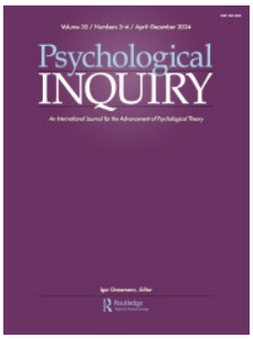

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REPLY

The Appraisal Model of Conspiracy Theories (AMCT): Highlighting Core Concepts and Potential Extensions

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In recent decades, research on conspiracy theories has increased significantly. In 2024 alone, a search for scientific articles using the Web of Science Core Collection for the topic of conspiracy theories[1] yielded 492 articles compared to 298 articles published in 2020, 34 articles in 2010 and 12 articles in 2000. Despite the many available scientific articles—and potentially also as a result of this rapid growth and little time to build and reflect on previous articles that comes with it—the field is missing theory-building and theory-testing (Douglas & Sutton, 2023; Sassenberg et al., 2023), which is something that we tried to respond to with the Appraisal Model of Conspiracy Theories (AMCT). Such theory-building and testing does not necessarily require the development of brand new models. Indeed, the field of psychology offers many existing models that have been tested and refined in other domains, providing a rich basis for theories that should theoretically also apply in the domain of conspiracy beliefs. Of course, existing theories would need to be adapted to take into account unique characteristics of conspiracy beliefs.

Engaging in theory-building and theory-testing based on existing models from other domains has enormous potential, especially in the field of conspiracy beliefs. Conspiracy theories are very varied, and there so far are very little theoretical models taking into account this variation to begin with (Douglas & Sutton, 2023; Sassenberg et al., 2023; see also van Prooijen, this issue). This is exemplified by the fact that a large proportion of recent studies have targeted COVID-19-related conspiracy beliefs and focus on reporting results (rather than making predictions) from this context. While this research certainly is valuable, it is hard to know whether findings from this context are generalizable to other conspiracy beliefs. Drawing from existing models from other domains allows theorizing that generalizes across conspiracy theories, for instance by suggesting moderators (i.e., variables characterizing relevant differences between conspiracy theories) and pointing to areas in which additional effects would be expected (but research so far is missing). This would serve the ultimate goal of theorizing, which is to make valid predictions. Applying existing theories from other domains to the field of conspiracy beliefs, of course, also feeds back to the original theories, potentially identifying boundary conditions, thus, ultimately, also advancing other domains of psychology.

In our manuscript, we engaged in this exact process of applying existing appraisal theories to the field of conspiracy beliefs, arguing for adaptations to the theories that are specific for the context of conspiracy beliefs (e.g., the inclusion and variations of certain appraisals while fixating others), and demonstrating how the appraisal theories help to structure and resolve inconsistencies in existing research. What is really unique about the resulting Appraisal Model of Conspiracy Theories (AMCT) is that it is the first theoretical model outlining how conspiracy beliefs can lead to the diverse behavioral outcomes that are evidenced in the literature. This aspect has also been positively noted as a strength of the model by many commentators (see e.g. Bertolotti, this issue; Koole et al., this issue; Poon et al., this issue; van Prooijen, this issue).

Additionally, we are convinced that the model in itself, but also the process of applying and modifying an existing theory to the field of conspiracy belief, provides an important stepping stone toward more theory-building and theory-testing in this field. The fact that almost all commentators suggested potential extensions of the model, proposing dynamic processes (e.g., Alper & Yilmaz, this issue; Bertolotti, this issue; Gendolla, this issue; Pantaleo & Sciara, this issue), the inclusion of emotion intensity (e.g., Alper & Yilmaz, this issue; Gendolla, this issue; Pantaleo & Sciara, this issue), social and group processes (e.g., Bilewicz, this issue; Koole et al., this issue; Poon et al., this issue; Thomas et al., this issue), or the effects of belief formation (e.g., Alper & Yilmaz, this issue; Gendolla, this issue) suggests that the goal of introducing appraisal theories to conspiracy belief research is a very promising endeavor and that the model successfully provides a theoretical framework for more fine-grained predictions about the effects of conspiracy beliefs. Thus, while we discuss these extensions in detail below, we conclude that our initial, more focused scope

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[1]The search was conducted on January 10, 2025 using the Web of Science Core Collection searching for the terms "conspiracy theory" or "conspiracy theories" in titles and abstracts.

successfully serves an important purpose: establishing a clear foundation upon which such extensions can be built.

