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The Appraisal Model of Conspiracy Theories (AMCT): Applying Appraisal Theories to Understand Emotional and Behavioral Reactions to Conspiracy Theories

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ABSTRACT

Beliefs in conspiracy theories are related to a diverse set of emotional and behavioral consequences. At the same time, a theoretical model detailing when a conspiracy theory is more likely to elicit confrontation compared to withdrawal, indirect aggression or community-building is missing. We argue that appraisals provide the missing link between conspiracy beliefs and their consequences, proposing the Appraisal Model of Conspiracy Theories (AMCT). Based on appraisal theories of emotions, we outline how the focus on different features that vary between conspiracy theories and the situations in which they are embedded (i.e., focus on secrecy vs. gained knowledge; powerlessness vs. option of confrontation; harm to oneself vs. others) facilitate specific appraisals, resulting in different behavioral outcomes. We also outline how the AMCT helps to reconcile inconsistent research on conspiracy beliefs by providing better predictions about their emotional and behavioral consequences.

KEYWORDS

Anger; appraisal theory; conspiracy theories; disgust; emotion; fear; pride; schadenfreude

Conspiracy theories are defined as explanations for significant events and circumstances as outcomes of secret actions by powerful individuals or groups who aim to suit their interests at the expense of others (e.g., Goertzel, 1994). Beliefs in conspiracy theories – or *conspiracy beliefs* – are culturally ubiquitous and widespread (Oliver & Wood, 2014; West & Sanders, 2003; YouGov, 2020), and there is an increasing interest in the study of conspiracy theories from scholars, journalists, and policymakers alike. This attention is warranted because of the consequences of conspiracy beliefs. These consequences are diverse and range from distrust toward the government (Pummerer et al., 2022), vaccination hesitancy (Hornsey et al., 2018; Jolley & Douglas, 2014a), to detrimental intergroup outcomes such as violent protests and physical attacks (Imhoff et al., 2021). At the same time, conspiracy theories might also feel entertaining (Brotherton & Eser, 2015; J.-W. van Prooijen et al., 2022), arguably not resulting in immediate negative consequences, but having more positive connotations for conspiracy believers such as sensation, thrill and adventure seeking.

We argue that the broad range of consequences of conspiracy beliefs is a result of the variations in characteristics of conspiracy theories that are accessible or salient to individuals, due to their content and the situational context that conspiracy theories are embedded in. For example, theories such as Elvis Presley or Princess Diana faking their deaths likely

elicit very different emotions and behavioral consequences than conspiracy theories claiming that the current government is trying to install a dictatorship. Likewise, it is possible that even the same conspiracy theory might bright up different emotions depending on which aspects are emphasized. For example, the belief that COVID-19 is a hoax might elicit positive (focusing on not having to worry or strictly keep to guidelines) or negative emotions (focusing on how the population is being manipulated). Overall, distinguishing between different aspects that are commonly part of conspiracy theories (such as their secrecy vs. their explanatory power, the alleged powerlessness vs. revelation of agents, and the harm directed either at one's own group vs. others) but differently emphasized should be crucial in determining the emotional and behavioral consequences of a conspiracy theory in ways that can be predicted by theoretical models.

In this article, we argue that the integration of *appraisal theories of emotions* (for a summary, see Moors et al., 2013) within the research on conspiracy beliefs provides the key for making such predictions. That is, the depth of existing research on how appraisals are affected by salient characteristics of an event allows predictions regarding how different aspects of conspiracy theories elicit different appraisals, which, in turn, are connected to behavioral consequences (C. A. Smith & Lazarus, 1993). Specifying how different aspects of conspiracy theories elicit different appraisals, we

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provide a novel model of conspiracy beliefs and their emotional and behavioral consequences. In doing so, we integrate and reconcile research on conspiracy beliefs that has thus far been inconsistent, while making “risky predictions” (Anjum & Mumford, 2018; Popper, 1977) when conspiracy beliefs are most likely to lead to specific kinds of behavioral consequences, ranging from withdrawal, confrontation, aggression aimed at exclusion or community-seeking.

We will first provide a short review of conspiracy beliefs and appraisal theories relevant to the question at hand. Then we will elaborate our Appraisal Model of Conspiracy Theories (AMCT), specifying how the different characteristics of conspiracy theories work together with the current focus of the individual work in eliciting specific appraisals, and consequently behaviors. We also provide an overview of how the model informs existing research and propose empirical hypotheses for future research, resulting from the integration of appraisal theories into the literature on conspiracy theories. A final section will present key conclusions and discuss limitations.

Conspiracy Beliefs

Conspiracy theories allege that secret groups of typically powerful people have colluded for their own benefit, and at the expense of others (e.g., Goertzel, 1994). While conspiracy theories concern events that are of public interest (Douglas & Sutton, 2023), they are also found on a local level such as allegations that conspiracies occur in a specific workplace that employees should know about (Douglas & Leite, 2017) or doubts about transparency regarding measures in favor of renewable energy on the community level (Winter et al., 2022, 2024). These conspiracy beliefs can be very specific, for example, when people assume that a certain group (e.g., a political party) or a specific individual (e.g., Bill Gates) engages in conspiratorial acts. When people are confronted with a conspiracy theory, they subsequently tend to agree with it more than people who have not been exposed (Jolley & Douglas, 2014a, 2014b; Pummerer et al., 2022), even if they are not aware that their endorsement of the conspiracy theory has increased (Douglas & Sutton, 2008). Additionally, beliefs in a conspiracy theory can be formed and strengthened by (repeated) engagement with content and situations suggesting a specific conspiracy (Béna et al., 2023). We therefore choose the term *conspiracy belief* to describe the process of engaging with a specific conspiracy theory for the first time, or continued engagement with a conspiracy theory.

Beyond the belief in a specific conspiracy theory, some researchers assess broader suspicions of ongoing conspiracies, which is sometimes termed conspiracy mindset, conspiracy ideation, or conspiracy mentality (e.g., Imhoff & Bruder, 2014). In particular, conspiracy mentality may give rise to more specific beliefs (Imhoff & Bruder, 2014). In contrast, recent discussions also highlight general differences between conspiracy mentality and specific conspiracy beliefs (e.g., Douglas & Sutton, 2023; Imhoff et al., 2022; Nera, 2024; Pummerer, 2024; Sutton et al., 2024; Sutton & Douglas, 2020) and some studies report that the two concepts at times can be

related to different behavioral outcomes (e.g., Imhoff & Lamberty, 2020; Pummerer et al., 2022; Trella et al., 2024). One reason for this might be differences in appraisals – a question that we also turn to below.

Current State of Research on Emotions and Conspiracy Beliefs

Researchers have made some attempts to address the impact of conspiracy beliefs on emotions. Several authors have argued that beliefs in conspiracy theories increase *negative emotions* such as fear and anger (e.g., Jolley & Paterson, 2020; Liekefett et al., 2023, p. 202; van Prooijen, 2022a). The argument is that conspiracy theories confront people with powerlessness considering actors with harmful intent and secret actions. While this argument is reasonable, it fails to account for differences in empirical findings regarding the relation between conspiracy beliefs and emotions. For example, while some authors report a positive correlation between conspiracy beliefs and fear (e.g., Bowes et al., 2021; Grzesiak-Feldman, 2013; Peitz et al., 2021; Sallam et al., 2020), others do not (Grzesiak-Feldman, 2007; Imhoff & Lamberty, 2020; Šrol et al., 2021; Swami et al., 2016; Wagner-Egger & Bangerter, 2007). Even more striking, it has been argued that conspiracy beliefs can also cause *positive emotions* such as pride or situational joy in light of gained insights, feelings of belonging or the derogation of an enemy or outgroup (e.g., Bilewicz et al., 2013; Van de Cruys et al., 2023; van Prooijen, 2016, 2022; van Prooijen & van Lange, 2014); and there are anecdotal accounts that conspiracy beliefs are connected to joy in the form of *schadenfreude*, as for example, in sports (Scheepers et al., 2003) and pride in one's country in the form of collective narcissism (Cichocka et al., 2016; Cislak et al., 2021; Molenda et al., 2023; Sternisko et al., 2023). van Prooijen et al. (2022) even outlined one study where a conspiracy theory (about the Notre Dame fire) induced negatively valenced emotions alongside a study with a different conspiracy theory (speculating about the causes of death for Jeffrey Epstein) eliciting positively valenced emotions (see also Harmon-Jones et al., 2024). Overall, existing research shows inconsistent, if not contradictory, findings regarding the effects of conspiracy theories on emotions.

