Research article

When alienated from society, conspiracy theory belief gives meaning to life

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ABSTRACT

Background: Conspiracy theory belief – explaining the ultimate causes of social and political events with claims of secret conspiracies – is assumed to arise from a desire to make sense of uncertainty, especially in times of crisis. However, there is no compelling evidence that conspiracy theory belief actually fulfils this function, particularly in terms of evaluating one's life as meaningful. We posit that the adoption of conspiracy theory belief can be explained as a *fluid compensation* when a more proximal source of meaning, a sense of belonging to society, is threatened. Thus, a positive association between conspiracy theory belief and meaningfulness should emerge when people feel alienated from society. We therefore tested the hypotheses that alienation from society correlates negatively with meaningfulness (H1), and that it moderates the relationship between conspiracy theory belief and meaningfulness (H2).
Method: Conspiracy theory belief related to the COVID-19 pandemic, meaningfulness (Meaning and Purpose Scales, MAPS), and perceived alienation from society were assessed in a representative sample of N = 974 German residents.
Results: As expected, alienation from society was inversely related to meaningfulness and moderated the relationship between conspiracy theory belief and meaningfulness. According to the interaction, a positive association between belief in conspiracy theory and meaningfulness emerged when individuals experienced themselves as alienated from society.
Conclusion: The results suggest that conspiracy theory belief might alleviate a lack of meaningfulness caused by experienced alienation from society. Individuals who felt discriminated against, treated unequally, or having their rights restricted were more likely to hold conspiracy theory belief, which was associated with a greater sense of meaning in their lives.

1. Introduction

While people believe in conspiracy theories at all times, conspiracy theory belief tends to thrive in times of crisis [1]. Climate, geopolitical, food and energy, societal, economic, and health crises characterise our present, to varying degrees in different parts of the

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world. They cause difficulties, confusion, or danger and often lead to people being distressed. The continuity of daily life is disrupted, and previously reliable routines and assumptions are challenged. The resulting anxiety and sense of loss of control may trigger crises of meaning, as observed during the COVID-19 pandemic [2,3]. While some internalised the external crisis and subjected their own worldview to scrutiny [4], others turned to conspiracies [5].

Conspiracy theories and conspiracy theory belief have been a topic of research in history, political science, and sociology for several decades. Recent years have also seen an increase in psychological research on conspiracy theory belief. Empirical studies on the topic have grown exponentially since 2007 [6–9]. Numerous definitions of conspiracy theory belief have been proposed e.g., [1, 10–20]. While these definitions often focus on different aspects, they share many similarities. We define a 'conspiracy' as a "secret plot by two or more powerful actors, …typically attempt[ing] to usurp political or economic power, violate rights, infringe upon established agreements, withhold vital secrets, or alter bedrock institutions," 'conspiracy theories' as "attempts to explain the ultimate causes of significant social and political events and circumstances with claims of secret plots by two or more powerful actors" and 'conspiracy theory belief' as referring "to belief in a specific conspiracy theory, or set of conspiracy theories" [21, 4f]. Such conspiracy theory belief, related to the corona pandemic, is at the centre of the present article.

Several systematic reviews and meta-analyses have synthesised the results of psychological research on predictors of conspiracy theory belief [6–9]. In terms of personality, they discovered that, while various aspects of personality were associated with conspiracy theory belief (e.g., anxiety, desirability of control, paranormal belief, narcissism, and low self-esteem), the Big Five personality traits - agreeableness, openness to experience, conscientiousness, extraversion, and neuroticism - were not among the significant predictors thereof [6]. Antecedents of conspiracy theory belief were categorised into cognitive, motivational, personality, psychopathological, political, and sociocultural factors [7]. Overall, the effect sizes of the associations between conspiracy theory belief and psychosocial and demographic variables were small to moderate. Significant predictors of higher levels of conspiracy theory belief included paranoid ideation, fear, anomia, low trust in political institutions, perceived alienation from the social and political system, experienced lack of control, feelings of uncertainty, uncertainty avoidance, and perceived risk and anxiety [6,7,9].

The following consequences of conspiracy theory belief were identified: harmful health-related behaviours, less self-reported adherence to protective measures against COVID-19, lower vaccination intentions, higher vaccine hesitancy, and more self-centred, dysfunctional behaviours such as hoarding goods and engaging in pseudoscientific practices, as well as greater susceptibility to health misinformation [7–9]. Associations between elevated conspiracy theory belief and lower psychological well-being, anxiety, depression, feelings of powerlessness, or uncertainty appear to be components of bi-directional effects and reinforcing vicious cycles [7,9]. It is therefore important to gain a better understanding of the phenomenon of conspiracy theory belief to be able to deal with it constructively.

1.1. Can conspiracy theory belief create meaning?

The above findings suggest that conspiracy theory belief is triggered by feelings of insecurity, anxiety, and alienation from social and political institutions but that it also has a range of negative consequences. It thus appears to neither be an appropriate nor a subjectively successful reaction to a crisis. Nevertheless, there are reasons to assume that conspiracy theory belief yields rewards. One frequently postulated benefit is a sense of meaning [22–24]. Meaningfulness has been defined as a basic trust that life is worth living, based on an evaluation of one's life as coherent, significant, oriented, and belonging [25].

