Stigmatized Beliefs: Conspiracy Theories, Anticipated Negative Evaluation of the Self, and Fear of Social Exclusion

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Abstract

Can conspiracy theories be a source of social stigma? If it is true, it would follow that people may expect to be socially excluded when they express endorsement of conspiracy theories. This effect should be partially explained by the knowledge of the negative perceptions associated with conspiracy theories. In Study 1, inducing French internet users to write a text endorsing (vs. criticizing) conspiracy theories about the Charlie Hebdo shooting, led them to anticipate fear of social exclusion. This effect was mediated by anticipated negative evaluation of the self. In Study 2, inducing French internet users to imagine defending (vs. criticizing) conspiracy theories about the Charlie Hebdo shooting in front of an audience, led them to anticipate fear of social exclusion. The effect was again mediated by anticipated negative evaluation of the self. To conclude, our findings demonstrate that conspiracy theories can be viewed as a source of social stigma.

Keywords: Conspiracy theories, Social Exclusion, Social Judgment, Stigma

Stigmatized Beliefs: Conspiracy Theories, Anticipated Negative Evaluation of the Self, and Fear of Social Exclusion

During a professional dinner where you barely know anyone, the conversation is turning to the last terrorist attacks in your country. You are convinced that, contrary to what the official reports claim, these terrorist attacks have been secretly planned by your own government. Yet, would you be motivated to defend publicly your position, or would you avoid giving your opinion for fear of being socially excluded? The second option would surely reflect the existence of a social stigma attached to conspiracy theories. The current work sought to test whether conspiracy theories carry a social stigma, by getting people to defend conspiracy theories. If, after defending conspiracy theories, people anticipate fear of social exclusion as a result of negative evaluation of the self, then conspiracy theories might carry a social stigma.

In recent years, the number of empirical and theoretical works about belief in conspiracy theories has exponentially increased, teaching us about the structure, causes, correlates, and consequences of conspiracy beliefs. For example, lack of control (Whitson & Galinsky, 2008), uncertainty (Whitson, Galinsky, & Kay, 2015), ambivalence (Van Harreveld, Rutjens, Schneider, Nohlen, & Keskinis, 2014), and perspective-taking of a group that is concerned with a threatening event (van Prooijen & van Dijk, 2014) are all factors that increase endorsement of conspiracy beliefs. On average and without being exhaustive, people who believe in conspiracy theories lack trust in others (Wagner-Egger & Bangerter, 2007), are more likely to see nonhuman agents as possessing human characteristics (Brotherton & French, 2015; Douglas, Sutton, Callan, Dawtry, & Harvey, 2016; Imhoff & Bruder, 2014), have more need for uniqueness (Imhoff & Lamberty, 2017; Lantian, Muller, Nurra, & Douglas, 2017), believe more in paranormal (Brotherton, French, & Pickering, 2013; Darwin, Neave, & Holmes, 2011; Lantian, Muller, Nurra, & Douglas, 2016; Lobato, Mendoza, Sims,

& Chin, 2014), and have lower education (Douglas et al., 2016; Van Prooijen, 2017). Finally, conspiracy beliefs have negative consequences on health and environmental domains (Bogart & Bird, 2003; Jolley & Douglas, 2014a; Jolley & Douglas, 2014b; Jolley & Douglas, 2017; Lewandowsky, Oberauer, & Gignac, 2013), and on pro-social behaviors (van der Linden, 2015).

Despite all the knowledge gained about the psychological factors related to conspiracy beliefs, there is relatively little empirical work about the public perception of conspiracy theories in our society. It is anecdotally believed that conspiracy theories have a negative connotation, and may thus, be a source of stigma for those who endorse them. Indirect support for this view is provided by Wood and Douglas (2013) who observed that people promoting alternative explanations for events via comments on news websites (referred to as "conspiracists" by the authors) were reluctant to label and let others label their beliefs as "conspiracy theories". According to these authors, these observations support the recurrent hypothesis of "social stigma" (p. 1) and of "intellectual stigma" (p. 3) attached to conspiracy theories, which supposedly negatively affects the social perception of people who endorse such theories. As the "stigma" hypothesis becomes increasingly popular (see also Harambam & Aupers, 2015; Wood, 2016; Wood & Douglas, 2015), to test it empirically, it is important to draw on theoretical considerations regarding the nature of stigma.

Social Stigma: Definition, Psychological Consequences, and Concealability

Testing the hypothesis of conspiracy theories as a social stigma requires turning to the literature and the conceptualizations of the concept of "stigma". *Stigma* was a term originally used by the ancient Greeks to designate a sign into the body (e.g., a cut, a burnt) that was made to signal to everyone the presumed questionable morality of its bearer (e.g., a criminal, a slave, etc.; Goffman, 1963). According to Goffman (1963), a stigma is "an attribute that extensively discredits an individual" (Goffman, 1963, p. 3). These attributes, such as skin

color (Pinel, Warner, & Chua, 2005), sexual orientation (Lewis, Derlega, Griffin, & Krowinski, 2003), physical or mental disabilities (Crandall & Moriarty, 1995; Rüsch, Angermeyer, & Corrigan, 2005), or religious (non)belief (Gervais & Najle, 2018; Nugier et al., 2016; Pachankis et al., 2018) may be of various kinds, as a function of the social context (Major, 2007). A great deal of research has been devoted to the topic of stigma (Link & Phelan, 2001; Major & O'Brien, 2005), including the study of its nature (e.g., the different characteristics of stigma such as controllability, concealability, and dangerousness; Frable, 1993; Major, 2007; Quinn, 2006), its origins (Kurzban & Leary, 2001), and its social-psychological consequences (Major & O'Brien, 2005).

Social exclusion is considered one of the most straightforward and logical consequences of stigma (Kurzban & Leary, 2001; Major & Eccleston, 2004; Miller & Kaiser, 2001; Smart & Wegner, 2000). According to Dodor and Kelly (2009), "The core feature of stigma is the possession of an attribute that conveys a devalued social identity, which is widely shared and well known among members of the culture, and become a basis for excluding or avoiding such person(s)" (p. 175). In fact, peoples' self-perception depends on how they think others perceive them (Shrauger & Schoeneman, 1979). Hence, people continuously monitor their environment to detect potential signs of social exclusion (Leary, 1999), an activity that helps them satisfy their fundamental need to belong (Baumeister & Leary, 1995). In other words, people are aware of the social world in which they live, which implies that they would know that holding a stigma makes them most likely to be socially excluded: something far from being benign. Indeed, social exclusion causes various aversive effects to those it concerns (Gerber & Wheeler, 2009; Williams, 2007), including a threat to their fundamental needs (e.g., Fayant, Muller, Hartgerink, & Lantian, 2014; Gonsalkorale & Williams, 2007; Williams, 2007).

The Hypothesis of Conspiracy Theories as a Social Stigma

In line with the defense of the conspiracy-theories-as-a-social-stigma hypothesis, some scholars explicitly state that providing a conspiracy theory as an explanation is stigmatized in our society (Harambam & Aupers, 2015; Husting & Orr, 2007). More specifically, Husting and Orr (2007) claim that in the public sphere, the term "conspiracy theory" trivializes people's explanations, regardless of the quality of these explanations. In this sense, conspiracy theories could be seen as a "sign of narrative disqualification" (Bratich, 2008, p. 4). For Barkun (2016), conspiracy theories are even doubly stigmatized, because they are not only considered as invalid knowledge, but also as theories defended by people belonging to the social fringe. Thus, more than the discredit associated with conspiracy theories, the traits of people who endorse them may also be discredited. Some scholars suggest indeed that being called "conspiracy theorist" conveys a negative image (Harambam & Aupers, 2015; Husting & Orr, 2007).

This image is even found in the academic literature. Indeed, believing in conspiracy theories seems to be a sign of "intellectual character vices", such as gullibility and lack of discernment, for giving too much credibility to questionable sources of information and lack of credibility to legitimate sources of information (Cassam, 2016). In addition to being qualified as possessing such flaws, conspiracy believers are often considered in the collective imagination as suffering from mental health disorders, such as paranoia (Bratich, 2008; Harambam & Aupers, 2015; Harambam & Aupers, 2017; Husting & Orr, 2007; Sparkman, 2012). Moreover, ridiculing arguments of those who believe in conspiracy theories has been found to be an effective lever to reduce belief in conspiracy theories (Orosz et al., 2016). In sum, social views of conspiracy (e.g., theories, beliefs, believers, etc.) seem to be in general considered derogatory in Western cultures (where most of the scholarship on this topic originates).