One reason for the inconclusiveness of the findings might be that existing research rarely distinguishes between different kinds of conspiracy theories (for an exception see Imhoff & Lamberty, 2020), nor does it often consider the specific features of conspiracy theories that make them distinguishable from each other, such as their differing degrees of malevolent intent (Douglas & Sutton, 2023), differences regarding whether specific actors are named or left in the dark, and how powerful or approachable the alleged conspirators are. Some measurement scales combine conspiracy theories implying great uncertainty and powerlessness (e.g., that a powerful and secretive group known as the New World Order is planning to take over sovereign governments) with conspiracy theories about past events that arguably have little consequence for everyday life today (e.g., NASA faked the moon landing; Lewandowsky et al., 2015).

Other studies measure only the belief in one specific conspiracy theory such as the belief that the COVID-19 virus is a hoax (Imhoff & Lamberty, 2020) or that the assassination of John F. Kennedy was part of a broader conspiracy involving weapons manufacturers and CIA officials (Butler et al., 1995). Again others measure the belief in a fictitious conspiracy theory, such as the notion that a fictitious bus accident in an African Country was the outcome of a conspiracy (Lantian et al., 2017). Given that these conspiracy theories differ in the alleged conspirators, the extent of harm they imply and who the harm is directed at, it comes as no surprise that they might also evoke different emotions and behavioral responses.

Also, existing research has not yet examined whether even the same conspiracy theory might elicit different emotional and behavioral responses, depending on which aspects of a conspiracy theory are salient. This might also change depending on situational characteristics. For example, anecdotal accounts such as those from the Capitol siege on January 6, 2021 (Parramore, 2021) suggest that being in a group might convey strength and perceptions of control that might not exist when sitting alone at home. In sum, the time seems ripe to replace the one-size-fits-all approach with a more fine-grained one.

Rather than only building on studies about conspiracy beliefs, there is a lot to learn from other areas of research that over the years have accumulated evidence of how behavioral reactions are shaped by the evaluation of an event in a specific situation. More specifically, we argue that appraisal theories of emotions provide a guiding framework. In developing the AMCT, we specify how different aspects of a conspiracy theory salient to an individual are connected to emotions and action tendencies. Furthermore, the AMCT allows for the integration and reconciliation of so far inconsistent research on conspiracy beliefs and emotions, as well as new hypotheses of how the salience of different aspects of conspiracy theories and situational factors such as being in a group shape behavioral outcomes of conspiracy beliefs.

Appraisal Theories of Emotions

Appraisal theories of emotions (e.g., Arnold, 1960; Ellsworth, 2013; Frijda, 1986; Lazarus, 1991; Ortony et al., 1988; Roseman, 2013; Scherer, 2009) circle around the idea that the generation and differentiation of emotions can be predicted by individuals' evaluations (appraisals) of events. These appraisals are driven and shaped by cognitive processes in several ways: In any given moment, individuals evaluate an event in relation to their goals and desires. Doing so, they arrive, for example, at the appraisal of an event as "pleasant" (if it matches a current goal or desire) or "unpleasant" (if it does not match a current goal or desire). Individuals further do so by using existing cognitive schemas that are salient in a given situation. For example, appraisals can be elicited and modified by guiding the focus of attention to specific aspects of a situation (see, e.g., Bailey et al., 2017; Briñol et al., 2018; Hemenover & Dienstbier,

1996; Neumann, 2000). Appraisals are also influenced by the current emotional state of the individual, since activated appraisals carry on to other situations that are then interpreted in a similar light (Lerner & Keltner, 2000; Quigley & Tedeschi, 1996). For example, anger in one situation automatically elicits appraisal of blame and, thus, additional anger, in another situation (Quigley & Tedeschi, 1996). Thus, appraisals are shaped by the respective nature of an event, but also by characteristics of the situation that make specific aspects of that event salient. The appraisals, in turn, shape action tendencies (e.g., Lerner & Keltner, 2000; Mackie et al., 2000; Scherer, 2019).

Individuals might evaluate an event on many different appraisal dimensions, and over the years, researchers have derived more and more distinctions (see, for example, Ellsworth & Scherer, 2003; Manstead & Fischer, 2001; Moors et al., 2013; Ritzenhöfer et al., 2019; Stöber & Muijs, 2001), thereby adding more nuance to the study of appraisals and emotions. Notwithstanding this complexity, there are four appraisal dimensions that can be thought of as a first "guiding grid" in the clustering of appraisals, which are relatively fundamental and which appear early on in the evaluation process (Gentsch et al., 2015; Lanctôt & Hess, 2007; Scherer, 1999, 2009, 2013). These four appraisals are also the appraisals many appraisal theories agree on (see e.g., Fontaine et al., 2007; Lerner & Keltner, 2000; Moors et al., 2013), which are the dimensions of *pleasantness* (i.e., whether or not an event represents a desired outcome), *certainty* (i.e., whether the future seems predictable and comprehensible), *control* (i.e., the ability to react and/or cope with the situation), and *agency* (i.e., whether oneself or someone else caused the event).

Appraisals are thought of in continuous dimensions; that is, individuals might evaluate a given event high, low or anywhere in between the dimensions of pleasantness, certainty, control and agency, with evaluations happening spontaneously, recursively and often unconsciously (e.g., Frijda, 1993; Lazarus, 1982; Scherer, 2009, 2019). Despite the almost endless possibility of combinations of appraisals, there are some appraisal combinations – summarized as emotions – which appear more often, most likely because they serve evolutionary adaptation (Ekman, 1999; Scherer, 1984; Scherer & Wallbott, 1994). These are called "modal emotions" (Scherer, 1984, 2009; Scherer & Wallbott, 1994), also resembling the basic emotions articulated by Ekman (1992, 1999) or Izard (2007). In this article, we mainly focus on the appraisals and action tendencies of such "modal emotions" (fear, anger, disgust, pride and joy in the form of *schadenfreude*). While the naming might sound like emotions are thought of as different categories, emotion research largely characterizes emotions as dimensional, with emotions being more or less present, and emotions shifting depending on the dimensional shifting of their underlying appraisals (see e.g., Briñol et al., 2018; Ekman, 1992; Moors et al., 2013). Many researchers also consider emotions not as singular occurments, but as an interplay with feedback loops between arousal, facial expressions and physiological concomitants (see, for example, Ekman et al., 1983; Moors

et al., 2013; Scherer, 2009). While we do consider these important aspects of emotion, the focus of the current model is on appraisals and resulting action tendencies as these promise the strongest added value to the understanding of responses to conspiracy beliefs.¹

While complex emotions have properties that differ across cultures (e.g., Izard, 2007; Mauro et al., 1992), researchers have repeatedly shown that the relationship between appraisals and modal emotions is culturally ubiquitous; that is, the same appraisals will lead to similar modal emotions across cultures (Ellsworth, 1994; Gentsch et al., 2015; Izard, 2007; Kuppens et al., 2008; Mauro et al., 1992; Scherer, 1997, 1999; Tong, 2015). However, whether an event elicits the appraisals of pleasantness, certainty, control and agency is influenced by culture as well as other cognitive schemas and motives. These encompass situational influences (e.g., current emotional or motivational state), chronic person characteristics (e.g., personality traits), group-related aspects (e.g., being in a group that shares the same goal) and cultural appraisal tendencies. We summarize different ways in which these aspects shape appraisals below.

Overall, the appraisal of an individual occurs in reaction to an event. In the case of conspiracy beliefs, this event is the respective conspiracy theory that is evaluated by the individual in terms of the implied certainty, control and pleasantness. Due to the current focus of an individual or situational aspects, certain features of a conspiracy theory hereby might be salient, giving rise to specific appraisals. Applying appraisal theories to conspiracy beliefs, we will now outline how different features of conspiracy theories facilitate different appraisals and resulting action tendencies, allowing predictions about under which circumstances conspiracy beliefs are more (vs. less) likely to result in behaviors like withdrawal, confrontation, indirect aggression or community-building.

Appraisals Elicited by Conspiracy Theories

So far, research on conspiracy beliefs has mostly treated conspiracy theories as a homogeneous concept, thereby overlooking important differences between conspiracy theories (for an exception, see Douglas & Sutton, 2023), as well as how the focus on different aspects of a conspiracy theory – salient due to individual or cultural tendencies as well as the current situation – shapes the connected emotions and resulting behaviors. As specified above, the appraisal dimensions of pleasantness (dimension from unpleasant to pleasant), certainty (dimension from uncertain to certain), control

(dimension from low control to high control) and agency (dimension from other-responsibility to self-responsibility) can serve as a first guiding grid that events typically are evaluated on.

The appraisal dimension of agency hereby is the only core appraisal dimension which is relatively fixed regarding conspiracy theories, since conspiracy theories, by definition, assume that other agents are responsible for societal events and their harmful consequences. Even in cases where the individual fights the conspirator, this action is understood and interpreted as a reaction, rendering the conspiracy belief always connected to the appraisal of other-responsibility. However, there is a considerable variation regarding the appraisal dimensions of certainty, control and pleasantness, which we will outline below (for an overview, see Table 1).

