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‘Where there are villains, there will be heroes’: Belief in conspiracy theories as an existential tool to fulfill need for meaning

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ABSTRACT

What leads people to believe in conspiracy theories? In this paper, we explore the possibility that people might be drawn towards conspiracy theories because believing in them might satisfy certain existential needs and help people find meaning in their life. Through two studies ($N = 289$ and 287 after exclusion), we found that participants higher in the need and search for meaning were more likely to believe in conspiracy theories. This relationship was not moderated by participants' feelings of control. We also found that believing in conspiracy theories was associated with more presence of meaning (Study 1), and more precisely with a heightened feeling of mattering in the grand scheme of things (Study 2). Additionally, we found that participants were more likely to endorse conspiracy theories that left them more agency and allowed them the possibility to make a difference. Overall, we argue that our results suggest that people might sometimes be drawn towards conspiracy theories because they allow them to feel as if they can make a difference and have a positive impact on the world, and thus that conspiracy theories can be used as tools to satisfy existential needs.

1. Introduction

Conspiracy theories can be defined as ‘proposed explanation of some historical event (or events) in terms of the significant causal agency of a relatively small group of persons – the conspirators – acting in secret’ (Keeley, 1999: 116). Conspiracy theories are widespread and can bear on a broad range of topics, from the 9/11 attacks to the origin of COVID. Some have advocated that these kinds of conspiracies can be classified in two categories: upward theory conspiracies, which display very powerful and rich groups (such as financial or political groups or big companies), and downward conspiracy theories, which center on powerless hidden minorities (such as the LGBTQIA+, Muslims) (Nera et al., 2021). However, despite these potential differences, many studies have pointed out that their adherence can be predicted by some common factors (Goertzel, 1994; Wagner-Egger & Bangerter, 2007) such as a conspiracy mentality, a stable psychological trait that can be defined as the propensity to believe in conspiracy theories (Lantian et al., 2016; Douglas et al., 2019).

Many empirical studies have emphasized the link between conspiracy mentality and a variety of negative outcomes. For example, believing in conspiracy theories is often associated with poor health

habits: adhesion to COVID-19-related conspiracies was associated to a lack of social distancing (Bierwiazczonok et al., 2020), endorsement of AIDS-related conspiracy is associated to unprotected sex (Grebe & Natrass, 2012), and belief in vaccine conspiracies seem to decrease vaccination intentions (Jolley & Douglas, 2014). Belief in conspiracy theories is also associated with higher narcissism and lower self-esteem (Cichocka et al., 2016). Finally, believing in conspiracy theories has also been shown to be detrimental to social relationships (van Prooijen et al., 2022), which is an important factor for subjective well-being (Diener & Ryan, 2009).

Less attention has been paid to the positive correlates of believing in conspiracy theories. However, one might think that one reason people believe in conspiracy theories is that they find some advantage in doing so – or at least believe that they would find some advantage in doing so. Focusing on the social and existential motivations behind endorsement of conspiracy theories is in line with recent recommendations that we should study conspiracy theories believers with ‘more compassion’ (Drażkiewicz, 2022; van Prooijen et al., 2022). In this paper, our hypothesis is that one reason people believe in conspiracy theories is that such beliefs might help find meaning in their life.

Previous studies and theoretical approaches have stressed the

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connection between the search for meaning and attraction towards conspiracy theories (Douglas et al., 2019; van Prooijen, 2019). However, these researches have emphasized the connection between belief in conspiracy theories and search for meaning *in general* – that is: the tendency to look for and find meaning and patterns in seemingly random events (often in order to consolidate a belief). The search for meaning *in life* should not be conflated with this general search for meaning, as shown by the way meaning in life has been theorized in the psychological literature. In the current psychological literature, meaning in life is defined as ‘the web of connections, understandings, and interpretations that help us comprehend our experience and formulate plans to direct our energies to the achievement of our desired future. Meaning provides us with the sense that our lives matter, that they make sense, and that they are more than the sum of our seconds, days, and years.’ (Steger, 2012: 165). An influential conceptualization of meaning in life identifies three different subdimensions (George & Park, 2017; Martela & Steger, 2016): (i) the sense of coherence (the extent to which we are able to make sense of the different events that happened in our life), (ii) the sense of purpose (the extent to which we direct our lives towards goals), and (iii) the sense of mattering (the extent to which we feel that our life is valuable in the grand scheme of things). Of these three dimensions, only the first one can be assimilated to the general search for meaning that has been the focus of previous research and recent studies suggest that it might be the less important dimension of meaning in life (Costin & Vignoles, 2020).

Why think that people's need for meaning might drive them towards conspiracy theories? Or that endorsing conspiracy theories might help people find meaning in life? There are at least two possible reasons. The first is that believing in conspiracy theories can possibly increase the sense of coherence, to the extent that they help their followers make sense of the complexity of the world by providing them with simple, overarching narratives in which most events can be integrated. Indeed, past research has shown that presenting participants with information ordered in an identifiable pattern increased the feeling of coherence, and thereby feelings of meaning in life. Heintzelman et al. (2013) showed that exposure to objective coherence (pictures or words displayed in a certain order) versus objective incoherence increased the psychological experience of meaning. These data are consistent with the theoretical approach called ‘meaning-as-information’ (Heintzelman & King, 2014), which emphasizes that meaning in life is a mental state that provides information about the reliability and coherence of perceived patterns and experienced stimuli. The main idea is that the psychological experience of meaning indicates whether experiences make sense or not. Conspiracy theory might have a similar effect and increase feelings of coherence by allowing people to sort information in an ordered pattern.

