# Investigating the Stability of Conspiracy Mentality versus Specific Conspiracy Belief: A Longitudinal Perspective

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**Abstract**

Conspiracy mentality and specific conspiracy beliefs are often treated interchangeably, yet theories suggest that they differ in both conceptual scope and temporal stability. Conspiracy mentality is thought to reflect a broad, trait-like worldview, whereas specific conspiracy beliefs arise from this mentality and are more closely tied to particular events or actors. Imhoff and colleagues argue that a conspiracy mentality should be more temporally stable, given its similarity to a personality trait, while specific conspiracy beliefs should fluctuate with changing contexts. The present study directly compared the stability of these constructs using 25 monthly waves of longitudinal survey data collected from 986 participants across Australia, New Zealand, and the United Kingdom. Conspiracy mentality was measured using the Conspiracy Mentality Questionnaire, and specific conspiracy beliefs were assessed using 11 contemporary items. Stability was evaluated using descriptive analyses, intraclass correlations (ICCs), which quantify the proportion of total variance attributable to between- versus within-person differences, and a multilevel structural equation model (MSEM) that separates within-person fluctuations from stable between-person differences. Both constructs showed high temporal stability at the item and latent levels. Item-level ICCS ranged from .73 to .83 for conspiracy mentality and from .76 to .86 for specific conspiracy beliefs, with average ICCs of .88 and .93, respectively. MSEM variance estimates similarly indicated that most variance occurred between individuals rather than within individuals over time. Conspiracy mentality showed a latent ICC of .91. In contrast, specific conspiracy beliefs demonstrated even greater stability at .96. These patterns held when CMQ responses were rescaled to match the specific conspiracy belief response format. Across analyses, specific conspiracy belief exhibited slightly higher stability than conspiracy mentality, suggesting that an individual's endorsement of specific narratives is at least as trait-like as the broader conspiratorial worldview. These findings challenge the assumption that specific conspiracy beliefs are more context-dependent and malleable than general conspiracy mentality. Instead,

both constructs appear highly stable over time. Limitations include the low endorsement of some specific beliefs, the two-year timeframe, and the possibility that the findings reflect features of the measures rather than the constructs. Nevertheless, there are practical implications for measurement, theory, and intervention design.

*Keywords:* conspiracy mentality, specific conspiracy beliefs, temporal stability, longitudinal study, intraclass correlation coefficients, multilevel structural equation modelling

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## Introduction

Although conspiracy theories are often viewed as a phenomenon of our modern society, they have been a persistent feature of public discourse throughout history (Van Prooijen & Douglas, 2017). Pagán (2008) has identified instances of conspiracy theory belief, such as secret alliances and plots of revenge, dating back to ancient Athens and Rome. Conspiracy theories continued to gain popularity during the Second Industrial Revolution, a period marked by technological advances and shifting power structures, leading to widespread feelings of insecurity in society (Hofstadter, 1966). While some conspiracy theories contribute to the spread of misinformation and can be harmful, others promote society's scientific progress by encouraging critical analysis (Martin, 2014). Conspiracy theories have maintained their popularity in today's society and are likely to remain so, making it essential to understand their psychological underpinnings and societal implications.

### Conspiracy Theory Definition

To examine the psychological underpinnings, societal impact, and factors contributing to the stability of conspiracy theories, it is necessary to establish a definition. However, narrowing down a precise definition is more complex than it might seem at first glance, as the definitions used by scholars often differ across studies, resulting in conceptual confusion (Sunstein & Vermeule, 2009; Swami & Furnham, 2014).

As a general starting definition, the Oxford English Dictionary defines a conspiracy theory as "the theory that an event or phenomenon occurs as a result of a conspiracy between interested parties" or "a belief that some covert but influential agency (typically political in motivation and oppressive in intent) is responsible for an unexplained event" (Oxford English Dictionary, 2024). In the past, many scholars have relied on Hofstadter's (1966) definition, which defines conspiracy theories as any belief in the existence of a "vast, insidious, preternaturally effective international conspiratorial network designed to perpetrate acts of

the most fiendish character" (p. 14). A broader definition, similar to the Oxford English Dictionary definition, is proposed by Van Prooijen (2018): "the belief that a number of actors join together in secret agreement, in order to achieve a hidden goal which is perceived to be unlawful or malevolent" (p. 5). Sunstein and Vermeule (2009) identify a conspiracy theory as "an effort to explain some event or practice by reference to the machinations of powerful people, who attempt to conceal their role (at least until their aims are accomplished)" (p. 205). Sunstein and Vermeule (2009) also raise an important point: many conspiracy theories involve people not in positions of power, such as friends or neighbours, but this is not included in their definition because it was not relevant to their study. Martinez et al. (2022) use this idea to distinguish between conspiracy and paranoia, defining conspiracy as mistrust in political and powerful situations, while paranoia is a general mistrust in day-to-day life. This differentiation represents an advancement in our understanding of the psychological underpinnings of conspiracy theories.

The current research will utilise a recent definition of conspiracy theory from Douglas and Sutton (2023) as it offers a comprehensive and contemporary view that encompasses the key features of such beliefs. Unlike earlier definitions that focus on secrecy, this definition covers a broad set of characteristics, including an oppositional stance toward official explanations, malevolent intent, and epistemic risk. It also emphasises that conspiracy theory beliefs are not individual cognitions but are collectively constructed, shared, and maintained. Given that the current study investigated both general conspiracy mentality and specific conspiracy beliefs, Douglas and Sutton's definition is especially suitable as it provides a broad yet precise conceptualisation.

> A conspiracy theory is a belief that two or more actors have coordinated in secret to achieve an outcome and that their conspiracy is of public interest but not public knowledge. Conspiracy theories (a) are oppositional, which means they oppose publicly

> accepted understandings of events; (b) describe malevolent or forbidden acts; (c) ascribe agency to individuals and groups rather than to impersonal or systemic forces; (d) are epistemically risky, meaning that though they are not necessarily false or implausible, taken collectively they are more prone to falsity than other types of belief; and (e) are social constructs that are not merely adopted by individuals but are shared with social objectives in mind, and they have the potential not only to represent and interpret reality but also to fashion new social realities. (p. 282)

**Prevalence of Conspiracy Theory Belief**

From the moon landing hoax to modern health-related issues, belief in conspiracy theories has been a consistent phenomenon across societies. Given its sustained popularity, it has influenced public discourse and political decision-making (Stockemer & Bordeleau, 2024). Although most individuals reject many specific theories, research suggests that a small but meaningful minority endorse them, making it essential to examine prevalence rates.

Prevalence varies across regions and contexts. For example, a systematic review of COVID-19 conspiracy beliefs across 25 countries showed widespread endorsement of conspiracy theories that involve themes such as power gain (78% endorsement), liberty restriction (56% endorsement) and lab origin (44% endorsement), with regional differences shaped by political and public health contexts (Fotakis & Simou, 2023). For example, North American samples had increased belief in “destabilisation and power gain”, presumably due to political importance in America. These findings align with broader patterns where conspiracy beliefs rise during periods of crisis and uncertainty (Fotakis & Simou, 2023; Van Prooijen, 2018). Within Australia and New Zealand, locally specific conspiracies also attract endorsement. For instance, 31% of Australians and 32% of New Zealanders reported agreement with sporting conspiracy theories such as suspicions that the racehorse Phar Lap was poisoned by American gangsters while racing overseas, and the 1995 All Blacks

poisoning claim (that the All Blacks rugby team were deliberately poisoned before the 1995 Rugby World Cup final against South Africa) (Marques et al., 2022), highlighting that conspiracy belief also take on culturally specific forms.

Beyond geography, prevalence can also be examined across the lifespan. A review of adolescent conspiracy belief research suggests that such beliefs emerge early and become relatively stable from mid-adolescence (Byrne et al., 2024). This was associated with mistrust and paranoid thinking while showing negative relationships with ontological confusion, cognitive ability, and actively open-minded thinking. Belief in health-related conspiracy theories was linked with adverse childhood experiences, peer difficulties, behavioural issues, and sociodemographic factors (Byrne et al., 2024). Across the broader lifespan, recent research indicates a small but robust negative association between age and conspiracy beliefs, with younger individuals tending to endorse conspiracy theories more strongly than older adults. This pattern may relate to predispositions toward unconventional forms of political participation, lower self-esteem, and general political disaffection (Bordeleau & Stockemer, 2025). Earlier work also suggests that younger individuals may be slightly more susceptible to conspiracy beliefs compared to adults (Goertzel, 1994).

In addition to this, van Prooijen (2017) found that people with lower levels of education were more likely to endorse conspiracy theories. Education accounted for about 5% of the variance in conspiracy belief, indicating a small to moderate effect. This association can partly be explained by a greater tendency to prefer simple explanations for complex problems, feelings of powerlessness, and subjective social class. These findings suggest that multiple psychological factors associated with education can help explain why certain groups exhibit a higher prevalence of conspiracy beliefs than others.

Taken together, conspiracy beliefs appear to be a persistent and recurring feature in society, expressed differently across regions and relatively stable from adolescence into

adulthood. These characteristics underscore the importance of examining not only the prevalence of conspiracy theories but also their stability over time.

**Consequences of Belief in Conspiracy Theories**

Given the widespread nature of conspiracy theories, thoroughly examining and understanding the consequences associated with conspiracy beliefs is crucial. Although this topic is undeniably important, relatively little research has been conducted on it until recently. The current global challenges, including the climate crisis, the COVID-19 pandemic, international conflict, and anti-vaccine movements, have prompted researchers to investigate the impacts of conspiracy theories in recent years (Douglas, 2021).

Several studies suggest that a belief in conspiracy theories may discourage people from participating in mainstream political processes. For example, Butler et al. (1995) found that people were less likely to want to engage in politics (such as voting) after watching a film with a conspiracy narrative about the assassination of John F. Kennedy in comparison to a control group who answered the survey prior to watching the film. Similarly, Jolley and Douglas (2014b) had participants read conspiracy theories about the government, while a control group read evidence against these theories. They found that participants who read conspiracy theories felt powerless and were less likely to vote.

Conspiracy theories also impact how receptive people are to scientific findings. A popular example is found in climate science, where several studies have shown that exposure to climate-related conspiracy theories reduces people's intentions to be more environmentally friendly, energy-efficient, and supportive of climate change initiatives (Douglas & Sutton, 2015; Jolley & Douglas, 2014a; van der Linden, 2015).

Belief in and exposure to conspiracy theories has been associated with a range of health-related behaviours, including vaccine refusal (Jolley & Douglas, 2014b), preference for alternative medicines (Lamberty & Imhoff, 2018; Oliver & Wood, 2014), refusal of

contraception (Thorburn & Bogart, 2005), and lower compliance with COVID-19 precautions (Biddlestone et al., 2020b; Pummerer et al., 2022; Romer & Jamieson, 2020). While many of these studies are correlational and cannot establish causation, Natoli and Marques (2021) found that across three experiments, exposure to antidepressant conspiracy theories was found to reduce intentions to seek medical/psychological help, primarily by lowering trust in health authorities. Together, these findings suggest that conspiracy beliefs may play a significant role in shaping risky health decisions, highlighting the importance of understanding the psychological underpinnings of conspiracy beliefs.

Although there are many negative consequences of conspiracy theory belief, research suggests there are some positive impacts, such as creating a sense of community for those with marginalised views (Franks et al., 2017) and increasing accountability and transparency among those in power (Basham, 2003; Dentith, 2016; Swami & Coles, 2010). Conspiracy theories can also contribute to scientific advancement by critically analysing the mainstream views (Martin, 2014).

