

Research article

Belief in conspiracy theories: The influence of uncertainty and perceived morality

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Abstract

In the present research, we examined people's tendency to endorse or question belief in conspiracy theories. In two studies, we tested the hypothesis that the perceived morality of authorities influences conspiracy beliefs, particularly when people experience uncertainty. Study 1 revealed that information about the morality of oil companies influenced beliefs that these companies were involved in planning the war in Iraq, but only when uncertainty was made salient. Similar findings were obtained in Study 2, which focused on a bogus newspaper article about a fatal car accident of a political leader in an African country. It is concluded that uncertainty leads people to make inferences about the plausibility or implausibility of conspiracy theories by attending to morality information. Copyright © 2012 John Wiley & Sons, Ltd.

In contemporary society, people are frequently faced with events that threaten the social order, such as terrorist attacks, wars, and economic crises. These events sometimes give rise to conspiracy theories, which can be defined as explanatory beliefs that involve a number of actors who join together in secret agreement, and try to achieve a hidden goal that is perceived as unlawful or malevolent (Zonis & Joseph, 1994; p. 448–449). These conspiring actors typically pertain to legitimate power holders or institutions in society (Robins & Post, 1997). The internet is filled with examples of such conspiracy theories assuming, for instance, that the 9-11 terrorist strikes were conducted by the Bush administration; that the war in Iraq was the result of a lobby by powerful Western oil companies; and that Democrats caused the economic crisis to get Barack Obama elected as US president. Conspiracy beliefs are widespread, as evidenced by findings that they occur among a substantial portion of the population of modern Western societies (Sunstein & Vermeule, 2009; Pipes, 1997). The present research is designed to contribute to a growing body of research that is aimed at understanding under what conditions people endorse or question conspiracy theories (Crocker, Luhtanen, Broadnax, & Blaine, 1999; Douglas & Sutton, 2008, 2011; Kramer & Messick, 1998; McCauley & Jacques, 1979; Swami, Chamorro-Premuzic, & Furnham, 2010). Specifically, in the present research, we investigate how reasoning about conspiracy theories is shaped by the perceived morality or immorality of authorities under conditions of uncertainty.

UNCERTAINTY AND CONSPIRACY THEORIES

One of the main features of conspiracy theories is that they provide causal explanations for distressing societal events. In his seminal work, Hofstadter (1966) correspondingly argues that conspiracist ideation is rooted in a general tendency to explain and rationalize complex real-world phenomena into a coherent set of assumptions about the existence of a powerful and evil enemy. Authors from various disciplines have likewise highlighted people's desire to explain events that are otherwise hard to comprehend as a core motive for conspiracy beliefs (Bale, 2007; Clarke, 2002; Miller, 2002). Related to these arguments, research indicates that conspiracy beliefs are grounded in a monological belief system: One conspiracy belief reinforces other conspiratorial ideas, rendering people who believe in one conspiracy theory more likely to also believe in other conspiracy theories (Goertzel, 1994; Lewandowski, Oberauer, & Gignac, in press; Swami et al., 2011; Wood, Douglas, & Sutton, 2012). This monological nature suggests that belief in conspiracy theories reflects a systematic method of information processing, leading to a general worldview that accounts for threatening events as being the intended consequence of evil conspiracies (Abalakina-Paap, Stephan, Craig, & Gregory, 1999; Darwin, Neave, & Holmes, 2011; Swami et al., 2010).

Conspiracy beliefs thus serve an explanatory function and are hence associated with mental sense-making processes aimed at seeing the world as orderly, understandable, and predictable (cf. Heine, Proulx, & Vohs, 2006; Park, 2010). Such

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sense-making processes are indeed central to 'paranoid social cognition', conceptualized as a suspicious state of mind that is characterized by hypervigilance to the possible malevolent intent of others (Kramer, 1998). These arguments are resonated in empirical research suggesting that identifying specific enemies as responsible for a threatening event is more effective in regulating distress than admitting the role of uncontrollable factors and randomness, because people can understand, and often anticipate on, the actions of a recognizable immoral agent (Sullivan, Landau, & Rothschild, 2010; see also Rothschild, Landau, Sullivan, & Keefer, 2012). Taken together, these considerations converge into a model stipulating that conspiracy theories may be functional to reinstall a sense of order and predictability in the aftermath of threatening societal events (Hofstadter, 1966).