However, all theory-building is useless if not taken up by the field, and if not considered useful by other researchers. Thus, we are specifically thankful for the commentaries and the time and effort the commentators have put into engaging with the model, wrestling with its core aim, giving critical feedback, and suggesting further extensions. In many cases, these extensions also reflect attempts to integrate our model with other theories and research, and we are excited to see how the model can be used as an inspiration for further theory-building. We are also grateful for the interdisciplinary perspective from philosophy, which have helped us to further refine the model and we also hope in doing so to provide a fruitful basis for interdisciplinary dialogue in the future.

Our response to the commentaries is structured as follows. First, we would like to address fundamental questions and misunderstandings about the scope and conceptual foundations of the AMCT. This includes clarifying the model's goals, clarifications regarding the definitions of conspiracy theories and what constitutes an event, and a response to the question of subjectivity (responding to Dentith, this issue; van Prooijen, this issue). Second, we discuss key extensions proposed by the commentators. These include incorporating dynamic processes (Bertolotti, this issue; Gendolla, this issue; Pantaleo & Sciara, this issue), considering emotion intensity (Alper & Yilmaz, this issue; Gendolla, this issue; Pantaleo & Sciara, this issue), and more fully incorporating social identity processes (Bilewicz, this issue; Koole et al., this issue; Thomas et al., this issue). Finally, we summarize practical applications mentioned by the commentators (such as those from Poon et al., this issue) and address broader questions about the model's complexity (Kunst & Bierwiaczonek, this issue).

Conceptual Clarity

Scope and Purpose of the AMCT

We started the journey noting that the existing literature shows considerable inconsistency in findings regarding emotional and behavioral responses to conspiracy beliefs, ranging from societal withdrawal (Jolley & Douglas, 2014) and aggression (Jolley & Paterson, 2020) to feeling entertained (van Prooijen et al., 2022). While frustrating for a researcher and the research field in itself, such inconsistencies also ultimately hinder clear communication to the public about the effects of conspiracy beliefs, and call for an investigation under which circumstances conspiracy beliefs are more likely to elicit one behavior over the other. Our goal was to address and reconcile these findings—an endeavor that was also appreciated by many of the commentators (e.g., Kunst & Bierwiaczonek, this issue; van Prooijen, this issue; Poon et al., this issue; Bertolotti, this issue).

Rather than investigating single moderators, we were interested in the broader structural guidelines, the bigger picture, helping to make sense of the different findings, and providing a treading ground for a more fine-grained investigation of specific personality-, culture-, and situation-related variables influencing the effect of conspiracy beliefs on behavior. At the same time, we tried to make statements on solid grounds and aimed for a parsimonious model. This led to the limitation that we could only cover three dimensions and therefore present an incomplete coverage of the resulting three-dimensional space (as noted by Pantaleo & Sciara).

Beside these limitations regarding the scope of the model, we acknowledge and, thus, agree with the commentators (e.g., Dentith, this issue; Gendolla, this issue; Pantaleo & Sciara, this issue) that the model in its existing form does not describe a complete process or theory, which is why we purposefully chose the framing as a "model." As Dentith (this issue) noted, the model in its current form is better understood as suggestive rather than strictly predictive at this stage. While we do offer predictions in the sense that certain features of conspiracy beliefs will make certain behaviors more or less likely, we are fully aware that these connections are subject to additional moderators and external influences that are to be tested in future research. We make some suggestions about such moderators in the target article, and overall agree that more empirical work is needed for more precise predictions.

In order to achieve more precision in the future, it is important to be clear about the goal and focus. In the AMCT, the focus is on the link between conspiracy beliefs and their emotional and behavioral consequences. Responding to Alper and Yilmaz (this issue) and Gendolla (this issue), we did not attempt to explain conspiracy belief formation or maintenance. We do see the potential of the model for these processes, for example, in the sense that a person's own expected emotional and behavioral reactions could offer a motivation for belief formation or maintenance. However, we also think that the more narrow focus on the link between conspiracy beliefs and emotional as well as behavioral reactions is - for now - more helpful to reach more precise predictions. It is therefore also more helpful in gaining a better understanding of the consequences of conspiracy beliefs once formed, thereby responding to calls for theoretical frameworks that take into account the varying consequences of conspiracy beliefs (Douglas & Sutton, 2023).

What Constitutes a Conspiracy Theory?

We also want to respond to the call for more clarity regarding the definition of conspiracy theory - what the AMCT is actually about. Most notably, Dentith (this issue) commented that we emphasized different aspects of conspiracy theories throughout the paper. In the beginning, we mention a relatively broad definition of conspiracy theories 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." This initial definition highlights three key elements: secrecy, actions benefiting the conspirator, and potential harm to others.