A second reason to hypothesize a relationship between meaning in life and endorsement of conspiracy theories has to do with the purpose and matter components of meaning in life. According to these dimensions, people are more likely to feel that their life has meaning when they have purpose and when they feel that what they are doing matters in the grand scheme of things. In a recent study in which we asked Europe and US residents to provide a definition of what makes a life meaningful, we found that most participants mentioned ‘having a purpose’ and ‘having a positive impact on people around them’ (Fuhrer & Cova, 2022a). Fuhrer & Cova (2022b) also found a decent correlation ($r = 0.78$) between the extent to which participants rated their life as meaningful and the extent to which they felt they had a positive impact on people around them. As such, it seems that feelings that one is engaged in actions that make a positive difference is an important predictor of meaning in life.

At first sight, these considerations might seem to speak against the idea that believing in conspiracy theories should increase meaning in life: conspiracy theories seem to stress the fact that the world is in the hands of powerful evildoers and might thus foster the feeling that one is powerless and cannot make a difference. However, this is not always so: conspiracy theorists generally engage in actions, under various forms

such as internet activism, protests, or even sometimes violent actions (Rottweiler & Gill, 2020). Moreover, conspiracy theories are more readily endorsed by people whose low socioeconomic status prevents them from having an impact in society (Douglas et al., 2016; van Prooijen, 2017), or who no longer believe in traditional forms of political engagements (Imhoff et al., 2021). Our proposal is thus that conspiracy theories might provide people who usually feel they are powerless with the illusion that they can make a difference. Indeed, because conspiracy theories purport to identify the ‘real’ enemy behind all societies' problems, or because they provide people with imaginary enemies, they can provide them with the feeling that they too can fight for the common good.

Both hypotheses predict that people who search and need meaning will be more likely to endorse conspiracy theories. Search for meaning can be defined as the feeling that one's life doesn't have enough meaning and purposes, and that one is actively searching for something or someone that gives meaning and purposes (Steger et al., 2006). The trait of need for meaning is somehow different: it refers to the extent to which a person is likely to think about the meaning of her life or if she is indifferent to it (Abeyta & Routledge, 2018). Additionally, people might be right in thinking that endorsement of conspiracy theories will satisfy their search and need for meaning, in which case we should also expect people who endorse conspiracy theories to be higher in presence of meaning (Steger et al., 2006).

However, compared to the first hypothesis (centered on coherence), the second hypothesis (centered on one's positive impact) makes additional predictions. The first is that the link between search for meaning and believing in conspiracy theories should be higher in people who do not have other ways to feel that they have a positive impact on people around them (e.g., through political activism). If this is true, one would expect this relationship to be moderated by a low sense of control. This is in line with psychological literature suggesting that individuals with a low sense of control are more likely to endorse conspiracy theories (van Prooijen & Jostmann, 2013; Whitson & Galinsky, 2008).

The second additional prediction is that people should be more drawn towards conspiracy theories they perceive as allowing them the possibility to have a positive impact, i.e., conspiracy theories that leave them more room for the agency. Moreover, we should expect that perceiving conspiracy theories as providing room for agency will lead people to endorse them when people (i) give some importance to finding meaning in life and (ii) do not have enough control over their environment to find other ways to bring meaning to their life by having a positive impact.

In the two studies presented in this paper, our main aim was to test the following hypotheses: (H1) meaning-seeking and meaning-need are positively correlated with conspiracy theory beliefs, (H2) this relationship is moderated by participants' sense of control, (H3) the more participants believe a conspiracy theory leave room for their agency, the more likely they are to endorse it, (H4) this relationship is higher in people high in search/need for meaning and low in sense of control, and (H5) conspiracy theory beliefs are associated with higher presence of meaning.

2. Study 1

Materials, and data for Study 1 are available at https://osf.io/q2dzw/?view_only=54ff5c7ecd074a74b369f7e21940715a.

Pre-registration is available at https://osf.io/pgxqu/?view_only=2f3b7b8b49714e408d802897535cb0de.

2.1. Participants

In total, 300 participants recruited through Prolific Academic (US residents only) completed an online survey and accepted that their data be used for research purposes. After excluding participants who failed at least one of two attention checks, we were left with 289 participants

(139 women, 145 men, 5 others; $M_{age} = 36.28$, $SD_{age} = 13.60$). The sample had 80 % power to detect an effect size of $r = 0.16$.

2.2. Procedure

The participants completed an online survey. After filling in the consent form, participants were presented with three lists of statements (in a randomized order).

2.2.1. Beliefs in conspiracy theories

The first list of statements was the Generic Conspiracist Beliefs (GCB) scale (Brotherton et al., 2013), which presents participants with 15 items describing various conspiracist beliefs (e.g. 'A small, secret group of people is responsible for making all major world decisions, such as going to war', 'Some UFO sightings and rumors are planned or staged in order to distract the public from real alien contact') and ask them to indicate to which degree each statement is likely to be true (on a 5-point scale from 'Definitely not true' to 'Definitely true').

2.2.2. Possibility of action

The second list of statements was composed of the exact same statements as the GCB scale except that, this time, participants were not asked about the truth of these statements but about the *possibility of action*. More precisely, they were asked:

For each theory, indicate to which extent we, as mere citizens, could organize ourselves to do something impactful about it if the theory turned out to be true.

Participants had to answer this question using the following scale: 'There is nothing we could do,' 'There is very little we could do,' 'We could do something about it,' 'We could do a lot about it', 'We could definitely solve the problem'.

2.2.3. Search for, need for, and presence of meaning

The third list of statements was composed of 20 statements about the meaning of life, and participants were asked to rate their agreement with each statement (on a 7-point scale from 'Strongly disagree' to 'Strongly agree'). Ten statements came from the Meaning in Life Questionnaire (MIL; Steger et al., 2006) and composed two subscales: the *Search for Meaning* subscale, which measures to which extent participants seek a meaning to their life (e.g. 'I am looking for something that makes my life feel meaningful'), and the *Presence of Meaning* subscale, which measures to which extent participants consider their life to already have meaning (e.g. 'I have discovered a satisfying life purpose'). The 10 other items constituted the Need for Meaning scale (Abeyta & Routledge, 2018), a measure of how participants feel the need to have a meaningful life (e.g. 'I have a strong need to find a sense of meaning or purpose in life').