A typical factor that instigates such sense-making processes is subjective feelings of uncertainty, for instance about the self or the surrounding social environment (Kramer, 1998; Park, 2010; Park & Folkman, 1997; McGregor, 2006; Van den Bos, 2009). Research indeed reveals that feelings of uncertainty have the potential to promote conspiracy beliefs. For instance, Whitson and Galinsky (2008) found that people who lack control—a condition frequently associated with uncertainty—have a greater inclination to perceive patterns in unrelated stimuli, such as seeing images in noise, superstitions, and also conspiracy beliefs. The relation between uncertainty and conspiracy beliefs was further supported in other studies (Newheiser, Farias, & Tausch, 2011; Sullivan et al., 2010; see also Shermer, 2011).

At the same time, it must be noted that the evidence for a direct relation between uncertainty and conspiracy beliefs is mixed. Indeed, people sometimes find order by *increasing* the faith that they have in the actors that are frequently implicated in conspiracy theories, such as governmental institutions (Kay, Gaucher, Napier, Callan, & Laurin, 2008; Kay, Whitson, Gaucher, & Galinsky, 2009). To illustrate, in the months after the 9-11 terrorist strikes—an event that induced a substantial level of uncertainty in many US citizens—George W. Bush had exceptionally high public approval ratings. Uncertainty may thus promote not only belief but also disbelief in conspiracies. In the present contribution, we propose that this inconsistency can be resolved by taking the perceived morality of authorities into account. Instead of assuming a direct effect of uncertainty on conspiracy beliefs, we propose that uncertainty makes people more attentive to the morality of the actions of authorities when making sense of a threat to the social order. As such, uncertainty increases the extent to which people make inferences about the plausibility and the implausibility of conspiracy theories based on the morality of authorities' actions.

THE CURRENT RESEARCH

Our line of reasoning is rooted in theorizing on the uncertainty management model of justice (Van den Bos & Lind, 2002), which asserts that when people experience uncertainty they are more in need for information about the extent to which decision-makers have benevolent intentions, information that people tend to derive from the morality of the decision-makers' behaviors. Research indeed indicates that the extent to which authority figures accord subordinates with fair versus

unfair decision-making procedures exerts a stronger influence on fairness judgments and affective reactions among subordinates who experience uncertainty as opposed to subordinates who do not experience uncertainty. These effects have been found for various conceptualizations of uncertainty, including uncertainty about the self (De Cremer & Sedikides, 2005), lack of control (Van Prooijen, 2009), or generalized uncertainty (Van den Bos, 2001). Thus far, however, these propositions have only been tested in the context of direct interactions between a leader and a subordinate (i.e., how the experience of procedurally fair or unfair treatment directly influences subordinate's responses), not in the context of how citizens are influenced by the perceived morality of the policies that are implemented by political or corporate leaders. Indeed, research indicates that typical procedural justice effects do not necessarily generalize to the context of group-level or political decision-making (Leung, Tong, & Lind, 2007).