Coherence in the sense of fit, consistency, and authenticity is hard to achieve in a complex, multi-optional world in which individuals can - and indeed have to - define themselves and choose from a multitude of options [25]. The availability of a grand narrative, as represented by an overarching conspiracy worldview, offers a simple alternative for making sense of complexity. Even though contradictions are common within individual conspiracy theories [26], they can be linked to an overarching worldview that is based on the assumption that the world is dominated by deceptive actors. In this way, global coherence emerges despite local incoherence [27].

Significance describes the experience of mattering - I am important and my actions count. People who feel overlooked, marginalised, or discriminated against often experience a sense of insignificance. During the COVID-19 pandemic, this proved particularly critical [28]. Encountering conspiracy theories can give the impression of being among the chosen few who discover something really important [25]. The resulting sense of uniqueness [29] can in turn reinforce the feeling of personal significance.

Orientation - i.e. purpose - can be gained from a variety of sources of meaning [30–32]. The multitude of possibilities renders it difficult at times for people to identify and pursue the purpose that corresponds to them. Like other extreme ideologies, a conspiracy worldview can eliminate doubt and uncertainty by dogmatically and unquestioningly advocating certain beliefs. Thus, the worldview behind different extreme ideologies seems to be characterised by a conviction to support a meaningful cause and a willingness to make personal sacrifices for it [25].

Finally, people who believe in conspiracy theories often consider themselves as *belonging* to a larger group, which can counteract feelings of isolation [33]. This aspect is further addressed below when we present the assumption that conspiracy theory belief provides *fluid compensation* for alienation from society.

Despite its theoretical plausibility and some empirical correlations between conspiracy theory belief and elements of meaning, there is no convincing evidence to date that conspiracy theory belief actually increases the experience of meaning in life. Several recent studies have shown a link between a *need* or *search* for meaning and conspiracy theory belief [23,34,35]. However, turning towards conspiracy theory belief when searching for meaning does not seem to elicit the desired sense of meaningfulness [35,36]. We found only one publication [23] that reported a positive, albeit very small, relationship between generic conspiracist beliefs and presence of meaning (N = 289; r = 0.14). When addressing elements of meaning, they found no associations between generic conspiracist beliefs and comprehension and purpose, and a small positive association with mattering (N = 287; r = 0.13). Participants were US residents

recruited via an online platform. Belonging was not measured.

Given that the number of studies on this topic is still relatively limited and the assumption that conspiracy theory belief might offer a sense of meaning in times of existential uncertainty seems plausible, additional research is warranted. Moreover, it is important to consider contextual factors. Arguably, conspiracy theory belief only has value as a hypothetical surrogate of meaning when this is not provided by more proximate resources or when these are being threatened. According to the meaning maintenance model [37] or the hierarchic meaning model [38], people strive for meaningful, coherent relations within themselves, the external world, and between themselves and the external world. When robbed of meaning or confronted with meaninglessness, they seek to reconstruct a sense of meaning. This is not necessarily pursued in the domain that has been jeopardised. Rather, meaning is "sought in domains that are most easily recruited, rather than solely in the domain under threat" [37], p. 90. Through *fluid compensation*, meaning can, therefore, be maintained.

Crises like the COVID-19 pandemic affect social cohesion [39] as they accentuate existing social inequalities and reveal deficits [40]. This puts a strain on many citizens, and vulnerable or marginalised groups in particular. Social belonging, a central source of meaning, might thus be called into question and create a perception of the world as unpredictable, hostile, and discriminatory [41].

1.2. Meaning in life and the sense of belonging

A sense of belonging can relate to different levels of being. As a core element of meaning in life, it is the *existential* experience of having a place in this world, of connectedness with something other, or bigger, than the self [38]. It can be viewed as the opposite of the experience of a fundamental separation between self and world, also called existential isolation [42]. This kind of isolation is understood as an existential given, as part of the human condition and therefore an experience that most people are likely to recognise. It is particularly pronounced, however, when further experiences of isolation occur, as is the case with people who experience separation, stigmatisation, depersonalisation, and the feeling of being ignored because they are in some way non-normative. A study showed that people who held a non-normative group status with regard to ethnicity, race, religious affiliation, sexual orientation, citizenship/foreign student status, native language, heavyweight status, or socioeconomic status experienced particularly strong existential isolation. This was found in two student samples, one from the Northeast (N = 1449) and the other from the Southwest of the USA (N = 1778) [43].

A sense of *social* belonging is a universal source of meaning. When asked what gives their life meaning, the majority of people all over the world name social relationships, above all, family and friends [38,44]. Cross-sectional, longitudinal, and experimental studies have demonstrated substantial relationships between meaningfulness and different forms of social connectedness – with intimate partners, parents, family members, friends, a social group, or a larger community. Likewise, close links were found between social exclusion and a sense of meaninglessness [45–49]. The findings suggest that meaningfulness is based on or benefits from various forms of belonging and that feelings of isolation – both existential and social – undermine meaningfulness. A resultant alienation may be a gateway for turning to a conspiracy theory belief that offers an alternative sense of orientation, coherence, significance, and belonging: to a group of people with special access to "the truth".