However, as Dentith (this issue) astutely points out, in discussing specific emotional outcomes, we emphasize and interpret aspects of the definition differently in accordance with the specific emotional outcomes. When examining fear responses, we emphasize the secrecy and potential harm

aspects of conspiracy theories. When discussing anger, we focus on the actions of power holders and the consequences of those actions. When analyzing pride or schadenfreude, we emphasize aspects of superior knowledge or harm to outgroups. These varying emphases partly demonstrate how different features - all contained within our broader definition—of conspiracy theories can become salient and trigger different emotional and behavioral responses. Thus, while not done on purpose, simply highlighting different features of conspiracy theories illustrates a central tenet of our model: Different aspects of conspiracy theories can become salient in different contexts, leading to different appraisals and emotional responses.

In addition to emphasizing specific features of conspiracy theories—while nonetheless keeping a broader definition of conspiracy theory as above—we at times diverged to specific interpretations of this broader definition. For example, when discussing the argument in the literature that conspiracy theories increase fear and anger, we argued that conspiracy theories often "confront people with powerlessness considering actors with harmful intent and secret actions" (Pummerer et al., p. 6), thereby describing a typical interpretation from the broader definition not only from us, but one commonly seen in the literature (see e.g. Imhoff et al., 2018; Jolley & Paterson, 2020; Kofta et al., 2020; Nera et al., 2024; Poon et al., 2020) that actions benefiting the conspirators are typically also perceived as "harmful" and "evil."

For the sake of clarity, we want to emphasize that the broader definition above is the one underlying the AMCT. It is also the definition allowing for consideration of the full spectrum of conspiracy theories that are discussed in the literature - ranging from theories relevant to the current political system like QAnon to theories about past events that barely have any relevance to people's current lifes (e.g., including theories such as those surrounding the Apollo moon landing or the death of Princess Diana or John F. Kennedy Lewandowsky et al., 2015)). In line with the propositions by Dentith (this issue), we also argue that future studies (including our own) would benefit from making deviations from this general definition more explicit, or when choosing specific interpretations of it, for example when using definitions that emphasize harmful intentions on the side of conspirators. While still possible, researchers should be aware that such a narrowing automatically carries important implications for emotional and behavioral reactions, as outlined in the AMCT and as also suggested by Dentith (this issue). The same applies when focusing on specific aspects that are part of the definition of conspiracy theories. For example, in conducting studies, researchers might focus on the secrecy that is—by definition—part of conspiracy theories, thereby again also fostering specific appraisals and emotions such as fear (when accompanied by harm to oneself or one's group) or pride (when focusing on the revelation of former secrecies).

What Constitutes an Event?

A second point raised by Dentith (this issue) concerns what constitutes the "event" being appraised in our model. We stated that "the event is the respective conspiracy theory that is evaluated by the individual." Importantly, the event is not the conspiracy theory by and in itself, but the moment of encountering or recalling a conspiracy theory in a given situation, that is, within a specific context and environment. As already argued in the target article, it is a feature of all narratives, including conspiracy theories, that they do not exist without such a context. In his field theory Lewin (1943) suggested, for instance, that valence is a function of the characteristics of the object and the person within the specific environment (i.e., the field). We believe that this applies to all appraisals. The object and the environment together constitute the event, and the appraisals are in addition influenced by what the person brings to the table.

Dentith (this issue) is therefore correct in saying that the event might look very different and might concern different aspects (e.g., focusing on the secrecy vs. the potential harm) or implied consequences (e.g., loss of control) of a conspiracy belief. Similarly, Bertolotti (this issue) points out that some of the emotions—in his argument, specifically positive emotions—are elicited not by the conspiracy theories but by corollaries such as their consequences (here, for enemies in the case of Schadenfreude) or the aspect of superior knowledge (for pride). We would argue that this is not only the case for positive emotions but also for negative ones. For example, fear might be experienced because of the anticipated negative consequences that are automatically implied in some conspiracy theories. Overall, encountering and recalling a conspiracy belief is inherently linked and inseparable from also thinking about such corollaries (which often give meaning to the conspiracy theory in the first place), and separating them is also not done in existing research, for example, in studies reporting on the relations between conspiracy beliefs and fear (Bowes et al., 2021; Grzesiak-Feldman, 2013; Peitz et al., 2021; Sallam et al., 2020). Since disentangling those aspects seems neither realistic nor productive, this complexity is likely best solved by making explicit how the different foci will affect appraisals and behavioral tendencies—which is a strength of the AMCT.