2.2.4. Control

After rating these three lists of statements, participants were presented with 8 statements about control (Levenson, 1973) and asked to rate to which extent they agreed with them (on a 7-point scale from 'Strongly disagree' to 'Strongly agree'). Statements focused on how much people felt that their life was controlled by *powerful others* (e.g., 'I feel like what happens in my life is mostly determined by powerful people').

2.2.5. Demographic informations

Finally, participants were asked to provide a few information about them (age, gender, native language, country of residence, political orientation) and presented with a summary of the goals of the study.

2.3. Results

In a first step, we computed individual scores for each of our main variables (GCB scale, search for meaning, presence of meaning, need for

meaning, and control). Pearson correlations between each of these variables are presented in Table 1.

2.3.1. H1 & H5

In line with our first hypothesis, believing in conspiracy theories was significantly correlated with the search for meaning ($r = 0.16$ [0.05, 0.27], $p = .005$) and the need for meaning ($r = 0.14$ [0.03, 0.25], $p = .015$) (see Fig. 1). In line with our fifth hypothesis beliefs, believing in conspiracy theories was positively correlated with presence of meaning ($r = 0.14$ [0.03, 0.25], $p = .017$) (see Fig. 2).

2.3.2. H2

To test our second hypothesis, we conducted two linear regressions with belief in conspiracy theories as dependent variable and either the search or the need for meaning as predictors, and sense of control as a moderator. To prevent multicollinearity issues, we centered all variables (all VIFs <1.04).¹ None of the models found a significant interaction effect between the predictor and the moderator (*Search*: $B = 0.02$ [-0.04, 0.09], $SE = 0.03$, $t = 0.715$, $p = .475$, $R^2 = 0.04$; *Need*: $B = 0.05$ [-0.05, 0.14], $SE = 0.05$, $t = 0.982$, $p = .327$) (detailed results for all models can be found in Supplementary Materials). Thus, the relationship between believing in conspiracy theories and need/search for meaning was not moderated by participants' feelings of control.

2.3.3. H3 & H4

To test our third and fourth hypothesis, we analyzed data at the level of individual answers and used linear mixed models. Each participant saw 15 conspiracy theories and answered two questions about each of them (adhesion and possibility of actions), giving us 15 analysis units per participant. We centered all relevant variables (Belief in Conspiracy Theories, Possibility of Action, Need for Meaning, Search for Meaning, and Control). Level-2 predictors (Need for Meaning, Search for Meaning, and Control) were grand-mean centered, while level-1 predictors (Possibility of Action) were cluster-centered to obtain the estimation of the pooled within-participants effect.

Following the procedure recommended by Sommet and Morselli (2021), we built an empty model (with only belief in conspiracy theories as a dependent variable) and calculated the ICC and the DEFF (see Table S4 for details). The ICC was 0.48, meaning that 48 % of the variance in endorsement of conspiracy theories was explained by differences between participants (a large within-cluster homogeneity). The DEFF (-2.21) was above 1.5, meaning that multilevel modeling was warranted.

As a second step, we built an intermediate model using possibility of action as predictor, and we performed a likelihood-ratio test to see whether estimating the slope residuals improved the fit. The p -value of the LR χ^2 (2) was below 0.001 meaning that estimating the slope residual variance and the covariance terms was warranted.

Then, to test our third hypothesis, we conducted a linear mixed model using adhesion to conspiracy theories as dependent variable, perceived possibility of action (cluster-mean centered) as level-1 predictor, and participant as random effect (ICC = 0.506). Consistent with our third hypothesis, we observed a significant effect of possibility of action on adhesion. ($B = 0.24$ [0.19, 0.29], $SE = 0.03$, $df = 214.61$, $t = 8.99$, $p < .001$). Thus, the more participants saw a theory as offering possibility for actions, the more likely they were to endorse it.

To test our fourth hypothesis, we first entered participants' search for meaning and perceived control as level-2 predictors into the model, as well as the interaction between all predictors (ICC = 0.486). We found no significant interaction between possibility of action and search for meaning: $B = -0.02$ [-0.06, 0.01], $SE = 0.02$, $df = 190.57$, $t = -1.38$, p

¹ This transformation (as well as all other centering procedures reported in this manuscript) were not pre-registered but added following reviewers' suggestions.

Table 1
Cronbach's alpha and Pearson correlations for each participant-level variable (Study 1).

	1	2	3	4	5
1. GCB	$\alpha = 0.95$	0.16** [0.05, 0.27]	0.14* [0.03, 0.25]	0.14* [0.03, 0.25]	-0.12* [-0.23, -0.01]
2. Search	-	$\alpha = 0.94$	-0.06 [-0.17, 0.06]	0.72*** [0.66, 0.77]	-0.15* [-0.26, -0.03]
3. Presence	-	-	$\alpha = 0.93$	0.08 [-0.03, 0.20]	0.19** [0.08, 0.30]
4. Need	-	-	-	$\alpha = 0.86$	-0.14* [-0.25, -0.03]
5. Control	-	-	-	-	$\alpha = 0.83$