Overall, it is clear that conspiracy theories have a variety of consequences, ranging from personal impacts, such as refusing contraception, to widespread impacts, such as the spread of viruses. Since believing in conspiracy theories has significant consequences, it is essential to understand what drives people to hold these beliefs.

**Why Do People Believe in Conspiracy Theories?**

Given the widespread nature and consequences of conspiracy theories, researchers have sought to understand the psychological and social factors that drive belief in conspiracy theories. Douglas et al. (2017) theorise that people believe in conspiracy theories when three main types of psychological motives are not being met. The first is social motives. People seek causal explanations to fulfil social motives such as the desire to belong and maintain a positive image of the self and the in-group. This stems from Social Identity Theory, which

proposes that individuals derive part of their self-concept from their social groups, such as social class, ethnicity, political affiliation, family, or sports teams (Tajfel & Turner, 1979). The in-group refers to a group with which an individual identifies, while the out-group is a group with which they do not identify and may perceive as different or competing. In this case, conspiracy theories can help to shift blame for adverse outcomes to those in an out-group. For example, after election losses, conspiracy theories often emerge that blame out-groups, such as political opponents, for "rigging" results, allowing the in-group to preserve a positive self-image despite the loss. Research generally supports the idea that conspiracy theory beliefs are especially appealing to those who feel their positive self-image or in-group image is threatened (Cichocka et al., 2016)**.** Similarly, conspiracy theory belief is associated with narcissism/collective narcissism and those who feel victimised (Cichocka et al., 2016). Research also shows that belief in conspiracy theories is ineffective in fulfilling this motivation; instead, it creates distrust and further isolates people (Douglas et al., 2017).

The second is epistemic motives, in which people seek causal explanations for events to achieve knowledge and certainty about them. If explanations are brief, they can often leave people dissatisfied (Bruder et al., 2013b; Marchlewska et al., 2018; van Prooijen & Jostmann, 2013). So conspiracy theories appeal to this need by offering an explanation when other information is unavailable or conflicting, thereby reducing uncertainty. Research suggests that belief in conspiracy theories is stronger among individuals who seek meaning and patterns in their environment, particularly when significant events occur In addition, conspiracy theory beliefs have also been linked to lower levels of analytic thinking, lower education, and a tendency to perceive intent where none exists, which often increases uncertainty rather than resolves it (Douglas et al., 2016; Swami et al., 2014).

Finally, the third is existential motives. This is when explanations fulfil the need for people to feel safe and secure in their environment and to have control over their

environment. Earlier research suggested that people may turn to conspiracy theories when their needs are threatened or when they feel anxious, powerless, or unable to control outcomes (van Prooijen & Acker, 2015). However, more recent evidence from Fox et al. (2025) indicates that these relationships are largely correlational rather than causal, with no strong evidence that anxiety, depression, or stress lead to belief in conspiracy theories. Furthermore, Fox et al. (2025) found no evidence that belief in conspiracy theories provoke psychological distress.

Despite more recent research showing no clear causal link between conspiracy beliefs and psychological distress, questions about their broader psychological consequences remain open. Overall, Douglas et al. (2017) suggest that the consequences of such beliefs may ultimately be self-defeating; in other words, rather than fulfilling the motive, developing a belief in a conspiracy theory can worsen it. They also emphasise the need for more controlled research to understand the consequences of conspiracy beliefs better. Empirical evidence provides partial support for this model; for example, studies show that conspiracy beliefs can satisfy epistemic motives by providing simplified explanations for complex events or social motives by enhancing in-group cohesion (Biddlestone et al., 2020a; Marchlewska et al., 2018; van Prooijen & van Lange, 2014). However, other research indicates that the motives often overlap, interact, or are influenced by broader contextual factors, and not all predicted patterns are consistently observed (Biddlestone et al., 2022; Sutton & Douglas, 2020; van Prooijen & Douglas, 2018). These mixed findings highlight the complexity of conspiracy belief. Nonetheless, the framework proposed by Douglas et al. (2017) provides a helpful lens for considering why people endorse conspiracy theories and the potential psychological costs associated with doing so.

**Belief in Multiple Conspiracy Theories**

Research indicates that individuals who believe in one conspiracy theory are more likely than average to also believe in other conspiracy theories (Williams et al., 2025). A possible explanation for this is the monological belief system (Goertzel, 1994). As discussed earlier, Goertzel (1994) surveyed participants' endorsement of a list of ten conspiracy theories. From this, he concluded that there are two types of belief systems: dialogical and monological. A dialogical belief system is open, flexible and engages with alternative perspectives, meaning that individuals are more willing to adjust their views when presented with new or conflicting information.

In contrast, a monological belief system is closed, self-sustaining and resistant to change. This helps explain belief in conspiracy theories because the structure of a monological system makes such beliefs especially appealing since they provide ready-made explanations that fit neatly within the existing belief structure. Once a person accepts one conspiracy theory, it becomes easier to interpret new events through the same lens, with each additional theory reinforcing the system and making it easier to dismiss contradictory evidence.

This theory also complements Douglas et al. (2017) three motives (epistemic, existential and social), and Social Identity Theory (Tajfel & Turner, 1979), as individuals with a monological belief system may turn to conspiracy theories to reduce uncertainty about existential threats (existential motives), preserve a sense of knowledge and coherence (epistemic motives) or protect the image of their in-group against out-groups (social motives). From this, Goertzel concluded that belief in one conspiracy theory increases the likelihood of endorsing others, as each new theory reinforces the broader monological worldview.

However, while Goertzel's framework explains how specific conspiracy beliefs reinforce each other, it does not explain why specific individuals are predisposed to develop these monological patterns in the first place. This is where the concept of conspiracy mentality from Imhoff and Bruder (2014) becomes useful.

**Conspiracy Mentality and Specific Conspiracy Belief: A New Theory**

Imhoff et al. (2022) argue that the monological belief system interpretation is incomplete. They acknowledge that a consistent finding in research is that beliefs in different conspiracy theories tend to be positively correlated, even when the theories are unrelated in content or are logically incompatible. However, instead of assuming that the theories themselves support one another, Imhoff et al. (2022) propose that these correlations are better explained by a broader, underlying disposition: conspiracy mentality. Conspiracy mentality refers to a general mindset where people reliably differ in their general view of the world and are predisposed to interpret events as resulting from malevolent plots. People differ in the strength of this disposition; some are consistently more prone to seeing conspiracies across diverse contexts, while others rarely do.

Crucially, Imhoff et al. (2022) distinguish between this general disposition and specific conspiracy beliefs. Specific conspiracy beliefs refer to the endorsement of particular claims, such as that climate change is a hoax. These specific beliefs may be influenced not only by a person's general conspiracy mentality but also by situational factors such as cultural context, political orientation, personal experience, and exposure to misinformation. This means that while conspiracy mentality may provide a broad tendency to endorse conspiracies, specific conspiracy beliefs represent more concrete and variable expressions of this tendency.

Understanding this distinction also helps clarify why belief in multiple conspiracy theories tends to co-occur. The monological model (Goertzel, 1994) proposes that the

positive correlations between beliefs in different conspiracy theories arise because specific beliefs reinforce one another. In contrast, Imhoff et al. (2022) argue that these positive correlations are instead driven by a general predisposition toward conspiratorial thinking rather than just a mutual reinforcement between specific beliefs. Frenken and Imhoff (2021) add that the monological model may still hold some truth, but primarily within clusters of related content (e.g., health-related or political conspiracies). In contrast, conspiracy mentality operates at a higher, more abstract level, reflecting general differences in worldview rather than content-specific reinforcement.

This framework shifts the focus from understanding how conspiracy theories support one another to why some people are more generally inclined than others to see the world through a conspiratorial lens. This distinction has significant implications for research design and raises questions about the best measurement methods for conspiracy belief. It also motivates investigations into the stability of each construct over time. These considerations provide the foundation for the following sections of this thesis.

### *Measurement of Conspiracy Mentality and Specific Conspiracy Beliefs*

Although both conspiracy mentality and specific conspiracy beliefs reflect conspiracist thinking, they differ significantly in terms of scope, measurement and theoretical basis. Typically, conspiracy mentality is measured using broad statements about how likely and frequent conspiracies are without directly mentioning a specific event or actor. For example, a widely used measure is the Conspiracy Mentality Questionnaire (CMQ; Bruder et al., 2013a), which includes items such as “I think that there are secret organisations that greatly influence political decisions” (p. 2). Another example is the Conspiracy Mentality Scale (CMS), developed by New Zealand researchers Stojanov and Halberstadt (2019). The CMS encompasses multiple items that target various aspects of conspiracy thinking. The

responses are combined to create an overall score, with higher scores reflecting a stronger conspiracy mentality.

In contrast, studies measuring specific conspiracy beliefs refer to distinct claims, such as “the United States government was involved in the 9/11 attacks”. The statements often relate to widely circulated narratives with identifiable actors and events. However, the distinction is not always clear-cut. Many items intended to measure specific conspiracy theories arguably tap into a broader conspiratorial worldview rather than a particular isolated theory, or vice versa. An example of this is the Generic Conspiracist Beliefs Scale (GCB; Brotherton et al., 2013). Intended to assess a broad conspiratorial mindset, the GCB includes references to well-known thematic domains, such as government malfeasance, extraterrestrial cover-ups, and information control, to encompass various aspects of conspiracy belief. Due to this design, specific content has been used to assess the general construct. Brotherton et al. (2013) argue that this blend enhances the measure’s content validity and predictive power, while also highlighting how ‘general’ and ‘specific’ can overlap in real-world measurements.

Nonetheless, these measures reliably differentiate between individuals who are more or less inclined to accept conspiratorial explanations. However, they do not always map neatly onto the conceptual distinction between a conspiracy mentality and specific conspiracy beliefs (Frenken & Imhoff, 2021).

### *Evidence of a Distinction Between Conspiracy Mentality and Specific Conspiracy Beliefs*

Despite measurement overlap, there is growing evidence that conspiracy mentality and specific conspiracy beliefs are psychologically and psychometrically distinct.

Imhoff et al. (2022) illustrated response distributions for the endorsement of specific conspiracy theories in relation to the individuals’ general conspiracy mentality from three different publications. These distributions indicate that specific conspiracy beliefs typically follow a skewed distribution, with the majority of participants rejecting specific theories

(Biddlestone et al., 2020b; Enders et al., 2023; Garry et al., 2022). However, some theories that are considered more plausible receive higher levels of endorsement (Frenken & Imhoff, 2021). Overall, the more a specific conspiracy theory contradicts common sense, the more skewed its distribution is likely to be. In contrast, conspiracy mentality scores tend to follow an approximately normal distribution centred around the scale's midpoint, indicating a continuous predisposition present to varying degrees across the population (Imhoff, 2015). Although these patterns highlight differences in how the measures behave in practice, it is essential to note that skewed distributions do not necessarily indicate that the underlying psychological constructs are fundamentally different; they could instead reflect variations in item content and the frequency of endorsement.

Recent theorising by Imhoff (2025) offers conceptual evidence that conspiracy mentality is a distinct construct rather than a diluted aggregation of specific conspiracy beliefs. Drawing on an extensive review of psychological and behavioural research, Imhoff argues that conspiracy mentality is composed of six interrelated facets: an intentionality bias (believing that events are the results of intentional decisions), a secrecy bias (believing that many things that happen are kept in secret), a refusal of randomness (an unwillingness to accept that things happen by chance), a heightened pattern perception (seeing connections between seemingly unconnected events), anti-elitism (the belief that those in power are malevolent and self-serving), and heterodoxy (the notion that official reports typically do not tell the truth). These facets reflect core cognitive and motivational tendencies that predispose individuals to interpret events as deliberately engineered by powerful, malevolent actors. Importantly, none of these dimensions requires endorsement of any particular conspiracy theory; instead, they capture the abstract worldview from which specific beliefs may later arise. This framework offers a theoretically grounded explanation of why conspiracy mentality and specific conspiracy beliefs are correlated yet distinct.