The definition of an event is also important regarding another point raised by van Prooijen (this issue) about whether the AMCT aims to classify conspiracy theories themselves or predict individual responses to them. In line with our definition of an event, our focus is strictly on individuals and how they appraise conspiracy theories as theories that are being encountered or recalled in a given situation. However, as we will argue in the following section, this does not necessarily rule out categorizing conspiracy theories in line with the emotions they typically elicit in different individuals.

The AMCT as Basis for Classifying Conspiracy Theories

As van Prooijen (this issue, p. 3) notes, "the main strength of the AMCT is that it provides a theoretical basis delineating the various subjective appraisals that people can make in the context of conspiracy theories." This aspect is crucial in

facilitating the integration of different personality characteristics (i.e., personality aspects influencing the individual and subjective appraisal), situational features (guiding the focus on different features of conspiracy theories), as well as differences between cultures (i.e., cultural differences in appraisal tendencies). As mentioned above, we also fully stand behind the approach of focusing on individual experiences as basis for appraisals and consequently action tendencies. We disagree, however, with the conclusion that the model does not allow for the categorization of conspiracy theories and that such a categorization needs objective criteria rather than subjective appraisals. In the following section, we contend that this perceived tension between subjective interpretation and objective classification cannot only be refuted by questioning the concept of "objective" criteria, but that it also represents a false dichotomy.

Objective Classification as Illusion

First of all, the tension postulated by van Prooijen (this issue) is built on the idea that there is an objective classification of conspiracy theories. This itself faces an unsolvable challenge, since conspiracy theories do not exist in a vacuum but are inherently tied to how people understand and process them (see also (Butter, 2023). Thus, when researchers propose classifications of conspiracy theories - for instance, as "upward" versus "downward" theories (Nera et al., 2021), as ideological versus non-ideological or ingroup versus outgroup (Mao et al., 2024)—these classifications are also not objective. Rather, they are codifying typical or common interpretations of these theories. Similarly, attempts to classify conspiracy theories as more or less harmful (as suggested by van Prooijen, this issue) inevitably rely on assessments of what constitutes harm and to whom - assessments that are themselves interpretative acts.

The appearance of objectivity comes from widespread agreement about certain interpretations, not from any inherent properties of the theories themselves, as theories are mental representations not physical objects that can objectively be classified. Overall, the existence of purely objective criteria along which conspiracy theories could be categorized is an illusion. The only difference between our model and others is that we make the subjective experience explicit, not only for the sake of transparency and scientific precision, but also purposefully allowing the existence of moderators on the individual level (e.g. personality traits).

Appraisals as Building Blocks for Conspiracy Theory Categorizations

However, this focus on individual processes does not preclude us from making predictions about how certain conspiracy theories are likely to be interpreted and appraised. Indeed, there is a rich tradition in emotion research demonstrating how specific situational features reliably elicit certain interpretations and appraisals (see e.g. P. Kuppens et al., 2007, 2008; T. Kuppens et al., 2013; Moors et al., 2013; Scherer, 2009). In fact, a lot of psychological research in general, and on emotions specifically, relies on the assumption that emotions can be reliably manipulated in experimental settings by presenting participants with specific situations or scenarios (Gerrards-Hesse et al., 1994). The same principle applies to conspiracy theories: while individual interpretation is always involved, certain features of conspiracy theories make particular interpretations and appraisals more likely. For example, conspiracy theories including conspirators that are publicly perceived as so powerful that they cannot be confronted should be linked to appraisals of low control. Thus, our argument for appraisals as building blocks for the categorization of conspiracy theories rests on the same assumption as other (so-called "objective") classifications: it is built on widespread agreement and typicality of the appraisals that a certain conspiracy theory type elicits.

Thus, focusing on individual-level processes of appraisal and emotions is not a contradiction to making predictions about how certain types of conspiracy theories are likely to be appraised. When we suggest that a conspiracy theory emphasizing powerful and malevolent hidden forces acting in secrecy might elicit fear, we are not claiming this is an objective property of the theory. Rather, we are recognizing that such content tends to elicit certain appraisals based on well-established patterns in how humans process and respond to information about potential threats. At the same time, we give room for individual and cultural variations based on individual and cultural differences in appraisal patterns. Even more—we point to research making specific predictions regarding how cultures affect these appraisal patterns, which is a significant strength and benefit compared to other classifications of conspiracy theories (e.g. the GIST-framework, Mao et al., 2024), which vaguely acknowledge the impact of culture but fail to explicate in what ways different cultures are expected to cause these variations.