Certainty Dimension

Conspiracy theories, by definition, claim that powerful agents are acting in secrecy, implying that their actions cannot be trusted. As such, believing in conspiracy theories can relate to *appraisals of uncertainty*, since they can indicate unreliable knowledge about the situation and the future (i.e., powerful actors act in secrecy), cast doubt concerning important structures of society (e.g., the government, institutes, academia) and call into question commonly shared knowledge convictions and expectations about the future (e.g., Imhoff et al., 2018; Lewandowsky, 2018). Importantly, this should be especially the case for conspiracy theories that imply a great deal of secrecy and ambiguity regarding the actors, actions and their plans, such as conspiracy theories speaking of elites taking over the world (where questions like “Who?”, “When?” or “How?” are completely left unanswered). As such, studies show that the relatively vague notion of conspiracy theories happening as measured through the conspiracy mentality questionnaire (Bruder et al., 2013) increases uncertainty in the long-term (Liekfett et al., 2023). There are also *situational aspects* that should highlight exactly these characteristics of conspiracy theories. For example, an already activated appraisal dimension guides the focus of attention, making it more likely to see similar aspects in new situations (see, e.g., Bailey et al., 2017; Briñol et al., 2018; Hemenover & Dienstbier, 1996; Neumann, 2000). Thus, appraisals of uncertainty activated, for example, through societal change or uncertainty in a previous situation, should also highlight aspects of secrecy and ambiguity within conspiracy theories. Overall, the appraisal of uncertainty should be stronger the greater the emphasis is (both, through the content of the conspiracy theory as well as the situation) on secrecy and ambiguity regarding actors, actions and their goals/plans.

At the same time, conspiracy beliefs might also lead to *appraisals of certainty* since conspiracy theories can offer explanations for societally relevant events (J.-W. van Prooijen, 2020) and help to “connect the dots” of so-far unrelated events which might have otherwise left an individual puzzled (Douglas et al., 2017; Van de Cruys et al., 2023). This should be especially the case when conspiracy theories

¹This focus on appraisals and action tendencies implies that our theorizing does not focus on emotions as a phenomenon but builds on elements of appraisal theories of emotions to provide a better understanding of the phenomenon we are interested in (i.e., responses to conspiracy theories). We acknowledge that due to this focus, some of our theorizing could also be categorized as motivational. However, a discussion about commonalities and differences between emotional and motivational aspects in general or regarding the AMCT would not only exceed the scope of the paper but would also be beyond our goal to derive a theory of how different aspects of conspiracy theories relate to different behavioral tendencies.

Table 1. Different appraisals elicited by conspiracy theories.

Appraisal Dimension		Conspiracy Theory Aspects that Elicit This Appraisal
Certainty	Uncertainty	Emphasis on secrecy and ambiguity regarding actors, their actions, goals and plans
	Certainty	Emphasis on the explanatory power of the conspiracy theory
Control	Low control	Emphasis on the power of the evil actor
	High control	Emphasis on the ability to stop the actor because their actions are now revealed
Pleasantness	Unpleasant	Emphasis on harm to oneself or group
	Pleasant	Emphasis on superior knowledge or superior morality; harm to the enemy

provide “meaningful” answers to questions that are otherwise left open or where existing answers are unsatisfactory to individuals. Research has shown that people are drawn to (we would add: specific kinds of) conspiracy theories because they intuitively assume that big events also have “big” causes. For example, they are more ready to assume that the killing of a president (vs. a shooting with no consequences) is the consequence of a conspiracy committed by a group rather than by one person alone (Leman & Cinnirella, 2007; McCauley & Jacques, 1979). One might also think back to the beginning of the COVID-19 pandemic, where the conspiracy theory of China deliberately developing the virus that was responsible for a world-wide change of markets and societies for some people sounded more convincing than the tentative speculations that the virus might stem from one (of probably thousands per day) human-animal interaction at a Wuhan market. Overall, the greater the emphasis on the explanations provided by a conspiracy theory, the greater the appraisal of certainty.

Control Dimension

Conspiracy theories arguably can also be related to appraisals of high or low control. Given that conspiracy theories allege evil or at least selfish intentions (i.e. pursuing interests at the expense of others) and secret actions of powerful actors, they are likely often to be connected to *appraisals of low control*. This is, for example, evident in studies showing that individuals feel powerless after exposure to a conspiracy theory claiming evil actions of powerful actors within one’s society (Jolley & Douglas, 2014b). There also are studies showing that conspiracy beliefs are related to the perception of low personal and political control (for a meta-analysis, see Biddlestone et al., 2022), and that exposure to conspiracy theories increases feelings of perceived victimhood (Bertin, 2024). Overall, the more the emphasis is on one’s own powerlessness in face of an evil and powerless actor, the more a conspiracy theory should elicit appraisals of low control.

However, there are also anecdotal accounts where conspiracy beliefs seem to empower people to react against a system they perceive to be unfair, and thus, *perceptions of high control*, as for example seen in protests like the March to the Capitol on January 6, 2021 (Frontline, 2021; Parramore, 2021) or protests during the COVID-19 pandemic (Fürstenau, 2021); Thus, it seems that conspiracy beliefs may also at times restore the perception of control when someone else can be blamed for things that are seen as problematic in society (Jolley et al., 2018). This effect should even be heightened when individuals act together in

a group, as group cohesion supports control appraisals (see e.g., Beal et al., 2003), and perceived discrimination from powerholders has been shown to increase identification with the group of conspiracy theory believers (Nera et al., 2022). The appraisal of control seems to be closely tied to the perception of certainty, as individuals perceive that they have understood the situation (certainty) and have a target to fight against (Van de Cruys et al., 2023). Overall, the more the emphasis is on the gained ability to stop the actor (individually, or as a group) because their actions are now revealed, the more a conspiracy theory should elicit appraisal of high control.

Pleasantness Dimension

One might also argue that conspiracy beliefs are typically connected to the *appraisal of unpleasantness*, as they often (though not necessarily) assume harm done toward oneself or one’s own group through secret actions of malevolent powerholders. This is also the case for most newer experimental research – potentially driven by the COVID-19 pandemic – which predominantly features conspiracy theories that indeed imply unpleasantness for the participant. Given that the expectation of harm is prototypical for unpleasantness, the more the emphasis is on harm to oneself or the group, the more a conspiracy theory should elicit appraisals of unpleasantness.

However, definitions of conspiracy theories do not specify that harm is done toward one’s own group and there is also a research tradition of examining conspiracy theories that do not imply direct harm to the individual or their group. For example, theories such as that NASA faked the Apollo moon landing or Elvis Presley faking his death –measured also among individuals outside the US–, long dominated the (mostly correlational) research on conspiracy beliefs before the pandemic (e.g., Lewandowsky et al., 2015). In these cases, conspiracy theories might even evoke *appraisals of pleasantness*, for example, when conspiracy theories are experienced as entertaining (J.-W. van Prooijen et al., 2022), when they inspire feelings of being (morally) superior to the conspirators or their unaware adherents (J.-W. van Prooijen, 2022b), when they confirm ingroup values, or when they allege that harm is being done to an opponent, which can inspire *schadenfreude* (Spears & Leach, 2004). Research has, for example, shown that reading about a conspiracy theory casting blame on others can increase positive feelings about one’s own system (Jolley et al., 2018; Mao et al., 2024). Overall, the more the emphasis on a conspiracy theory providing superior knowledge, superior morality and/or harm to an enemy instead of

harm to one's own group, the more the conspiracy theory should elicit appraisals of pleasantness.

Personal and Cultural Aspects Influencing Appraisals

We have already mentioned ways in which the appraisals elicited by conspiracy theories are shaped by the current situation, such as the specific aspect of the conspiracy theory that the individual pays attention to, a preexisting appraisal (reinforcing similar appraisals), or whether the individual is in a group or not. In addition, there are chronic person characteristics that have an influence on appraisal tendencies, reflected in personality traits or the self-concept (for an overview, see van Reekum & Scherer, 1997). Such personality traits and self-concepts should lead to interindividual differences in what aspects of conspiracy theories dominate the perception, and consequently the appraisals and action tendencies the engagement with conspiracy theories brings forward.