While scholars have discussed the view that endorsing conspiracy theories is a source of stigma, empirical evidence supporting it is scarce. Besides the above-cited work by Wood and Douglas (2013); Klein, Van der Linden, Pantazi, and Kissine (2015) have shown that US MTurkers consider that a certain number of negative traits, such as 'gullible', 'crazy', 'stupid', etc. applies more to people who believe in conspiracy theories than to people who do not believe in conspiracy theories. Moreover, conspiracy believers are more likely to be members of often socially disadvantaged minority groups (Crocker, Luhtanen, Broadnax, & Blaine, 1999; Freeman & Bentall, 2017; Parsons, Simmons, Shinhoster, & Kilburn, 1999; Stempel, Hargrove, & Stempel, 2007; Uscinski & Parent, 2014), and are more likely to report a feeling of powerlessness and anomie (Abalakina-Paap, Stephan, Craig, & Gregory, 1999; Goertzel, 1994; Jolley & Douglas, 2014a). Given that "rejection is an indicator of stigma" (Miller & Kaiser, 2001, p. 190), this could be seen an indirect hint in favor of the stigmatized condition of conspiracy believers.

Nevertheless, despite the fact that these works support the conspiracy-theories-as-stigma hypothesis, their correlational nature and the fact that they do not directly measure stigma do not allow to demonstrate a causal relation between endorsement of conspiracy theories and social stigma. More importantly, previous studies do not tackle the fact that stigma is inherently dependent on contextual factors, which is well articulated in the stigma literature. As Crocker, Major and Steele (1998) note: "stigmatization is (…) primarily a situational threat, the predicament of being in a situation where one's stigma could influence how one is treated and judged" (p. 504).

The present work represents the first experimental attempt to specifically test the hypothesis that conspiracy theories are socially stigmatized. While taking into account the contextual factors articulated in the stigma literature, we tested the conspiracy-theories-as

stigma hypothesis, using two indicators of the existence of social stigma.[1] Specifically, we suggest that if the conspiracy-theories-as-stigma hypothesis holds, then, driving people to defend (vs. criticize) conspiracy theories should make them (1) aware of the risk to be evaluated negatively, and (2) consequently make them fear being excluded. These hypotheses stem from the fact that social stigma is originally defined as subjective and contextual (Crocker et al., 1998), and hence, social stigma is noticeable by assessing people's internal representation about the subject matter in question. Thus, the social expectations that people develop when they imagine defending (vs. criticizing) conspiracy theories allow us to study stigma in a quasi-ecological context. We conducted two studies to test our hypotheses.

In a more exploratory manner, we also included a baseline measure of belief in conspiracy theories. Indeed, one could wonder whether people who are generally drawn to conspiracy theories will react differently to the defense of conspiracy theories compared with people who do not believe in those theories. In terms of the direction of these potential differences, we anticipated two possibilities. On the one hand, people who endorse conspiracy theories could be more sensitive to publicly defending conspiracy theories because they may personally carry this stigma on their day-to-day experience. On the other hand, people who endorse conspiracy theories could be less sensitive to these effects because they may feel protected by a strong sense of belonging in a subgroup of people sharing the same beliefs, and/or through the development of strategies to cope with and overcome a negative in-group status position (e.g., Mummendey, Kessler, Klink, & Mielke, 1999). Moreover, more pragmatically, defending something in which someone really believes could lead to relatively less discomfort than defending something in which someone does not really believes. In any event, including a baseline measure of belief in conspiracy theories also

[1] Importantly, social stigma is originally defined as subjective and contextual (Crocker et al., 1998), hence, people's beliefs regarding social perception of conspiracy theories are a witness of the existence of a social stigma. In other words, a social stigma is noticeable by assessing people's internal representation about the subject matter in question.

allowed us to ensure that the predicted effects are not only limited to people who do not believe in conspiracy theories.

The current studies

Studies were conducted with French speakers so the materials were in French. For readability, we provided example of the materials in English. Study 1 and Study 2 were conducted and pre-registered in parallel. Studies were conducted online and participants were randomly assigned either to Study 1 or Study 2. For both studies, we pre-registered the hypotheses, the intended statistical treatments, the planned sample size, and the a priori exclusion criteria, on the *AsPredicted* website (https://aspredicted.org/tx9st.pdf for Study 1, https://aspredicted.org/yp45w.pdf for Study 2). We planned to run a mediation analysis. Then, to determine the sample size (total $N = 150$ for each study), we based our power analysis calculation (with $\alpha = .05$ and a statistical power of 80%) on the test of the indirect effect (calculated thanks to the joint significance test, Judd, Yzerbyt, & Muller, 2014). It was based on a hypothetical simple mediation model, with an expected effect size of 0.39 (conventionally considered as a medium effect size) for the IV to mediator path and an expected effect size of 0.26 (conventionally considered as a small-to-medium effect size) for the mediator to DV path (see Fritz & MacKinnon, 2007). These two effect sizes could not be determined on the basis of previous literature because of an absence of similar reported effect, but were based on our own sense of smallest effect of interest (Funder et al., 2014). Finally, in both studies presented in this paper, "we report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures in the study" (Simmons, Nelson, & Simonsohn, 2012, p. 4). Publicly available anonymized raw data, analysis codes, and materials of our two studies can be found here: https://osf.io/32kps/.

Study 1

In this study, the main goal was to test whether getting people to defend (vs. criticize) conspiracy theories by writing a short essay, would lead them to fear social exclusion. This effect is expected to be mediated by an anticipated negative evaluation resulting from the defense of conspiracy theories. A secondary goal was to test whether people think that those who believe in conspiracy theories are negatively judged (assessed with a specific item detailed below). Finally, a baseline measure of conspiracy theories belief allowed us 1) to run some additional exploratory analyses on the potential moderating effect of conspiracy belief on our variables, and 2) to study the relation between conspiracy beliefs and people's perceptions (in general and members of their social circle) of believers in conspiracy theories.

Method

Materials and procedure. The study was conducted online. In the present study, we made participants believe that we were studying the ability to argue, more precisely, the ability to convince others during a debate. Participants were told that the computer program controlling the experiment would randomly select a topic, and that they would have to defend a specific and imposed viewpoint on this topic. We stipulated that regardless of their real opinion on this issue, their task consisted in defending this imposed viewpoint as convincingly as possible. We added that their arguments would be compared with the arguments of another internet user having been instructed to defend the opposite viewpoint, as in a television debate. We specified then that to identify who argued best, judges would evaluate and tell by whom they were the most convinced.

Then, participants were randomly allocated to one of the two experimental conditions. After a brief reminder of the Charlie Hebdo shooting, we informed participants that some people called into question the official story about the group accused to be at the origin of the event, claiming that it was, in reality, planned in secret by French or foreigners' secret services or secret societies. In the pro-conspiracy condition, participants were asked to argue

in favor of these alternative theories (explicitly called “conspiracy theories” in the text), so as to convince an audience that these theories are true. In the anti-conspiracy condition, participants were asked to argue against these alternative theories (explicitly called “conspiracy theories” in the text), so as to convince an audience that these theories are false. All the participants were invited to write down three arguments.

Next, we asked participants to imagine that the arguments they just produced were published on their Facebook profile, visible to anyone. We asked them to think about how people would evaluate them. We explicitly emphasized that by "people", we referred to any person finding their Facebook profile by chance, not their friends. For the purposes of the study, we created a 5-item scale to measure anticipated negative evaluation of the self (i.e., “After having read my arguments, people would form an unfavorable opinion of me”, “After having read my arguments, people would criticize me”, “After having read my arguments, people would judge me positively” [reverse-coded item], “After having read my arguments, people would have a wrong image of myself”, “After having read my arguments, people would despise me”), with the following anchors (1 = *Strongly disagree*, to 5 = *Strongly agree*). This scale had good internal consistency (Cronbach alpha, $\alpha = .88$). We also created a 4-item scale (1 = *Strongly disagree*, to 5 = *Strongly agree*) to measure anticipated fear of social exclusion (i.e., “After having read my arguments, I would be scared that people wish to be less susceptible to socialize with me”, “After having read my arguments, I would be scared that people wish to ignore me”, “After having read my arguments, I would be scared that people wish to put me aside”, “After having read my arguments, I would be scared that people wish to reject me”, $\alpha = .96$).

Before proceeding further, we ensured whether these last two constructs (i.e., anticipated negative evaluation of the self and anticipated fear of social exclusion) were empirically distinguished. To do so, we conducted two confirmatory factorial analyses (using

maximum likelihood estimator), one with a two-factor model and one with a one-factor model. In line with our expectations, we found a good fit for the two-factor model (χ^2[26, N = 142] = 56.19, normed chi-square (χ^2/df) = 2.96, comparative fit index [CFI] = 0.98, mean square error of approximation [RMSEA] = 0.09 [90% CI = 0.06, 0.12], standardised root mean square residual [SRMR] = 0.05) and more modest support for the one-factor model combining all the items onto a single factor (χ[27, N = 142) = 160.67, normed chi-square (χ^2/df) = 5.95, CFI = 0.89, RMSEA = 0.19 [90% CI = 0.16, 0.22], SRMR = 0.08). Crucially, we also found that the two-factor model fitted significantly better than the one-factor model (χ^2[1] = 104.49, $p < .001$).