Key Extensions and Future Directions

After responding to requests for clarity and the main criticism of the AMCT, we now want to turn to several suggestions made by commentators. Almost all commentators proposed potential extensions - a response that we interpret as indicating both the model's potential value as a theoretical framework and its capacity to stimulate productive new directions for research and theorizing. These suggested extensions range from incorporating dynamic processes (Gendolla, this issue; Bertolotti, this issue; Pantaleo & Sciara, this issue), including emotion intensity (Alper & Yilmaz, this issue; Pantaleo & Sciara, this issue; Gendolla, this issue), and the inclusion of social identity processes (Bilewicz, this issue; Thomas et al., this issue; Koole et al., this issue).

While we cannot do justice to all these suggestions within the scope of this response, we will focus on several key themes that were mentioned repeatedly and that we believe are particularly promising in terms of future extensions. We also explain why some of these elements, though valuable, were not included in the initial model for now.

Dynamic Processes

Several commentators (Gendolla, this issue; Bertolotti, this issue; Pantaleo & Sciara, this issue) suggested that we could more clearly address dynamic processes in the AMCT. This suggestion aligns well with fundamental insights from appraisal theories of emotion, emphasizing that emotional experiences unfold over time through recursive cycles of appraisal and reappraisal (Scherer & Moors, 2019). We see particular promise in two ways that dynamic processes could be incorporated into the AMCT.

First, the AMCT could help to enlighten the ways in which conspiracy theories seem to be part of self-reinforcing cycles, as suggested by recent research (e.g., Liekefett et al., 2023). For example, conspiracy theories that emphasize threats from powerful and malevolent conspirators acting in secrecy might elicit fear. Fear, in turn, increases sensitivity to threat-related information (G. Butler & Mathews, 1983; Coles & Heimberg, 2002; Mogg & Bradley, 1999; Wenzel & Lystad, 2005), which should make individuals more receptive to similar conspiracy theories and similar appraisals. Such cycles could help explain the "rabbit hole" phenomenon observed in conspiracy belief, where initial engagement with one conspiracy theory leads to increasing engagement with similar theories over time (Sutton & Douglas, 2022), and might also link back to the role of AMCT in belief maintenance (see e.g. Alper & Yilmaz, this issue). Notably, the AMCT offers a theoretical basis for studying this phenomenon, encouraging further predictions (e.g., H1: "When conspiracy beliefs elicit specific appraisals and no motivation for regulation is given, people are more likely to seek out conspiracy theories matching the same appraisals," H2: "When conspiracy beliefs elicit specific appraisals, people are more likely to appraise other conspiracy theories in a similar manner compared to when no previous appraisals occurred").

Second, conspiracy theories could also be part of emotion regulation strategies. This aspect is also highlighted by Gendolla (this issue), who emphasizes that emotions do more than just provide action tendencies - they also serve important feedback functions that help individuals make sense of their situations and to regulate their responses. Thus, when a motivation for regulation is given (Tamir, 2016), individuals might actively engage with conspiracy theories to manage their emotional states. For instance, in an attempt to regulate external uncertainty, individuals might seek out conspiracy theories that offer clear explanations and identify specific actors to blame, thereby (aiming to) regulate their negative emotional states (see Kofta et al., 2020; van Prooijen, 2016; van Prooijen & Douglas, 2017 for a similar argument), even if the emotion regulation might not be successful on the long term (Douglas et al., 2017; Liekefett et al., 2023). As Bertolotti (this issue) notes, emotional reappraisal processes, well-studied in clinical psychology and psychotherapy, might help explain how initial reactions to conspiracy theories are modified over time.

These and the other dynamic extensions mentioned in the commentaries offer intriguing possibilities for future development that are not contradictory but easily included as extensions of the existing model. Our concern was that incorporating complex temporal dynamics might make the model's predictions less precise and more difficult to test empirically (a concern that was also mentioned by some commentators, see e.g., van Prooijen, this issue; Kunst & Bierwiaczonek, this issue). For this reason, we wanted to focus first on establishing clear links between specific features of conspiracy theories, their appraisals, and resulting emotional and behavioral tendencies to build a foundation upon which more complex dynamic processes can later be built.