The uncertainty management model suggests that subjective uncertainty increases the extent to which perceivers pay attention to the morality of an authority's actions, which is consistent with the hypervigilant state of mind that is at the core of paranoid social cognition (Kramer, 1998). Such increased susceptibility to morality information is likely to have implications for people's conspiracy beliefs. Although the extent to which political or corporate leaders are considered, moral or immoral is in and of itself a component of conspiracy beliefs (e.g., an authority needs to be very immoral to be part of a malevolent conspiracy), people may be reluctant to draw straightforward inferences about secret conspiracies based on such morality information alone (e.g., many people find George W. Bush very immoral without believing in a 9-11 governmental conspiracy). Uncertainty, however, has been found to prompt a psychological process termed 'compensatory conviction', which means that feelings of uncertainty in one domain increases one's certainty—both in terms of consistency and clarity—about beliefs or convictions in unrelated domains, such as about political or social issues (McGregor, 2006; McGregor & Marigold, 2003). As a consequence, subjective uncertainty is likely to increase confidence in the extent to which the perceived morality of the *overt* behaviors of authorities confirms assumptions about the *covert* affairs that these authorities may or may not be involved in. This argument thus suggests that uncertainty increases the extent to which people interpret signs suggesting that authorities are moral or immoral as diagnostic evidence for the likelihood of secret and illegal conspiracy formation. On the basis of this line of reasoning, we hypothesize that the perceived morality or immorality of leaders more strongly predicts the extent to which people believe in—or doubt—conspiracy theories under conditions of uncertainty.

STUDY 1

In keeping with previous research within the tradition of the uncertainty management model (Van den Bos & Lind, 2002), we manipulated whether or not uncertainty was a salient issue to participants: In the uncertainty salient conditions, participants responded to two open-ended questions about

them being uncertain; in the control condition, participants responded to two open-ended questions about a neutral topic (i.e., watching TV). A substantial body of research established that this is a validated manipulation of uncertainty salience by influencing a range of variables that are associated with sense-making, worldview defense, and self-regulation. Moreover, these effects of uncertainty salience typically converge theoretically with insights on how people cope with uncertainty, and empirically with the effects of related constructs such as experienced personal uncertainty, and uncertainty orientation (for a review, see Van den Bos, 2009).

Following the manipulation of uncertainty salience, participants received bogus information about the morality or immorality of oil companies that was unrelated to the alleged conspiracy (i.e., information pertaining to how well oil companies treat their personnel, and abide to environmental regulations, in third-world countries). We predicted that the morality manipulation would exert a stronger influence on beliefs that oil companies helped to cause the war in Iraq when uncertainty was salient than when uncertainty was not salient.

Method

Participants and Design

The hypothesis was tested in a 2 (uncertainty salience: uncertain vs TV) \times 2 (morality: moral vs immoral) factorial design. We recruited 73 students from the University of Amsterdam (60 men, 13 women; $M_{\text{age}} = 21.47$, $SD = 4.75$; age ranging from 18 to 49 years). The study was followed by an unrelated piece of research. Together, the studies lasted approximately 30 minutes, and participants were either paid €3.50 or given course credit for their participation.

Procedure

The study was presented as two separate experiments. The first experiment, which was presented as an experiment on “personal memories,” contained the manipulation of uncertainty salience. Following previous research (Van den Bos, 2001), participants were asked to respond to the following two open questions (manipulated information in *italics*): “Please describe briefly what emotions the thought of you *being uncertain/watching TV* arouses in you,” and “Please describe as specifically as possible what physically happens to you when you *are uncertain/watch TV*.” To establish whether this manipulation influenced participants’ mood, they were subsequently asked to indicate how positive or negative they felt on an affect thermometer ranging from 1 (*very negative*) to 100 (*very positive*).

Participants then continued with an experiment on “how students perceive the role of Western oil companies in the world.” Participants first read the conclusions of a (bogus) research report by a human rights organization, which contained the morality manipulation. In the moral condition, participants read that oil companies generally endorse very humane personnel policies, and adhere strictly to international environmental policies, in developing countries. In the immoral condition, participants read that oil companies generally endorse very strict personnel policies, and frequently violate international environmental policies, in developing countries.