Following these measures, we assessed participants' general conspiracy belief baseline using the French version (Lantian et al., 2016) of the Generic Conspiracist Beliefs scale (GCB; Brotherton et al., 2013). This is a 15-item scale (1 = *Definitely not true* to 5 = *Definitely true*), which measures the general proneness to believe in conspiracy theories (e.g., "Evidence of alien contact is being concealed from the public", $\alpha = .89$). We also included an attention check to assess if participants really payed attention to the task (i.e., "This question is designed to ensure that you are reading carefully, please answer "undecided", corresponding to the third row"). Finally, participants were told to answer to demographic questions. We asked if they were disturbed by their environment during the study ("no", "just a little", "a lot"), and asked for their socio-economic category, age, gender, what they thought was the goal of the study, and a free space for comments. Then, we asked, if the question was relevant to their concerns, to what religious orientation they felt the closest. We assessed, on an analogical scale from 0 (not at all) to 100 (extremely) if they had followed the news about the Charlie Hebdo attacks in January 2015, and if they personally believed in conspiracy theories about these events. To assess perceptions of believers in conspiracy theories, we also asked how, according to them, French people in general perceive people who doubted the

official version of the Charlie-Hebdo attacks (1 = *Very negatively*, to 7 = *Very positively*), and how people from the participants' social circle (i.e., their acquaintances) do (on the same rating scale). We included a seriousness check ("I have taken part seriously" or "I have just clicked through, please throw my data away";see Aust, Diedenhofen, Ullrich, & Musch, 2013). At the end, participants were debriefed and thanked.

Participants. One hundred and fifty-one French participants (M_{age} = 27.55, SD_{age} = 12.91, 107 females) were recruited via various online platforms (e.g., social media, diverse mailing lists, etc.). In terms of socio-economic status, student participants were in majority in our sample (63.6%), followed by "managers and higher intellectual professions" (15.9%). Following our pre-registered a priori exclusion criteria, we excluded nine participants from the final sample. Among them (including participants who satisfy diverse exclusion criteria), two were excluded due to being considered by two independent judges as "non-compliant participants"[2], two because they failed the seriousness check (Aust et al., 2013), three because they failed the attention check, one for having reported being clearly disturbed during the study, and three for having self-reporting lack of knowledge about the Charlie Hebdo attacks. Hence, our final sample is composed of 142 participants (M_{age} = 27.31, SD_{age} = 11.56, 102 females)[3].

Results

Confirmatory Results

To test our main prediction (a mediation model, see Figure 1)[4], we first tested the total effect of conspiracy argumentation (anti-conspiracy coded -1 vs. pro-conspiracy coded +1) on

[2] "Non-compliant participant" qualifies participants who explicitly do not follow the instructions, for example, refusing to do the task or writing something not related to the instructions.
[3] Given the low number of missing participants after applying the exclusion criteria, the decrease in statistical power is relatively negligible.
[4] On one of the following regression models, we detected an observation with a very large studentized deleted residual (i.e., a value of 4.44, see McClelland, 2014). Accordingly, to our pre-registering document, we removed this participant from the sample, for this mediation analysis and the moderated mediation analysis that followed. Keeping this participant did not change any of the conclusions.

anticipated fear of exclusion. In line with our hypothesis, participants who were asked to defend conspiracy theories reported more anticipated fear of social exclusion than participants who were asked to criticize them, β = 0.61, *B* = 0.75, *SE* = .08, *t*(139) = 9.19, *p* < .001, η^2_p = .378. A second regression model (testing the IV to mediator path) showed that participants from the pro-conspiracy condition anticipated more negative evaluation than participants in the anti-conspiracy condition, β = 0.59, *B* = 0.58, *SE* = .07, *t*(139) = 8.71, *p* < .001, η^2_p = .353. Third, a last regression model (testing the mediator to DV path) showed that the more people anticipated negative evaluation, the more they anticipated fear of social exclusion, controlling for the experimental condition, β = 0.67, *B* = 0.84, *SE* = .08, *t*(138) = 11.05, *p* < .001, η^2_p = .470. The residual direct effect of conspiracy belief was reduced, but still significant, β = 0.22, *B* = 0.26, *SE* = .07, *t*(138) = 3.55, *p* < .001, η^2_p = .084. Because the IV to mediator and mediator to DV paths are significant at the same time, one can conclude that this reduction is significant (Judd et al., 2014). Of course, as an alternative test, the percentile bootstrap procedure (percentile 10,000) also leads to the same conclusion with a confidence interval that does not include zero, 95% [0.36; 0.62] for the indirect effect.

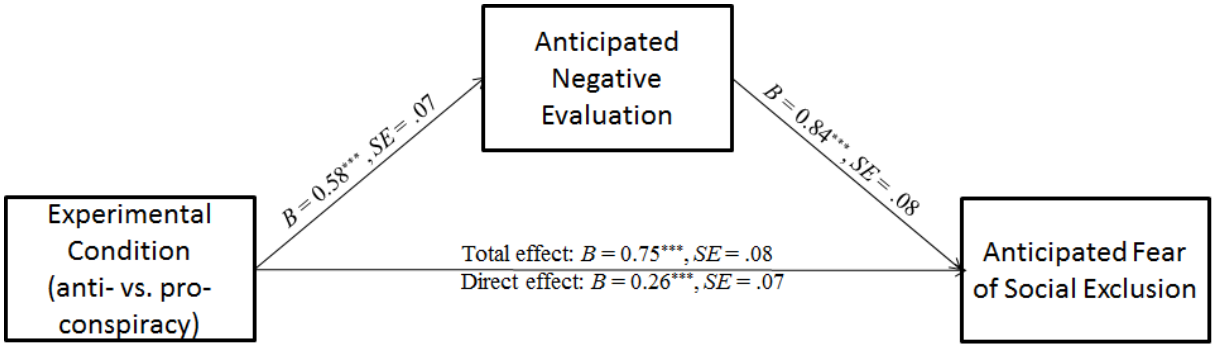

Figure 1. Unstandardized regression coefficients (*B*) of the mediated model tested in Study 1.

*** *p* < .001.

Our secondary prediction was that, in general, people think that those who believe in conspiracy theories (on Charlie-Hebdo attacks in our case) are negatively judged. A one-

sample t-test against the middle point of the scale (4) confirms that people view believers in conspiracy theories as negatively judged by people in general (M = 2.59, SD = 1.16), $t(141)$ = 14.45, $p < .001$, Cohen's d = 1.21.

Exploratory Results and Discussion

Having found that the effect of the experimental manipulation on anticipated fear of social exclusion is mediated by negative evaluation of the self, we considered whether this mediation was moderated by people's chronic tendency to espouse conspiracy beliefs[5]. To do so, we run a moderated mediation model, after having made sure that the experimental manipulation did not affect the moderator. This condition was met.[6]:

The moderated mediation model followed the analytic strategies specified by Muller, Judd, and Yzerbyt (2005). After having mean-centered all the predictors (see Table 1 for the univariate and bivariate statistics), we observed an overall effect of the experimental condition on the anticipated fear of social exclusion, at the average level of baseline measure of belief in conspiracy theories (B = 0.75, $p < .001$). This overall effect of the experimental condition was moderated by baseline measure of belief in conspiracy theories[7], that is, the more participants are susceptible to believe in conspiracy theories, the less being asked to defend conspiracy theories led them to fear being socially excluded (B = -0.38, $p < .001$; see Table 2 for all the relevant data). The analysis of the simple effects showed that people with low, average, and high level of conspiracy belief, feared more social exclusion when defending

[5] Ultimately, we chose the measure of the general tendency to believe in conspiracy theories instead of the single-item measuring belief in conspiracy theories about Charlie Hebdo shooting, as a moderator in the moderated mediation model tested. We believe that in terms of generalization, we will learn more about conspiracy beliefs from analyzing people's general susceptibility to believe in conspiracy theories rather than studying only a subset of this category of beliefs. Indeed, conspiracy mentality is the hypothetical underlying construct linking belief in various conspiracy theories together, which bring us to argue that this effect should not be restricted to these particular conspiracy theories (i.e., Charlie Hebdo shooting conspiracy theories). In any case, interested readers are referred to Supporting Information S1 to see the results involving the single-item measuring belief in Charlie Hebdo conspiracy as the moderator.

[6] People in the pro-conspiracy condition did not express a higher baseline belief in conspiracy theories (M = 2.59, SD = 0.79, n = 72) compared to the anti-conspiracy condition (M = 2.58, SD = 0.73, n = 69), $t(139) = 0.09$, $p = .93$, $\eta^2_p < .001$.