Emotion Intensity

Gendolla (this issue), Pantaleo and Sciara (this issue), as well as Alper and Yilmaz (this issue) also pointed out that the AMCT focuses primarily on the quality of emotional responses (i.e., which emotions are experienced) while paying less attention to their intensity (i.e., how strongly they are experienced). As Gendolla (this issue) and Pantaleo and Sciara (this issue) point out, understanding emotion intensity is important because it determines the strength of action tendencies and thus the likelihood that these tendencies will translate into actual behavior. Thus, they correctly point out that without considering intensity, we cannot fully explain why some conspiracy beliefs lead to strong versus mild behavioral responses.

One way to incorporate intensity into the AMCT would be through the dimension of relevance, which is also discussed (though not always as an appraisal dimension) in classic appraisal theories (Arnold, 1960; Lazarus, 1991). The question of relevance is also discussed by other commentators. Thomas et al. (this issue) note how group identities can make certain conspiracy theories more personally relevant, while Alper and Yilmaz (this issue, p. 8) suggest adding "significance of a conspiracy belief in shaping the worldview" as a fourth appraisal dimension. This emphasis on relevance could help explain why the same conspiracy theory might provoke intense emotional responses in some individuals but only mild responses in others. For example, a conspiracy theory about election fraud might elicit intense anger in strong party supporters but only mild interest in those less politically engaged.

In the current model, we dealt with the aspect of relevance by simply specifying that the event (i.e., the experience of the conspiracy theory in one's current context) must be relevant to the individual, thereby treating relevance as a dichotomous variable (similar to Arnold, 1960; Lazarus, 1991). This, arguably, is a simplification and we see the point of the commentators that an inclusion of relevance as a continuous variable in the model would help to strengthen predictions about actual behavior. At the same time, the model is already very complex—something that also has been noted by commentators (most strongly by Kunst & Bierwiaczonek, this issue; see also van Prooijen, this issue).

In addition, one might argue that the inclusion of relevance, though informative for the intensity of emotions and the likelihood of actual behavior, does not add anything to the differences between emotions and type of action tendencies, or the question of "what kind of behavior occurs." That

is, the combination of low certainty, low control and unpleasantness should still lead to action tendencies of withdrawal, even if with different strengths. With the AMCT and the focus on the appraisals of certainty, control and pleasantness, we aim to lay the groundwork for predicting which different kinds of behavioral tendencies occur in response to conspiracy theories, that is, the question of "what kind of behavior." The question of "whether the suggested behavior then actually occurs," in turn, could not only benefit from the inclusion of relevance, but also aspects like opportunities, costs and benefit calculations, as suggested by Poon et al. (this issue).

Overall, we see the potential for including relevance in extensions of the model that more specifically focus on the likelihood that a behavior is carried out, potentially together with other aspects such as opportunity, cost and benefits. However, as it stands, the inclusion of relevance—though adding more nuanced information at the cost of more complexity—would not question or require changing anything in the existing model. Thus, the inclusion of relevance and emotion intensity remains a promising potential extension of the model specifically when focusing on the question of whether a behavior is carried out, and we strongly encourage research in this regard.

Social and Group Processes

Thomas et al. (this issue) further suggest the inclusion of social identity and group processes to the model—a thought also encouraged by Koole et al. (this issue) as well as Bilewicz (this issue). Thomas and colleagues suggest including social identities at two points in the model: First, as facilitator and intensifier of appraisals, second, as catalyst for the formation of new social identities and communities. Drawing on intergroup emotion theory (e.g., Mackie et al., 2008), Thomas and colleagues argue that a salient social identity can serve as a lens through which conspiracy theories are interpreted and appraised, which can also intensify certain emotional responses. For instance, a conspiracy theory about election fraud might elicit stronger emotional responses from those who strongly identify with the allegedly victimized political group. This idea is similar to the one discussed before regarding relevance, and we fully agree with such an extension and adaptation of the model toward group contexts.

In addition, both Thomas et al. (this issue) and Koole et al. (this issue) point out that conspiracy theories and their associated emotions can also serve as catalysts for the formation of new social identities and communities. When people recognize others share their emotional reactions to a conspiracy theory, this shared emotional experience can become the basis for a new group identity (Thomas & McGarty, 2009). In this way, conspiracy beliefs serve the fundamental need for social connection, with shared emotional responses helping to create and maintain communities of like-minded individuals, making it more likely that conspiracy theories which elicit emotions that are readily shared have greater societal impact than those that do not (Koole et al., this issue).

While these ideas are interesting and most likely valid, they are beyond the current focus of the AMCT which is limited to appraisals and action tendencies. Nonetheless, the creation of communities could be downstream consequences not only from the emotions elicited by the conspiracy belief, but also shared action building on the action tendencies outlined in the AMCT. Building on this idea, there might even be different types of community formation. For instance, conspiracy theories appraised as revealing hidden knowledge might foster communities built around shared pride and superiority (see e.g., qualitative research by Franks et al., 2017), while those appraised as revealing threats might create communities united by shared fear or anger.