Despite these differences, the two constructs are consistently positively correlated, typically with a correlation coefficient of $r \approx .6$ to .7 (Imhoff & Lamberty, 2020; Imhoff & Lamberty, 2017; Pummerer et al., 2022). This pattern suggests that conspiracy mentality reflects a broader dispositional tendency to endorse conspiracy narratives. The approximate normality of conspiracy mentality scores captures a wider (e.g. naïve gullibility to paranoid suspicion) and more dispersed range of individual differences, which increases statistical power when examining associations with variables such as education, political beliefs, or mental health. In contrast, because most participants reject specific conspiracy theories, any correlations are primarily driven by a small subset who endorse them, which introduces methodological complications. Overall, specific conspiracy belief measures may be valuable for identifying active conspiracy believers; however, their skewed distributions introduce methodological challenges when combining them with conspiracy mentality.

Further evidence for the distinction between conspiracy mentality and specific conspiracy beliefs comes from Biddlestone et al. (2025), who found that specific conspiracy beliefs correlated with low cognitive ability, low personal control, and a defensive in-group mentality. Conspiracy mentality, by contrast, did not correlate with these items and was significantly weaker than the correlations observed for specific conspiracy beliefs. Moreover, moderation analyses revealed that defensive in-group identity was associated with a belief in specific conspiracy theories, but not with a general conspiracy mentality. These divergent patterns of association provide more substantial evidence for the distinction between these two constructs.

While conspiracy mentality and specific conspiracy beliefs reflect different aspects of conspiracy thinking, developing measures that capture these differences without overlap is not straightforward. Specific conspiracy theory beliefs encompass particular contexts, targets, and goals, which are often shaped by personal attitudes, ideologies, or biases. These

influential factors are already captured in conspiracy mentality. This is known as content contamination. For example, the belief that immigration from Muslim countries to Europe is part of a plot to establish a European caliphate may reflect underlying Islamophobia and anti-immigration attitudes. Endorsement of this theory may not reflect a general tendency to believe in conspiracy theories, but instead blends political/cultural views with the endorsement of the specific conspiracy theory (Imhoff et al., 2022). This content contamination can distort research findings. For instance, a positive correlation between anti-Black attitudes and belief in the theory that Barack Obama forged his birth certificate might be driven by negative feelings toward Obama rather than a genuine belief in conspiracy theories (Pasek et al., 2015). These contextual factors complicate the interpretation of correlations with specific conspiracy beliefs, which may not necessarily reflect an individual's general conspiracy mentality. Overall, this suggests that measures of belief in specific conspiracy theories may actually reflect a conspiracy mentality and, therefore, be at an increased risk of content contamination.

### *Importance of the Difference Between Conspiracy Mentality and Specific Conspiracy Beliefs*

Past research has often conflated conspiracy mentality and specific conspiracy beliefs, using them interchangeably. While evidence has been presented supporting the idea that these concepts should be separated, it is also important to consider why this matters.

One of the most apparent benefits of distinguishing between conspiracy mentality and specific conspiracy beliefs is the potential to address misinformation effectively. Conflating the two concepts may obscure the underlying drivers of belief and result in misdirected countermeasures. By making these two concepts distinct, interventions can be more closely aligned with the mechanisms that sustain different types of conspiracist thinking. By targeting the underlying mechanisms, these interventions are more likely to

succeed. For example, conspiracy mentality may require more long-term interventions that promote analytical thinking and trust in the competency of others (Orosz et al., 2016), while specific conspiracy beliefs may be addressed more directly through corrective information and fact-checking (Lewandowsky & van der Linden, 2021). This distinction also enables the development of public health and communication strategies that recognise the drivers of conspiracy beliefs.

***Stability***

While the preceding evidence has highlighted important differences between conspiracy mentality and specific conspiracy beliefs, much less is known about how stable each construct is over time. Imhoff et al. (2022) hypothesised that, because conspiracy mentality reflects a general mindset, it should be more temporally stable and resistant to change than specific conspiracy beliefs. Specific conspiracy beliefs, by contrast, are often tied to important events or cultural trends and therefore tend to fluctuate more over time (Bierwiaczonek et al., 2020; Martin, 2014)**.** Both constructs, however, can be subject to change. Bierwiaczonek et al. (2020) and Liekefett et al. (2023) note that although conspiracy mentality is stable on average, there could still be meaningful within-person change occurring over time. This pattern has led some to characterise conspiracy mentality as resembling a personality trait, generally consistent but not entirely fixed (Imhoff et al., 2022).

Evidence from experimental studies also provides insight into stability. If conspiracy mentality reflects a broad, trait-like disposition, it should be less susceptible to short-term manipulations compared to belief in specific beliefs. To demonstrate this, Stojanov and Halberstadt (2020) conducted a meta-analysis on control deprivation, which found weak but detectable effects on belief in specific conspiracy theories, but no significant effects on general measures of conspiracy mentality. This suggests that specific beliefs can be temporarily shifted, whereas conspiracy mentality is comparatively resistant to change. The

same pattern is observed in individual experiments: while some manipulations affect specific conspiracy beliefs, they consistently fail to shift conspiracy mentality reliably (Imhoff, 2015; Pantazi et al., 2022; Salvador Casara et al., 2022). Together, these results suggest that a conspiracy mentality is more stable than specific conspiracy beliefs, although both exhibit some degree of variability.

Beyond experiments, longitudinal studies provide indirect but valuable insights into stability. For example, Bierwiaczonek et al. (2020) investigated the relationship between conspiracy belief and social distancing compliance over time. This also showed that belief in COVID-19-specific conspiracies rose and fell substantially over time, consistent with the idea that conspiracy belief is context-dependent. In addition, Liekefett et al. (2023) found that while conspiracy mentality showed relatively high between-person stability across waves, there were also substantial within-person fluctuations over time. This suggests that conspiracy mentality is not a fixed trait, but a disposition that is generally consistent yet still capable of change in response to situational factors. Even when stability was not the central focus, these findings collectively suggest that the conspiracy mentality behaves more like a personality trait, while specific conspiracy beliefs represent more malleable attitudes.

Taken together, the existing literature provides helpful hints but leaves the central question of stability unsolved. Direct tests of the relative stability of conspiracy mentality and specific conspiracy beliefs are rare, and evidence often comes from studies with a different purpose. This is a crucial gap, as many psychological models assume that dispositional traits are relatively consistent; yet, it remains unclear whether the conspiracy mentality truly functions in this way. If conspiracy mentality represents an enduring, personality trait-like disposition as theorised, it should demonstrate greater temporal stability than specific conspiracy beliefs. Investigating this difference is vital, as it informs how these constructs

should be measured, interpreted over time, and why their stability (or lack thereof) matters for theory and practice.

Understanding the comparative stability of conspiracy mentality and specific conspiracy beliefs is not only theoretically important but also has methodological and practical implications. First, stability serves as a critical test of Imhoff and colleagues' theorising. If conspiracy mentality is genuinely a trait-like disposition that shapes the emergence of specific conspiracy beliefs, then it must demonstrate substantially greater temporal stability than the beliefs it is proposed to shape. Clarifying this relationship, therefore, strengthens or challenges the validity of the broader conceptual model. Second, the amount of within-person variability in a construct has direct consequences for longitudinal studies. Approaches such as random-intercept or cross-lagged panel models rely on sufficient within-person change to detect temporal changes; knowing which construct varies more over time can inform analytical decisions and improve statistical power (Mulder, 2023). Finally, differences in stability also underscore the relevance of intervention. If specific conspiracy beliefs fluctuate more readily in response to contextual factors, they may be more malleable targets for short-term interventions. In contrast, if conspiracy mentality is highly stable, it may require more sustained or structural approaches. For these reasons, establishing the relative stability of each construct is a central step in understanding how conspiracy beliefs develop, persist, and potentially change.

**Summary of Key Findings**

Although there is an increasing body of research on the distinction between conspiracy mentality and specific conspiracy theory beliefs, it remains unclear whether conspiracy mentality truly demonstrates greater temporal stability than specific conspiracy beliefs. The present study compared the stability of conspiracy mentality and specific conspiracy theory beliefs across a two-year longitudinal study.

### Hypothesis

We hypothesised that conspiracy mentality would be more stable over time than belief in specific conspiracy theories. This prediction is grounded in prior work suggesting that conspiracy mentality reflects a general, trait-like disposition, whereas specific conspiracy beliefs are more susceptible to situational factors and change (Bierwiaczonek et al., 2020; Imhoff et al., 2022). Meta-analytic and experimental studies further support this distinction, showing weaker and non-significant effects of experimental manipulations on conspiracy mentality compared to specific beliefs (Imhoff, 2015; Pantazi et al., 2022; Salvador Casara et al., 2022; Stojanov & Halberstadt, 2020). Given this evidence, it is reasonable to expect that conspiracy mentality, as a broader worldview, will exhibit greater temporal stability than specific conspiracy beliefs. This hypothesis was developed after data collection and was therefore not preregistered.

## Methods

This section describes the design and data source, sample and recruitment procedures, measures, and data analysis plan used in the current study.

### Design and Data Source

This study employed an observational, longitudinal design, utilising pre-existing data collected as part of a larger ongoing research project in New Zealand (Williams et al., 2025). The overarching project involved conducting monthly online surveys to assess a range of psychological constructs. A total of 25 survey waves were administered between October 2022 and October 2024. Each survey was open for seven days.

### Sample and Recruitment

Participants were recruited through Prolific using a screening survey that targeted individuals currently residing in Australia (target $n$ = 1,500), New Zealand (target $n$ = 350), and the United Kingdom (target $n$ = 1,500). The three countries were selected as they enabled

a sufficient sampling frame, shared a common language (English), and had a Commonwealth history. The sample size was determined based on the analysis requirements for preregistered aspects of the project, which are not reported here. The screening survey was only advertised to participants with an approval rate of 95% on prior submissions. UK participants were additionally required to have completed at least 20 prior studies on Prolific, and gender-balancing was applied only to the UK sample. Gender-balancing was only applied to the UK sample, as the smaller sample pools for Australia and NZ combined with the extra restrictions would make it less likely that the target samples would be fulfilled. This criterion was based on longitudinal research using Prolific by Williams et al. (2024) that found participants with a greater number of prior survey completions were less likely to drop out of a longitudinal study.

The screening survey informed participants about the structure of the longitudinal study before asking if they would be interested in participating. It also included a single-item measure of conspiracism, “I think that the official version of the events given by the authorities often hides the truth” (Lantian et al., 2016). Responses to this item were to be used to ensure an adequate representation of conspiracy theory “believers”. However, this item was ultimately not used as a selection criterion due to relatively high endorsement rates.

Participants who expressed interest in the screening survey were invited to participate in the first wave of the monthly surveys. The initial recruitment goal was 400 participants from Australia, 150 from New Zealand, and 450 from the UK. Wave 1 received 1003 responses, with 995 retained after exclusion criteria were applied (see Appendix A for full exclusion details). Subsequent waves were released on the third of each month, totalling 25 waves, each open for 7 days. Participants excluded from a given wave remained eligible to participate in future waves. However, only participants who completed at least two waves were included in the present analysis, totalling 986 participants.

The final sample ($n$ = 986) ranged in age from 18 to 85 ($M$ = 40.09, $SD$ = 13.14). Regarding gender, 44.4% identified as male, 54.4% as female, and 1.1% as non-binary. Participants resided in Australia (39.5%), New Zealand (15.3%) and the United Kingdom (45.3%). See Table 1 for additional demographic details and Table 2 for income statistics.