Similarly, appraisals are also shaped by cultures (for an overview, see Keltner & Haidt, 1999; Scherer, 1997; Scherer & Brosch, 2009). For example, individualistic cultures are more quick to attribute events to the acts of other (powerful) individuals and groups than more collectivistic cultures (An et al., 2001; Choi et al., 1999; Matsumoto et al., 1988; Mauro et al., 1992; Morris & Peng, 1994), which should facilitate perceptions of low control. However, given that people from collectivist cultures place more emphasis on their social reference group and the interrelatedness (Oishi et al., 2004; Suh, 2002), they should feel more affected (i.e., greater experience of unpleasantness) when believing that one's own population is being targeted by conspirators. Cultures also differ in the extent to which they are tolerant toward uncertainty (Hofstede, 2001; House et al., 2004), with countries from Central and Latin Europe, Japan, South Korea, Russia, the Middle East and Pakistan scoring higher on uncertainty avoidance, while English-speaking countries (e.g., United Kingdom, United States), China, Scandinavia, India, and Southeast Asia score lower on uncertainty avoidance (Hofstede et al., 2005). Uncertainty avoidance also encompasses appraising situations of mild uncertainty as strongly uncertain (DeWees & Lerner, 2020), which should increase the likelihood that conspiracy theories elicit appraisals of uncertainty in respective countries. So far, cross-cultural differences have been rarely considered in research on conspiracy theories (for exceptions see Adam-Troian et al., 2021; Cordonier et al., 2021; Hornsey et al., 2023; Hornsey & Pearson, 2022; Imhoff, 2022; Jovančević & Miličević, 2020). Through focusing on appraisals and their relations to action tendencies, the AMCT also provides a fruitful basis for examining how the consequences of conspiracy beliefs differ between cultures.

In sum, conspiracy theories should elicit some variation in the appraisals of certainty, control, and pleasantness, depending on which features of the conspiracy theory are salient. We hereby assume that there are differences between conspiracy theories as a whole, with some conspiracy theories being more likely to generally elicit, for example,

appraisals of low control than others. Additionally, conspiracy theories might differ in the variety of appraisals they elicit. There are likely some conspiracy theories that elicit relatively fixed appraisals. For example, assuming that a secretive group known as the New World Order is planning to take over sovereign governments should mostly elicit appraisals of uncertainty, low control and unpleasantness. However, there are other theories in which there is extreme variation in possible appraisals depending on which aspects are salient to the individual. For example, believing that COVID-19 is a hoax might elicit appraisals of uncertainty, low control and unpleasantness when focusing on the alleged wrongdoing of governments and their possibilities of restricting the population, but appraisals of high certainty, control and pleasantness when focusing on one's own superior knowledge about the situation that bears the option to safely to ignore the guidelines.

Here, we want to highlight that the respective abilities of conspiracy theories to elicit the different appraisals is based on typical examples from appraisals theories. Thus, while we have provided examples of conspiracy theories matching situations typically eliciting appraisals of certainty and uncertainty, high and low control, as well as pleasantness and unpleasantness, whether these conspiracy theories indeed reliably elicit the respective appraisals in individuals needs to be established by future research.

The Appraisal Model of Conspiracy Theories

The combinations of appraisals described above are connected to different emotions, as specified in appraisal theories (e.g., Arnold, 1960; Ellsworth, 2013; Frijda, 1986; Lazarus, 1991; Ortony et al., 1988; Roseman, 2013; Scherer, 2009). While all combinations of appraisals are possible, there are some appraisal combinations that occur more often, potentially due to evolutionary reasons (Ekman, 1999; Scherer, 1984; Scherer & Wallbott, 1994). Among them are the combinations of uncertainty, unpleasantness and low control being connected to *fear*, appraisals of certainty, unpleasantness, high control to *anger*, appraisals of certainty, unpleasantness, low control to *disgust*, appraisals of certainty, pleasantness, high control to *pride*, and appraisals of certainty, pleasantness, and low control to *joy* (Lerner & Keltner, 2000; C. A. Smith & Ellsworth, 1985; Tiedens & Linton, 2001). These combinations are also the focus of the AMCT. In addition to these five emotions, surprise is also often part of the list of modal (sometimes also called "basic") emotions (e.g., Ekman, 1999; Izard, 2007; Scherer, 2009). However, recent research suggests that surprise is only elicited in the beginning, later giving rise to other emotions (Noordewier et al., 2016), and thus, surprise will not be discussed here at length.

Emotions have a core appraisal theme (Fredrickson, 1998; Lazarus, 1991; C. A. Smith & Lazarus, 1993), which specifies those kinds of situations in which the combination of appraisals are most likely to occur. Many emotion researchers agree that modal emotions can be thought of as "emotion families" (e.g., Ekman, 1992; Fredrickson, 1998;

Izard, 2007; Scherer, 1984, 2009), for example, that fear can have different gradients and eliciting events, matching the core appraisal theme more or less perfectly.

Combining research on appraisal theories and conspiracy belief, we derive to the predictions of the AMCT that an emphasis on the secrecy and ambiguity regarding the actors and their actions, goals and plans, combined with a perceived powerlessness in light of the abilities of the conspirators, and harm to oneself or one's own group is connected to the emotion of *fear*. An emphasis on the explanatory power of the conspiracy theory and the ability to stop the actor because their actions are now revealed when expecting harm to oneself or one's group, is connected to the emotion of *anger*. Conspiracy theories revealing the contamination of purity (the core appraisal theme of disgust) which is hard to control while assuming harm to oneself or one's group are connected to the emotion of *disgust*. In turn, when no harm or harm to enemies is implied and when the superior knowledge or morality through the explanatory power of the conspiracy theory is highlighted, then conspiracy beliefs should be related to *pride* (emphasis on one's own actions) or *joy* in the form of *schadenfreude* (emphasis on actions from others).

Modal emotions as combinations of appraisals, in turn, are related to specific action tendencies, as established in emotion research (e.g., Carver & Harmon-Jones, 2009; Fredrickson, 1998; Frijda et al., 1989; Kreibig et al., 2010; Lerner & Keltner, 2001; Mercadante et al., 2021; Roseman et al., 1994). We thereby do not assume that emotional and behavioral reactions to conspiracy beliefs are different from emotional and behavioral reactions in other situations. Taken together, we put forward at the AMCT (see Figure 1), linking different features of conspiracy theories to different action tendencies.

In the next section, we will provide further details on how the different appraisal combinations of fear, anger, disgust, pride and joy in the form of *schadenfreude* are related to action tendencies and how the emphasis on different features of conspiracy beliefs facilitates specific action tendencies. We will also refer to existing research on conspiracy

beliefs, pointing out how the integration of appraisal theories can help to make sense of inconsistencies between studies measuring emotional reactions to conspiracy beliefs.

Fear

Fear is related to the appraisals of uncertainty, unpleasantness and low control (Lerner & Keltner, 2000). This appraisal combination often emerges from perceiving danger or threat, no matter whether physical or goal-related (Frijda, 1986; Lench et al., 2011, p. 20). In terms of action tendencies, fear will increase vigilance toward threatening stimuli (Wenzel & Lystad, 2005) and the tendency to avoid or withdraw from a situation (Carver & Harmon-Jones, 2009).

As outlined above, the appraisals are likely to be elicited by focusing on those aspects of conspiracy theories that imply current or future harm to the participant or their ingroup (i.e., unpleasantness), secrecy and ambiguity regarding actors, actions and their goals/plans (i.e. uncertainty) and conspirators, who are so powerful or unidentifiable that they are not able to fight them, either alone, or collectively as a group (i.e., low control). An example of a conspiracy theory where the content should very dependably elicit uncertain, low-control and unpleasant appraisals is the theory of the New World Order (i.e., "A powerful and secretive group known as the New World Order are planning to eventually rule the world through an autonomous world government which would replace sovereign governments.", Lewandowsky et al., 2015). Here, the alleged collusions are so vague, yet the allegedly involved people are so powerful that it seems impossible to escape their evil intentions. The emotion of fear should further be more likely to be elicited by this (or a similar) conspiracy theory if the mentioned aspects of unpleasantness, uncertainty and low control are salient, for example when the person already is experiencing fear through an unrelated event, or among individuals and cultures higher in uncertainty aversion.