^a Note. * $p < .05$, ** $p < .01$

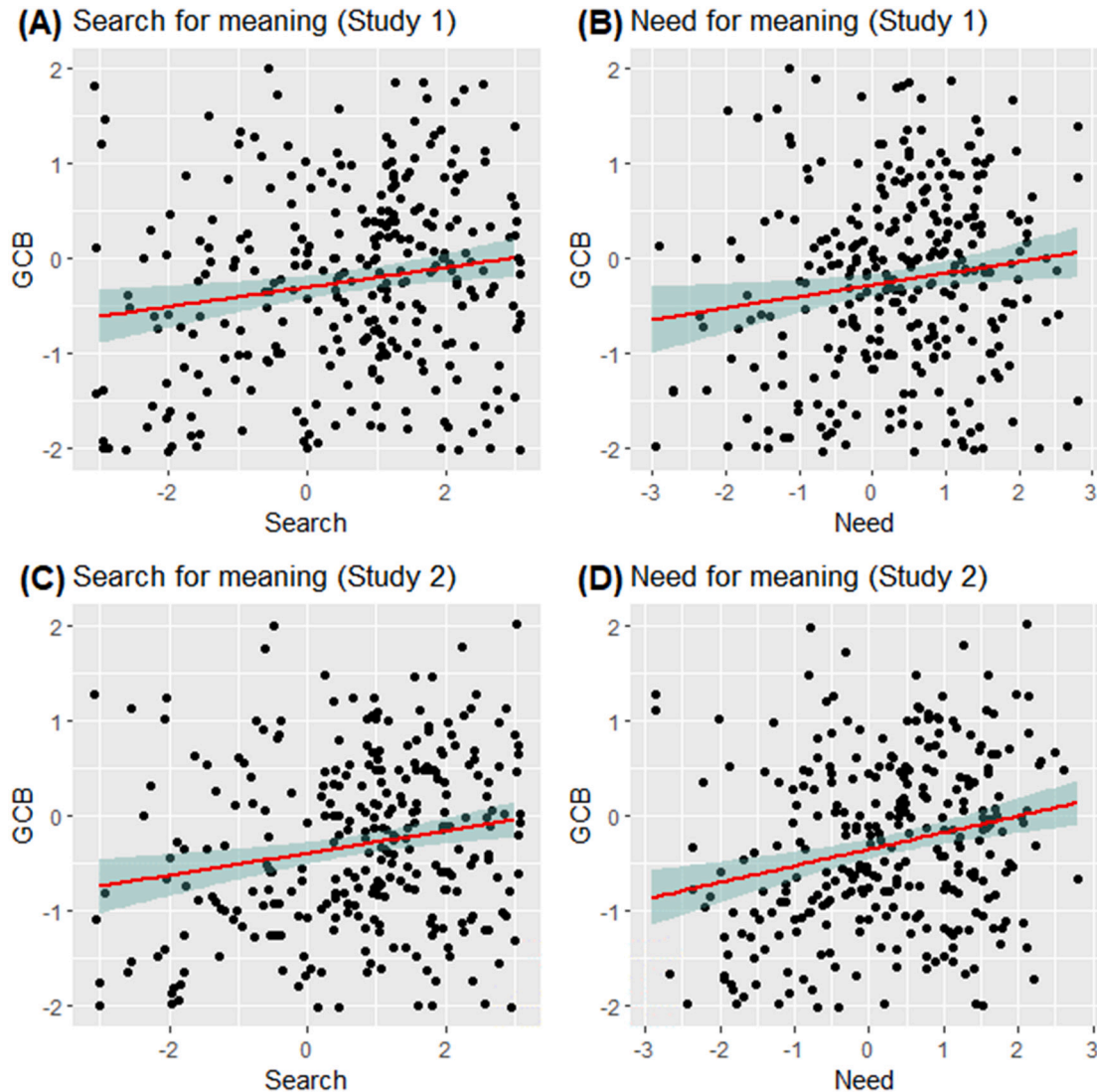


Fig. 1. Participants' scores to the Generic Conspiracy Beliefs scale in function of search and need for meaning (Studies 1 and 2).

= .168; no significant interaction between possibility of action and control: $B = -0.03$ [-0.08, 0.02], $SE = 0.03$, $df = 191.93$, $t = -1.13$, $p = .259$; and no significant three-way interaction: $B = 0.02$ [-0.01, 0.05], $SE = 0.01$, $df = 168.64$, $t = 1.47$, $p = .145$.

We then ran a similar model, but with need for meaning as level-2 predictor instead of search for meaning ($ICC = 0.488$). We found no significant interaction between possibility of action and need for meaning: $B = -0.003$ [-0.05, 0.04], $SE = 0.02$, $df = 200.97$, $t = -0.15$, $p = .883$; no significant interaction between possibility of action and

control: $B = -0.03$ [-0.08, 0.03], $SE = 0.03$, $df = 189.60$, $t = -0.98$, $p = .330$; and no significant three-way interaction: $B = 0.04$ [-0.003, 0.08], $SE = 0.02$, $df = 178.77$, $t = 1.80$, $p = .074$.

Thus, though there was a link between the possibility of actions offered by a theory and the extent to which participants endorsed it, this relationship was not mediated either by search/need for meaning, or by their feelings of control (Fig. 3).