**Table 1**

*Demographic Characteristics of Participants (as at Time 1)*

| | Australia (*n* = 389) | | New Zealand (*n* = 150) | | United Kingdom (*n* = 447) | | Total (*n* = 986) | |
|---|---|---|---|---|---|---|---|---|
| | *n* | % | *n* | % | *n* | % | *n* | % |
| **Gender** | | | | | | | | |
| Male | 166 | 42.7% | 59 | 39.3% | 213 | 47.7% | 438 | 44.4% |
| Female | 217 | 55.8% | 90 | 60.0% | 230 | 51.5% | 537 | 54.5% |
| Non-binary | 5 | 1.3% | 1 | 0.7% | 3 | 0.7% | 9 | 0.9% |
| Prefer not to say | 1 | 0.3% | 0 | 0.0% | 1 | 0.2% | 2 | 0.2% |
| **Age** | | | | | | | | |
| 18-24 | 63 | 16.2% | 30 | 20.0% | 15 | 3.4% | 108 | 11.0% |
| 25-34 | 131 | 33.7% | 41 | 27.3% | 102 | 22.8% | 274 | 27.8% |
| 35-44 | 96 | 24.7% | 39 | 26.0% | 142 | 31.8% | 277 | 28.1% |
| 45-54 | 54 | 13.9% | 24 | 16.0% | 90 | 20.1% | 168 | 17.0% |
| 55-64 | 28 | 7.2% | 11 | 7.3% | 71 | 15.9% | 110 | 11.2% |
| 65-74 | 13 | 3.3% | 4 | 2.7% | 25 | 5.6% | 42 | 4.3% |
| 75+ | 4 | 1.0% | 1 | 0.7% | 2 | 0.4% | 7 | 0.7% |
| **Highest level of completed education** | | | | | | | | |
| Doctoral degree (e.g., PhD, PsyD, MD) | 25 | 6.4% | 5 | 3.3% | 9 | 2.0% | 39 | 4.0% |
| Postgraduate degree (e.g., Masterate) | 75 | 19.3% | 25 | 16.7% | 68 | 15.2% | 168 | 17.0% |
| Undergraduate degree (e.g., Bachelor's) | 155 | 39.8% | 70 | 46.7% | 183 | 40.9% | 408 | 41.4% |
| Other tertiary qualification | 65 | 16.7% | 20 | 13.3% | 55 | 12.3% | 140 | 14.2% |
| Completed high school | 60 | 15.4% | 27 | 18.0% | 121 | 27.1% | 208 | 21.1% |
| Some high school (without completing) | 9 | 2.3% | 3 | 2.0% | 10 | 2.2% | 22 | 2.2% |
| No high school | 0 | 0.0% | 0 | 0.0% | 1 | 0.2% | 1 | 0.1% |
| **Employment status** | | | | | | | | |
| Working full-time | 191 | 49.1% | 76 | 50.7% | 267 | 59.7% | 534 | 54.2% |
| Working part-time | 91 | 23.4% | 33 | 22.0% | 97 | 21.7% | 221 | 22.4% |
| Unemployed or looking for work | 25 | 6.4% | 7 | 4.7% | 9 | 2.0% | 41 | 4.2% |
| A homemaker or stay-at-home parent | 21 | 5.4% | 5 | 3.3% | 22 | 4.9% | 48 | 4.9% |
| Student | 34 | 8.7% | 18 | 12.0% | 8 | 1.8% | 60 | 6.1% |
| Retired | 14 | 3.6% | 4 | 2.7% | 34 | 7.6% | 52 | 5.3% |
| Other | 13 | 3.3% | 7 | 4.7% | 10 | 2.2% | 30 | 3.0% |

**Table 2**

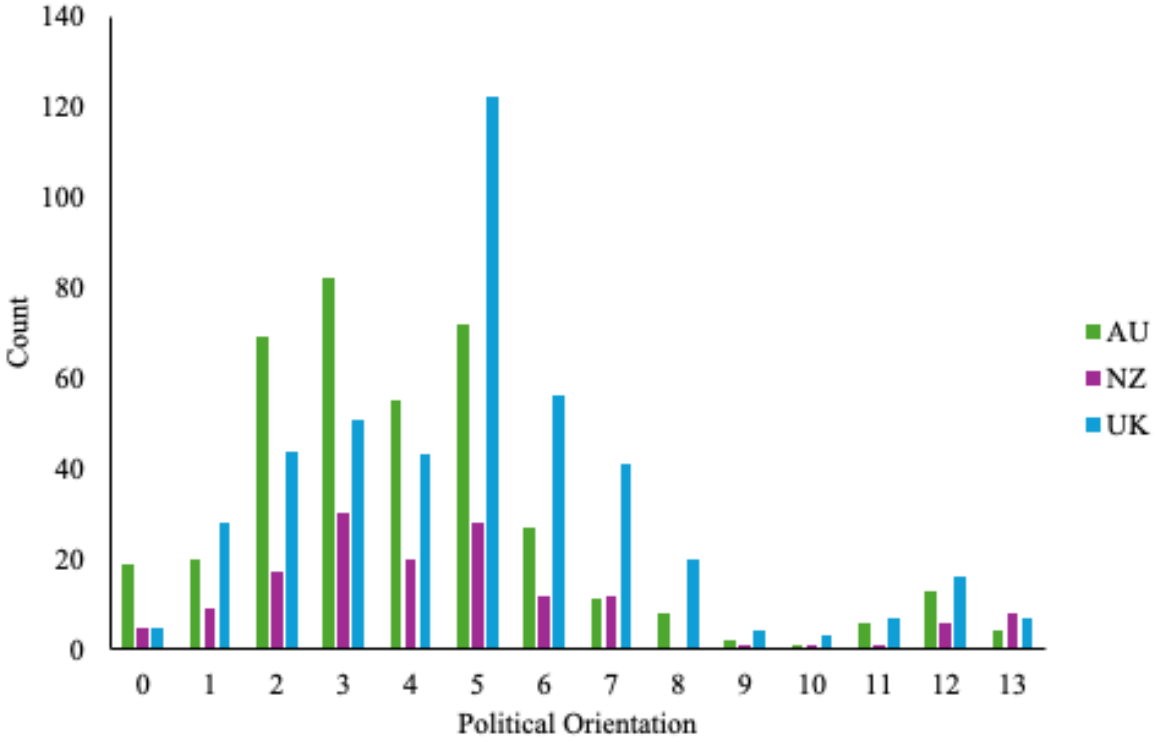
*Participant's Personal Incomes (Before Tax, Per Annum) by Country*

| Bracket | Frequency | Percent |
|---|---|---|
| **United Kingdom (GBP)** | | |
| Less than £10,000 | 61 | 13.6% |
| £10,000 - £19,999 | 89 | 19.9% |
| £20,000 - £29,999 | 111 | 24.8% |
| £30,000 - £39,999 | 74 | 16.6% |
| £40,000 - £49,999 | 54 | 12.1% |
| £50,000 or more | 57 | 12.8% |
| Did not answer | 1 | 0.2% |
| **Australia (AUD)** | | |
| Less than $20,000 | 77 | 19.8% |
| $20,000 - $39,999 | 56 | 14.4% |
| $40,000 - $59,999 | 58 | 14.9% |
| $60,000 - $79,999 | 74 | 19.0% |
| $80,000 - $99,999 | 52 | 13.4% |
| $100,000 or more | 71 | 18.3% |
| Did not answer | 1 | 0.3% |
| **New Zealand (NZD)** | | |
| Less than $20,000 | 31 | 20.7% |
| $20,000 - $39,999 | 27 | 18.0% |
| $40,000 - $59,999 | 25 | 16.7% |
| $60,000 - $79,999 | 27 | 18.0% |
| $80,000 - $99,999 | 17 | 11.3% |
| $100,000 or more | 23 | 15.3% |

Political orientation was assessed using a scale from 0 (extreme left) to 10 (extreme right), with a median score of 4. The majority of participants were left-leaning, although variation was observed between countries: Australian and New Zealand participants tended to lean further to the left compared to those in the UK. A small proportion of participants indicated they did not know their political orientation (1.4%), had not thought about it (3.5%), or did not understand the terms "left" and "right" (1.9%). The political orientation of participants is graphed in Figure 1.

**Figure 1**

*Political Orientation across Countries*




*Note.* 0 = extreme left, 10 = extreme right, 11 = don't know, 12 = haven't thought much about this, 13 = I do not know the meaning of the terms "left" and "right".

The median number of participants per wave after exclusions was 819 for waves 1 to 13 and 660.5 for waves 14 to 25. 63.6% of participants ($n$ = 627) were still participating in wave 25, exhibiting moderate attrition. For more detailed attrition information, see Table 3.

**Table 3**

*Participant Retention and Attrition Across 25 Survey Waves*

| Wave | Participants Completed (*n*) | Cumulative Retention (% of Total Participants Across All Waves) |
|---|---|---|
| 1 | 986 | 100.00 |
| 2 | 884 | 89.66 |
| 3 | 851 | 86.31 |
| 4 | 851 | 86.31 |
| 5 | 844 | 85.60 |
| 6 | 829 | 84.08 |
| 7 | 798 | 80.93 |
| 8 | 790 | 80.12 |
| 9 | 801 | 81.24 |
| 10 | 819 | 83.06 |
| 11 | 786 | 79.72 |
| 12 | 775 | 78.60 |
| 13 | 764 | 77.48 |
| 14 | 698 | 70.79 |
| 15 | 666 | 67.55 |
| 16 | 672 | 68.15 |
| 17 | 679 | 68.86 |
| 18 | 655 | 66.43 |
| 19 | 682 | 69.17 |
| 20 | 654 | 66.33 |
| 21 | 670 | 67.95 |
| 22 | 631 | 64.00 |
| 23 | 627 | 63.59 |
| 24 | 638 | 64.71 |
| 25 | 625 | 63.39 |

Overall, the sample is broadly consistent with typical Prolific participant pools, which tend to be more diverse than general population samples. While Prolific provides higher-quality and more diverse samples than many convenience sampling approaches, it is not fully representative of the general populations of Australia, New Zealand, and the United

Kingdom (Peer et al., 2017). Therefore, the present findings should be interpreted as reflecting online survey participants rather than fully representative national populations.

**Procedure**

Each survey was structured into sections corresponding to different psychological constructs. Section and item order were randomly assigned per participant and wave, with the exception of specific conspiracy belief items, which were shuffled each wave but retained a fixed order within each wave for all participants to facilitate open-ended follow-up questions (not analysed in the current study). Although some sections of the broader project changed over time, all items included in this analysis remained constant across the 25 waves. Complete questionnaires and analysis code are available in the project's Open Science Framework (OSF repository (https://osf.io/fqzpd/overview?view_only=d8647d807bd24b2fbf7fad38d696f85e).

Each wave also included two attention checks: one nonsensical item (for which only a subset of responses could be justified as correct) and one instructional manipulation check (in which participants were instructed to select a specific response). The content of these checks was changed across waves. A non-response to these checks was considered a fail, and any participant who did not provide correct responses for both attention checks was excluded from that wave. Nonsensical items are listed in Appendix B, and instructional manipulation checks are listed in Appendix C.

All participants gave written informed consent before the start of the study, and the Massey University Human Participants Ethics Committee approved the research (Massey University Human Ethics Committee Southern A, application SOA 22/42).

**Measures**

This study used two sets of items: one assessing conspiracy mentality and the other assessing belief in specific conspiracy theories. All items relevant to the present study

remained unchanged across the 25 survey waves. The questionnaires also included measures intended to address research questions beyond those investigated in this paper.