Applying the lens of appraisal theories to existing research on conspiracy belief can help to get a better

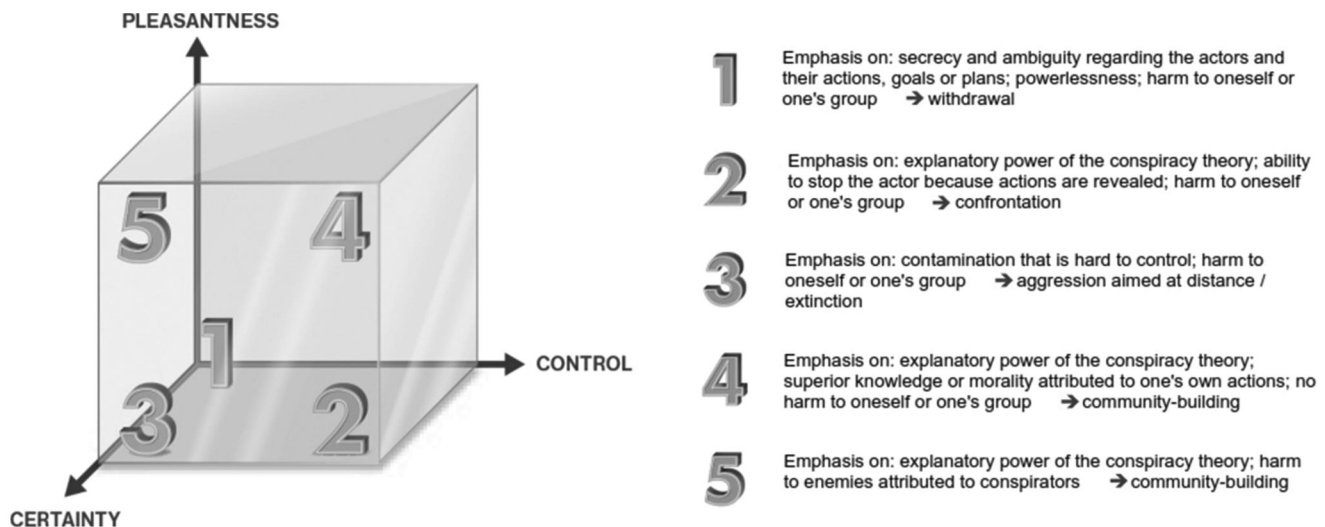


Figure 1. Appraisal model of conspiracy theories (AMCT). Figure: Pawel Nuwaltzew.

understanding of previous inconsistencies, for example regarding the relations between conspiracy beliefs and fear. In line with the model, measures of conspiracy beliefs that include vague and threatening statements (implying uncertainty, unpleasantness and low control) should be more related to fear than measures of conspiracy theories stating specific conspirators (i.e., certainty) that might be confronted (i.e., high control) and/or do not imply harm to an individual (i.e., allowing for pleasantness). This assumption has not been directly tested. However, longitudinal analyses using measures of conspiracy mentality or the flexible inventory of conspiracy suspicions, which both built on rather vague but threatening items (e.g., “There are secret organizations that greatly influence political decisions”, Bruder et al., 2013; “Reporters, scientists, and government officials are involved in a conspiracy to cover up important information about ____”, Wood, 2017), show that conspiracy beliefs on these measures predict more fear at a later time point in US-Canadian and German participants (Leibovitz et al., 2021; Liekefett et al., 2023). At the same time, conspiracy beliefs about Jews in Poland or conspiracy beliefs concerning different minorities in Switzerland – which arguably should be less threatening to people from majority groups – were unrelated to fear (Grzesiak-Feldman, 2007; Wagner-Egger & Bangertner, 2007).

Similarly, looking at the findings in light of appraisal theories can also explain why US participants seeing a film about the conspiracy theory surrounding the assassination of President John F. Kennedy (i.e., certainty regarding conspirators, no harm to participants) did not report more fear than the control group (Butler et al., 1995), while Greek participants reading a text suggesting that unnamed foreign forces were the cause of a huge wildfire that was spreading in Greece (i.e., uncertainty regarding conspirators and the future, potential future harm to participants) reported much more fear ($d=3.10$) than participants reading a non-conspiracy control text about the wildfire (Gkinopoulos & Mari, 2023). As indicated above, some conspiracy theories should even *reduce* fear, namely, when the content and focus of the individual is about denying an existing threat (as long as the focus is not on the alleged concomitant manipulation of the general population). For example, believing that COVID-19 is a hoax was related to less perceived threat by COVID-19, both cross-sectionally (in UK and US samples, Imhoff & Lamberty, 2020) as well as longitudinally (in the Netherlands, J. van Prooijen et al., 2023). A similar effect could be expected for conspiracy theories claiming that anthropogenic climate change is a hoax when the focus is on the alleviation of the climate threat rather than the alleged evil governments. Overall, while existing research has not directly tested the impact of conspiracy theories on appraisals, the patterns in existing research are in line with the prediction that the more narratives emphasize uncertainty, harm and powerlessness regarding the conspirators, the more the exposure to conspiracy theories leads to fear, while conspiracy theories denying harm are expected to reduce existing fear.

When conspiracy beliefs induce fear, the suggested action tendency is withdrawal, as there is no point in confrontation. Such withdrawal from politics and society has also been reported in relation to conspiracy beliefs (e.g., Jolley & Douglas, 2014b; van der Linden, 2015). In line with our starting point that conspiracy beliefs are not all the same and that different features of conspiracy theories being differently salient in conspiracy theories should also bring forward different action tendencies, other studies have found a relation between conspiracy beliefs and more political or broader civic engagement (e.g., Jolley et al., 2018; Pantazi et al., 2022; Winter et al., 2023, see also Imhoff et al., 2021). We argue that this is due to differences in the underlying appraisals and, thus, connected emotions. More specifically, such increased engagement is more in line with the emotion of anger – the emotion which we turn to next.

Anger

Just like fear, anger is connected to appraisals of unpleasantness. But different to fear, anger is connected to appraisal of certainty and high control (Lerner & Keltner, 2000; C. A. Smith & Ellsworth, 1985). This appraisal combination is especially likely to result when people are not able to reach their desired goal, when they are hurt intentionally by another person (Carver & Harmon-Jones, 2009; Frijda, 1986), or due to the perception of injustice and inequality (Leach, 2008). In terms of action tendencies, anger prepares individuals to fight and to seek risks (Lerner & Keltner, 2001) to redress perceived wrongdoings or injustices (Carver & Harmon-Jones, 2009), often by attacking the anger evoking target (e.g., Mackie et al., 2000). Anger is, thus, related to more hostility (Wenzel & Lystad, 2005), aggression (Veenstra et al., 2018), and non-normative behaviors (Hastings & O'Neill, 2009).

As outlined above, conspiracy theories should especially lead to anger when there is expected harm to the individual or their group (i.e., unpleasantness) conspirators and their method of conspiring are known (i.e., certainty), and when the individual perceives that the threat can be prevented, mitigated or confronted (i.e., high control) – either by the individual or by a group that the individual identifies with. Examples for such theories are theories that imply a specific government or company malfeasance when an individual feels able to confront this malfeasance, such as in theories assuming pharmaceutical manipulation when the vaccine or drug can be avoided, or when the government can be confronted through collective action. As already evident in the examples, the experienced anger should vary with the perceived control in that moment, which can be individually or situationally heightened, for example when focusing on specific aspects of a theory, when being in a group, or when already being in a hostile mindset. Thus, the theory of 5G masts spreading COVID-19 should especially evoke anger when focusing on the alleged malfeasance of the companies, when being with like-minded others, and when generally feeling that the threat can be mitigated (e.g., through turning off the Wi-Fi). Additionally, anger should vary

depending on appraisal tendencies and values of the respective culture, with previous research suggesting that anger is more likely to be elicited by violations of harmony and injustice to the group in collectivist cultures compared to violations of autonomy in individualistic cultures (see e.g. Liu et al., 2019; Triandis, 2001).

Experimental studies conducted in the US confirm that conspiracy theories can increase anger in individuals, as evidenced in a study about governments and pharmacies covering up dangers of vaccinations (Featherstone & Zhang, 2020), about the death of John F. Kennedy (Butler et al., 1995), and about the theory of alleged election interference by Democrats or Russians, which elicited anger both among Democrats as well as Republicans, respectively (Albertson & Guiler, 2020). Additionally, there is a correlation between anger and the conspiracy beliefs that COVID-19 is caused by 5G technology (Jolley & Paterson, 2020), that authorities hid the truth about COVID-19 (Peitz et al., 2021), and scales including items of the state's interference regarding chemtrails or the attacks on 9/11 (Bowes et al., 2021; Šrol et al., 2021), conducted in the UK, US and Slovakia. Since arguably all these conspiracy theories imply harm while mentioning the respective conspirators and offering the chance to (collectively) confront the threat, they fit the typical appraisal structures proposed to elicit the emotion of harm and respective action tendencies. Future studies might systematically vary perceptions of control and certainty to examine differences in emotions and resulting action tendencies.

Anger has been shown to mediate the link between conspiracy beliefs and violence against objects related to the conspiracy in the UK (Jolley & Paterson, 2020), underlining the importance of understanding emotions in predicting action tendencies. Given the typical action tendencies of anger, it is likely that this emotion also plays a role in the relations between conspiracy beliefs and intentions to engage in everyday crimes (in the UK, Jolley et al., 2019), collective action (in German facebook groups, Frischlich, 2022), non-normative behaviors (in Greece and Germany, Gkinopoulos & Mari, 2023; Pummerer et al., 2022) and aggression, including the intention of violent attacks against the government (among German and US participants, Imhoff et al., 2021) or hostility toward the outgroup accused of the conspiracy (among participants in the Middle East, Poland, and Greece, Nyhan & Zeitzoff, 2018; Oleksy et al., 2021; Sapountzis & Condor, 2013). In addition, the fact that individuals derive certainty from the experience of a shared reality and higher appraisals of control when group cohesion is high, suggests that situations of protests are specifically likely to result in anger and aggression - even if the same conspiracy theory might be more linked to fear when the individual is again alone.