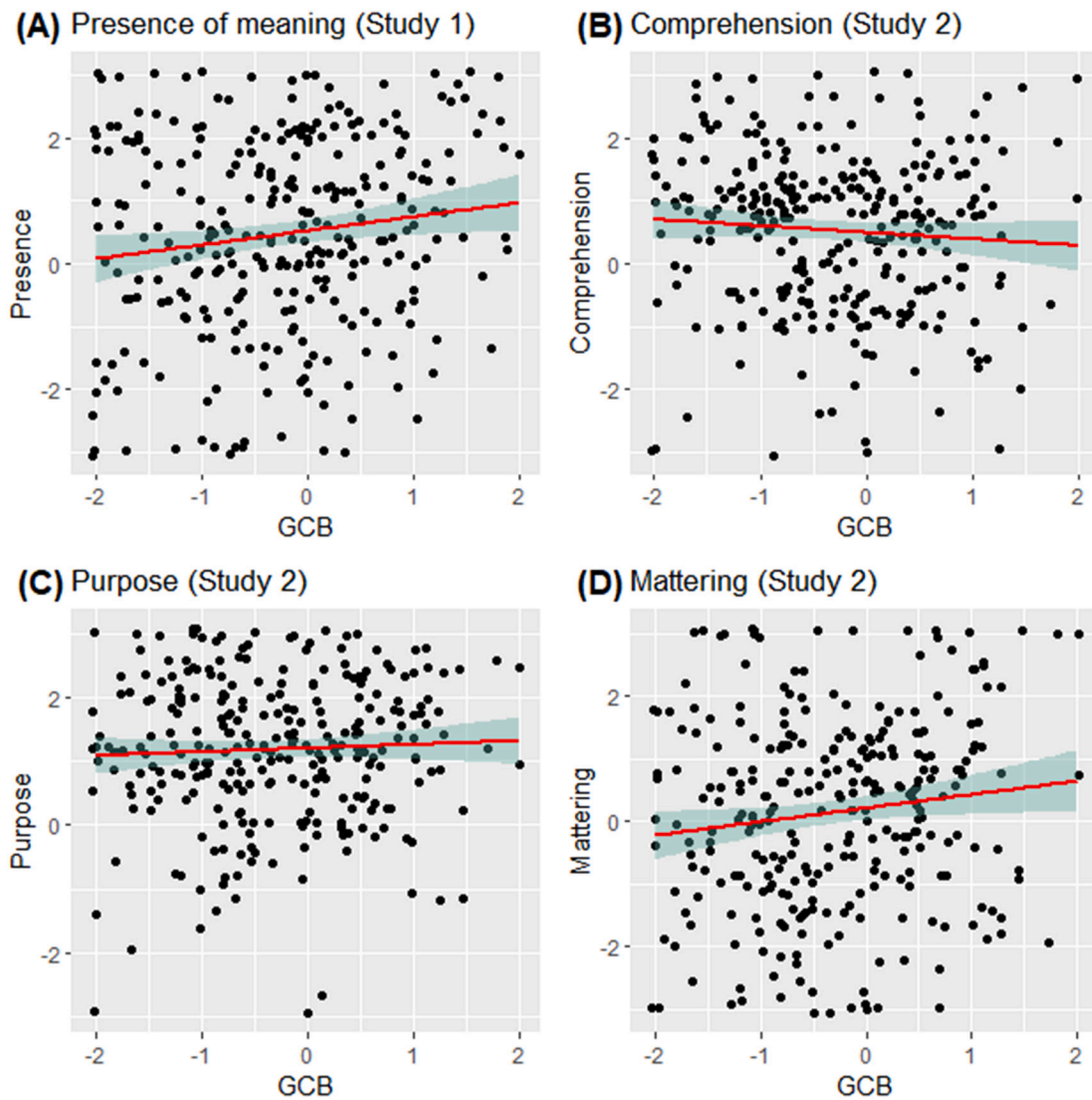


Fig. 2. Participants' presence of meaning (Study 1) and scores to the Comprehension, Purpose and Mattering subscales of the Multidimensional Existential Meaning Scale (Study 2) in function of their scores to the Generic Conspiracy Beliefs scale.

2.4. Discussion

The results of our first study suggest that people who need and search for meaning are more likely to endorse conspiracy theories, and that people who endorse conspiracy theories are also more likely to experience their life as meaningful. This is coherent with our overall proposal but does not allow us to distinguish between the coherence-based and the impact-based version of our hypothesis. Still, the fact that people are more likely to endorse conspiracy theories they perceive as leaving them more agency is in line with the impact-based account. The fact that believing in conspiracy theories is positively linked with presence of meaning offers us one opportunity to decide between these accounts by using measures that distinguish between the different kinds of meaning (coherence, purpose, and mattering). This is what we set out to do in Study 2.

Contrary to our expectations, the relationship between search for meaning and conspiracy theories beliefs was not moderated by participants' feelings of control. One reason might be that we measured participants' perceived control on a very narrow sphere, and that more general feelings of control might be relevant. Given that our hypothesis is that conspiracy theory beliefs function as a way to restore a frustrated desire for impact on one's environment (which requires some degree of

control), we decided to use a broader measure of perceived control on the environment.

3. Study 2

Materials and data for Study 2 are available at https://osf.io/jemga/?view_only=fea9bdb03b4641b1ab507c245d4f3d00.

Pre-registration is available at: https://osf.io/an3cz/?view_only=89b9c1cbe3df4f45b293eed91ddf5666.

3.1. Participants

In total, 297 participants recruited through Prolific Academic (US residents only) completed an online survey and accepted that their data be used for research purposes. After excluding participants who failed at least one of two attention checks, we were left with 287 participants (139 women, 144 men, 4 others; $M_{age} = 35.89$, $SD_{age} = 14.10$). The sample had 80 % power to detect an effect size of $r = 0.16$.