1.3. Alienation from society as a contextual factor

As early as the end of the last century, a study with a relatively small US student sample (N = 156) showed that belief in conspiracy theory was linked to individual differences in authoritarianism, powerlessness, and anomie, the latter reflecting a breakdown of social bonds [41]. Ostracism – a sense of being excluded, ignored, or rejected – predicted COVID-19 conspiracy theory belief in a UK-based representative sample [34]. There is evidence for associations between social exclusion and other conspiratorial beliefs too, with a search for meaning acting as a mediator in a US-American sample from Amazon Mechanical Turk and a student sample, both sample sizes around N = 100 [35]. Trust in political institutions, on the other hand, has repeatedly been identified as a negative predictor of conspiracy theory belief [7–9]. The findings thus suggest that conspiracy theory belief is associated with various phenomena that can be subsumed under the concept of *alienation from society*, defined as the experience of disconnection and estrangement from society, its institutions, and norms.

The general term *alienation* denotes "a problematic separation between a self and other that belong together" [50]. This "other" can refer to a wide variety of entities. The APA Dictionary of Psychology offers four definitions of alienation, ranging from estrangement from others to deep-seated dissatisfaction with existence and a lack of trust in one's environment or oneself, estrangement from customary or expected ways of personal functioning, and, finally, derealisation and depersonalisation [51]. The perspectives here are thus primarily subjective, and the focus is on the individual.

Although historically closely linked to the use of the term, none of these definitions refers to the subjective experience of alienation from *society*, with a focus on constitutional decision-making and execution of implementation processes. Since the COVID-19 pandemic, forms of critical "alienisation" have emerged, where small but substantial segments of the population accuse the government and its institutions of making and executing illegitimate decisions, which are perceived as threatening, and even deliberately restricting basic civil rights and democratic freedom [52,53]. We expect the presence of such a sense of alienation from society to be associated with a low sense of meaning in life, as concerned individuals are likely to experience little involvement in supportive, participatory, and orienting structures (Hypothesis 1). Recognising alienation from society as a contextual factor, we further assume that conspiracy theory belief may serve as a *fluid compensation* [37] for a lack of meaningful belonging to society (Hypothesis 2). The lack of societal integration is thus replaced by an alternative orientation and affiliation, which in turn might re-establish personal meaning. The present study examines both hypotheses in a representative sample of N = 974 German residents.

Table 1

Alienation from society scale – results from factor analyses and corrected item-total correlations.

Item	Facet	Factor loadings[a] (two-factor solution)		Factor loadings (one-factor solution)	Corr. item-total correlation (total score)
		1	**2**		
I do not trust any information from public institutions.	Lack of trust in public institutions	**0.86**	−0.18	0.58	0.54
I feel betrayed by those in power.	Sense of political betrayal	**0.81**		0.72	0.66
I can express my opinion freely at any time. (−)	Lack of freedom of expression	**0.47**	0.32	0.72	0.65
Society is changing in a direction I do not understand.	Sense of estrangement from social change	**0.43**	0.14	0.51	0.47
I am discriminated against because of my worldview or religion.	Sense of discrimination based on worldview	**0.42**		0.45	0.41
I feel like a part of this society. (−)	Sense of social exclusion		**0.80**	0.61	0.56
I can be fully myself in this society. (−)	Lack of freedom of personality development	0.17	**0.64**	0.69	0.62
With my voice, I can make a difference in this society. (−)	Lack of participation		**0.62**	0.47	0.42
I feel that I am among the losers in this society.	Sense of inequality	0.31	**0.41**	0.64	0.58

Note. N = 974. (−) indicates a negatively coded item, recoded before inclusion in analyses; bold = highest loadings on factors 1 and 2, resp. [a] > 0.10.

2. Materials and methods

2.1. Sampling and participants

Sampling was guided by the objective of obtaining a representative sample of the German population with regard to various aspects. In particular, we sought to avoid the usual education bias, as convenience samples usually include a large number of highly educated people and therefore participants of higher socio-economic status - in addition to being Western, Industrialised, and Democratic (WEIRD, [54]). To ensure a balanced sample, we collaborated with Consumerfieldwork GmbH, a professional survey company with over 39,000 panellists across Germany at the time of recruitment (October 2021).

We opted for a sample size of N = 1000. This size has proven sufficient to adequately represent the German population (approx. 70 million adults [55]). Likewise, a sample of this size proved adequate to detect a moderator effect, which was assumed to be small for a continuous moderator variable [56]. A power analysis [57] for a moderation model resulted in a necessary sample size of N = 980 for the detection of a small effect (R^2 = 0.02) with 14 covariates, an alpha level of 0.05, and a power of 0.80.

Our initial sample included 1000 participants who were representative of the German population aged 18 and above in terms of age, gender, educational background (medium-level qualification, higher education entrance qualification, university degree), and residence in the former East or West German states. Participation was voluntary, and participants were paid a remuneration for completing the questionnaire. Prior to the analysis, we excluded 21 participants with excessively short response times (relative speed index >2 [58]), one duplicate case, and four participants who provided repetitive responses for more than ten items. Therefore, our final sample consisted of 974 subjects. Among them, 51 % self-identified as female and 49 % as male. The participants' age ranged from 18 to 89 years, with a mean of 50 years (SD = 16). Sixty-three per cent of the participants were partnered, and 56 % had one or more children. The highest educational levels were distributed as follows: secondary and intermediate secondary school certificates: 70 %, higher education entrance qualification: 14 %, and university degree: 16 %. Fifteen per cent of the respondents came from former East German states, 80 % from former West German states, and 5 % from Berlin. The majority of participants self-identified as political centre (M = 5.56, SD = 2.04, range 1 [left] to 11 [right]). Fifty-eight per cent said they belonged to one of the five world religions, with 51 % self-identifying as Christian, 5 % as Buddhist, 2 % as Muslim, and 0.3 % as Jewish. Finally, 43 % reported it was "very easy," "easy," or "rather easy" to make ends meet with their monthly household income ("Deleeck question"), whereas 33 % had "some," 17 % "considerable," and 7 % "great difficulty."