[7] This result is incompatible with a prototypical moderated mediation, which assumes that the effect of the IV on the DV is not dependent on values of the moderator (Muller et al., 2005).

rather than criticizing conspiracy theories (see Figure 2 for a graphical representation of the values of the simple effects for low, average, and high believers in conspiracy theories). More importantly, we found then that the effect of experimental condition on anticipated negative evaluation was moderated by baseline measure of belief in conspiracy theories (B = -0.33, $p < .001$). Interestingly, despite this moderation, not only low believers but also average and high believers in conspiracy theories felt negatively evaluated when defending rather than criticizing conspiracy theories. We did not find a significant moderation effect of baseline measure of belief in conspiracy theories on the effect of negative evaluation of the self on fear of social exclusion (controlling for the experimental condition; B = -0.13, *ns*). Finally, we did not find evidence of a moderation effect of baseline measure of belief in conspiracy theories on the direct effect of experimental condition on fear of social exclusion (controlling for the other variables in the model; B = -0.06, *ns*).

Table 1

Univariate and Bivariate Statistics for Moderated Mediation in Study 1

Variable	Pro-conspiracy	Conspiracy beliefs baseline	Anticipated negative evaluation	Anticipated fear of social exclusion
M	0.02	2.59	3.31	2.51
SD	1	0.76	0.98	1.22
Correlations				
Pro-conspiracy	_	.01	.59***	.61***
Conspiracy beliefs baseline		_	-.09	-.20*
Anticipated negative evaluation			_	.80***
Anticipated fear of social exclusion				

Note: $N = 141$.

* $p < .05$. *** $p < .001$.

Table 2

Least Squares Regression Results for Moderated Mediation in Study 1

	Outcome: Anticipated fear of social exclusion		Outcome: Anticipated negative evaluation		Outcome: Anticipated fear of social exclusion	
Predictors	*B* (*SE*)	*t*	*B* (*SE*)	*t*	*B* (*SE*)	*t*
Pro-conspiracy	0.75 (.08)	9.96***	0.58 (.06)	9.20***	0.26 (.08)	3.36**
Conspiracy beliefs baseline	-0.29 (.10)	-2.94**	-0.10 (.08)	-1.16	-0.21 (.07)	-2.69**
Pro-conspiracy x Conspiracy beliefs baseline	-0.38 (.10)	-3.81***	-0.33 (.08)	-3.92***	-0.06 (.09)	-0.68
Anticipated negative evaluation					0.79 (.08)	10.01***
Anticipated negative evaluation x Conspiracy beliefs baseline					-0.13 (.09)	-1.42

Note: *B* = unstandardized estimate, *SE* = standard error of the estimate. *N* = 141.

** $p < .01$. *** $p < .001$

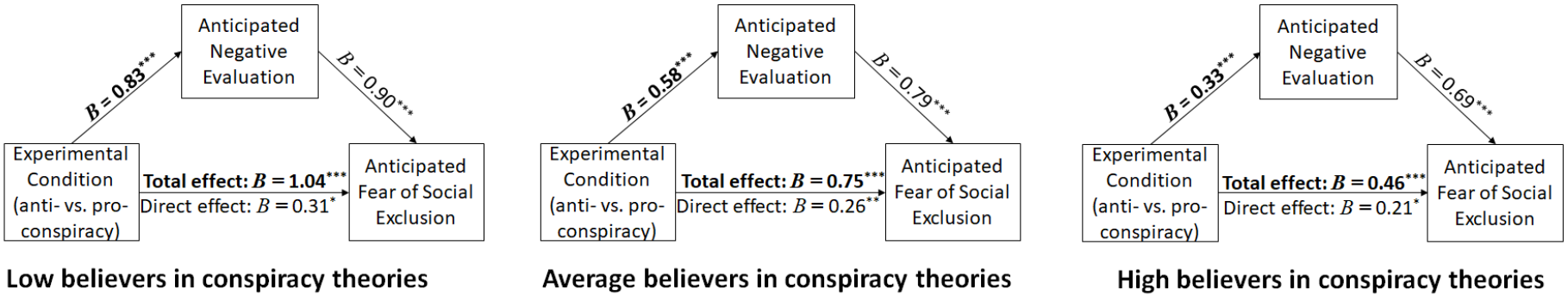

Figure 2. Unstandardized regression coefficients (*B*) of the mediated model tested illustrating simple effects for low (-1 SD), average, and high (+1 SD) believers in conspiracy theories, in Study 1. Unstandardized regression coefficients in boldface are significantly different ($p < .05$) across levels of the moderator.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Our next exploratory investigation involved testing if people's baseline measure of belief in conspiracy theories was related to their guessing about how French people perceive people who believe in conspiracy theories regarding the Charlie Hebdo attacks (M = 2.59, SD = 1.16), as well as how people from their own social circle (i.e., their acquaintances) perceived people who believe in such theories (M = 2.73, SD = 1.41). We observed that participants' baseline measure of belief in conspiracy theories was not significantly related to how they think the French people perceive those who believe in conspiracy theories about Charlie Hebdo events, $r(140) = .03$, 95% CI [-.14, .19], $p = .76$. However, the more participants believe in general conspiracy theories, the more they think that people from their own social circle positively evaluate those who believe in conspiracy theories about Charlie Hebdo events, $r(140) = .36$, 95% CI [.21, .50], $p < .001$.

In sum, the results of Study 1 allow us to confirm our main prediction that people who defend conspiracy theories expect to be negatively judged, which, in turn, leads them to fear social exclusion. General baseline susceptibility to conspiracy theories seems to play a role in this stigmatizing mechanism, but only to some extent: The more people are susceptible to believe in conspiracy theories, the less being asked to defend conspiracy theories (rather than criticize them) led them anticipate negative evaluation of the self. When defending conspiracy theories, people who do not believe in conspiracy theories felt negatively evaluated and reported fear of social exclusion, but it is also the case, albeit to a lesser extent, for people who moderately and strongly believe in conspiracy theories. Note nevertheless, that these exploratory results should be treated with caution given that our sample size planning was based on the test corresponding to our main hypothesis, and not this exploratory analysis. Study 2 tested the replicability of our main findings.

Study 2

In this study, our aim was to demonstrate that inducing people to imagine defending conspiracy theories in public, in front of an audience, leads to an anticipated fear of social exclusion. Again, we expected this effect to be mediated by the knowledge that defending conspiracy theories is negatively viewed by people in general.[8] The secondary and exploratory hypotheses were the same as in Study 1.

Method

Participants. We recruited the complete data of 150 French participants (M_{age} = 27.01, SD_{age} = 9.97, 117 females). As in Study 1, student participants were in majority in our sample (58.7%), followed by "managers and higher intellectual professions" (16.7%). In accordance with our pre-registered a priori exclusion criteria, five participants were excluded from the final sample. Among them (including participants who satisfy diverse exclusion criteria), three were excluded because they failed the seriousness check (Aust et al., 2013), two because they failed the attention check, and two for having reported being clearly disturbed during the study. Our final sample is composed of 145 participants (M_{age} = 26.68, SD_{age} = 9.73, 112 females).

Materials and Procedure

In the present study, we told participants that we were studying imagination and perspective taking. Participants were told that the program is going to randomly select a topic for an imaginary task, in which they would have to imagine what they could feel, their attitudes, beliefs, and behaviors, trying to do their best to forget their own convictions, who they are, and how they would normally react, etc. (small portions of the instructions were borrowed from Rusbult, 1980).

[8] For reasons of consistency and fluency, although in the pre-registration document we distinguish between confirmatory and exploratory analyses in both studies, we do not make this distinction in the following results section of Study 2. The distinction was made in the preregistration document of both studies because they were run in parallel. However, as here the studies are presented sequentially, we only made this distinction for Study1 which was presented first.

Then, participants were randomly allocated to one of the two experimental conditions. In the two conditions, they should imagine that they were in front of an audience of 300 people attending a public debate. Importantly, we specified that they would know absolutely no one in this audience. The topic of the debate was the Charlie Hebdo shooting. We informed participants that some people called into question the official story about the group accused to be at the origin of the event, claiming that it was, in reality, planned in secret by French or foreign secret services or secret societies. In the pro-conspiracy condition, participants were told that they strongly argued in favor of these alternative theories (explicitly called "conspiracy theories" in the text), because they are convinced of their veracity. In the anti-conspiracy condition, participants were told that they strongly argued against these alternative theories, because they were strongly convinced that they were false. Then, all the participants were invited to take one minute to imagine this situation and what they would feel and think immediately after their speaking slot. They could not continue as long as the minute had not fully elapsed. To increase the efficacy of the procedure, immediately after this minute, we instructed them to write with the maximum of details how they have lived this situation, including their emotions, behaviors, etc. (this general procedure was borrowed from Brambilla, Ravenna, & Hewstone, 2012). We assessed the quality of the mental imagery (Libby, 2003) by evaluating how participants estimate the difficulty of the task: "I found that imagining this event was" (1 = *Extremely easy*, to 7 = *Extremely difficult*), the vividness: "I found that the mental pictures linked to this event were" (1 = *Foggy and blurry*, to 7 = *Clear and distinct*) and the completeness of the imagery "I found that the mental pictures link to this event were" (1 = *Sparse and empty*, to 7 = *Rich and detailed*).