***Conspiracy Mentality Questionnaire***

Conspiracy mentality was measured using all five items from the Conspiracy Mentality Questionnaire (CMQ; Bruder et al., 2013a). These items assess a generalised belief that powerful actors are secretly working behind the scenes to influence major events. A comprehensive list of items is provided in Table 4. Responses were provided on an 11-point scale ranging from 0% (certainly not) to 100% (certain). To enable comparison with the specific conspiracy belief items, which used a 5-point scale, CMQ responses were linearly rescaled to a one to five metric while retaining. This was done by mapping the lowest and highest response options to one and five, respectively, and proportionally transforming intermediate values to preserve equal spacing across the scale. Scores were averaged to create a composite measure of conspiracy mentality for each wave.

The CMQ has demonstrated acceptable to good internal consistency across different samples, with Cronbach's $\alpha$ typically around .70 or higher, and very good to medium item discrimination statistics, $r_{itc} > .37$ (Bruder et al., 2013a). Test-retest studies show strong correlations across a two-week time period ($r = .84$), indicating that the CMQ provides consistent measurements over time (Bruder et al., 2013a).

The CMQ has also demonstrated evidence of convergent, discriminant, and predictive validity. In terms of convergent validity, CMQ scores were highly correlated with the Conspiracy Mentality Scale (Stojanov & Halberstadt, 2019), as well as having small-to-medium-sized correlations with anthropomorphism, powerlessness, and right-wing authoritarianism, among others (Bruder et al., 2013a).

However, some research has raised concerns about the CMQ's factorial validity. Swami et al. (2017) found that although the CMQ items loaded strongly onto a single factor

with good internal consistency ($\alpha = .85$), confirmatory analyses revealed poor model fit indices (e.g. RMSEA = .31; CFI = .81), suggesting that the CMQ may not capture a unidimensional construct as cleanly as intended. Furthermore, the CMQ showed only moderate convergent validity with other measures of conspiracist ideation, leading the authors to question whether it adequately represents the broader construct of conspiracy thinking. These findings highlight the need for caution in interpreting CMQ scores and suggest that the measure, while psychometrically acceptable, may not provide a fully comprehensive or structurally robust assessment of conspiracy mentality.

Recent studies also demonstrate the CMQ's measurement invariance across cultures and genders, providing reassurance regarding its cross-cultural applicability (Ćirović & Pedović, 2025). Taken together, the CMQ appears to be a generally reliable tool for capturing a broad disposition toward conspiratorial thinking, but its structural validity remains open to further refinement.

**Table 4**

*Conspiracy Mentality Items*

| Item Number | Abbreviation | Conspiracy Mentality Item |
|---|---|---|
| 1 | CMQ_Inform | I think that many very important things happen in the world, which the public is never informed about |
| 2 | CMQ_Motives | I think that politicians usually do not tell us the true motives for their decisions. |
| 3 | CMQ_Monitoring | I think that government agencies closely monitor all citizens. |
| 4 | CMQ_Connection | I think that events which superficially seem to lack a connection are often the result of secret activities. |
| 5 | CMQ_Influence | I think that there are secret organizations that greatly influence political decisions. |

### *Specific Conspiracy Beliefs*

Belief in specific conspiracy theories (SCB) was measured using 11 items adapted from those used by Williams et al. (2024) with modifications to ensure contemporary relevance. The original item referencing the 9/11 attacks was removed, and new items were added to reflect current issues, including conspiracy theories related to climate change and genetically modified organisms. Additionally, the item concerning microchips in COVID-19 vaccines was replaced with an item more broadly endorsed and more likely to generate variable responses (‘I think that the government wants to limit the rights and freedom of citizens using the pretext of fighting the COVID-19 pandemic’). The items included in this measure were drawn from conspiracies that were current at the time but had become widely known prior to the Williams et al. (2024) study. In waves 13 to 15, additional items were added; however, for consistency and ease of analysis, they are excluded. All items were rated

on the same 5-point Likert scale as the conspiracy mentality items, consistent with the format used by Williams et al. (2024). A comprehensive list of items is provided in Table 5.

The specific conspiracy beliefs used are internally consistent in capturing endorsement of widely recognised conspiracy narratives (Cronbach's alpha at time 1 was 0.86). Williams et al. (2024) highlight limitations in construct validity, noting that the items have not been comprehensively validated and only represent a modest range of conspiracy theories. In addition, expressed agreement may not fully represent participants' beliefs, due to factors such as inattention, social desirability, and acquiescent response bias.

Taken together, while the specific conspiracy belief measure provides a valuable way of capturing endorsement of specific narratives, its psychometric properties are less well-established. Nonetheless, this measure was used because few alternative measures offer adequate validation while also assessing contemporary conspiracy theories.

**Table 5**

*Specific Conspiracy Belief Items*

| Item Number | Abbreviation | Specific Conspiracy Belief |
|---|---|---|
| 1 | SCB_CovidWeap | COVID-19 is a biological weapon intentionally created and released by China. |
| 2 | SCB _NWO | A powerful and secretive group, known as the New World Order, are planning to rule the world. |
| 3 | SCB _5G | Telecommunication companies are covering up the health risks of the 5G cellular network. |
| 4 | SCB _Pandemic | I think that the government wants to limit the rights and freedoms of citizens using the pretext of fighting the COVID-19 pandemic. |
| 5 | SCB _ChemTrails | The trails left behind airplanes are toxic chemicals released as part of a secret government programme. |
| 6 | SCB _Fluor | Fluoride is added to the water supply by governments to make people less intelligent and easier to control. |
| 7 | SCB _Climate | The claim that the climate is changing due to emissions from fossil fuels is a hoax perpetrated by corrupt scientists who want to spend more taxpayer money on climate research. |
| 8 | SCB _Vaxx | Vaccines are harmful, and this fact is covered up by governments and pharmaceutical companies. |
| 9 | SCB _Trump | Democrats stole the 2020 US Presidential election from Donald Trump by creating fraudulent ballots. |
| 10 | SCB _CancerCure | Pharmaceutical companies ("Big Pharma") know of a cure for cancer, but they are keeping it secret to protect their profits. |
| 11 | SCB _GMO | Governments and agricultural businesses are hiding evidence that genetically modified organisms (GMOs) harm human health. |

**Analysis**

All analyses were performed using R Statistical Software (v4.4.0; R Core Team, 2024), along with the *lavaan* (v048.i02; Rosseel, 2012), *psych* (v2.5.6; Revelle, 2025), and *irr* (v0.84.1; Gamer et al., 2019) packages. To examine the stability of observed responses to conspiracy mentality and specific conspiracy belief items, we conducted a series of analyses at both the sample and individual levels. All analysis scripts are available in the OSF repository associated with this study.

First, descriptive analyses were used to calculate mean item scores for all items across survey waves, providing an overview of changes in average endorsement over time. To quantify individual-level fluctuations, we computed each participant's mean score at each wave and their within-person standard deviation across waves, allowing assessment of short-term variability in responses relative to their own baseline. Spearman correlations were used to examine the relationship between participants' average endorsement and their within-person variability.

Secondly, to assess the proportion of variance attributable to stable between-person differences versus within-person fluctuations in observed responses, intraclass correlations (ICCs) were calculated for both conspiracy mentality and specific conspiracy belief scores to estimate the proportion of variance attributable to between-person differences versus within-person fluctuations. However, ICCs do not differentiate between measurement error and true changes in conspiracy mentality or specific conspiracy beliefs.

To address this limitation, the stability and change of each construct over time were further examined using a multilevel structural equation model. Conspiracy mentality and specific conspiracy beliefs were modelled as separate latent variables at the within-person and between-person levels. Within-person paths captured wave-to-wave fluctuations in item responses, and between-person paths captured stable differences in overall endorsement

between participants. The model was estimated using maximum likelihood estimation, with model fit assessed via the chi-square statistic, the Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA), and the Standardised Root Mean Square Residual (SRMR). Variance estimates were used to derive latent ICCs, providing an additional estimate of temporal stability.

Missing data resulted from participants not being required to respond to every survey wave. Participants were only included in the dataset if they had responded to a minimum of two waves. For ICCs, missing observations were handled by using all available data for each participant; however, this method does not explicitly account for missingness, which may result in slightly biased ICC estimates. For the multilevel structural equation model, missing data were handled using complete information maximum likelihood, which is applied automatically with the maximum likelihood estimation with robust standard errors (MLR) estimator in *lavaan*, allowing all available observations to contribute to parameter estimates without discarding partially missing cases.

## Results

### Item-Level Descriptives

Table 6 shows descriptive statistics calculated across participants and waves for all conspiracy mentality (CMQ) and specific conspiracy items (SCB). Conspiracy mentality items showed means ranging from 2.54 to 3.69 (*SD* = 0.92 to 1.17) and were approximately symmetric (skew = -0.63 to 0.38) with minimal kurtosis (kurtosis = -1.10 to 0.05), indicating a relatively even response distribution. Participants tended to respond in the mid to upper levels of responses. Specific conspiracy items had lower means (*M* = 1.36 to 2.24, *SD* = .77 to 1.30) and were positively skewed (skew = 0.66 to 2.42) with higher kurtosis for some items (kurtosis = -0.75 to 5.98), reflecting that most observed responses indicated low endorsement of specific conspiracy beliefs, with a few higher scores.

**Table 6**

*Item-Level Descriptives*

| Item | *n* | Mean | SD | Min | Median | Max | Skew | Kurtosis | SE |
|---|---|---|---|---|---|---|---|---|---|
| CMQ_Inform | 18674 | 3.41 | 1.13 | 1 | 3.4 | 5 | -0.45 | -0.79 | 0.01 |
| CMQ_Motives | 18672 | 3.69 | 0.92 | 1 | 3.8 | 5 | -0.63 | 0.05 | 0.01 |
| CMQ_Monitoring | 18675 | 2.76 | 1.16 | 1 | 2.6 | 5 | 0.15 | -1.10 | 0.01 |
| CMQ_Connection | 18673 | 2.54 | 1.06 | 1 | 2.6 | 5 | 0.38 | -0.79 | 0.01 |
| CMQ_Influence | 18674 | 2.91 | 1.17 | 1 | 3 | 5 | 0.01 | -1.10 | 0.01 |
| SCB_CovidWeap | 18675 | 2.24 | 1.27 | 1 | 2 | 5 | 0.66 | -0.75 | 0.01 |
| SCB_NWO | 18675 | 1.91 | 1.17 | 1 | 1 | 5 | 1.06 | -0.01 | 0.01 |
| SCB_5G | 18675 | 1.78 | 1.04 | 1 | 1 | 5 | 1.24 | 0.72 | 0.01 |
| SCB_Pandemic | 18675 | 2.06 | 1.30 | 1 | 2 | 5 | 0.93 | -0.44 | 0.01 |
| SCB_ChemTrails | 18675 | 1.36 | 0.77 | 1 | 1 | 5 | 2.42 | 5.98 | 0.01 |
| SCB_Fluor | 18675 | 1.41 | 0.82 | 1 | 1 | 5 | 2.25 | 4.96 | 0.01 |
| SCB_Climate | 18675 | 1.60 | 1.01 | 1 | 1 | 5 | 1.74 | 2.20 | 0.01 |
| SCB_Vaxx | 18675 | 1.82 | 1.12 | 1 | 1 | 5 | 1.29 | 0.70 | 0.01 |
| SCB_Trump | 18675 | 1.76 | 1.17 | 1 | 1 | 5 | 1.39 | 0.79 | 0.01 |
| SCB_CancerCure | 18675 | 2.09 | 1.28 | 1 | 2 | 5 | 0.88 | -0.50 | 0.01 |
| SCB_GMO | 18674 | 2.07 | 1.12 | 1 | 2 | 5 | 0.79 | -0.32 | 0.01 |

*Note*. *n* = Number of valid responses included in the calculation of descriptive statistics for each item.