2.2. Measures

2.2.1. Conspiracy theory belief

Conspiracy theory belief with regard to the COVID-19 pandemic served as an independent variable. It was assessed by three conspiratorial statements that had obtained the highest levels of agreement in a representative survey on conspiracy theories around COVID-19 [59]. They are: "The Coronavirus was developed and (intentionally or unintentionally) released as a biological weapon." "The Corona crisis is just a pretext by politicians to permanently restrict the personal liberties of citizens." "Secret societies are exploiting the current crisis and want to establish an authoritarian world order/New World Order." Belief in the accuracy of the three statements was measured using a five-point Likert scale (1–5). A Cronbach's alpha of α = 0.81 indicated the feasibility of aggregating the three item scores into an overall conspiracy theory belief score.

2.2.2. Alienation from society

Alienation from society served as a second independent variable. Lacking the availability of a respective instrument, the present study utilised a scale designed to measure alienation from society operationalised as a sense of estrangement, discrimination, and betrayal by society and its institutions, and the perception of violation or restriction of fundamental civil rights pertaining to personal freedoms, equality, and participation (see Table 1). Agreement with the nine statements was rated on a six-point Likert scale (0–5).

The scale was tested in two pilot studies before inclusion in the current survey. In the present study, principal axis factoring with oblimin rotation revealed two dimensions with eigenvalues >1 (3.92, 1.23, 0.90). Two items had double-loadings >0.30, and the two factors correlated at r = 0.54, thus suggesting a one-dimensional structure (see Table 1). The scree plot also indicated a one-factor solution. All factor loadings in the one-factor solution were 0.45 or higher (see also Table 1). Cronbach's alpha for the total scale was α = 0.84. The corrected item-total correlations for the total score yielded coefficients between 0.41 and 0.66 (see Table 1), which indicates a good scale. Positive correlations with subjective poverty, right-wing political orientation, and lower education (see Table 2) are in line with theoretical expectations and findings employing related indicators [60] and thus offer preliminary evidence of the scale's construct validity.

2.2.3. Meaningfulness

Meaningfulness was the study's primary outcome variable, measured by the respective scale from the Meaning and Purpose Scales (MAPS [32]). The five-item scale assesses the degree of perceived meaning in life based on the evaluation of one's life as meaningful ("My life is meaningful"), oriented ("I have found my way"), coherent ("My life makes sense to me"), significant ("My existence enriches the lives of others"), and belonging ("I feel connected to this world"). Several studies have demonstrated the scale's reliability and validity [32]. Utilising a six-point Likert scale (0–5), Cronbach's alpha in the current survey was α = 0.89.

2.2.4. Sociodemographics and personality traits

Several sociodemographic and personality variables were included in the survey for use as covariates and to validate the use of the primary scales. The following sociodemographic variables were assessed: gender, age, education, residence in the former East or West German states, partnership, and children. We further assessed political orientation by a left-right continuum, religious or secular worldview by a multiple-choice question, and subjective poverty by means of the Deleeck question ("Considering the total income of your household, how easily can you make ends meet?"). Additionally, the Big Five personality traits (neuroticism, extraversion, openness, agreeableness, and conscientiousness) were measured by the 15-item Big Five Inventory BFI-15 – SOEP [61]. The respective Cronbach's alphas were α = 0.70, 0.76, 0.70, 0.52, and 0.68.

2.3. Procedure and statistical analyses

The study used a cross-sectional design. In the preliminary data analyses, we conducted descriptive statistics (means, standard deviations) for the primary variables, checked their distribution (skewness and kurtosis), and calculated Pearson correlations between the primary variables, sociodemographic data, and personality traits. We assessed our first hypothesis of an inverse relationship between alienation from society and meaningfulness using Pearson correlation coefficient. To determine the contribution of alienation from society in predicting meaningfulness above and beyond conspiracy theory belief, sociodemographics, and personality variables,

Table 2
Means, standard deviations, skewness, and kurtosis for primary variables and Pearson correlations with sociodemographics and personality traits.

	Conspiracy theory belief (1–5)		Alienation from society (0–5)	Meaningfulness (0–5)
M/SD	2.15/1.13		2.09/0.99	3.31/1.05
Skewness	0.85		0.27	−0.62
Kurtosis	−0.19		−0.42	0.08