In the following phase, we asked participants how people from the audience would evaluate them. The two scales used in Study 1, that is, the anticipated negative evaluation of the self (α = .73) and the anticipated fear of social exclusion (α = .95), were slightly adapted

to this task (e.g., "After having heard me, people would form an unfavorable opinion of me"). All the remaining materials were exactly the same as in Study 1.

Again, we found that these two last constructs (i.e., anticipated negative evaluation of the self and anticipated fear of social exclusion) were empirically distinguished. Indeed, a confirmatory factorial analyses (using maximum likelihood estimator) provided good support for a two-factor model (χ^2[26, N = 141] = 34.98 normed chi-square (χ^2/df) = 1.35, CFI = 0.99, RMSEA = 0.05 [90% CI = 0.00, 0.09], SRMR = 0.07) and a more modest support for a one-factor model combining all the items into one constructs (χ^2[27, N = 141] = 120.54, normed chi-square (χ^2/df) = 4.46, CFI = 0.86, RMSEA = 0.16 [90% CI = 0.13, 0.19], SRMR = 0.14). Crucially, the two-factor models fitted significantly better than the one-factor models (χ^2[1] = 85.57, p < .001).

Results

We observed that participants in the pro-conspiracy condition considered that the imaginary task was significantly more difficult (M = 3.98, SD = 1.81, n = 64 vs. M = 2.83, SD = 1.49, n = 81, t[143] = 4.22, p < .001, η^2_p = .111), marginally less vivid (M = 4.61, SD = 1.70 vs. M = 5.07, SD = 1.37, t[143] = 1.83, p = .070, η^2_p = .023), but no less rich and detailed (M = 4.38, SD = 1.54 vs. M = 4.65, SD = 1.23, t[143] = 1.22, p = .23, η^2_p = .010) than participants in the anti-conspiracy condition.

First, we tested the total effect of conspiracy argumentation (anti-conspiracy coded -1 vs. pro-conspiracy coded +1) on anticipated fear of social exclusion[9] (see Figure 3). Participants in the pro-conspiracy condition reported more anticipated fear of social exclusion than participants who were asked to criticize them, β = 0.26, B = 0.30, SE = .09, t(139) = 3.20, p = .002, η^2_p = .069. Participants from the pro-conspiracy condition anticipated more negative

[9] Four participants have a too low value on the measure of anticipated evaluation of the self (detected thanks to the median absolute deviation, see Leys, Ley, Klein, Bernard, & Licata, 2013). Following our pre-registering document, we removed these participants from the sample, for this mediation analysis and the moderated mediation analysis that follows. Keeping these participants did not change any of the conclusions.

evaluation than participants in the anti-conspiracy condition (IV to mediator path), β = 0.24, *B* = 0.14, *SE* = .05, *t*(139) = 2.85, *p* = .005, η^2_p = .055. Finally, the more people anticipated negative evaluation, the more they anticipated fear of social exclusion, controlling for the experimental condition (mediator to DV path), β = 0.28, *B* = 0.51, *SE* = .15, *t*(138) = 3.39, *p* < .001, η^2_p = .077. The residual direct effect of conspiracy theories defence was reduced, but still significant, β = 0.20, *B* = 0.23, *SE* = .09, *t*(138) = 2.43, *p* = .017, η^2_p = .041. Again, because the IV to mediator and mediator to DV paths are significant at the same time, one can conclude that this reduction is significant (Judd et al., 2014), but, as an alternative test, the percentile bootstrap procedure (percentile 10,000) leads to the same conclusion, 95% IC [0.018; 0.149]. Therefore, conspiracy theory defense increases people's anticipated negative evaluation, which, in turn, increases their anticipated fear of social exclusion.

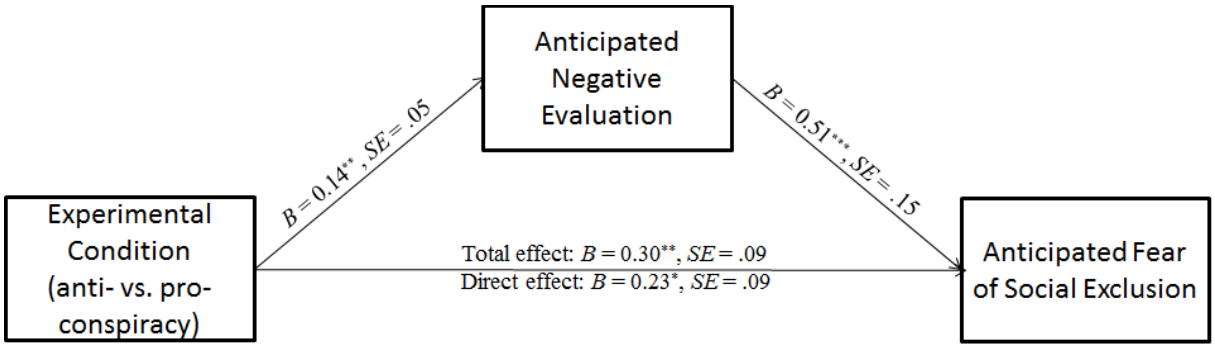

Figure 3. Unstandardized regression coefficients (*B*) of the mediated model tested in Study 2. * *p* < .05. ** *p* < .01. *** *p* < .001.

Regarding our secondary predictions, we replicated the results of Study 1. A one-sample t-test against the middle point of the scale (4) revealed that people consider that believers in conspiracy theories are rather negatively judged by people in general (*M* = 2.72, *SD* = 1.19), *t*(143) = 12.93, *p* < .001, Cohen's d = 1.08.

As in Study 1, we did not observe a significant effect of conspiracy theory defense on conspiracy belief baseline: pro-conspiracy condition (*M* = 2.66, *SD* = 0.77, *n* = 63), anti-conspiracy condition (*M* = 2.53, *SD* = 0.67, *n* = 78), *t*(139) = 1.00, *p* = .32, η^2_p = .007. As this

condition is met, a moderated mediation (cf. Study 1) could be run (see Table 3 for the univariate and bivariate statistics).

The overall effect of the experimental condition on the anticipated fear of social exclusion, at the average effect of baseline measure of belief in conspiracy theories, is significant ($B = 0.31$, $p < .01$). Contrary to Study 1 and more in line with the prototypical moderated mediation, this overall effect was *not* moderated by baseline measure of belief in conspiracy theories ($B = -0.11$, *ns*; see Table 4 for all the relevant data). Moreover, in this study, the pattern of results is not exactly the same as in the previous one, because we did not find a significant moderator effect of baseline measure of belief in conspiracy theories on the effect of conspiracy theory defense on anticipated negative evaluation ($B = 0.01$, *ns*). However, as baseline measure of belief in conspiracy theories increases, the effect of anticipated negative evaluation on anticipated fear of social exclusion increases, but only marginally ($B = 0.43$, $p = .076$). In fact, for average and high believers, the more they anticipate negative evaluation of the self, the more they fear social exclusion (controlling for the experimental condition), while this link is not significant for low believers; see Figure 5 to see a graphical representation of the values of the simple effect for low, average, and high believers in conspiracy theories). Finally, we did not find evidence of a moderation effect of baseline measure of belief in conspiracy theories on the direct effect of experimental condition on fear of social exclusion (controlling for the other variables in the model; $B = -0.18$, *ns*).

Table 3

Univariate and Bivariate Statistics for Moderated Mediation in Study 2

Variable	Pro-conspiracy	Conspiracy beliefs baseline	Anticipated negative evaluation	Anticipated fear of social exclusion
M	-0.11	2.59	3.34	2.56
SD	1	0.72	0.61	1.14
Correlations				
Pro-conspiracy	_	.08	.24**	.26**
Conspiracy beliefs baseline		_	.03	-.06
Anticipated negative evaluation			_	.32***
Anticipated fear of social exclusion				

Note: $N = 141$.