Disgust

Disgust is associated with *appraisals* of high certainty, unpleasantness and low control (Briñol et al., 2018; Tiedens & Linton, 2001; Smith & Ellsworth, 1985). The core

appraisal theme (Lazarus, 1991) is to serve the function of protecting individuals from danger and illness, for example, by keeping one's own objects clean, and avoiding contaminants. As such, the activated goal of disgust is to restore purity and cleanliness (Roseman et al., 1994; Schnall, 2017). Importantly, apart from objects, disgust can also be directed against individuals and groups, here also serving as a warning signal about the moral status of an action or person (Chapman et al., 2009; Pizarro et al., 2011). It can result from seeing moral transgressions (Haidt et al., 1997; Rozin et al., 1999) and is related to moral condemnation (Schnall, 2017; Schnall et al., 2008). In terms of action tendencies, disgust leads to the desire to create distance away from the object (Roseman et al., 1994; Rozin & Fallon, 1987), which may result in cleaning, creating visual or spatial boundaries, or distancing toward, and expulsion of morally condemned people. While both anger and disgust are related to aggression, the form and goal of the aggression is different. Anger is characterized by short-term aggression aimed at reaching a specific goal (e.g., coercing change in another person's behavior) but with the long-term goal of reconciliation (e.g., Fischer & Roseman, 2007). Disgust, in turn, is focused on long-term distancing and exclusion, including elimination. While this might include direct aggressive behaviors in some instances, it is also connected to so-called indirect forms of aggression that maintain distance against the transgressor (while still being aggressive and harmful, e.g., being manipulative, excluding from groups, harming others' reputations through gossiping, encouraging punishment by others; Fan et al., 2024; Molho et al., 2017).

Conspiracy theories should evoke disgust when they imply contamination or moral transgression unfavorably for the individual (i.e. unpleasantness), when the conspirator is known (i.e., certainty), yet when the threat is not easily confronted (i.e., low control), for example due to its contaminative nature. Admittedly, the emotion of disgust is somewhat special compared to the broader emotions of fear or anger, in that it is typically elicited by the specific violations of purity, cleanliness, and only in the broader context by violations of morality. However, there are also conspiracy theories which touch upon such violations. For example, they might create disgust against commonly used treatments such as medications or vaccinations by framing them in terms of a "violation of the purity of the body" (Hornsey et al., 2018) or, for example, by likening face masks to muzzles commonly used for restraining animals, as during the COVID-19 pandemic (Aratani, 2020). As we have outlined, appraisals and emotional reactions can change depending on which aspects are salient to an individual. Thus, a vaccination conspiracy theory might elicit disgust when thinking about the process of vaccination and how vaccinations allegedly violate the purity of the body but elicit anger when thinking about the wrongdoings of pharmaceutical companies.

A prominent example of a disgust related conspiracy theory is the Jewish Conspiracy Theory as it was spread by the propaganda in Nazi Germany which, among other things, stated that Jewish blood endangers the purity of the German race. Similar ideas can be identified for the conspiracy belief

that the “pure” European race is being slowly and purposefully replaced by migrants (Jedinger et al., 2023), or that gender equality measures have been designed to harm traditional (“pure”) family values. Thus, while the groups eliciting disgust are still perceived as being threatening and not easily confronted through their alleged contamination, they might also be from groups that are typically more thought of as being from a minority or low-status group.

Experimental and longitudinal studies measuring disgust and conspiracy beliefs are rare. In a study conducted in the US by Albertson and Guiler (2020), participants who were exposed to the theory of an alleged election interference by Democrats or Russians showed more disgust, but also more anger, compared to participants who were not exposed to the theory, with effect sizes being similar in size for both emotions. Correlational studies further report a link between believing that people have not been told the full truth about COVID-19 by the authorities and disgust toward the political system in Italy, the UK, the US and South Korea (Moon & Travaglino, 2021), as well as vaccine hesitancy and disgust, as measured in a 24-nation study (Hornsey et al., 2018). It is, therefore, likely that antisemitic conspiracy theories and gender conspiracy beliefs also lead to disgust. While studies measuring this link are missing, believing in such theories is related to typical action tendencies of disgust. That is, believing in antisemitic conspiracy beliefs has been related to the desire to create physical and relational distance between oneself and Jewish individuals (Bilewicz et al., 2013), and gender conspiracy beliefs are linked to being less accepting of gay men and lesbians as coworkers, neighbors or family members (Marchlewska et al., 2019). While aggressive tendencies establishing a distance between oneself and the object are typically seen in behaviors called indirect aggression (e.g., exclusion, discrimination, bad-mouthing), disgust can also inspire direct forms of aggression aimed at seeking long-term distance and elimination. Two examples are the Holocaust and the terror attacks by Anders Breivik – both inspired by conspiracy beliefs built on the idea of the purity and contamination of one’s race, and marked not by the idea of confrontation and a potential later reconciliation, but elimination. Future studies might not only further investigate the link between different narratives of conspiracy beliefs, cultural differences and disgust, but also specifically investigate the differential outcomes for anger versus disgust in types and goals of aggression (i.e., more direct forms of aggression aimed at long-term reconciliation for anger, and forms of aggression maintaining or creating distance aimed at long-term exclusion for disgust).

Pride

A combination of certainty, pleasantness, and high control appraisals is associated with the experience of pride (e.g., C. A. Smith & Ellsworth, 1985; Tracy & Robins, 2004b, 2004a). This appraisal combination is especially likely to occur in response to an achievement that is perceived to have social value (Michie, 2009; Tracy & Robins, 2007), which might either be connected to an individual or a group (Delvaux et al., 2016). In

terms of action tendencies, pride reinforces the action that elicited pride when it reflects the desired self-presentation (Tracy & Robins, 2004a, 2004b), potentially through boosting self-esteem (Brown & Marshall, 2001). It can also prepare the individual for the engagement with the environment, which can include activities like sharing the achievements and new insights with other people (Kreibig et al., 2010) with the goal to draw attention on the behavior and to gain acceptance and status in a group (Tracy & Robins, 2004a). Thus, in line with other positive emotions (Fredrickson, 2001), pride serves the overall goal of mastery (Lazarus et al., 1980) as well as connection and self-development.

Conspiracy theories might elicit pride through the pleasantness derived when individuals feel that they understand what is going on while many other do not (see e.g., Imhoff & Lamberty, 2017; Lantian et al., 2017) – a tendency which should especially be found in individualistic cultures emphasizing individual achievements (P. B. Smith & Bond, 2020). In addition, conspiracy theories should also elicit pride (in individuals as well as groups), when they perceive themselves as morally superior to another individual or outgroup alleged in a conspiracy (J.-W. van Prooijen, 2024). Thus, the knowledge gained contributes to the appraisal of certainty. To allow for pleasantness, there should also be no expected harm to the individual or ingroup implied in the conspiracy theory – or at least one that can be avoided or confronted through the knowledge gained and as a group (i.e., control). To date, experimental and longitudinal research examining the effect of conspiracy beliefs on pride is missing, rendering the idea that conspiracy beliefs can elicit pride open for debate. It is for future research to more systematically investigate this link. However, there are qualitative and theoretical manuscripts which already highlight this possibility, offering a basis for the aforementioned assumptions. For example, one qualitative study in the US reports that people report pride because of their beliefs since they feel like they have come to the respective conclusions by “doing their own research” (Carrion, 2018). Furthermore, for some conspiracy theories, individuals seem to have “aha moments” when solving riddles or being able to “connect the dots” (Van de Cruys et al., 2023). In digital environments, individuals also share conspiracy theories to build connections and receive likes (Ren et al., 2023), to signal group membership (Mus et al., 2022), or even to advance their group’s goals (Miller et al., 2016), which map with typical action tendencies of pride.

In sum, engagement with conspiracy theories should lead to pride and action tendencies of community-building under appraisals of high certainty, pleasantness and control, which should be especially likely when the gained insights or the superior morality are emphasized and when the situation of the individual fosters appraisals of pleasantness, certainty and control. However, while the idea of conspiracy beliefs eliciting pride is not new, studies experimentally testing these assumptions are so far missing.

Schadenfreude (Gloating)

Similarly, we want to inspire debate and future empirical studies regarding the emotion of joy in the form of

schadenfreude (gloating), which so far has received little attention in conspiracy theory research. Joy is connected to the appraisal combination of high certainty, pleasantness and control (C. A. Smith & Ellsworth, 1985). In the realm of conspiracy theories, this is most likely to occur in the form of schadenfreude, which is a positive emotion in response to a misfortune of others that leads to personal gain (R. H. Smith et al., 2009). It typically arises when the misfortune happens to an enemy, or a person the individuals feel envy or resentment against, (Levy, 2020; R. H. Smith et al., 2009), and when this person initially displays dominance (Lange & Boecker, 2019). Experiencing the misfortune of such a person can reduce a perceived threat to oneself or one's group (Leach et al., 2003; Leach & Spears, 2008; Van Dijk et al., 2011). Just like pride, the resulting action tendency is aimed at building connections (Fredrickson, 1998, 2001), for example in the form of celebration (Levy, 2020; Roseman & Steele, 2018).