We then assessed participants’ belief in conspiracy theories by averaging responses on the following three questions (1 = *certainly not*, 7 = *certainly so*): “Do you believe that oil companies had a vested interest in the war in Iraq?”, “Do you believe that oil companies helped to cause the war in Iraq?” and “To what extent do you believe that people who are associated with oil companies gave the order to start the war in Iraq?” ($\alpha = .75$). To check the morality manipulation, we asked the following questions: “Do you believe that oil companies are trustworthy?” (1 = *certainly not*, 7 = *certainly so*), “Do you believe that oil companies are concerned about justice in their policies?” (1 = *certainly not*, 7 = *certainly so*), “How much value do you believe that oil companies ascribe to human life?” (1 = *a little*, 7 = *a lot*), and “How slyly do you believe that oil companies operate?” (1 = *not very slyly*, 7 = *very slyly*; recoded) ($\alpha = .76$). After this, participants were debriefed, thanked and paid for their participation.

Results and Discussion

Manipulation Check

A 2 (uncertainty salience) \times 2 (morality) analysis of variance (ANOVA) on the manipulation check of morality only yielded a significant main effect of morality, $F(1, 69) = 5.07$, $p < .03$ and $\omega^2 = 0.05$. Participants in the moral condition perceived oil companies as more moral ($M = 3.34$, $SD = 0.75$), than participants in the immoral condition ($M = 2.86$, $SD = 0.95$). It must be noted that perceptions of morality were somewhat low even in the moral condition, which in all likelihood is caused by pre-existing opinions about the perceived immorality of oil companies; we address this issue in Study 2. Nonetheless, the significant main effect indicates that the manipulation was successful in varying relative differences in perceived morality.

Affect Thermometer

A 2 (uncertainty salience) \times 2 (morality) ANOVA on the affect thermometer revealed no significant main or interaction effects, $F_s < 1$ (overall $M = 60.25$, $SD = 23.06$). These results indicate that the effects of the uncertainty salience manipulation cannot be attributed to changes in participants’ mood, which is consistent with previous research (Van den Bos, 2001).

Belief in Conspiracy Theories

The means and standard deviations are displayed in Table 1. A 2 (uncertainty salience) \times 2 (morality) ANOVA on belief in

Table 1. Means and standard deviations of belief in conspiracy theories as a function of uncertainty salience and morality—Study 1

Morality	Uncertainty salience			
	Uncertainty		TV	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Moral	3.80	1.10	4.49	0.98
Immoral	4.68	1.29	4.11	1.25

Means are on 7-point scales, with higher values indicating more belief in conspiracy theories.

conspiracy theories only revealed a significant interaction, $F(1, 69) = 5.33$, $p < .03$ and $\omega^2 = .06$. As predicted, simple main effect analyses indicated that the morality manipulation exerted a significant influence on belief in conspiracy theories in the uncertainty salient condition, $F(1, 69) = 4.94$, $p < .04$ and $\omega^2 = 0.05$. In the TV condition, however, the impact of the morality manipulation on belief in conspiracy theories was not significant, $F(1, 69) = 1.02$, $p = .31$ and $\omega^2 = 0.00$. Consistent with the hypothesis, these results reveal that morality information only influenced conspiracy beliefs among participants who experienced salience of uncertainty.

In sum, the results of Study 1 reveal that information about the morality of oil companies influenced conspiracy beliefs only among participants in the uncertainty salient condition. When uncertainty was not salient, there was no effect of morality information on conspiracy beliefs, which is consistent with our assumption in the introduction that people frequently are reluctant to make direct inferences about conspiracy theories based on morality information. In Study 2, we sought to replicate and extend these findings.

STUDY 2

Study 1 focused on an existing conspiracy theory pertaining to oil companies' involvement in the war in Iraq. Although this is a setting with high mundane realism, a drawback is that participants in all likelihood had pre-existing opinions about this conspiracy theory: Most people have opinions about the morality of oil companies that may be relatively hard to manipulate, as well as about the likelihood that oil companies were part of the political decision-making process to start the war in Iraq. Indeed, these pre-existing opinions may explain why the effect size of the crucial morality simple main effect in the uncertainty salient condition was somewhat low in Study 1. As such, it is important to find out whether the effects described here materialize in a setting where participants have no pre-existing opinions and have not been influenced by others.