Bilewicz (this issue) also commented on intergroup processes, and specifically on how conspiracy theories function in intergroup relations. He argues that intergroup conspiracy theories always follow the pattern of portraying malevolent powerful conspirators acting systematically against one's own inferior group. According to him, this implies that intergroup conspiracy beliefs are always accompanied by feelings of low control, thus, facilitating fear but not disgust. Disgust, in turn, is specific to hate speech, in which one's own group is experienced as superior (vs. inferior, as in conspiracy theories). Though not related to intergroup processes or disgust, Poon et al. (this issue) also commented that conspiracy theories should generally decrease a sense of control.

Part of our response to this thought relates back to the question of definitions. Of course, one might simply define conspiracy theories as theories painting one's own group as inferior and without control. In this case, the definition would also limit the appraisals that can occur. However, as argued above, such a definition does not capture the full range of conspiracy theories that have been traditionally examined in the field (see e.g. Lewandowsky et al., 2015 for an overview), nor would it capture the range of theories that lay people would classify as such. More importantly, limiting conspiracy beliefs to appraisals of low control does not only deny that conspiracy beliefs can elicit disgust (for which, admittedly, there is limited evidence thus far), but also goes against findings that consistently relate conspiracy beliefs to anger (e.g. Albertson & Guiler, 2020; Bowes et al., 2021; Butler et al., 1995; Featherstone & Zhang, 2020; Jolley & Paterson, 2020; Peitz et al., 2021), as anger is also connected to appraisals of high control. Based on the empirical evidence, we thus disagree with the assumption that conspiracy beliefs are always connected to feelings of low control. Whether or not conspiracy beliefs, in turn, are connected to disgust is, of course, dependent on the conspiracy theory. As outlined in the original manuscript, we expect conspiracy beliefs to elicit disgust when they are connected to physical or moral purity.

Practical Applications

Many of the commentators also highlighted potential practical applications of the AMCT for intervention strategies, ranging

from individual-level strategies to broader social approaches. We certainly agree that a better understanding of the appraisal processes, as outlined in the AMCT, could inform intervention strategies (Bertolotti, this issue) and that investigating intervention strategies is an important endeavor (Poon et al., this issue). More specifically, knowing which features of conspiracy beliefs specifically trigger aggressive behavioral tendencies could help in designing specific interventions addressing the behavioral tendencies rather than the beliefs themselves. Thus, different types of interventions might be needed for different types of conspiracy beliefs, depending on which appraisals and emotions are primarily involved—something that might be investigated by future research. Similarly, training addressing problems in emotion regulation could be effective in altering or mitigating the intensity of an emotion elicited by a conspiracy belief, reducing the need to use conspiracy beliefs as potential emotion regulation strategy (e.g., Gendolla, this issue; Bertolotti, this issue).

Furthermore, Thomas et al. (this issue) and Koole et al. (this issue) suggest that similar emotional experiences as elicited by conspiracy belief serve the function of building social identities, and this raises the question of whether providing alternative ways for people to connect through emotions could reduce reliance on conspiracy beliefs.

Overall, by linking specific features of conspiracy theories to particular emotional and behavioral responses, the model appears to provide a useful framework not only for theoretical advancement, but also in terms of practical applications.

Model Complexity

We noticed a tension in the commentaries between calls for greater complexity (e.g., Thomas et al., this issue; Koole et al., this issue; Alper & Yilmaz, this issue; Bertolotti, this issue) and arguments for simplification (Kunst & Bierwiaczonek, this issue; van Prooijen, this issue). Kunst and Bierwiaczonek present a mathematical calculation suggesting that the probability of cross-cultural replication decreases exponentially with model complexity. They argue that a simpler model using just valence and arousal would be more likely to replicate across cultures than our more complex model suggesting three appraisal dimensions. Similarly, van Prooijen (this issue) suggests that the dimension of harm alone might be sufficient to explain many effects of conspiracy theories.

We see the point that more complexity can indeed reduce cross-cultural applicability and value parsimony. This is exactly the reason we refrained from adding more complex appraisals or emotions in the model, including those that have been suggested by commentators, such as surprise and interest (Gendolla, this issue), or appraisals of accountability, coping potential and future expectancy (Thomas et al., this issue). While the inclusion of such appraisals and emotions is understandable and likely even fruitful in some contexts, they might rather add unnecessary complexity in most contexts, thus, were not included here.

