations, we applied text analysis techniques to assess the sentiment of the statements. Given that the statements were presented in Finnish, we employed the Finnsentiment app, a tool that classifies text into positive, neutral, or negative categories (Lindén et al., 2023). From this, we created a binary "sentiment" variable (positive = 1, other = 0). The sentiment variable correlated modestly but significantly with participants' valence ratings ($r = .11$, $p < .001$), indicating a meaningful link between computational sentiment and human judgments.
5. Full regression results are reported in Table S5 in the Supplement. Table S9 includes models with participants' valence ratings as an additional control.
6. As a robustness check, we estimated the models separately for true and false statements (see Supplementary Tables S6–S7). The results confirm that political confirmation bias was evident regardless of factual accuracy. Notably, the SECS score had a significant negative main effect on trust ratings for true statements, but no such effect for false statements, suggesting that more conservative participants were, overall, less trusting of true information. In addition, the "Voted for left/green" variable was negatively associated with trust ratings for true statements (Table S6), while its inclusion did not alter the substantive conclusions of the models. In addition, the results are robust to the inclusion of political interest, political knowledge, and news-following as additional covariates (see Table S8).
7. For brevity, Table 4 includes only the results from models in which either the direct emotional response or the interaction variable was significant. A complete set of results, including the effects of all examined emotions, is presented in Table S11 in the Supplementary Material.
8. For brevity, Table 5 includes only the results from models in which either the direct emotional response or the

interaction variable was significant. A complete set of results, including the effects of all examined emotions, is presented in Table S13 in the Supplementary Material.

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