In Study 2, we therefore investigated our hypothesis in the context of a threat to the social order that participants were confronted with for the first time (cf. McCauley & Jacques, 1979; Swami et al., 2011). In particular, participants read a bogus newspaper article about a powerful African opposition leader who died in a car crash, and we tested whether manipulations of uncertainty salience and morality predicted participants' beliefs that the accident was in fact an organized political assassination.

Method

Participants and Design

The hypothesis was again tested in a 2 (uncertainty salience: uncertain vs TV) \times 2 (morality: moral vs immoral) factorial design. We recruited 91 participants (29 men, 62 women; $M_{\text{age}} = 20.66$, $SD = 2.91$; age ranging from 17 to 35 years) in VU university's student cafeterias. The study was followed by two unrelated studies. Together, the studies lasted 15 minutes, and participants received either course credit or €2.50 for participation.

Procedure

The study was again presented as two separate experiments. The first experiment, which contained the manipulation of uncertainty salience and the measurement of participants' mood, was identical to the alleged first experiment of Study 1. After this, participants started with "Experiment 2," in which they were informed that they would read a newspaper article about the elections that were held 2 years ago in the African country of Benin (although Benin is an existing country, the newspaper article only contained bogus information). The newspaper article described that, according to a press agency from Benin, a powerful opposition leader (who was expected to win the upcoming elections) died as a consequence of a car crash. In the article, we also manipulated morality. In the immoral condition, the government of Benin was described as corrupt, and it was said that the government frequently received accusations of tax money ending up in officials' own private funds. In the moral condition, the government of Benin was described as not corrupt, and it was said that the government frequently received praise for the responsible way in which they used tax money to increase the well-being of citizens.

After reading the article, we measured participants' conspiracy beliefs by averaging responses to the following four items (1 = *strongly disagree*, 7 = *strongly agree*): "The press agency withholds information," "This was in fact an assault," "A conspiracy is responsible for this accident," and "I am inclined to believe that the car has been sabotaged" ($\alpha = .80$). To verify the assumption that participants would not be familiar with the actual political situation in Benin, we asked dichotomously whether or not participants felt knowledgeable about the political situation in Benin. Finally, we checked the morality manipulation by averaging responses to the following two questions (1 = *strongly disagree*, 7 = *strongly agree*): "The current government of Benin is corrupt" (recoded) and "The current government of Benin respects human rights" ($\alpha = .87$). After this, participants were thoroughly debriefed, thanked and given their credits or payment.

Results and Discussion

Manipulation Check

We analyzed the manipulation check of the morality manipulation by means of a 2 (uncertainty salience) \times 2 (morality) ANOVA. This analysis yielded only a main effect of the morality manipulation, $F(1, 87) = 69.89$, $p < .001$ and $\omega^2 = 0.43$. Participants in the moral condition perceived the government of Benin as more moral ($M = 4.47$, $SD = 1.20$) than participants in the immoral condition ($M = 2.52$, $SD = 0.98$). It can be concluded that participants perceived the morality manipulation as intended.

Knowledge about Benin

A total of 87 participants (95.6%) indicated that they did not feel knowledgeable about the political situation in Benin (exclusion of the four participants who answered affirmative to this question did not change the results in the succeeding text). It can be concluded that participants were not familiar with the actual political situation in Benin, as we intended with our stimulus materials.

Affect Thermometer

A 2 (uncertainty salience) \times 2 (morality) ANOVA on the affect thermometer revealed no significant main or interaction effects, $F_s < 1$ (overall $M = 62.73$, $SD = 25.77$). Again, these results suggest that the effects of the uncertainty salience manipulation cannot be attributed to changes in participants' mood (cf. Van den Bos, 2001).