3.2. Procedure

The participants completed an online survey. The structure of Study

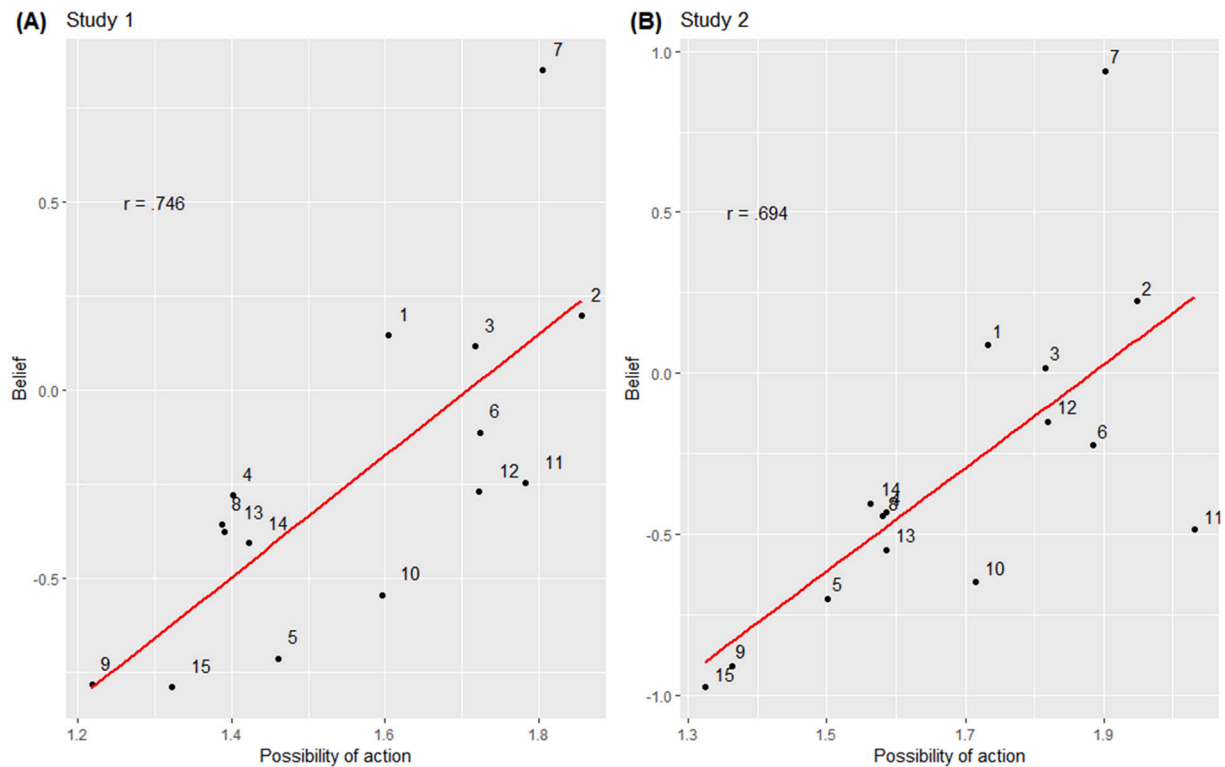


Fig. 3. Average belief in each theory in function of the average possibility of action. Each data point represents a specific conspiracy theory (Studies 1 and 2). The number aside each point indicates the item to which it corresponds in the Generic Conspiracy Belief Scale (see Supplementary Materials). These analyses were not preregistered.

Note: The outlier theory is Item 7 (“A small, secret group of people is responsible for making all major world decisions, such as going to war”). The fact that it is considered much more plausible than other theories might be due to the fact that it basically sums up the common theme behind most conspiracy theories.

2 was the same as the structure of Study 1, with two major modifications.

3.2.1. Subdimensions of meaning

First, the *Presence of Meaning* subscale was replaced by the 15 items of the Multidimensional Existential Meaning Scale (MEMS; George & Park, 2017). Participants were asked to indicate to which extent they agreed with each statement (on a 7-point scale from ‘Very strongly disagree’ to ‘Very strongly agree’). The MEMS is composed of three different subscales, each corresponding to a different dimension of meaning in life: *comprehension* (e.g., ‘I can make sense of the things that happen in my life’), *purpose* (e.g., ‘I have aims in my life that are worth striving for’), and *mattering* (e.g., ‘Even considering how big the universe is, I can say that my life matters’).

3.2.2. Three types of control

Second, the 8-items measure of control, which focused on the influence powerful others exerted in one's life, was replaced by three lists of 10 items, corresponding to the three subscales of the Spheres of Control Scale (Paulhus & Van Selst, 1990): *personal control* (e.g., ‘I can usually achieve what I want when I work hard for it’), *interpersonal control* (e.g., ‘In my personal relationships, the other person usually has more control over the relationship than I do’), and *socio-political control* (e.g., ‘By taking an active part in political and social affairs we, the people, can control world events’).

3.3. Results

In a first step, we computed individual scores for each of our main variables (GCB scale, search for meaning, need for meaning, comprehension, purpose, mattering, personal control, interpersonal control, and socio-political control). Pearson correlations between each of these

variables are presented in Table 2.

3.3.1. H1

In line with our first hypothesis, beliefs in conspiracy theories were significantly correlated with search for meaning ($r = 0.19$ [0.07, 0.30], $p = .001$) and the need for meaning ($r = 0.23$ [0.12, 0.34], $p < .001$) (see Fig. 1).

3.3.2. H5

Regarding our fifth hypothesis beliefs, beliefs in conspiracy theories were positively correlated with mattering ($r = 0.13$ [0.01, 0.24], $p = .031$), but not with comprehension ($r = -0.08$ [-0.19, 0.04], $p = .204$), nor with purpose ($r = 0.05$ [-0.07, 0.16], $p = .441$) (see Fig. 2).

3.3.3. H2

To test our second hypothesis, we conducted six linear regressions with beliefs in conspiracy theories as dependent variable and either search or need for meaning as predictors, and each type of control (personal, interpersonal, socio-political) as a moderator. To prevent multicollinearity issues, we centered all variables (all VIFs <1.04). None of the models found a significant interaction effect between the predictor and the moderator (*Search*Personal*: $B = 0.06$ [-0.001, 0.14], $SE = 0.04$, $t = 1.80$, $p = .073$, $R^2 = 0.05$; *Need*Personal*: $B = -0.01$ [-0.010, 0.07], $SE = 0.04$, $t = -0.33$, $p = .739$, $R^2 = 0.06$; *Search*Interpersonal*: $B = 0.02$ [-0.004, 0.08], $SE = 0.03$, $t = 0.64$, $p = .524$, $R^2 = 0.04$; *Need*Interpersonal*: $B = -0.03$ [-0.010, 0.05], $SE = 0.04$, $t = -0.71$, $p = .478$, $R^2 = 0.06$; *Search*Sociopolitical*: $B = 0.04$ [-0.002, 0.10], $SE = 0.03$, $t = 1.43$, $p = .153$, $R^2 = 0.05$; *Need*Sociopolitical*: $B = 0.01$ [-0.007, 0.08], $SE = 0.04$, $t = 0.21$, $p = .838$, $R^2 = 0.06$). Thus, the relationship between believing in conspiracy theories and the need/search for meaning was not moderated by participants' feelings of control (either personal, interpersonal, or sociopolitical).