Conspiracy theories imply potential misfortune, as they speak about evil actions of power holders. Often, the misfortune is perceived to be directed against people's ingroups, but this does not need to be the case. In fact, conspiracy belief is often measured by asking people how much they agree with conspiracy theories that allege evil intentions against two or more outgroups, be they different countries or populations. For example, people might be asked about conspiracy theories surrounding 9/11 (i.e., evil intentions of the American government against American people) and Princess Diana (i.e., evil intentions of the British government against the British people) in the same scale (e.g., Douglas & Sutton, 2011; Leman & Cinnirella, 2007; Lewandowsky et al., 2015; Pummerer et al., 2023). Thus, conspiracy theories might also allege harm to outgroups, including potential enemies which fits the prototypical situation for schadenfreude. One example could be the theory that 9/11 was planned and conducted by the US government from the perspective of individuals that are anti-Western. This is not very far-fetched since this specific conspiracy theory is spread in the Middle East (Kohut et al., 2011; Rabasa, 2004), and since there are accounts that the event of 9/11 itself caused schadenfreude in some cities (Rabasa, 2004). Instances of schadenfreude are also reported after terror attacks in Europe (some of them itself inspired by conspiracy theories) from Israelis deriving pleasure from pain to countries that have before criticized Israel for anti-terror-measures (Levy, 2020).

Another area in which the engagement with conspiracy theories likely elicits schadenfreude is among sports fans. Schadenfreude is often found in relation to sports events, since such events include competition (e.g., McNamee, 2003; R. H. Smith et al., 2009; Van Dijk et al., 2011). Sport also seems to be a place for conspiracy theories to thrive (Bertin et al., 2023). Some of these conspiracy theories blame the referee or opponent team, but there are also conspiracy theories that allege harm to the opponent team as caused by a secretive third party (Scheepers et al., 2003). Despite these anecdotal accounts, there so far is no research systematically examining the effect of conspiracy beliefs on schadenfreude,

rendering our theorizing novel but speculative. However, rather than denying such instances and anecdotal accounts of individuals deriving pleasure from the alleged harm of others, the AMCT provides a model to examine such instances in future studies, allowing a theoretical framework that considers the many instances in which individuals report to derive positive feelings from the engagement with conspiracy theories.

Discussion

Summary

In this article, we put forward the AMCT as a model that proposes different emotional and behavioral responses to conspiracy beliefs. In our effort to unpack the principles, rationale and assumptions that underpin AMCT, we have synthesized insights from appraisal theories with existing research on conspiracy beliefs to outline when conspiracy beliefs are most likely to elicit fear, anger, disgust, pride or joy in the form of schadenfreude, respectively. We assume that emotional reactions to conspiracy beliefs are like other appraisal processes. Thus, we have argued that conspiracy beliefs that emphasize harm, secrecy regarding conspirators, actions and their goals, as well as powerlessness are most likely to lead to fear and withdrawal. Anger, in turn, is more likely to occur when the explanatory power of a conspiracy theory is emphasized and when expecting harm, but also perceiving that the threat somehow can be confronted, either as an individual or as a group, which should lead to confrontation. Since disgust focuses on contaminations or moral transgressions, it is most likely to occur when conspiracy beliefs imply impurity or contamination by an identifiable group, which should lead to aggression aimed at distancing and extinction toward this group. Again, conspiracy beliefs that imply no harm or loss of control to the individual or their group but provide (superior) knowledge should elicit pride and, consequently, foster behaviors of community-building. A similar action tendency is expected to follow from conspiracy beliefs that do not imply harm to one's own group, but to a hated enemy which should elicit schadenfreude. As mentioned, the ability of conspiracy beliefs to elicit positive emotions and respective action tendencies remains open for debate and needs to be tested in future research.

Limitations

In the AMCT, we have mostly drawn upon research on appraisal theories, interindividual and cross-cultural differences in appraisals, as well as their consequences in the form of action tendencies, and then applied the insights to the study on conspiracy beliefs. Overall, there are many studies confirming the general assumptions of appraisal theories (see e.g. Frijda et al., 1989; Kuppens et al., 2008; Mauro et al., 1992; Power & Hill, 2010; Scherer, 1997) and these continue to be influential in guiding new theory development (see e.g. Briñol et al., 2018; Ellsworth, 2013; Scherer,

2019; Tong, 2015). As such, we deemed that appraisal theories are ideally suited to also inform theorizing about the consequences of conspiracy beliefs. One advantage of appraisal theories is that they are relatively parsimonious in highlighting some core appraisal themes and modal emotions, thus offering a guiding grid in categorizing different outcomes.

However, it is exactly this parsimony of modal emotions that is questioned by some recent developments in emotion research. For example, some authors have questioned whether there are modal emotions at all, noting that the same emotion can have different autonomic nervous system (ANS) patterns, and arguing that the grouping of different emotion categories is learned rather than innate (Siegel et al., 2018, see also Barrett, 2006; Kreibitz, 2010). Thus, there might not be one generalizable (modal) emotion of, for example, anger, and not even a specific prototype of anger in the sense of an emotion family, but different emotions depending on in which situation the “anger” is felt, also connecting to different functional action tendencies. Future studies might help to pinpoint such different types of emotions that so far are clustered within one emotion category. Future readers might evaluate whether the framework provided in the AMCT still provides some guiding framework for providing a broader cluster of emotions and action tendencies.

We have also referred to appraisal tendencies in binary terms (e.g., certainty vs. uncertainty, unpleasantness vs. pleasantness, high vs. low control), although we understand appraisals as dimensions where individuals score higher or lower in one of these domains, as is also the understanding of most appraisal theorists (e.g. C. A. Smith & Ellsworth, 1985). Indeed, while the appraisal of low control is a very important aspect in the experience of the emotion of fear (e.g., Lerner & Keltner, 2001; C. A. Smith & Ellsworth, 1985), this is not so much the case for the experience of disgust (see e.g., Russell & Giner-Sorolla, 2011; C. A. Smith & Ellsworth, 1985). However, for simplicity, we decided not to display these kinds of nuances in our descriptions. For the same reason, we also decided to stick with modal (sometimes also called basic) emotions, fully acknowledging that existing research (building on appraisal theories or not) has much to provide regarding complex emotions which would likewise be applicable to the study of conspiracy beliefs. We look forward to future studies and future theoretical models exploring them further, adding even more variety of responses elicited by conspiracy theories.

We also want to add as a caveat that most of the empirical studies on conspiracy theories have been conducted in the geographic West, which is a constraint on generality (see also Butter & Reinkowski, 2014) and (experimental) research on conspiracy beliefs from a more diverse set of countries is much needed (for a start, see Adam-Troian et al., 2021; Douglas et al., 2023; Hornsey et al., 2018, 2023; Hornsey & Pearson, 2022; Imhoff et al., 2022; Nyhan & Zeitzoff, 2018). We believe that our proposed model also provides a helpful tool in deriving hypotheses about cross-cultural differences and studies therein, in the hopes that predictions about

cross-cultural differences will become more nuanced over time.

Considering cultural differences, the goal of the model itself might be regarded as a culturally biased attempt. Overall, we focused on the question of how appraisals elicited by conspiracy beliefs make one emotion and connected behavioral tendency more likely than others, thus, focusing on the differentiation between emotions. However, it seems that non-Western countries have less problems with acknowledging and experiencing several emotions at once, even thinking of emotions in dialectical terms (Grossmann et al., 2014, 2016), thus adding another layer and perspective to cross-cultural research on emotions and their behavioral tendencies, also regarding conspiracy beliefs.

One might also debate whether and under which circumstances the emotions elicited through a conspiracy theory are indeed the consequences of the alleged conspiracy rather than emotions caused by its (non-conspiracy) content. For example, one might say that *schadenfreude* elicited by conspiracy theories that imply harm to one's enemy is caused simply because of the harm, and not necessarily because of the assumed conspiracy causing the harm. Arguments of this kind imply that conspiracy theories can and should somehow be clearly separated into conspiracy and non-conspiracy content, or that there is a content-free core of conspiracy theories that can be somehow extrapolated and measured. Recent discussions show that this in itself is a difficult task heavily debated in the field of conspiracy beliefs research in psychology (see e.g. Bruder et al., 2013; Douglas & Sutton, 2023; Imhoff, Bertlich, et al., 2022; Meuer et al., 2023; Nera, 2024; Nera & Schöpfer, 2023; Oleksy et al., 2021; Pummerer, 2024; Sutton et al., 2024; Sutton & Douglas, 2020), and one questioned (both, in terms of meaningfulness and success) by researchers from neighboring disciplines such as Cultural History (see e.g. Butter, 2024; Butter & Knight, 2015).