** $p < .01$. *** $p < .001$.

Table 4

Least Squares Regression Results for Moderated Mediation in Study 2

	Outcome: Anticipated fear of social exclusion		Outcome: Anticipated negative evaluation		Outcome: Anticipated fear of social exclusion	
Predictors	*B* (*SE*)	*t*	*B* (*SE*)	*t*	*B* (*SE*)	*t*
Pro-conspiracy	0.31 (.09)	3.26**	0.14 (.05)	2.81**	0.23 (.09)	2.44*
Conspiracy beliefs baseline	-0.12 (.13)	-0.95	0.01 (.07)	0.15	-0.14 (.13)	-1.10
Pro-conspiracy x Conspiracy beliefs baseline	-0.11 (.13)	-0.80	0.01 (.07)	0.08	-0.18 (.13)	-1.35
Anticipated negative evaluation					0.54 (.15)	3.57***
Anticipated negative evaluation x Conspiracy beliefs baseline					0.43 (.24)	1.79†

Note: *B* = unstandardized estimate, *SE* = standard error of the estimate. *N* = 141.

† $p = .076$. * $p < .05$. ** $p < .01$. *** $p < .001$.

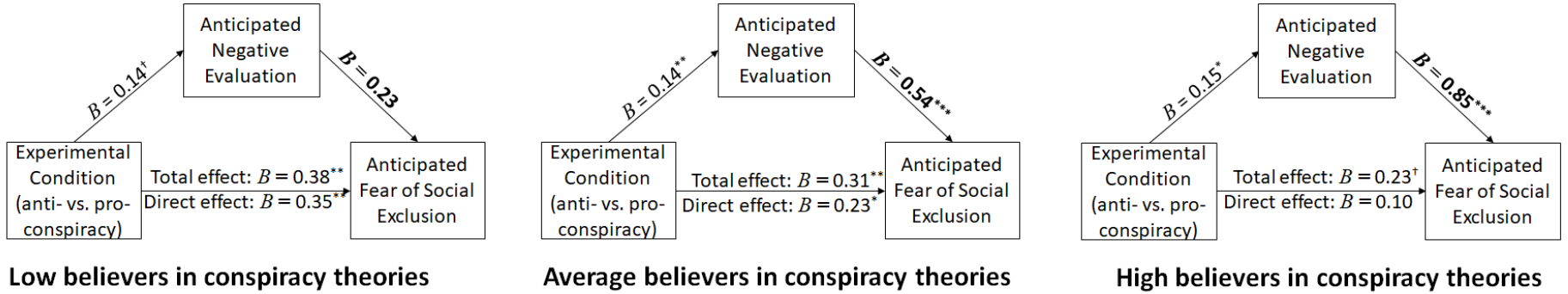

Figure 4. Unstandardized regression coefficients (*B*) of the mediated model tested illustrating simple effects for low (-1 *SD*), average, and high (+1 *SD*) believers in conspiracy theories, in Study 2. Unstandardized regression coefficients in boldface are marginally significantly different (p = .078) across levels of the moderator.

† $p < .086$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Contrary to Study 1, participants' baseline belief in conspiracy theories is significantly related to how they think the average French people perceive those who believe in conspiracy theories about Charlie Hebdo events (M = 2.72, SD = 1.19): High believers in conspiracy theories think that the French people judge less negatively those who believe in conspiracy theories, $r(142) = .23$, 95% CI [.07, .38], $p = .005$. As in Study 1, the more participants believe in general conspiracy theories, the more positively they think that people from their own social circle judge (M = 2.97, SD = 1.39) those who believe in conspiracy theories about the Charlie Hebdo events, $r(142) = .42$, 95% CI [.27, .54], $p < .001$.

Discussion

To sum up, in Study 2, we replicated the finding that people who defend conspiracy theories anticipated negative evaluation from others, which, in turns, leads them to fear social exclusion. Thus, this effect holds in contexts where people imagine their subsequent social reputation, suggesting the high level of intensity of this social stigma. We also observed that the more people believe in conspiracy theories, the more they consider that their peers, but also French people in general, view conspiracy theories positively.

The moderated mediation analysis did not return the same pattern as in Study 1. We did not find that baseline belief in conspiracy theories moderated the negative effect of conspiracy theories defence on the evaluation of the self and the anticipated fear of social exclusion. Besides, the conclusions that result from the moderated mediation analysis of Study 2 are not very clear and easy to interpret at this stage. It then seems that, in general, the protocol used in Study 2 yields less clear results on the exploratory analyses, compared to the protocol used in Study 1 (i.e., more unreliable measures, effects descriptively lower in size). These differences could be due to many sources, such as the additional delay and measures between the experimental manipulation in Study 2, and/or the nature of the task itself (i.e., a purely imaginary task in Study 2 vs. an argumentative task in Study 1). Nevertheless, it does

not appear that the descriptively different effect sizes between the main mediation model in Studies 1 and 2 are due to the differences in the quality of the imaginary product between the two experimental conditions (see Supporting Information S2 for the details).

General Discussion

Overall, the current findings support the idea that conspiracy theories could be considered as a social stigma. In Study 1, asking people to produce arguments supporting conspiracy theories about the Charlie Hebdo shooting led them to expect that strangers reading their arguments would evaluate them negatively, which in turn, led them to expect that these same people would socially exclude them. In Study 2, asking people to imagine defending in public conspiracy theories about Charlie Hebdo shooting produced the same effects. Thus, a consistent finding emerges from these results: In people's minds, publicly espousing conspiratorial claims renders them the object of negative evaluations and behaviors from others (i.e., by being socially excluded).

These results allow us to go further than the conclusions drawn by a relatively more indirect investigation of the hypothesis of conspiracy theories as a social stigma (see Wood, 2016). Wood (2016) tested whether the mere use of the label “conspiracy theory” produces a negative effect on the credibility of an idea, which could be taken to provide evidence for the discrediting power behind the label “conspiracy theory” (Husting & Orr, 2007), and by extension, for the stigma attached to conspiracy theories. In his experiments labeling written contents (i.e., conspiracy claims, confirmed historical conspiracies, and information from a bogus news article) as “conspiracy theories” versus “ideas”, did not have an effect on their perceived veracity. Setting aside the usual methodological and statistical limitations associated with the acceptance of the null hypothesis (Harcum, 1990), these inconclusive results could be explained by the compartmentalized and abstract approach that does not consider the effect of the stigma in a meaningful social context. Another important element in Wood’s study, is that it focused on the label effect, while granting a less prominent place to

the content. To the contrary, in our materials, we used both the label "conspiracy theories" but also made sure that the conspiratorial content was developed. This likely made the conspiratorial identity of our material more salient, which might have enhanced its impact on our participants' perceptions. A comparative view of our results and those of Wood (2016), thus, raise the interesting question about the respective weight that the label vs. the content of conspiracy theories may have on people's perceptions. Subsequent studies could test these two effects orthogonally, if technically possible.

While our paper contributes to the understanding of the public perception of conspiracy theories, it does not give a definitive answer to the question of how people who firmly believe in conspiracy theories in their daily lives perceive themselves and evaluate conspiracy theories. With respect to this latter point, if conspiracy theories can be a stigma, they can also be rewarding, depending on contextual and personal factors. For example, a romantic and socially valorized picture of the conspiracy theorist fighting injustice can sometimes trump its more sinister counterpart. Researchers have already mentioned this ambivalence (Uscinski & Parent, 2014; Wood, 2016). In this regard, research focusing on the role of motivational grounds of conspiracy beliefs shows that conspiracy believers satisfy their need for uniqueness through their belief in conspiracy theories (Imhoff & Lamberty, 2017; Lantian et al., 2017). Uniqueness, could be an important junction point between conspiracy theories and stigma. Indeed, depending on the social norms, uniqueness could be seen as abnormality and deviant (Snyder & Fromkin, 1980). In sociology, it has been noted that people's counter-normative behaviors (the "outsiders" who break the norms) could lead to stigmatization (Becker, 1963). In fact, an attribute is not deviant in itself but it all depends on how people will treat it, based on social norms (Becker, 1963; Snyder & Fromkin, 1980). In view of this discussion, people who believe in conspiracy theories should have a more shaded perception of these theories, due to their presumed importance and centrality for their

self. Nevertheless, our results do not allow to provide a clear and homogenous picture of the relations between conspiracy beliefs and anticipated psychosocial consequences of belief in conspiracy theories. This constitutes a limitation of the present work, which could be due to the limited population of "hard-core" conspiracy believers, a statistical property that leads mechanically to a higher uncertainty. In order to address this question, future studies should ensure large samples of hard-core conspiracy believers.

One might ask if the observed pattern would not be the demonstration that defending an unpopular or unfounded belief in general produces these negative social expectations. If this was the case, it would follow that these effects should only occur among people who reject conspiracy theories, which might not be the case among people with agnostic position or among people with a higher level of belief, who do not consider the content of their belief as unfounded. Our data provide an answer to this, since in both studies, the hypothesized mediation model (from conspiracy belief defense to anticipated negative evaluation of the self, and from anticipated negative evaluation of the self to fear of social exclusion) is significant not only for an average level of baseline measure of belief in conspiracy theories, but also for participants above average on baseline measure of belief in conspiracy theories. In sum, our results do not support the idea that only people who reject conspiracy theories are expressing social concerns when defending conspiracy theories in public.