Table 2
Cronbach's alpha and Pearson correlations for each participant-level variable (Study 2).

	2	3	4	5	6	7	8	9
1. GCB	0.19** [0.07, 0.30]	0.23*** [0.12, 0.34]	-0.08 [-0.19, 0.04]	0.05 [-0.07, 0.16]	0.13* [0.01, 0.24]	0.05 [-0.06, 0.17]	0.04 [-0.08, 0.16]	-0.09 [-0.20, 0.03]
2. Search	$\alpha = 0.94$	0.77*** [0.72, 0.82]	-0.05 [-0.16, 0.07]	0.25*** [0.14, 0.36]	0.22*** [0.11, 0.33]	0.08 [-0.04, 0.20]	-0.08 [-0.19, 0.04]	0.03 [-0.09, 0.14]
3. Need	-	$\alpha = 0.88$	-0.07 [-0.18, 0.05]	0.22*** [0.11, 0.33]	0.26*** [0.15, 0.37]	0.03 [-0.09, 0.14]	-0.09 [-0.20, 0.03]	-0.05 [-0.17, 0.06]
4. Comprehension	-	-	$\alpha = 0.92$	0.57*** [0.49, 0.64]	0.58*** [0.50, 0.65]	0.52*** [0.43, 0.60]	0.44*** [0.34, 0.53]	0.19** [0.08, 0.30]
5. Purpose	-	-	-	$\alpha = 0.91$	0.57*** [0.48, 0.64]	0.57*** [0.49, 0.65]	0.37*** [0.26, 0.46]	0.22*** [0.10, 0.32]
6. Mattering	-	-	-	-	$\alpha = 0.91$	0.48*** [0.39, 0.56]	0.38*** [0.27, 0.47]	0.16** [0.04, 0.27]
7. Personal	-	-	-	-	-	$\alpha = 0.79$	0.54*** [0.45, 0.61]	0.19** [0.07, 0.30]
8. Interpersonal	-	-	-	-	-	-	$\alpha = 0.84$	0.18** [0.07, 0.29]
9. Sociopolitical	-	-	-	-	-	-	-	$\alpha = 0.81$

^a Note. * $p < .05$, ** $p < .01$

3.3.4. H3 & H4

To test our third and fourth hypothesis, we analyzed data at the level of individual answers and used linear mixed models. Each participant saw 15 conspiracy theories and answered two questions about each of them (adhesion and possibility of actions), giving us 15 analysis units per participant. Because no particular kind of control seemed to distinguish itself from others in its interaction with participant-level variable, we aggregated all three control measures to constitute a single control measure. We centered all relevant variables (Belief in Conspiracy Theories, Possibility of Action, Need for Meaning, Search for Meaning, and Control). Level-2 predictors (Need for Meaning, Search for Meaning, and Control) were grand-mean centered, while level-1 predictors (Possibility of Action) were cluster-mean centered to obtain the estimation of the pooled within-participants effect.

Following the procedure recommended by Sommet and Morselli (2021), we built an empty model (with only belief in conspiracy theories as a dependent variable) and calculated the ICC and the DEFF (see Table S4 for details). The ICC was 0.48, meaning that 48 % of the variance in endorsement of conspiracy theories was explained by differences between participants (a large within-cluster homogeneity). The DEFF (-2.21) was above 1.5, meaning that multilevel modeling was warranted.

As a second step, we built an intermediate model using possibility of action as predictor, and we performed a likelihood-ratio test to see whether estimating the slope residuals improved the fit. The p -value of the LR χ^2 (2) was below 0.001 meaning that estimating the slope residual variance and the covariance terms was warranted.

Then, to test our third hypothesis, we conducted a linear mixed model using adhesion to conspiracy theories as dependent variable, perceived possibility of action (cluster-mean centered) as level-1 predictor, and participant as random effect (ICC = 0.506). Consistent with our third hypothesis, we observed a significant effect of possibility of action on adhesion. ($B = 0.24$ [0.19, 0.29], $SE = 0.03$, $df = 214.61$, $t = 8.99$, $p < .001$). Thus, the more participants saw a theory as offering possibility for actions, the more likely they were to endorse it.

To test our fourth hypothesis, we first entered participants' search for meaning and perceived control as level-2 predictors into the model, as well as the interaction between all predictors (ICC = 0.505). We found no significant interaction between possibility of action and search for meaning: $B = -0.02$, $SE = 0.02$, $df = 190.57$, $t = -1.38$, $p = .168$; no significant interaction between possibility of action and control: $B = -0.03$, $SE = 0.03$, $df = 191.93$, $t = -1.13$, $p = .259$; and no significant three-way interaction: $B = 0.02$, $SE = 0.01$, $df = 168.64$, $t = 1.47$, $p = .145$.

We then ran a similar model, but with need for meaning as level-2 predictor instead of search for meaning (ICC = 0.488). We found no

significant interaction between possibility of action and need for meaning: $B = -0.003$, $SE = 0.02$, $df = 200.97$, $t = -0.15$, $p = .883$; no significant interaction between possibility of action and control: $B = -0.03$, $SE = 0.03$, $df = 189.60$, $t = -0.98$, $p = .330$; and no significant three-way interaction: $B = 0.04$, $SE = 0.02$, $df = 178.77$, $t = 1.80$, $p = .074$.

Thus, though there was a link between the possibility of actions offered by a theory and the extent to which participants endorsed it, this relationship was not mediated either by search/need for meaning, or by their feelings of control.

4. General discussion

Overall, the results of our two studies suggest that there is indeed a correlation between adherence to conspiracy theories and the need, the search, and the presence for meaning in life. Thus, it might be that one reason people are drawn towards conspiracy theories is that conspiracy theories help them satisfy certain existential needs.