	Conspiracy theory belief (log-10 transf.)	Conspiracy theory belief	Alienation from society	Meaningfulness
Alienation from society	0.53***	0.53***		
Meaningfulness	−0.06	−0.05	−0.48***	
Gender (f/m)[a]	−0.08*	−0.08*	−0.04	0.02
Age	−0.07*	−0.07*	−0.17***	0.20***
Education	−0.11***	−0.11**	−0.10**	0.03
Partnered (no/yes)[a]	0.05	0.05	−0.06	0.18***
Children (no/yes)[a]	0.09**	0.09**	−0.07*	0.22***
East/West[a]	−0.08*	−0.07*	−0.07*	−0.05
Political orientation (left-right)	0.27***	0.26***	0.19***	0.02
Worldview (religious/secular)[a]	0.04	0.05	0.17***	−0.18***
Subjective poverty	0.20***	0.20***	0.35***	−0.26***
Neuroticism	0.11**	0.10**	0.30***	−0.36***
Extraversion	0.06	0.07*	−0.22***	0.41***
Openness	0.04	0.04	−0.13***	0.34***
Conscientiousness	0.03	0.03	−0.12***	0.36***
Agreeableness	−0.02	−0.00	−0.22***	0.32***

we conducted a hierarchical regression analysis. A final moderation analysis tested Hypothesis 2, i.e., whether alienation from society moderates the relationship between conspiracy theory belief and meaningfulness. The variables defining the product were mean-centred. We show the plotted interaction as well as the Johnson-Neyman plot.

Data analysis was conducted using IBM SPSS Statistics 26 and reviewed using R, version 4.2.2. PROCESS version 4.2 beta was used for the moderation analysis [62]. The chart in Fig. 1 was created using ggplot2 (version 3.4.1), Fig. 2 was created using GraphPad Prism 9.

3. Results

3.1. Preliminary data analysis

Table 2 displays the primary variables' descriptive statistics, as well as their correlations with sociodemographics and personality traits. (Intercorrelations of all scales are shown in Table 1S in the Supplement.) Although skewness values for all primary variables indicated near-normal distribution ($<|2|$), conspiracy theory belief displayed a strong positive skew. To avoid excessive influence of the relatively rare high conspiracy theory belief scores, a log-10 transformation was used in correlational analyses [63]. In order to check statistical robustness, we also report on the results obtained by using the untransformed scale.

Conspiracy theory belief, both log10-transformed and non-transformed, showed a small negative correlation with education, a moderate positive correlation with subjective poverty, and a medium positive correlation with right-wing political orientation. Among the personality variables, only neuroticism had a (small, positive) correlation with conspiracy theory belief. (Only effects of at least small size - $r \geq |.10|$ - are interpreted).

Findings regarding alienation from society mirrored these associations to some extent. Alienation from society decreased slightly with age and education. To a lesser degree than conspiracy theory belief, it was associated with right-wing political orientation. People with secular worldviews reported significantly more alienation from society than those with religious worldviews. There was a medium-sized positive relationship between alienation and subjective poverty. In contrast to conspiracy theory belief, alienation from society also yielded a medium-sized positive correlation with neuroticism and small to moderate negative correlations with extraversion, openness, agreeableness, and conscientiousness.

Meaningfulness was moderately positively correlated with age, being partnered, having children, and having a religious world-view. It showed a medium-sized negative association with subjective poverty. Relationships with the Big Five personality traits were also of medium size, with neuroticism being negatively correlated and all other factors being positively correlated.

3.2. Main analysis

Hypothesis 1 assumed an inverse association between meaningfulness and alienation from society. An inspection of the bivariate relationship between both variables revealed a high negative correlation coefficient and thus supported the assumption ($r = -0.48$; cf. Table 2). At 29/28 % ($r = 0.54/.53$), also belief in conspiracy and alienation from society shared a substantial degree of variance. A hierarchical analysis then regressed meaningfulness on conspiracy theory belief, sociodemographics, personality variables, and alienation from society. In model 1, conspiracy theory belief and meaningfulness were uncorrelated (Table 3). This did not change when adjusting for sociodemographic and personality covariates (Table 3, model 2). Altogether, predictors in model 2 explained 44 % of the variance in the dependent variable, thus confirming an effect of common predictor variables on meaningfulness. When also including alienation from society as a predictor (Table 3, model 3), an additional 7 % of variance in meaningfulness was explained. Moreover, the effect of conspiracy theory belief on meaningfulness changed to a positive association when adjusting for alienation from society (beta = 0.14/.15). Alienation from society thus appears as a risk factor for low meaningfulness, which favours a positive relationship between conspiracy theory belief and meaning in life.

To test Hypothesis 2, which posited an interaction between conspiracy theory belief and alienation from society in the prediction of meaning in life, we conducted a moderation analysis. As expected, alienation from society moderated the relationship between
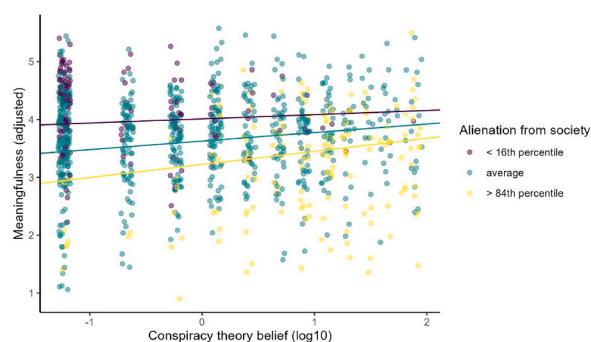

Fig. 1. Meaningfulness as a function of conspiracy theory belief and alienation from society.
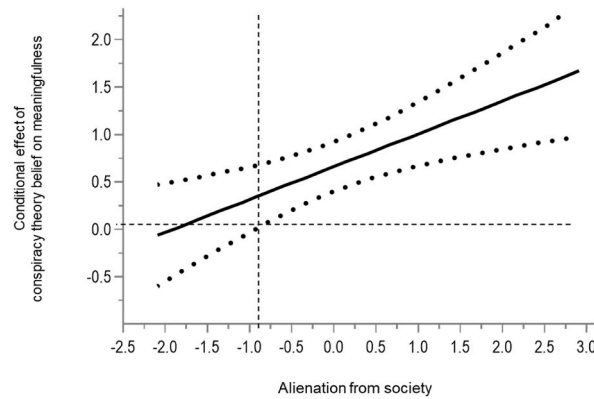
Fig. 2. Johnson-Neyman plot of the interaction between conspiracy theory belief and alienation from society.