Regarding the specificity of this effect, we did not demonstrate that this effect does not happen with other beliefs. We remain silent about the stigmatized status attached to other forms of belief, but we claim that given the societal concerns that belief in conspiracy theories arouses, it is particularly relevant to study this specific belief considering its potential in terms of strength of stigma. Indeed, beyond the suspicion of mental health disorders for people defending conspiracy theories as well as their harmful effects pointed by academic circles, the journalists and the civil society as a whole seem worried by the societal dangerousness of

conspiracy theories. This is evidenced by governmental initiatives to counter conspiracy theories in school (Bronner et al., 2016). In this sense, through their suspected link with extremism and violent action (Bartlett & Miller, 2010), the challenge they pose to political legitimacy and the status quo (Imhoff & Bruder, 2014; Sapountzis & Condor, 2013), for instance by accusing the elites (qualified as 'evil', Campion-Vincent, 2005), conspiracy theories are viewed as posing a potential risk in terms of social order and peace. In short, this form of belief is particularly loaded in terms of potential threat, which makes it more susceptible to be stigmatized.

A less central result found in our two studies is that high believers in conspiracies think that people from their own social circle judge those who believe in conspiracy theories less negatively. If this judgment reflects an inference based of peoples' daily interaction, this observation could indicate that the social network of conspiracy believers is probably made of more people sharing their views. This is in line with a recent finding suggesting an important sense of community among conspiracy believers, as a thematic dimension forming conspiracy worldviews (Franks, Bangerter, Bauer, Hall, & Noort, 2017). This possibility could question the potential efficiency and relevance of attempts to change people's belief at an individual level, without taking into account the beliefs shared at the group level, that is, the foundation of their social identities. We should consider this last point because people seek belief consonance to fit into their social group and protect the core values and beliefs about the self (Golman, Loewenstein, Moene, & Zarri, 2016). It is important to consider the question of social identity by integrating it to the specific context involved in our two studies. Indeed, in these studies, we insisted on the fact that people who will read participants' arguments (Study 1) or participants' public talk (Study 2) are random people. This is crucial because as conspiracy theories are generally counter-normative beliefs supported by quite a minority of people, people would normally deduce that the audience would be on average against

conspiracy theories. Given this specific social context in which social identity should be salient, in conjunction with an audience psychologically present and a clear visibility to the audience, the question of identification is decisive to predict if people will express or not their social identity (Klein, Spears, & Reicher, 2007). Future work could examine this pivotal role of identification, as well as the effect of the nature of audience, with respect to the effect of conspiracy theories defense on anticipated fear of social exclusion.

Our work opens the door to new questions. We have shown that people who defend conspiracy theories expect to be socially excluded, but does defending conspiracy theories *really* lead to social exclusion? In fact, social exclusion and conspiracy beliefs have already been connected, but only in one causal direction. At this stage, we know that social exclusion leads to more conspiracy thinking (Graeupner & Coman, 2017). If the reverse is also true, that is, if conspiracy thinking leads to social exclusion, this could be an interesting vicious cycle whereby people progress gradually in conspiracy thinking as they become socially isolated, which, in turns, increase their belief in conspiracy theories, etc. Longitudinal research designs could help to model these potential reciprocal effects.

Relying on participants recruited on the Internet could be seen as a limitation given our willingness to take into account the social dimension of conspiracy theories. Indeed, in these studies, participants were not involved in genuine social interactions, but, rather, in anticipated or imagined social interactions. Nevertheless, we were not in a purely artificial setting given that social interactions on internet are common, and are even, through "fake news", the basis of spread of various conspiracy theories (Del Vicario et al., 2016; Douglas, Ang, & Deravi, 2017). Of course, we do not deny that there is still a certain interest to test this hypothesis in contexts involving physical social interactions, for instance, by designing role-playing games or by setting up an audience in a laboratory experiment. Moreover, to generalize our findings, future studies need to rely on other conspiracy theories than those

based on Charlie Hebdo events. Indeed, conspiracy theories about Charlie Hebdo events could be potentially more socially stigmatized than other conspiracy theories relatively more distant in time and location.

In the future, we can also generate more sophisticated hypothesis by fitting conspiracy theories into known dimensions of stigma (Pachankis et al., 2018). A first relevant dimension of stigma is its concealability. Research suggests that living with a concealable stigma does not necessarily make life easier than living with a non-concealable stigma (for an extensive review, see Pachankis, 2007). For example, people with concealable stigmas (e.g., a minority sexual orientation, people with bulimia, etc.) are more vulnerable (e.g., characterized by lower self-esteem, more negative affect, etc.) than people with non-concealable stigma (Frable, Platt, & Hoey, 1998), which could reflect their difficulty to find similar others able to provide a precious social support (Gaines, 2001). In addition to these affective implications, hiding a stigma can have cognitive consequences (e.g., obsessive and intrusive thoughts, etc., Smart & Wegner, 1999, 2000). Consequently, these psychological considerations could be relevant because beliefs, are concealable by definition (as illustrated by the low score of visibility of the stigmatized statuses “atheist” in Pachankis et al., 2018).

A second relevant dimension of stigma is controllability (Kurzban & Leary, 2001). The fact that the controllability dimension is applicable on stigma based on various illnesses (Crandall & Moriarty, 1995; Pachankis et al., 2018; but see Kurzban & Leary, 2001, for a more nuanced perspective), lead us to predict that a clinical interpretation of conspiracy beliefs by lay people could give similar results: For instance, little pity and more anger toward people holding a stigma (Weiner, Perry, & Magnusson, 1988). Even outside a clinical interpretation of conspiracy beliefs, the way that lay people perceived the role of responsibility and controllability in the origins of beliefs (and by extension conspiracy beliefs) remains unknown (see Engel, 2002, for a philosophical discussion; see also Pachankis et al.,

2018, for deriving preliminary thoughts about this topic by looking at the relatively high score of perceived controllability of the stigmatized statuses of being atheist).

More generally, it is important to put the question of social perception of conspiracy theories in a broader context. In this Information Age marked by the spread of the Internet, this new medium of communication has led to important transformations in our lives: not only the format of dissemination and reception of information, but its nature itself (Bronner, 2015). Historically, conspiracy theories were considered as "fringe ideas", but according to Barkun (2016), the development of the Internet, in combination with the elimination of gatekeepers, the general distrust for authority, and the spread of conspiracy narratives in the popular culture, erodes the boundary between the fringe and the mainstream. This is what Barkun calls "mainstreaming the fringe" (Barkun, 2016, p. 4). This transition could weigh against the development of the stigmatized status associated with conspiracy theories. Nevertheless, even if the context had changed and even if conspiracy theories have become more mainstream, peoples' representations do not necessarily change as quickly. It turns out that conspiracy theories are not just narratives like any others. Our contribution shows that people consider conspiracy theories as a social cost. As it turns out that ridiculing arguments of those who believe in conspiracy theories is effective to reduce belief in conspiracy theories (Orosz et al., 2016), the challenge is to ensure, at the same time, that we avoid contributing to this stigma. Hence, interventions aimed at addressing this important societal phenomenon should take into account this aspect.

To conclude, it is highly likely that during your next professional dinner, you will naturally choose to avoid certain topics or holding certain positions. Our studies place conspiracy theories among these positions, as they seem to be far from innocuous in certain social contexts, making the hypothesis of conspiracy theories as a social stigma more credible.

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Supporting Information

S1

Cautionary remarks before presenting the results related to the use of the single-item measuring belief in conspiracy theories about Charlie Hebdo shooting rather than the general tendency to believe in conspiracy theories, as a moderator in the moderated mediation models tested.

There are several unexpected statistical limitations leading us to avoid giving too much credit to the results related to the moderated mediation pretended below (Tables S1-A & B, Figures S1-A & B). For instance, unlike what we observed concerning the original moderator, the lack of effect of the experimental manipulation on the moderator is more uncertain, all the more varying whether we consider results with [$t(139) = 1.61$, $p = .109$, $\eta^2_p = .018$, in Study 1 and $t(138) = 1.38$, $p = .17$, $\eta^2_p = .014$, in Study 2] or without (many) statistical outliers [$t(133) = 1.89$, $p = .061$, $\eta^2_p = .026$, in Study 1 and $t(133) = 2.25$, $p = .026$, $\eta^2_p = .037$, in Study 2]. Moreover, contrary to the single-item measure of belief in conspiracy theories about the Charlie Hebdo attacks, the GCB scale (Brotherton, French, & Pickering, 2013) is less vulnerable to random measurement errors due to their multiple items (Schmidt, & Hunter, 1996). Ignoring these issues, the patterns of results is not substantially different from those obtained with our original moderator: they are more pronounced in Study 1 and less pronounced in Study 2. More precisely, in Study 1, the effect of experimental condition on anticipated negative evaluation and the effect of negative evaluation of the self on fear of social exclusion (controlling for the experimental condition) are significantly moderated by the belief in Charlie Hebdo conspiracy. The analysis of the simple effects reveal that these two last effects are significant for people with low, moderate, and high belief in Charlie Hebdo conspiracy. In Study 2, none of the effect involved in the predicted mediation are significantly moderated by the belief in Charlie Hebdo conspiracy.