Belief in Conspiracy Theories

The means and standard deviations are displayed in Table 2. A 2 (uncertainty salience) \times 2 (morality) ANOVA on the conspiracy belief scale indicated a significant main effect of morality, $F(1, 87) = 11.96$, $p < .01$ and $\omega^2 = 0.11$. Participants in the immoral condition were more strongly inclined to believe in conspiracy theories ($M = 4.61$, $SD = 0.91$) than participants in the moral condition ($M = 3.84$, $SD = 1.29$). More important was that the predicted interaction was significant, $F(1, 87) = 4.11$, $p < .05$ and $\omega^2 = .03$. In line with the hypothesis, simple main effect analyses indicated that the effect of morality was significant in the uncertainty salient condition, $F(1, 87) = 14.03$, $p < .001$ and $\omega^2 = 0.13$, but not in the TV salient condition, $F(1, 87) = 1.35$, $p = .25$ and $\omega^2 = 0.00$. These findings further support the prediction that uncertainty salience shapes the effect of the perceived morality of institutions on belief in conspiracy theories.

GENERAL DISCUSSION

The results obtained in two studies revealed evidence for the hypothesis that the perceived morality of authorities influences conspiracy beliefs particularly when people experience uncertainty. We found evidence for this hypothesis in the context of both an existing conspiracy theory (Study 1) as well as in the context of people's ad hoc conspiracy belief formation following a fictitious newspaper article (Study 2). As such, the findings obtained in the present studies represent a robust phenomenon that generalizes across different conspiracy theories. It can be concluded that subjective uncertainty and the perceived morality of authorities jointly influence people's tendency to believe or disbelieve in conspiracy theories.

The more specific contribution that is offered here is that the current studies help to illuminate some of the underlying mental processes that are at work when people determine the

plausibility of conspiracy beliefs. These processes may be informative about closely related theoretical questions surrounding paranoid social cognition (Kramer, 1998), such as how trust and distrust towards political or corporate leaders originates, and when negative sentiments can be expected to escalate into, for instance, blaming, scapegoating or demonizing of these leaders (see also Rothschild et al., 2012). Furthermore, the present findings were predicted based on broader theoretical frameworks such as the uncertainty management model (Van den Bos & Lind, 2002) and compensatory conviction (McGregor & Marigold, 2003). Hence, it is likely that these theoretical frameworks can be expanded to incorporate conspiracy beliefs, which may be a step towards developing a coherent theoretical model explaining under what conditions people are likely to believe in—or question—conspiracy theories, as well as what the psychological underpinnings are of the monological belief system underlying conspiracist ideation (Goertzel, 1994; Lewandowski et al., in press; Swami et al., 2011; Wood et al., 2012).

When interpreting the current findings, it is important to take note of two considerations. First, in our studies, we did not find a consistent main effect of morality (this main effect was nonsignificant in Study 1 and significant in Study 2). One likely explanation for this is that our operationalization of morality was conceptually more distant from conspiracy beliefs in Study 1 as opposed to Study 2. But an additional possibility is that a certain level of uncertainty may be a necessary precondition before people start making inferences about conspiracy theories based on morality information, a proposition that can be inferred from previous theorizing (McGregor, 2006; Van den Bos & Lind, 2002). Indeed, a closer inspection of the data of Study 2 reveals that the significant morality main effect in that study was qualified entirely by the strong simple main effect in the uncertain condition, and the morality simple main effect was nonsignificant in the control condition. These findings underscore that people conceptually differentiate between morality information and conspiracy beliefs and are unlikely to derive assumptions of conspiracy formation from the morality of authorities' actions unless they experience uncertainty.

Second, our line of reasoning was largely inspired by the process of compensatory conviction, which is a framework that has broader relevance for people's fundamental desire for consistency and clarity in the face of uncertainty (McGregor & Marigold, 2003). However, whether in the context of conspiracy theories such consistency and clarity is found in the form of increased conspiracy beliefs (Whitson & Galinsky, 2008), or rather, increased disbelief in conspiracies (Kay et al., 2008) may depend on yet unidentified factors or specific contingencies of the conspiracy theory in question. Indeed, our studies revealed no consistent pattern whether it is particularly morality that promotes disbelief in conspiracies, or immorality that promotes belief in conspiracies, under conditions of uncertainty.¹ Future research may examine these more complex dynamics

Table 2. Means and standard deviations of belief in conspiracy theories as a function of uncertainty salience and morality—Study 2

Morality	Uncertainty salience			
	Uncertainty		TV	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Moral	3.42	1.13	4.24	1.33
Immoral	4.67	0.74	4.56	1.03

Means are on 7-point scales, with higher values indicating more belief in conspiracy theories.