Table 3
Results of a hierarchical analysis regressing meaning in life on conspiracy theory belief, sociodemographics, personality variables, and alienation from society.

Model		B	SE	95 % CI for B		Beta	p
				LL	UL		
1	Conspiracy theory belief[a]	−0.28	0.15	−0.573	0.017	−0.06 (-0.05)[c]	0.065
2	Conspiracy theory belief[a]	−0.07	0.12	−0.315	0.171	−0.02 (-0.01)[c]	0.56
	Gender (f/m)[b]	−0.03	0.05	−0.131	0.080	−0.01	0.63
	Age	0.00	0.00	0.001	0.008	0.06	0.02
	Education	0.03	0.01	0.000	0.056	0.05	0.05
	Partnered (no/yes)[b]	0.19	0.06	0.079	0.298	0.09	0.001
	Children (no/yes)[b]	0.12	0.06	0.009	0.239	0.06	0.04
	East/West[b]	−0.29	0.07	−0.434	−0.142	−0.10	<0.001
	Political orientation (left – right)	−0.01	0.01	−0.039	0.013	−0.03	0.32
	Religious/secular worldview[b]	−0.28	0.05	−0.390	−0.176	−0.13	<0.001
	Subjective poverty	−0.15	0.02	−0.201	−0.107	−0.17	<0.001
	Neuroticism	−0.18	0.02	−0.222	−0.143	−0.23	<0.001
	Extraversion	0.13	0.02	0.086	0.174	0.16	<0.001
	Openness	0.17	0.02	0.124	0.211	0.20	<0.001
	Conscientiousness	0.21	0.03	0.151	0.265	0.19	<0.001
	Agreeableness	0.14	0.03	0.081	0.195	0.13	<0.001
3	Conspiracy theory belief[a]	0.67	0.13	0.408	0.931	0.14 (0.15)[c]	<0.001
	Gender (f/m)[b]	−0.01	0.05	−0.107	0.091	−0.00	0.85
	Age	0.00	0.00	−0.001	0.006	0.04	0.15
	Education	0.02	0.01	−0.009	0.043	0.03	0.18
	Partnered (no/yes)[b]	0.18	0.05	0.079	0.283	0.08	0.001
	Children (no/yes)[b]	0.11	0.06	−0.004	0.098	0.05	0.05
	East/West[b]	−0.29	0.07	−0.426	−0.151	−0.10	<0.001
	Political orientation (left – right)	0.01	0.01	−0.018	0.031	0.01	0.66
	Religious/secular worldview[b]	−0.20	0.05	−0.303	−0.100	−0.10	<0.001
	Subjective poverty	−0.09	0.02	−0.131	−0.039	−0.10	<0.001
	Neuroticism	−0.14	0.02	−0.176	−0.100	−0.18	<0.001
	Extraversion	0.09	0.02	0.051	0.135	0.12	<0.001
	Openness	0.15	0.02	0.109	0.191	0.18	<0.001
	Conscientiousness	0.20	0.03	0.148	0.256	0.18	<0.001
	Agreeableness	0.09	0.03	0.039	0.147	0.09	0.001
	Alienation from Society	−0.38	0.03	−0.445	−0.314	−0.36	<0.001

conspiracy theory belief and meaningfulness (cf. Table 4).

As also shown in Fig. 1, simple slopes for conspiracy theory belief predicting meaningfulness at 16th, 50th, and 84th percentiles of alienation from society are as follows: For low alienation from society, there is no relationship between conspiracy theory belief (log-10) and meaningfulness ($b = 0.32$, $t(956) = 1.84$, $p = 0.07$, $\beta = 0.07$). For average alienation from society ($b = 0.63$, $t(956) = 4.71$, $p = <0.001$, $\beta = 0.13$) and especially for those with a high sense of alienation from society ($b = 1.01$, $t(956) = 5.84$, $p < 0.001$, $\beta = 0.22$) meaningfulness increased with increasing conspiracy theory belief.

The Johnson-Neyman plot (Fig. 2) further visualises the interaction between conspiracy theory belief and alienation from society. The black continuous line shows the conditional effect of conspiracy theory belief on meaningfulness for all values of alienation from society, and the dotted lines above and below indicate the corresponding 95 % confidence intervals (CI). The grey dashed lines identify the region of significance, starting at the alienation score at which the lower 95 % CI of the slope crosses the zero point. For all alienation scores above this point, the effect of conspiracy theory belief on meaningfulness is statistically significant. This suggests that conspiracy theory belief and meaningfulness are already significantly related at a (non-centred, not shown) alienation from society value of 1.15 (range 0–5), $t(956) = 1.96$, $p = 0.05$, $b = 0.34$. (Using the untransformed conspiracy theory belief scale, this is the case at alienation from society values of 1.10) As alienation increases, the relationship between conspiracy theory belief and meaningfulness becomes more positive, with the highest alienation from society score (5), $t(956) = 4.76$, $p < 0.001$, $b = 1.67$.