**Sample-Level Endorsement of Conspiracy Beliefs**

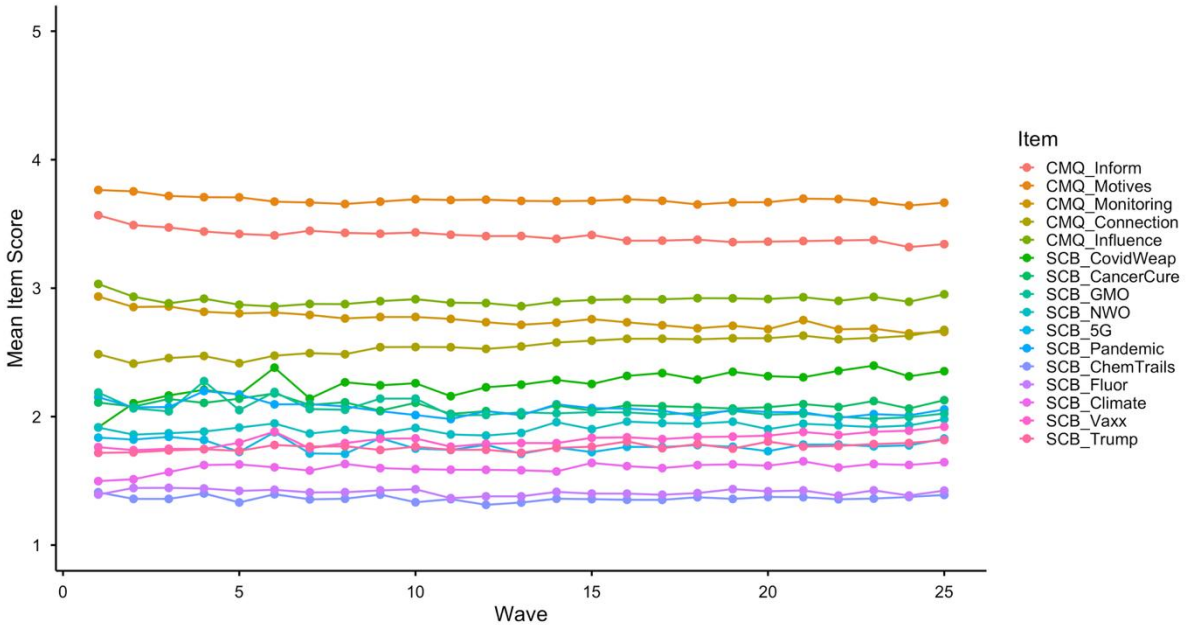
We next examined changes in observed responses to conspiracy mentality and specific conspiracy belief items across the 25 survey waves at the overall sample level. Figure 2 displays the mean level of agreement for each item, with each wave illustrated as a point.

As shown, CMQ items were endorsed at substantially higher levels than SCB items. Among the CMQ items, *motives* and *inform* consistently had higher means (around 3-4), while *connection*, *monitoring*, and *influence* showed slightly lower averages (around 2-3). In contrast, SCB items showed generally low endorsement, with most means ranging from 1 to 2. The most strongly endorsed SCB items were *COVID-19 weapon*, *cancer cure*, and *GMO*, whereas *fluoride* and *climate change* remained consistently low throughout the study period.

Overall, participants showed stronger and slightly more stable sample-level mean endorsement of conspiracy mentality items compared to specific conspiracy beliefs; however, both sets of items demonstrated minimal variation across waves. This pattern reflects stability in the sample means of the observed responses, and should be interpreted separately from the within-person variability analyses that follow.

**Figure 2**

*Mean Response of Each Item Across 25 Survey Waves*




**Stability of Conspiracy Beliefs**

While the analyses above provide information about fluctuations at the sample level, they do not capture the degree to which individuals' observed item responses changed over the study period. To examine this, we calculated each participant's mean CMQ and SCB scores at each wave and then the within-person standard deviation of these scores across all waves in which they participated. The mean within-person standard deviation was 0.29 (IQR = 0.21-0.36) for CMQ scores, reflecting modest variability across waves, and 0.19 (IQR = 0.09-0.25) for SCB scores, indicating relatively lower variability.

We also examined the relationship between participants' average endorsement levels and their within-person variability. Figures 3 and 4 visualise these associations for CMQ and SCB, respectively. For CMQ, there was a small but significant negative correlation, $r_s(984) = -.14$, $p = < .001$, 95% CI [-.20, -.08], suggesting that participants with higher average conspiracy mentality scores tended to fluctuate slightly less across waves. In contrast, for SCB, there was a strong positive correlation, $r_s(984) = .72$, $p = < .001$, 95% CI [.68, .76], indicating that participants who endorsed specific conspiracy beliefs more strongly tended to fluctuate more, relative to their own baseline, despite the overall SD being low. Overall, within-person mean scores for CMQ responses appeared to be associated with slightly greater stability, while SCB showed greater variability among participants with higher endorsement levels.

**Figure 3**

*Relationship Between Mean CMQ and Within-Person Variability*

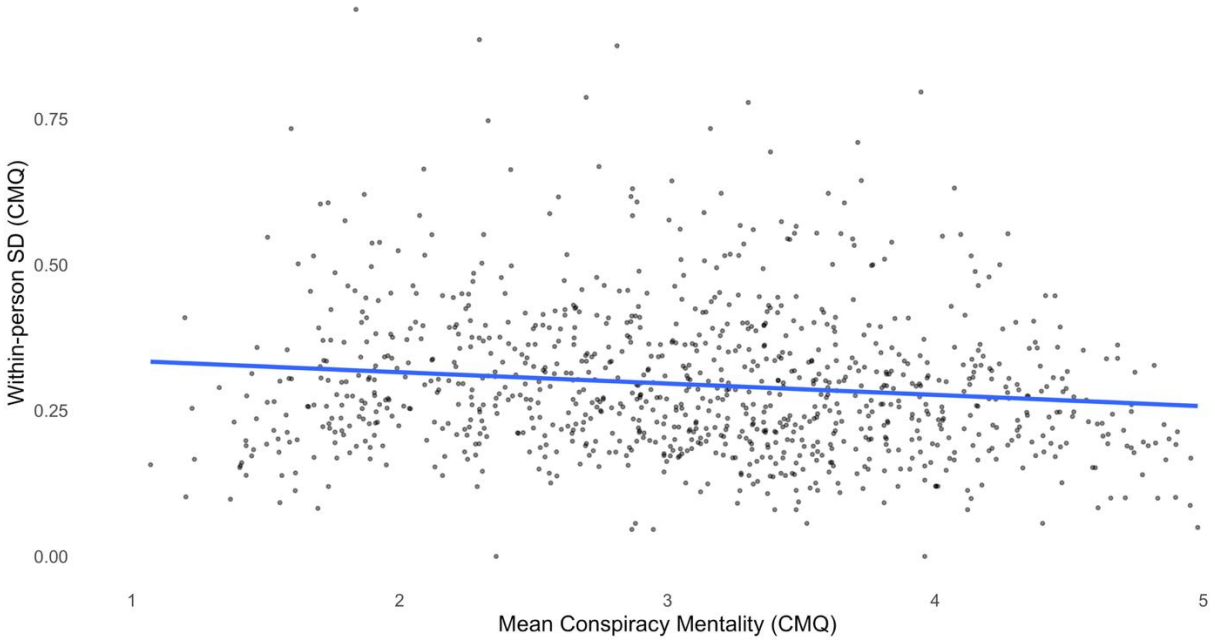
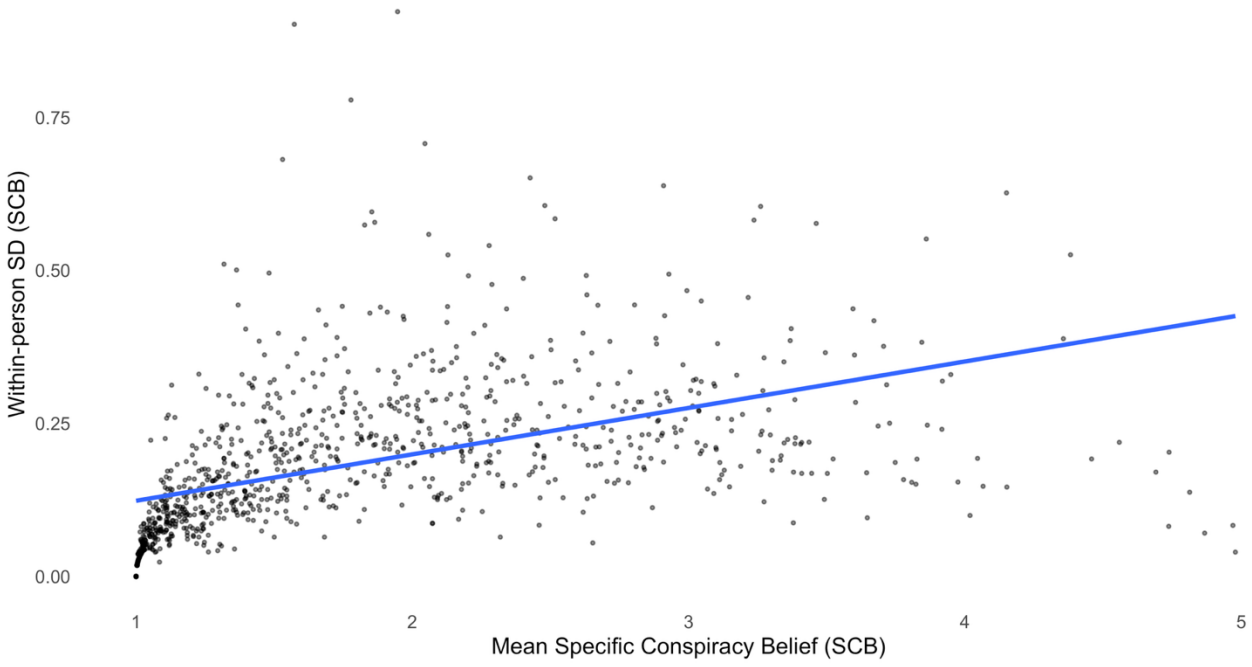



**Figure 4**

*Relationship Between Mean SCB and Within-Person Variability*



### *Intraclass Correlation Coefficients*

To further examine the stability of observed responses to conspiracy mentality and specific conspiracy belief items over time, intraclass correlation coefficients (ICCs) were computed across 25 waves. ICCs quantify the proportion of variance in scores that is attributable to differences between participants, relative to variability within participants over time. We used a two-way mixed-effects model with consistency, specifically ICC[3,1]. The ICC type was selected according to the standard framework described by Shrout and Fleiss (1979). In this case, the "3" refers to a two-way mixed-effects model, where participants' repeated responses were treated as fixed, as we were only interested in the specific individuals in our sample. The "1" indicates that the ICC is calculated for single measurements rather than averages. The focus on consistency means that we assess whether participants maintain the same relative position compared to others over time, rather than examining whether their scores are precisely the same across waves. The same ICC model was applied to the average scores, which were treated as single measurements for each item. All participants were included based on the waves to which they responded.

Where relevant, the interpretation of stability and model-based indices was guided by standard benchmarks used in psychological and structural equation modelling research. For the robust comparative fit index, values above .95 are generally indicate a good fit. For the standardised root mean square error of approximation, values below .06 indicate a good fit. For the standardised root mean square residual, values below .08 are typically considered a good fit. These guidelines are commonly used in structural equation modelling research to evaluate model fit (Hu & Bentler, 1999).