Table S1-A. Least Squares Regression Results for Moderated Mediation (with belief in Charlie Hebdo conspiracy instead of baseline measure of belief in conspiracy theories) in Study 1

	Outcome: Anticipated fear of social exclusion		Outcome: Anticipated negative evaluation		Outcome: Anticipated fear of social exclusion	
Predictors	*B* (*SE*)	*t*	*B* (*SE*)	*t*	*B* (*SE*)	*t*
Pro-conspiracy	0.77 (.07)	10.26***	0.60 (.06)	9.64***	0.27 (.08)	3.36**
Belief in Charlie Hebdo conspiracy	-0.01 (.004)	-1.68†	-0.01 (.003)	-1.84†	-0.005 (.003)	-1.37
Pro-conspiracy x Belief in Charlie Hebdo conspiracy	-0.02 (.004)	-4.55***	-0.01 (.003)	-4.10***	-0.01 (.003)	-2.04*
Anticipated negative evaluation					0.79 (.08)	9.52***
Anticipated negative evaluation x Belief in Charlie Hebdo conspiracy					-0.006 (.003)	-2.16*

Note: *B* = unstandardized estimate, *SE* = standard error of the estimate. *N* = 141.

† $p < .095$. * $p < .05$. ** $p < .01$. *** $p < .001$

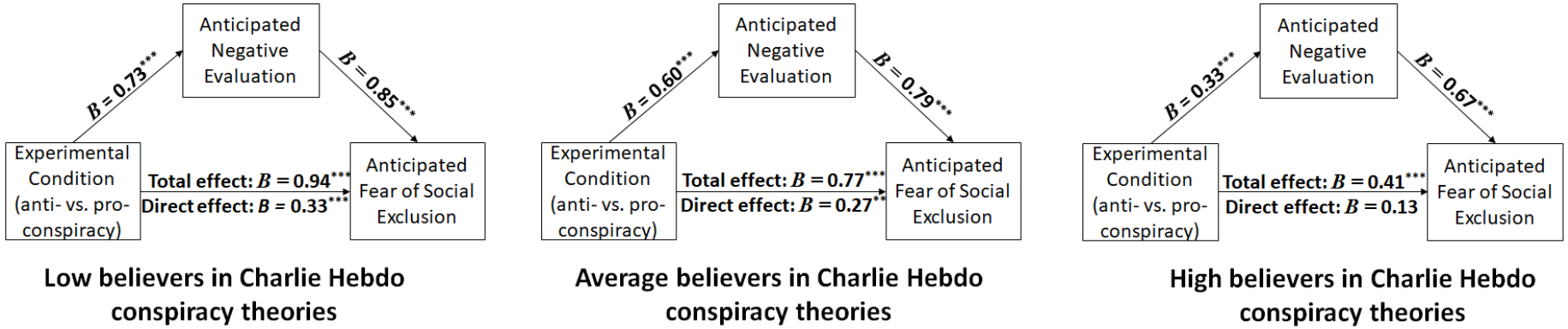

Figure S1-A. Unstandardized regression coefficients (*B*) of the mediated model tested illustrating simple effects for low (minimum value of the scale), average, and high (+1 *SD*) believers in Charlie Hebdo conspiracy theories, in Study 1. Unstandardized regression coefficients in boldface are significantly different ($p < .05$) across levels of the moderator.

** $p < .01$. *** $p < .001$.

Table S1-B. Least Squares Regression Results for Moderated Mediation (with belief in Charlie Hebdo conspiracy instead of baseline measure of belief in conspiracy theories) in Study 2

	Outcome: Anticipated fear of social exclusion		Outcome: Anticipated negative evaluation		Outcome: Anticipated fear of social exclusion	
Predictors	*B* (*SE*)	*t*	*B* (*SE*)	*t*	*B* (*SE*)	*t*
Pro-conspiracy	0.32 (.09)	3.44***	0.13 (.05)	2.58*	0.25 (.09)	2.70**
Belief in Charlie Hebdo conspiracy	-0.01 (.004)	-2.63**	0.004 (.002)	1.52	-0.01 (.005)	-2.99**
Pro-conspiracy x Belief in Charlie Hebdo conspiracy	0.001 (.004)	0.20	-0.001 (.002)	-0.53	0.002 (.004)	0.40
Anticipated negative evaluation					0.57 (.15)	3.77***
Anticipated negative evaluation x Belief in Charlie Hebdo conspiracy					0.002 (.008)	0.22

Note: *B* = unstandardized estimate, *SE* = standard error of the estimate. *N* = 140.

* $p < .05$. ** $p < .01$. *** $p < .001$

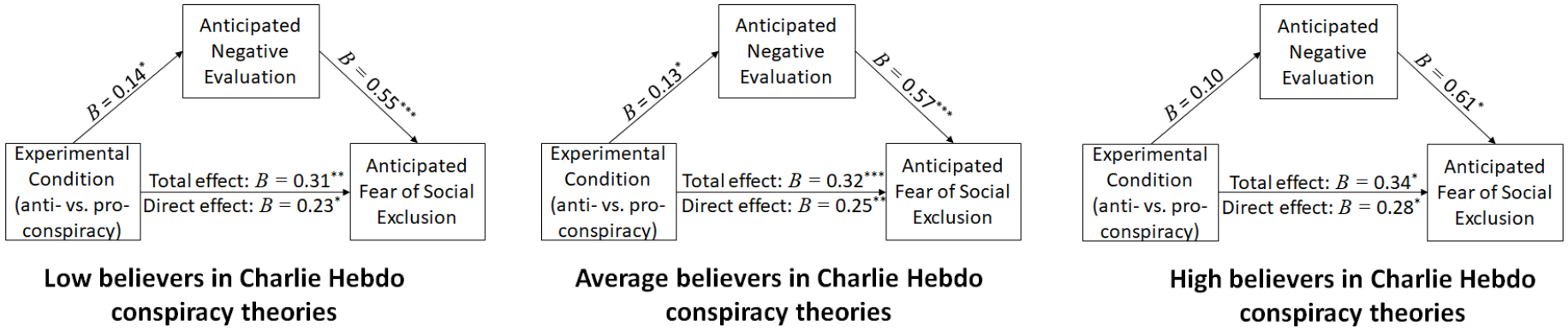

Figure S1-B. Unstandardized regression coefficients (*B*) of the mediated model tested illustrating simple effects for low (minimum value of the scale), average, and high (+1 *SD*) believers in Charlie Hebdo conspiracy theories, in Study 2.

* $p < .05$. ** $p < .01$. *** $p < .001$.

S2

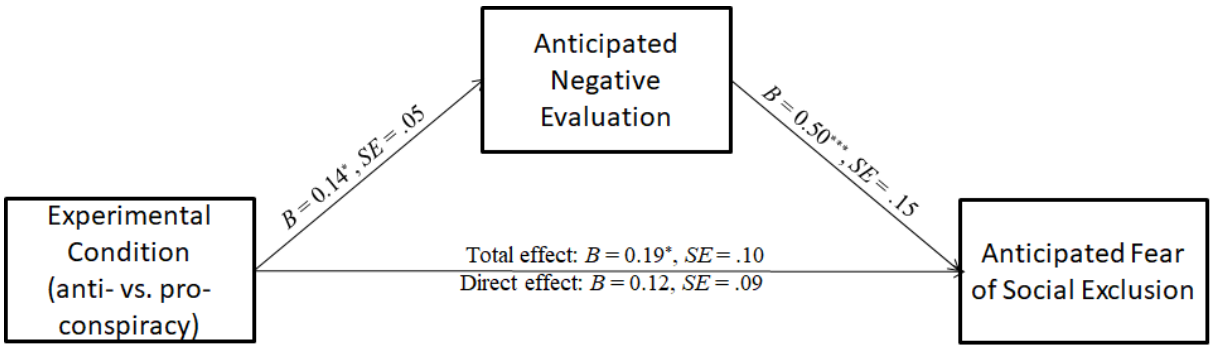

Figure S3. Unstandardized regression coefficients (*B*) of the mediated model tested in Study 2, when controlling for the effect of the difficulty to imagine the event.

* $p < .05$. *** $p < .001$.