4. Discussion

In a sample of N = 974 German residents, representative with regard to gender, age, education, and residence in the former East or West German states, we found a relatively high degree of meaningfulness (M = 3.31, range 0–5), but also non-trivial degrees of conspiracy theory belief (M = 2.15, range 1–5) and alienation from society (M = 2.09; range 0–5). As seen in many other studies cf. [38], meaningfulness was higher among older people, parents, and participants living in a partnership and being affiliated with a religion. The more meaningfulness people reported, the less often they experienced subjective poverty. They were more emotionally stable, extraverted, conscientious, open, and agreeable.

Conspiracy theory belief was more prominent among less educated participants, but this effect was small. To a greater but still moderate extent, people with conspiracy theory belief reported subjective poverty and a right-wing political orientation. Apart from a small positive correlation with neuroticism, relationships between conspiracy theory belief and the big five personality variables were unrelated or negligible. These results tie in with those found in meta-analyses, systematic reviews, and large-scale studies [cf. 6–9,64].

Alienation from society was more prominent among younger and less educated people, among those who tended to lean to the right politically and who perceived their economic situation as problematic. It was further associated with a secular worldview, emotional instability, introversion, disagreeableness, and slightly lower openness and conscientiousness. Due to the unavailability of empirical studies that measure alienation from society, comparison with prior findings is difficult. However, associations with a lower level of education, a right-wing political orientation, and subjective poverty are consistent with theory and with studies in which related indicators have been analysed [60].

As hypothesised, we observed a significant inverse relationship between alienation from society and meaningfulness. Individuals who experienced a detachment from society and its institutions due to perceptions of discrimination, betrayal, and the infringement of their basic rights related to personal freedoms, equality, and participation also expressed a diminished sense of meaning in their lives. This finding suggests that a sense of exclusion from society can affect the perception of one's life as worthwhile and meaningful. Since the present study is cross-sectional, the direction of this relationship cannot be determined. However, there is ample experimental evidence for a negative effect of social exclusion on meaning in life [45–49].

The close connection we have established between a perceived alienation from society and a low sense of meaning in life emphasises once again that social and societal processes can have far-reaching effects on the existential experience of the individual. A

Table 4
Alienation from society moderating the relationship between conspiracy theory belief and meaningfulness.

Variable	B	SE	t	p	95 % CI for B LL	UL	Beta
Conspiracy theory belief[a]	**0.66** (0.13)[c]	0.13 (0.03)[c]	4.96 (4.62)[c]	<0.001 (<0.001)[c]	0.40 (0.07)[c]	0.92 (0.18)[c]	0.14 (0.13)[c]
Alienation from society	**−0.39**	0.03	−11.75	<0.001	−0.46	−0.33	−0.37
Conspiracy theory belief[a] X Alienation from society	**0.35** (0.05)[c]	0.11 (0.02)[c]	3.07 (2.30)[c]	0.002 (0.02)[c]	0.13 (0.01)[c]	0.57 (0.09)[c]	0.07 (0.05)[c]
Gender (f/m)[b]	−0.01	0.05	−0.22	0.83	−0.11	0.09	−0.00
Age	0.00	0.00	1.41	0.16	−0.00	0.01	0.04
Education	0.02	0.01	1.14	0.26	−0.01	0.04	0.03
Partnered (no/yes)[b]	**0.17**	0.05	3.29	0.001	0.07	0.28	0.08
Children (no/yes)[b]	**0.12**	0.06	2.11	0.04	0.01	0.22	0.05
East/West[b]	**−0.29**	0.07	−4.12	<0.001	−0.42	−0.15	−0.10
Political orientation (left – right)	0.00	0.01	0.26	0.80	−0.02	0.03	0.01
Religious/secular worldview[b]	**−0.21**	0.05	−4.02	<0.001	−0.31	−0.11	−0.10
Subjective poverty	**−0.08**	0.02	−3.61	<0.001	−0.13	−0.04	−0.09
Neuroticism	**−0.14**	0.02	−6.97	<0.001	−0.17	−0.10	−0.18
Extraversion	**0.09**	0.02	4.23	<0.001	0.05	0.13	0.11
Openness	**0.15**	0.02	7.08	<0.001	0.11	0.19	0.18
Conscientiousness	**0.21**	0.03	7.51	<0.001	0.15	0.26	0.19
Agreeableness	**0.09**	0.03	3.35	<0.001	0.04	0.15	0.08

Note. N = 974. CI = confidence interval; *LL* = lower limit; *UL* = upper limit. Bold = significant. [a] log-10 transformed. [b] all binary variables were coded 0/1 in the given order. [c] in brackets: value for non-transformed conspiracy theory belief scale. All other values shown refer to the analysis including the log-10 transformed scale.

society that cares about the existential, psychological, and physical well-being of its citizens, which is clearly linked to meaning in life [cf. 38,65], should therefore be attentive to any processes that might cause alienation and discrimination.