What are these existential needs exactly? In introduction, we sketched two different hypotheses: (i) conspiracy theories increase the feeling of coherence by helping people make sense of their environment, and (ii) conspiracy theories provide people with purpose and a sense of mattering by giving people the impression that they can make a difference and have a positive impact on their environment. The first hypothesis is the one that features the most prominently in the psychological literature when it comes to the relationship between meaning in life and beliefs in conspiracy theories. Thus, it has been hypothesized that people might endorse conspiracy theories because it helps them *make sense* of their environment and of unusual or distressing events. However, this perspective is hard to reconcile with the fact that conspiracy theories do not contribute to alleviate anxiety (Liekefett et al., in press), or with the fact that most conspiracy theories do not form a coherent, detailed account – to the extent that some researches have argued that conspiracy theories are not really theories (Dieguez & Delouée, 2021).

However, as we pointed out in the introduction, meaning in life is not restricted to meaning-making and making sense of the world: it also has a more active component, in which agents strive to 'make a difference' or 'have a positive impact on the world'. Rather than tools for better explanations, conspiracy theories can be seen as interpretations of the world that offer people more agency by giving them the impression that they can make a difference. Seeing conspiracy theories in this light can help overcome certain limitations of the 'making sense' view. For example, van Prooijen et al. (2022) notes that "while conspiracy theories may help people understand their social environment when faced with existential threats, the epistemic assumption that hostile conspiracies

operate in the shadows is unlikely to make them feel safe or certain". And indeed, it's not clear that trading the hypothesis of global pandemics for the hypothesis of a global conspiracy should make one feel less anxious. However, while most of us might feel useless against a pandemic, the existence of a global conspiracy allows one to play one's part by denouncing said conspiracy.

Our results suggest that this second hypothesis captures part of the appeal of conspiracy theories. Against the first hypothesis, the results of Study 2 suggest that believing in conspiracy theory does not come with a greater feeling to understand the world one lives in. Rather, it came with a heightened feeling of making a difference and having a positive impact on the world. Moreover, as one would expect on the basis of this second hypothesis, we also found in both studies that participants were more likely to endorse conspiracy theories they perceived as leaving them more possibilities for actions and for making difference, while conspiracy theories that condemned participants to inaction and uselessness were less popular.

Together, these results call for a new way of looking at the relationship between conspiracy theories and meaning in life. While researchers have mostly looked at this relationship from the 'meaning-making' angle, and emphasized the explanatory power of conspiracy theories, it might be fruitful to engage more deeply with the latest ways of conceptualizing meaning in life and its different dimensions.

One limitation in our results is the absence of moderation. Against our expectations, the relationship between search/need for meaning and belief in conspiracy theories was not moderated by participants' feelings of control. One explanation might be that measures of perceived control were not a good proxy for the construct we sought to measure: participants' lack of access to legitimate means of having an impact on their environment. Another might be that the relationship between conspiracy theories and control is twofold: while a lack of control might lead people to endorse conspiracy theories to gain the impression they can make a difference, endorsing conspiracy theories might heighten participants' feelings of control in return. If this is the case, then measuring participants' feelings of control now might not inform us about their perception when they were drawn to conspiracy theories.

This second possibility might explain why our results seem to go against the literature suggesting that people who have little sense of control over their lives are more likely to believe in conspiracy theories (van Prooijen & Jostmann, 2013; Whitson & Galinsky, 2008). Indeed, in our second study, we found no significant correlation between any of the three measures of control and conspiracy beliefs. We found a significant correlation in Study 1, but this might be due to the fact that the measure of control we used (which focuses on the role powerful others play in our lives) has some conceptual redundancy with measures of belief in conspiracy theory. However, in accord with the existing literature (Costin & Vignoles, 2020), we found that perceived control is linked to the presence of meaning and to the three dimensions of meaning. In the end, this suggests that, even though the perception of control can be a predictor of meaning in life, the link between meaning in life and conspiracy theories is not explained by conspiracy theories providing people with a greater sense of control.

Overall, the results of our two studies suggest that conspiracy theories are not only cognitive tools that help people make sense of the world, but also existential tools that people endorse to satisfy needs such as the one of making a difference. Endorsing a conspiracy theory can allow people to see themselves as heroes, members of a small resistance who fight against some Great Evil that is responsible for the current state of the world, and thus bring meaning to their life. These results do not conflict with previous results suggesting that conspiracy theories can contribute to make people more miserable, or do not contribute to make them less anxious (Liekfett et al., in press). Indeed, happiness and meaning in life are two different constructs (Baumeister, 2018), and recent studies suggest that having a positive impact on others is a key component of meaning in life, but not of happiness (Führer & Cova, in press; Huang & Yang, in press). Thus, it might be that conspiracy

theories have a positive impact when it comes to meaning in life, but not when it comes to happiness or well-being.

Although the evidence that we have presented in this paper is only correlational and should ultimately be supplemented by other kinds of evidence, we think that looking at how people use conspiracy theories to improve their lives will not only contribute to shed light on the attractiveness of conspiracy theories in general but might also help us understand why some conspiracy theories are more successful than others.

CRediT authorship contribution statement

Céline Schöpfer: Conceptualization, Term, Resources, Writing - Original Draft, Writing - Review & Editing, **Angela Gaia F. Abatista:** Conceptualization, Term, Methodology, Formal analysis, Investigation, Resources, Writing - Original Draft, Writing - Review & Editing, **Joffrey Führer:** Conceptualization, Term, Resources, Writing - Original Draft, **Florian Cova:** Conceptualization, Term, Methodology, Formal analysis, Investigation, Resource, Data Curation, Writing - Original Draft, Writing - Review & Editing, Visualization, Supervision, Project administration.

Data availability

Methods and analysis plans have been pre-registered for all studies. Materials, data, and analysis scripts (R) are available on OSF for all studies.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.paid.2022.111900>.

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