For conspiracy mentality, single-measure ICCs (ICC[3,1]) ranged from $r = .73$ to $r = .83$, indicating that most of the variability in responses to each item was due to stable between-person differences rather than within-person fluctuations. When using an average of

all CMQ items, the ICC was (ICC [3,1]) *r* = .88, 95% CI [.87, .89], showing that mean scores over time provide a stable estimate of individual differences. Refer to Table 7 for specific item-level ICCs and the overall average ICC.

Single-measure ICCs (ICC[3,1]) for specific conspiracy beliefs ranged from *r* =.76 to *r* =.86, indicating that most of the variability in responses to each item was due to stable between-person differences rather than within-person fluctuations. When using an average of all SCB items, the ICC was (ICC [3,1]) *r* = .93, 95% CI [.93, .94], showing that mean scores over time provide a highly stable estimate of individual differences. Refer to Table 7 for specific item-level ICCs and the overall average ICC.

The ICC for the mean of specific conspiracy beliefs (ICC[3,1] = .93 [.93, .94]) was higher than that for the mean of conspiracy mentality (ICC[3,1] = .88 [.87, .89]). Since the confidence intervals do not overlap, this difference suggests that specific conspiracy belief response patterns exhibit slightly greater temporal stability than conspiracy mentality.

While the ICC for the mean of SCB items was higher than that for the mean of CMQ items, the item-level ICCs suggest that this difference is not solely due to the larger number of SCB items. In classical test theory, combining more items typically increases reliability (Nunnally & Bernstein, 1994), so part of the higher stability of the SCB mean is likely attributable to this aggregation effect. At the same time, individual SCB items appear to be slightly more stable over time than CMQ items, indicating that the greater stability of the SCB mean reflects both aggregation effects and genuine differences in temporal stability of observed responses.

**Table 7**

*Intraclass Correlation Coefficient for Item-Level and Averages*

| Item | ICC Value | 95% Confidence Interval | |
|---|---|---|---|
| | | Lower Bound | Upper Bound |
| CMQ_Inform | 0.79 | 0.78 | 0.81 |
| CMQ_Motives | 0.73 | 0.71 | 0.75 |
| CMQ_Monitoring | 0.83 | 0.81 | 0.84 |
| CMQ_Connection | 0.77 | 0.76 | 0.79 |
| CMQ_Influence | 0.79 | 0.77 | 0.81 |
| CMQ average | 0.88 | 0.87 | 0.89 |
| SCB_CovidWeap | 0.81 | 0.79 | 0.82 |
| SCB_NWO | 0.81 | 0.8 | 0.83 |
| SCB_5G | 0.79 | 0.78 | 0.81 |
| SCB_Pandemic | 0.82 | 0.81 | 0.83 |
| SCB_ChemTrails | 0.77 | 0.76 | 0.79 |
| SCB_Fluor | 0.78 | 0.77 | 0.8 |
| SCB_Climate | 0.78 | 0.77 | 0.8 |
| SCB_Vaxx | 0.83 | 0.82 | 0.85 |
| SCB_Trump | 0.86 | 0.85 | 0.87 |
| SCB_CancerCure | 0.86 | 0.85 | 0.87 |
| SCB_GMO | 0.76 | 0.74 | 0.77 |
| SCB average | 0.93 | 0.93 | 0.94 |

*Note*. ICC type for all items and averages was ICC[3,1]. For the SCB average, the lower bound of the confidence interval appears identical to the ICC value due to rounding to two decimal places.

### *Key Findings*

Taken together, these results indicate that both conspiracy mentality and specific conspiracy belief scores remained largely stable over the 25 survey waves. Importantly, conspiracy mentality scores showed slightly less temporal stability than specific conspiracy belief scores, suggesting that individuals' observed responses on the greater conspiracy mentality items fluctuated slightly more over time than their responses to specific conspiracy belief items. While participants endorsed conspiracy mentality items more strongly than specific conspiracy belief items, within-person fluctuations in observed responses were generally small for both measures. Notably, for specific conspiracy beliefs, higher-scoring participants tended to fluctuate more relative to their own baseline, despite the overall low SD. ICC analyses further confirmed that most of the variance in observed item responses was attributable to stable between-person differences, with specific conspiracy beliefs showing slightly higher temporal stability than conspiracy mentality. Overall, these findings suggest that the observed responses to both sets of items were highly consistent over time, with only minor changes at the individual level.

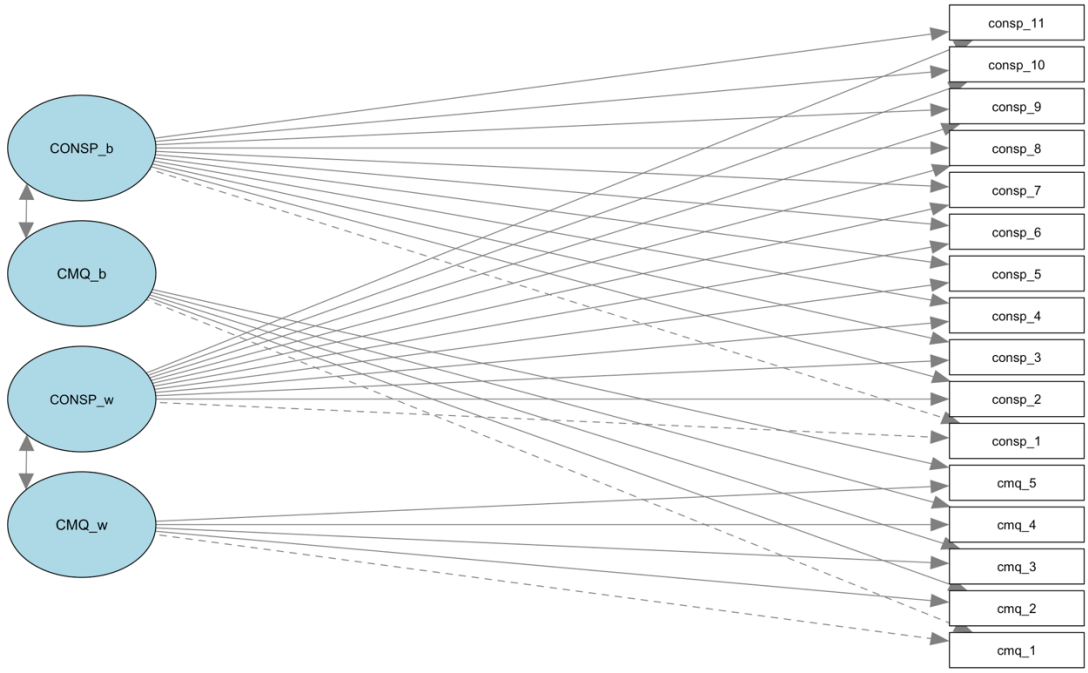
## Multilevel Structural Equation Modelling

As shown in the analyses above (see descriptive statistics and ICCs), responses to both conspiracy mentality and specific conspiracy beliefs were largely stable over time; however, these results do not distinguish between true within-person change and measurement error. To address this, a multilevel structural equation model (MSEM) was specified with survey waves (Level 1) nested within participants (Level 2). At each level, responses on conspiracy mentality and specific conspiracy belief items were modelled as latent variables indicated by their respective items. Within-level paths captured wave-to-wave fluctuations, and between-level paths captured stable between-person differences (See Figure

3 for two-level structural equation model specification). The model was estimated via maximum likelihood estimation with robust (scaled) standard errors (MLR).

**Figure 5**

*Two-Level  Structural Equation Model*




The model demonstrated an imperfect but reasonably acceptable fit to the data. The scaled chi-square statistic was significant, $\chi^2(206, N = 986) = 2523.47$, $p < .001$, indicating that the null hypothesis of exact fit in the population can be rejected. However, given the large sample size, this result is not unexpected and should be interpreted in conjunction with other fit indices. The robust comparative fit index was 0.9, which falls slightly below the 0.95 threshold suggested by Hu and Bentler (1999), indicating a less-than-adequate model fit. However, such cutoffs should be interpreted in light of the model complexity. However, the standardised root mean square error of approximation was 0.032, within the 0.06 cutoff suggested by Hu and Bentler (1999). The robust root mean square residual for the within-

person variable was 0.027, and the between-person variable was 0.06, all indicating good absolute residual fit.

All factor loadings were statistically significant ($p < .001$). At the within-person level, standardised item loadings for conspiracy mentality ranged from .44 to .59 (unstandardised item loadings ranged from 0.76 to 1.12), indicating moderate associations between short-term fluctuations in the latent factor and its indicators. Standardised loadings for specific conspiracy belief items ranged from .29 to .46 (unstandardised item loadings ranged from 0.84 to 1.34), also reflecting moderate within-person relationships. At the between-person level, standardised loadings were substantially stronger. Conspiracy mentality items loaded between .78 and .95 (unstandardised item loadings ranged from 0.69 to 1.12), and specific conspiracy belief items loaded between .72 and .88 (unstandardised item loadings ranged from 0.69 to 1.16), indicating that both constructs were measured reliably at the stable, trait-like level. These values reflect fully standardised estimates which express the strength of association between each item and its latent factor in standard deviation units.

At the within-person level, the covariance between conspiracy mentality and specific conspiracy belief was small but significant, $b = 0.013, SE = .001, \mathrm{p} < .001$, corresponding to a moderate standardised association ($\beta = 0.297$). This suggests that short-term fluctuations in conspiracy mentality were only weakly associated with concurrent fluctuations in specific conspiracy beliefs. At the between-person level, the relationship was substantially stronger, $b = 0.554, SE = .030, \mathrm{p} < .001$, corresponding to a strong standardised association ($\beta = .793$). This indicates that individuals who, on average, scored higher in conspiracy mentality also tended to endorse higher levels of specific conspiracy beliefs. Overall, this pattern reflects a weak within-person association but a strong between-person association between the two constructs.

The variance estimates revealed the central finding of this study: both conspiracy mentality and specific conspiracy beliefs were highly stable over time, with specific conspiracy beliefs showing the highest stability. For conspiracy mentality, the between-person variance for conspiracy mentality was .734 (95% CI [0.662, 0.807]), while the true within-person variance (i.e. fluctuation over time, separate from measurement error) was .077 (95% CI [0.067, 0.087]), yielding a latent ICC of .91. This indicates that approximately 91% of the total variance in conspiracy mentality reflected stable differences between individuals rather than within-person fluctuations. For specific conspiracy belief, the between-person variance was .663 (95% CI [0.571, 0.755]), and the within-person variance was .026 (95% CI [0.020, 0.032]), yielding a. latent ICC of .96, indicating even greater stability over time.

Since CMQ responses were rescaled to the same scale as SCB responses (a 5-point scale) prior to analysis, the unstandardised within- and between-person variance components can be meaningfully compared across constructs. These patterns were consistent with the item-level ICCs obtained from individual indicators, which ranged from .73 to .83 for CMQ items and .76 to .86 for SCB items. Since the item-level ICCs include measurement error, whereas latent ICCs do not, the latent estimates more accurately represent the stability of the underlying constructs.

Importantly, these latent ICCs differ from the observed ICCs reported earlier because they adjust for measurement error, providing a purer estimate of true stability in the underlying constructs. Across both models, most variance was attributable to stable between-person differences rather than within-person fluctuations, with specific conspiracy beliefs exhibiting the least within-person change across the 25 survey waves.