At the same time, we also think that further simplifying the model overlooks important distinctions that the AMCT aims to capture. First, while the statistical argument for cross-cultural replicability is compelling in principle, it assumes that all model parameters are equally important and equally likely to vary across cultures. In reality, appraisal-emotion relationships for basic emotions have been shown to be relatively consistent across cultures (Gentsch et al., 2015; Izard, 2007; Matsumoto et al., 1988; Scherer, 1997; Scherer & Wallbott, 1994; Tong, 2015), even if their specific manifestations vary. Secondly, not every application of the AMCT requires the consideration of three-way interactions between appraisals. It is perfectly possible, for example, to only vary the appraisals of certainty and/or control and examine their impact on behavioral tendencies, while keeping the unpleasantness dimension constant. Thus, in many cases, deriving hypotheses from the AMCT will result in two-way interactions and, thus, are potentially also able to be replicated cross-culturally.

Focusing instead solely on harm, or using only valence and arousal, would significantly limit our ability to predict specific behavioral responses. First of all, valence and arousal have not been extensively studied in the context of conspiracy beliefs. Thus, there would be even less empirical evidence to start from. Secondly, the combination of valence and arousal, or simply focusing on harm, does not allow us to predict specific action tendencies. To give one example, both fear and anger involve harm, negative valence and high arousal, but lead to very different action tendencies. Arguably, the distinction between action tendencies of fear (withdrawal) and anger (confrontation) carries important societal relevance. Thus, a certain differentiation also seems to be warranted in terms of societal interest.

Given that there are both commentaries calling for more complexity and commentaries calling for simplification, it seems that the current level of complexity represents an appropriate starting point: on the one hand, the model is complex enough to capture meaningful distinctions, while at the same time focusing on one core question (i.e., how conspiracy beliefs elicit different behavioral consequences) and three appraisal dimensions. Whilst being built on evidence both from appraisal theories and on conspiracy beliefs and emotions—and the emotions of fear, anger, and to some extent pride, it also points to emotions (i.e., disgust and Schadenfreude) where effects are to be expected but empirical research so far is missing.

That being said, we also encourage future developments, extensions, and modifications of the model. Specifically, including dynamic processes, the aspect of emotion intensity, and social and group processes seem promising candidates that are easily integrated into the existing model.

Conclusion

We began this response by noting the explosive growth in conspiracy theory research and the corresponding need for more systematic theory-building and theory-testing in the field. We argued that such theory-building need not always involve developing new models, and can benefit from thoughtful application (and adaptation) of existing psychological theories.

The diversity and depth of the commentaries affirm that applying appraisal theories to conspiracy beliefs is a promising avenue for theoretical advancement. The suggestions for extension - from incorporating dynamic processes and personal relevance to considering social identity - show how the basic framework has already stimulated new theory-driven predictions. At the same time, the critiques and calls for clarification have helped us to better articulate the goal, scope, underlying guiding assumptions and limitations of the AMCT. The interdisciplinary dialogue has provided important perspectives, and underlines the hope that the AMCT does not only help to bridge divides between different psychological fields (i.e., appraisal theories and conspiracy beliefs), but also different disciplines. More broadly, we hope this exercise in theory application and refinement can serve as a model for future theoretical work in conspiracy belief research as the field continues to grow and the need for robust theoretical frameworks becomes increasingly important.

The AMCT in its current form is, of course, only the first step. Future studies will be able to manipulate different appraisals more systematically, and, even more importantly, test those corners of the model that so far have received little empirical attention (e.g., conspiracy beliefs eliciting disgust and Schadenfreude). Future theories and studies will also explore additional moderators and adaptations—a process which we very much welcome and which has already begun in the commentaries to the original article.

Ultimately, better theoretical understanding of how conspiracy beliefs lead to different behavioral outcomes is crucial not just for academic purposes but for addressing real-world challenges. We therefore want to emphasize again that the goal of the AMCT is more on explaining differences in behavioral outcomes and not necessarily the likelihood that behavioral action occurs. While determining which type of action is most likely to occur is an important first step, it seems worthwhile to integrate the AMCT with other theories, or at least to include aspects like emotion intensity and cost/benefit calculations to more precisely predict the intensity of the action proposed by the AMCT.

Overall, while the AMCT in its current form represents an important step toward better theoretical integration, we look forward to seeing how future research builds on, tests, and refines these ideas, contributing to a more theoretically grounded understanding of conspiracy beliefs and their consequences.

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