Furthermore, the results of the present study suggest that a lack of a sense of belonging to society can create a vacuum that can move people to seek other forms of belonging – which in turn may provide meaning to life. In terms of *fluid compensation* [37], when belonging (to society) is threatened by a sense of alienation, an alternative and easy-to-recruit representation – here, the belief in conspiracy theory – is invoked, and meaning is regained. Thus, tying in with findings from previous research on the relationship between conspiracy theory belief and perceived alienation from the social and political system [7], conspiracy theory belief seems to be capable of satisfying a need for meaningful belonging as a reaction to experienced alienation. The established interaction between conspiracy theory belief and alienation from society, which indicates higher meaningfulness among those who believe in conspiracy theory and perceive themselves as alienated from society, renders this interpretation plausible. Interestingly, the effect is already evident starting from a relatively low alienation score. The finding suggests that conspiracy theory belief, which questions, rejects, and devalues the social norms of mainstream society [5], might help to cope with the experience of feeling unrepresented by that very society. The availability of new networks of like-minded individuals who know "what the world is really like" offers an alternative to disengagement from social ties and networks [66,67]. This effect is certainly not exclusive to conspiracy belief. Far-right and far-left political movements that distance themselves from mainstream society also serve as a refuge for people who feel excluded [68]. The same might be true for insular religious communities.

Practically, our findings are significant in that they help to understand under which circumstances the often postulated meaning-making function of conspiracy theory belief [21,23,24,69] actually takes effect. It further adds to recent research on the role of conspiracy theory belief in the rise of anti-democratic attitudes and authoritarianism. Mistrust of democratic institutions and procedures feeds into authoritarianism, with its exclusive promises of community and belonging [70]. The crisis of the COVID-19 pandemic seems to have accelerated dynamics in which conspiracy theory belief becomes an anti-democratic reservoir of meaning and belonging:

> "For democracy, this increasing popularity of conspiracy myths is bad news (…): The conspiracy mentality is a virus of mistrust and exacerbates resentment and hostility towards minorities. Its prevailing patterns of argumentation alone amount to an attack on the rules of democratic discourse, with the result that the conspiracy mentality breeds alienation from democracy and support for right-wing authoritarian parties, as well as an increased propensity for violence." [71, p. 188]

The findings of the present study thus provide further compelling reasons to enhance a democratic and inclusive culture within society. Where politicians attempt to foster a sense of belonging among individuals who feel alienated by appealing to their inclination towards conspiracy theories - as seen in the case of right-wing conservative parties in Germany - this approach does not appear to be a suitable path forward. In fact, it often ends up pushing conspiracy believers even further toward extremist right-wing ideologies [72]. Instead, democratic inclusion can be achieved by empowering individuals through opportunities for active participation, fostering a sense of social justice, trust, and belonging [73,74]. These measures are essential in order to prevent feelings of alienation and disengagement from democratic processes – the conditions in which conspiracy theory belief seems to be thriving.

4.1. Limitations

The present study has several limitations but also strengths. Our findings show that there is a positive correlation between conspiracy theory belief and meaningfulness when people are alienated from society. This suggests that in this case, conspiracy theory belief contributes to a sense of meaning, although the direction of this effect cannot be determined due to the cross-sectional nature of our survey. Further longitudinal or experimental research is needed to establish causal and reinforcing effects in the nexus of conspiracy theory belief, meaning in life, and alienation from society. Due to the unavailability of published validated measures, we used a not-yet published scale that we developed to measure alienation from society. Factor analysis, reliability analysis, and correlations with primary and secondary variables offer preliminary evidence of its reliability and validity.

The fact that all our data was collected via self-report questionnaires suggests that a common-method bias may have occurred. After applying Harman's exploratory factor analysis test, however, we can rule out such a bias [75]. The unrotated solution with all primary scale items included produced three factors accounting for 35 %, 19 % and 6 % of the variance, respectively. When all covariate items were additionally included, the unrotated factor solution yielded eleven factors accounting for 20 %, 10 %, 6 % and less of the variance.

A particular strength of the present study is its sample, which is representative with regard to gender, age, education, and residence in the Eastern and Western parts of Germany. As a result, people with lower levels of education, who are otherwise rarely included in psychological studies, are well represented, and the gender ratio is balanced. Although asked, no participants self-identified as non-binary.

4.2. Conclusion

Why do people believe in conspiracy theories? A hypothesis that is often voiced but has not been substantiated so far is that conspiracy theory belief supports or restores an endangered sense of meaning. With reference to COVID-19 conspiracy beliefs, the present study shows that this is possible, provided that people do not draw meaning from the more proximate source of belonging to society. Our findings suggest that conspiracy theory belief can alleviate a lack of meaning that is caused by an experienced alienation from society. The more people felt discriminated against, treated unequally, or had their rights restricted, the more likely they were to

harbour conspiracy theory belief, and the more this belief was associated with meaningfulness: a sense of orientation, coherence, significance, and (existential) belonging.

Ethics approval

This study was reviewed and approved by the Institutional Review Board (Psychology) of the University of Innsbruck with the approval number 30/2021, dated April 2021.

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Consent

All participants were informed that consent to participate in the study and publish their data would be assumed on completion and submission of the study questionnaire/survey.

Data availability

The data that support the findings of this study are openly available in OSF Home at https://osf.io/s5kgj/

CRediT authorship contribution statement

Tatjana Schnell: Writing – review & editing, Writing – original draft, Resources, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Roberto Viviani:** Writing – review & editing, Methodology, Formal analysis. **Claudia Lenz:** Writing – review & editing, Formal analysis. **Henning Krampe:** Writing – review & editing, Methodology, Formal analysis.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.heliyon.2024.e34557.

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