¹More specifically, in Study 1, the uncertainty simple main effects were nonsignificant in both the moral condition, $F(1, 69) = 2.35$, $p = .13$ and $\omega^2 = .02$, and the immoral condition, $F(1, 69) = 2.81$, $p = .10$ and $\omega^2 = 0.02$. In Study 2, the uncertainty simple main effect was significant only in the moral condition, $F(1, 87) = 5.92$, $p < .02$ and $\omega^2 = 0.05$, and not in the immoral condition $F < 1$.

regarding uncertainty and morality in more detail. Of importance, these considerations do not compromise the main conclusion of the present contribution, which is that the influence of perceived morality on conspiracy beliefs is particularly pronounced when people experience uncertainty, a conclusion that was supported by both studies presented here.

Our manipulation of morality was specifically focused on the powerful agents that were involved in the conspiracy theory. An interesting question for further study is whether the present findings generalize to broader conceptualizations of morality, such as when the broader category of politicians or corporate leaders is described as generally moral or immoral. It stands to reason that such a category-based manipulation of morality may lead to similar effects. It has been noted that there is a strong social, or group-based, dimension to conspiracy beliefs as these beliefs typically involve an out-group (e.g., the political or corporate elite) that is perceived to be harming one's ingroup (e.g., Crocker et al., 1999; Kramer & Messick, 1998). Hence, information about the morality of the broader outgroup is likely considered informative about the specific agents that are involved in a conspiracy theory. Moreover, one might speculate that the effects of uncertainty only materialize when people experience strong emotional ties to their ingroup, as this motivates people to make sense of potential threats to their ingroup. These are empirical questions that await further testing.

The social dimension of conspiracy beliefs is reflected in people's feelings of suspiciousness in the context of social issues that a wide collective of citizens are concerned about (i.e., the war in Iraq; democracy in Africa). Nevertheless, paranoid social cognition can take on forms that are much more directly self-relevant without necessarily turning pathological (e.g., beliefs that people are talking about someone behind the person's back; see also Darwin et al., 2011; Kramer, 1998; Fenigstein & Vanable, 1992), and a relevant question is whether or not the present findings generalize to these more self-relevant forms of paranoia. Although this is an empirical question that is impossible to answer based on the present data, we speculate that uncertainty will have a similar, but potentially even stronger effect on these more self-relevant forms of paranoia. After all, if people for instance are paranoid about the possibility that other people are conspiring against them, there are more anticipated costs involved for the target individuals (e.g., possibilities for exclusion or exploitation), rendering it more important to instigate sense-making processes. Indeed, related research suggests that various forms of self-focus increase the extent to which people's fairness-based judgments are influenced by the morality of the way they are treated by others (Van Prooijen et al., 2008; Van Prooijen & Zwenk, 2009; see also De Cremer & Sedikides, 2005). These arguments suggest that examining the implications of the current findings for more self-relevant forms of paranoia provide fruitful avenues for further study.

In conclusion, in the present studies, we aimed to resolve the paradox that although uncertainty sometimes has the potential to increase conspiracy beliefs (Sullivan et al., 2010; Whitson & Galinsky, 2008), at other times it increases support for the same actors that are subject to accusation in conspiracy theories (Kay et al., 2008, 2009). Our findings reveal that this paradox can be resolved by appreciating the moderating role

of morality: Uncertainty leads people to be more attentive to the morality of authorities' actions, which subsequently influences belief or disbelief in conspiracies. As such, the studies presented here may not only provide insights into various ways in which people make sense of threatening societal events but also have implications for related issues, such as distrust and attitude polarization in the political debate. Taken together, it can be concluded that the morality of authorities' actions shapes reasoning about conspiracy theories particularly when people experience uncertainty.

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