One difficulty is that conspiracy theories typically are deeply embedded in cultural contexts and social identities, making it difficult (if not impossible) to study one without the other, or to prime conspiracy content without also priming content that typically comes with conspiracy theories. There is also the practical question of why one would attempt such a separation. The goal of the AMCT was to outline how different appraisals elicited through conspiracy theories spreading in real-life and being embedded in cultural contexts lead to different behavioral reactions. Rather than assuming conspiracy theories always lead to fear and withdrawal, confrontation or community-building, we argued that the content of the conspiracy theory as well as the current focus and situation of the individual needs to be considered. Thus, the model itself allows for appraisals being elicited through aspects that are automatically included in or logical consequences of a conspiracy theory, even if they do not constitute a “pure” conspiracy part (if distinguishable at all). For example, we argued that conspiracy theories denying the existence of a threat such as COVID-19 or climate change (i.e. consequences or concomitants of believing that governments and scientists exaggerate or manipulate

climate-related findings for their own goals) should decrease fear.

The question might remain whether a “pure” conspiracy part of a theory would still be able to elicit fear, anger, disgust, pride, or schadenfreude above and beyond otherwise implied content. We would certainly argue that it can, since the implied secrecy of a malevolent act should make expected harmful events even more fear-eliciting, increase anger against powerholders not keeping to the rules, and highlight an unmoral and disgust-eliciting character. Likewise, it can be specifically the unveiled secrecy that elicits its pride, or harm that comes unexpectedly for the enemies increasing schadenfreude. Overall, albeit we argue that focusing on such a “pure” conspiracy part is not necessary for the model, it also does not constitute a threat for its validity, but rather highlights its core aspects.

Conclusions

We have argued that conspiracy beliefs can evoke different appraisals and associated with this, different emotions, depending on what features of a conspiracy theory are emphasized. The action tendencies elicited by these combinations of appraisals should also determine the consequences of conspiracy beliefs, ranging from withdrawal and confrontation to more indirect aggression or even community-building. Given the noticeable differences in emotions experienced in the context of conspiracy theories and in the action tendencies, we argued that research on conspiracy theories needs to consider the differences between conspiracy beliefs and what aspects of conspiracy theories are salient in any given situation. Beyond this main message, several conclusions result from our discussion.

The Variety of Responses Elicited by Conspiracy Theories

As argued in the sections above, conspiracy theories can elicit appraisals of uncertainty as well as certainty, and high as well as low control, depending on the highlighted aspects of a conspiracy theory. Additionally, it seems possible that conspiracy beliefs also elicit appraisals of pleasantness – a possibility that needs to be established in future research. Given this diversity, any well-meant attempt to single out one appraisal or one emotion that is related to conspiracy beliefs (e.g., anger or fear) is determined to fail from the beginning. At the same time, this does not mean that all appraisals are equally frequent. We assume that appraisals of low control and uncertainty are rather frequent considering the assumed evil intentions from powerholders.

It might also be possible, however, that conspiracy theories are most examined in these contexts by researchers. Research in recent years, to a great extent, has focused on conspiracy theories surrounding the COVID-19 pandemic, during which appraisals of low control and uncertainty were especially prevalent. While this research was certainly important and timely, it seems somewhat disconnected to conspiracy theories such as the Apollo moon landing or Elvis Presley not being alive, which long have played an

important role in the assessment of conspiracy beliefs (e.g., Lewandowsky et al., 2015).

One reason that those two lines of research might report different results in terms of their emotional and behavioral consequences is that both research lines focus on different features in conspiracy theories, and were conducted during times that differently gave preference to certain appraisals (e.g., that of uncertainty and low control, as conveyed by the situation of the pandemic). Additionally, what became apparent in this review is that research on conspiracy beliefs and disgust, pride or schadenfreude as well as the appraisal patterns eliciting these emotions is strikingly missing considering anecdotal accounts of conspiracy beliefs eliciting these emotions. We hope that our model helps to put forward more research in these domains by providing a better theoretical framework for studying those emotional reactions to conspiracy beliefs and believe that research focusing on these emotions will greatly advance the field and produce a better understanding of how the content of conspiracy theories shapes different consequences.

Consequences of Conspiracy Beliefs as Action Tendencies Associated with Specific Emotions

Existing research has found that beliefs in different conspiracy theories (even conspiracy theories concerning the same event such as the COVID-19 pandemic) lead to different consequences (Imhoff & Lamberty, 2020) and that the consequences of conspiracy beliefs are mediated by emotions such as anger (Jolley & Paterson, 2020; Peitz et al., 2021b) and anxiety (Peitz et al., 2021). The current article goes one step further by detailing which features of conspiracy theories are likely to elicit which action tendencies. Overall, conspiracy beliefs eliciting the appraisal patterns associated with fear (i.e., uncertainty, unpleasantness, low control) should lead to withdrawal, while confrontation and non-normative action is expected in cases where conspiracy theories elicit appraisal patterns associated with anger (i.e., certainty, unpleasantness, high control). Likewise, indirect aggression and behaviors aimed at distancing, cleaning and elimination of aggressors is expected from conspiracy content and orientation connected to disgust (i.e., certainty, unpleasantness, low control). In addition, we have outlined how conspiracy beliefs might also elicit the positive emotions of pride and schadenfreude connected to action tendencies of community-building.

Overall, this framework offers a glimpse into the many possible consequences of conspiracy beliefs, by making predictions of consequences as well as processes underlying the consequences that can, and should, be tested by future research, in the hopes that this also provides more insights into how conspiracy theories prepare different actions.

The Importance of Studying Appraisals and Emotions as Occurring in the Moment

The proposed framework also highlights the importance of studying appraisals in the moment to understand the specific consequences of conspiracy beliefs. As shown above,

the consequences of conspiracy beliefs can be wide-ranging both in terms of the versatility (ranging from withdrawal over sharing of insights to confrontation) as well as the severity of the consequences for society. Appraisals might, however, vary within individuals and across situations as outlined above. For example, an individual might experience fear when thinking about a conspiracy theory and being alone at home, while the same thought might increase anger when being at a protest, together with a perceived powerful mass. Thus, considering the appraisals in the very moment seems crucial to understand how the content of the conspiracy theory and the current orientation of the individual shape behavioral consequences.

Additionally, which aspects of conspiracy theories are salient might also be driven by more stable personality traits or cultural aspects, implying that conspiracy theories can mean different things for different individuals – even within one culture. For example, while some individuals might focus on the alleviating thought that COVID-19 is a hoax, others might focus on the alleged manipulation of scientific data in order to make such a conspiracy possible, which resemble two sides of the same “conspiracy coin”. Future studies have much to uncover by not only assessing the broader belief in a conspiracy theory, but also examining, which aspects of a conspiracy theory are more or less salient to an individual. This is even more true when looking at different cultures. Given that cultures differ in their appraisal tendencies, it seems likely that the same conspiracy theory elicits different appraisals (and, thus, different behavioral reactions) across different cultures, and we strongly encourage researchers to examine conspiracy beliefs more cross-culturally.

Final Remarks

Currently, the field lacks theories concerning the relation between conspiracy beliefs and emotions, how conspiracy beliefs elicit the diverse set of outcomes thus far described in the literature, and differences between specific conspiracy theories (but, see Douglas & Sutton, 2023). Drawing from research on appraisal theories and emotions, we provide a framework for research on conspiracy beliefs describing how the focus on different features of conspiracy theories relates to different action tendencies determining the consequence of conspiracy beliefs. The different types of reactions to conspiracy theories advance the existing literature by offering a framework that makes it possible to integrate different strands of research on conspiracy beliefs that thus far seem fragmented or inconsistent, such as anecdotal accounts and research indicating that conspiracy beliefs can elicit positive emotions, while other report on conspiracy beliefs eliciting anger and fear. We thus offer a framework that helps to integrate existing research while preserving and exemplifying the diversity of conspiracy beliefs and emotions. Overall, we encourage researchers to discover differences between conspiracy theories and to pay attention to what features in a conspiracy theory are highlighted rather than – as is currently more common – treating them as interchangeable,

and propose using appraisal dimensions to systematize those differences. Paying attention to the different kinds of conspiracy theories and the different aspects within one conspiracy theory that might be (situationally) highlighted or downplayed will greatly improve predictions regarding the consequences of conspiracy beliefs, pointing to new interventions and a future research agenda regarding the under-studied subject of conspiracy beliefs and emotions.

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