**Analysis with Equal Response Options**

The previous results indicated greater within-person variance for conspiracy mentality compared to specific conspiracy beliefs. However, this difference may have partly

reflected the differing response scales rather than true differences in response variability. Since conspiracy mentality items had eleven response options while specific conspiracy beliefs had only five, the former may have been more sensitive to minor within-person fluctuations in observed responses. To assess whether the response format influenced these findings, CMQ responses were collapsed from eleven to five responses based on response distributions; see Table 8 for further details.

**Table 8**

*New Response Bins*

| **Collapsed Response** | **Original Responses** | **Responses Across All CMQ Items in Collapsed (*n*)** |
|---|---|---|
| 1 | 1 (certainly not) to 2 (extremely unlikely) | 15,456 |
| 2 | 3 (very unlikely) to 4 (unlikely) | 14,649 |
| 3 | 5 (somewhat unlikely) to 7 (somewhat likely) | 30,063 |
| 4 | 8 (likely) to 9 (very likely) | 19.888 |
| 5 | 10 (extremely likely) to 11 (certain) | 13,312 |

Recomputed ICCs showed a highly similar pattern to the original analyses. CMQ item-level ICCs remained high ( r = .69 to .79), and the ICC for mean CMQ score was ICC [3,1] *r* = .86, 95% CI [.85, .87], indicating substantial temporal stability. As before, the mean SCB score showed high stability ICC[3,1] = .93 [.93, .94], and the non-overlapping

confidence intervals indicate that this difference remained statistically significant (see Table 9). Thus, collapsing the CMQ response scale did not change the fact that specific conspiracy belief items showed higher stability than conspiracy mentality items.

**Table 9**

*Intraclass Correlation Coefficient for Item-Level and Averages with CMQ Collapsed Responses*

| Item | ICC Value | 95% Confidence Interval | |
|---|---|---|---|
| | | Lower Bound | Upper Bound |
| CMQ_Inform | 0.76 | 0.74 | 0.78 |
| CMQ_Motives | 0.69 | 0.67 | 0.71 |
| CMQ_Monitoring | 0.79 | 0.77 | 0.8 |
| CMQ_Connection | 0.74 | 0.72 | 0.76 |
| CMQ_Influence | 0.76 | 0.74 | 0.77 |
| CMQ average | 0.86 | 0.85 | 0.87 |
| SCB_CovidWeap | 0.81 | 0.79 | 0.82 |
| SCB_NWO | 0.81 | 0.8 | 0.83 |
| SCB_5G | 0.79 | 0.78 | 0.81 |
| SCB_Pandemic | 0.82 | 0.81 | 0.83 |
| SCB_ChemTrails | 0.77 | 0.76 | 0.79 |
| SCB_Fluor | 0.78 | 0.77 | 0.8 |
| SCB_Climate | 0.78 | 0.77 | 0.8 |
| SCB_Vaxx | 0.83 | 0.82 | 0.85 |
| SCB_Trump | 0.86 | 0.85 | 0.87 |
| SCB_CancerCure | 0.86 | 0.85 | 0.87 |
| SCB_GMO | 0.76 | 0.74 | 0.77 |
| SCB average | 0.93 | 0.93 | 0.94 |

*Note*. ICC type for all items and averages was ICC[3,1]. For the SCB average, the lower bound of the confidence interval appears identical to the ICC value due to rounding to two decimal places.

The two-level structural equation model re-estimated with collapsed CMQ responses showed an equivalent pattern of results. Overall model fit was comparable with the original model, with the scaled chi-squared statistic being significant, $\chi^2$(206, *N = 986)* = 2414.78, *p* < .001, the robust comparative fit index again fell below the suggested threshold of 0.95 at 0.9. The fit indices remained acceptable (RMSEA = .031; SRMRwithin = .025; SRMRbetween = .06). Factor loadings remained statistically significant at both levels, indicating reliable measurement of both constructs. At the within-person level, standardised item loadings for conspiracy mentality ranged from .40 to .55 (unstandardised loadings ranged from 0.74 to 1.11), and specific conspiracy item loadings ranged from .29 to .46 (unstandardised loadings ranged from 0.84 to 1.22), indicating moderate associations between short-term fluctuations in the latent factors and their indicators. At the between-person level, standardised loadings for conspiracy mentality ranged from .78 to .95 (unstandardised loadings ranged from 0.70 to 1.12), and specific conspiracy item loadings ranged from .72 to .88 (unstandardised loadings ranged from 0.69 to 1.16), indicating reliable measurement of both constructs at the trait level.

Variance estimates again indicated that most variance in both constructs was attributable to stable between-person differences (within $b = 0.014, SE = .002, \mathrm{p} < .001, \beta = 0.286$; between $b = 0.594, SE = .032, \mathrm{p} < .001, \beta = 0.790$). The latent ICC for conspiracy mentality was .90, while the latent ICC for specific conspiracy belief was .96, closely mirroring the original model.

Overall, collapsing the CMQ to the same five-point response scale as the specific conspiracy belief items did not meaningfully change the pattern of results. The key conclusions, therefore, remain unchanged; both conspiracy mentality and specific conspiracy beliefs exhibit high temporal stability, with specific conspiracy beliefs showing slightly

greater stability. The previously observed differences cannot be attributed to response scale length.

## Discussion

### Summary

The present study investigated whether conspiracy mentality and specific conspiracy beliefs differ in their temporal stability across a two-year longitudinal study. Across all analyses, including descriptive trends, within-person variability, intraclass correlations, and multilevel structural equation modelling (MSEM), both constructs demonstrated a high degree of stability. Mean responses remained essentially unchanged over the two years, within-person fluctuations were small, and between-person differences accounted for most of the variability in both conspiracy mentality and specific conspiracy beliefs.

A consistent pattern emerged across the analyses, with specific conspiracy beliefs displaying slightly greater stability over time. This was reflected both in the observed ICCs and in the latent ICCs produced by the MSEM, which indicated 90-91% of the variance in conspiracy mentality occurred between individuals, compared to approximately 96% for specific conspiracy beliefs. However, this pattern was likely influenced by restricted variance in specific conspiracy belief items, which were heavily skewed toward disagreement across all waves.

These findings challenge the initial hypotheses and prior theorising that a conspiracy mentality functions as a stable predisposition toward conspiratorial thinking, whereas specific conspiracy beliefs fluctuate with changing contexts (Imhoff et al., 2022). Instead, the evidence suggests that both constructs behave like trait-like dispositions, with only minor short-term fluctuations over time. Notably, conspiracy mentality, despite its theorised role as a more trait-like predisposition, was slightly *less* stable than specific conspiracy belief (specifically, disagreement with specific beliefs).

**Interpretation**

The central questions raised by these findings are why both constructs were so stable and why specific conspiracy beliefs were, if anything, slightly more stable than conspiracy mentality.

One explanation for the high stability of specific conspiracy beliefs comes from research on attitude strength (Howe & Krosnick, 2017). Strong attitudes, especially those held with personal importance, are well-established and resistant to change over time (Blankenship & Wegener, 2008). The Causal Attitude Network model further suggests that attitude strength reflects the connectivity of the underlying network of evaluative reactions (i.e., beliefs, feelings, and behavioural tendencies), with more highly connected networks producing greater consistency and stability over time (Dalege et al., 2016). It is possible that the specific conspiracy beliefs measured in this study functioned more like strong attitudes rather than context-dependent evaluations. If participants already held firm opinions on these topics, even significant context shifts or new information would be unlikely to produce meaningful variability over the two-year study period (Leeper, 2014).

A second explanation comes from the motive-based framework proposed by Douglas et al. (2017)**,** which suggests the conspiracy theories persist because they fulfil social, epistemic, and existential psychological motives. In terms of social motives, specific conspiracy beliefs can help individuals maintain a positive image of the in-group or attribute blame to threatening out-groups, in line with Social Identity Theory (Tajfel & Turner, 1979). If specific conspiracy beliefs serve these identity-protecting functions, individuals may retain these beliefs even in the absence of new supporting evidence. Epistemic motives may also contribute to this stability, as conspiracy theories may provide an explanation for complex events that lack a clear official explanation. These beliefs may then be reinforced through confirmation bias when new information is presented. Existential motives may also be at

play, as conspiracy theories can create a sense of security in times of uncertainty and a perceived lack of control. When beliefs serve these enduring social, epistemic, and existential needs, they can become deeply entrenched within individuals' worldviews and therefore highly resistant to change over time.

A further explanation comes from schema-based processing. Schema theories propose that once a belief becomes integrated into a broader cognitive structure, it is maintained through processes that favour coherence and stability (Rumelhart, 1980). Conspiracy beliefs may form part of such interconnected schemas or networks, where endorsing one belief increases the perceived plausibility of others. These networks are self-reinforcing, where contradictions are minimised, information is interpreted to fit the schema, and alternative explanations are dismissed (Goertzel, 1994). Therefore, specific conspiracy beliefs may endure because they are supported by a larger, underlying cognitive structure, which would be consistent with these specific beliefs arising from conspiracy mentality.

Taken together, these same mechanisms also help explain why conspiracy mentality showed slightly lower temporal stability than specific conspiracy beliefs. Specific conspiracy beliefs involve specific, concrete claims that can become tightly embedded within motive-fulfilling, schema-based attitude networks, whereas conspiracy mentality reflects a broader, more abstract worldview. This abstractness may mean that conspiracy mentality is more sensitive to situational cues, changes in context, temporal effects, and fluctuations in trust of powerful actors, allowing for modest within-person changes even when overall levels remain highly stable.

An additional contextual consideration is that the longitudinal period overlapped with major political events, including the 2023 New Zealand General Election and the 2024 United Kingdom General Election. These events represent substantial real-world changes in political environments that could reasonably be expected to influence political attitudes and

potentially conspiracy beliefs. However, despite these large-scale contextual shifts, both conspiracy belief and specific conspiracy beliefs remained highly stable across the study period. This suggests that the observed stability is not easily disrupted by short-term political or societal events and provides additional support for interpreting these constructs as relatively enduring dispositions.

In addition to these theoretical explanations, methodological factors may also have contributed to the observed pattern. Mean levels of endorsement differed across the two constructs, which may have constrained within-person variability in different ways. For specific conspiracy belief items, average scores were below the scale midpoint, meaning that participants with higher endorsement were closer to the centre of the scale and therefore had a greater capacity to shift in either direction over time. By contrast, conspiracy mentality items were endorsed above the midpoint on average, so higher scores were further from the centre of the scale and therefore had less room for fluctuation. As a result, within-person mean scores for conspiracy mentality appeared more stable, whereas greater variability was observed among participants with higher endorsement of specific conspiracy belief items. This range restriction can increase stability estimates and partly explain why conspiracy mentality appeared slightly less stable than specific conspiracy beliefs in this sample. Although this does not negate the interpretations discussed above and may even further support the idea that opinions opposing specific theories are as deeply entrenched as those in favour of them, it provides an important methodological context for understanding the stability of these beliefs.

When viewed together, these findings reinforce the conceptual distinction between conspiracy mentality and belief in specific conspiracy theories, while highlighting that stability is not the dimension on which they differ meaningfully. Conspiracy mentality functions as a broad and enduring worldview, whereas specific conspiracy beliefs, once

people form an opinion, whether endorsement or disagreement, may become similarly entrenched and resistant to change. Rather than representing event-driven attitudes, specific conspiracy beliefs may operate more like identity-linked or schema-driven dispositions for a subset of individuals, which may still arise from a conspiracy mentality. This may help explain their high temporal stability in the present study.

**Implications**

The present findings offer several important implications for theory, measurement, and interventions on conspiracy thinking.

First, the consistently high stability observed for both conspiracy mentality and specific conspiracy beliefs suggests that both constructs function more like enduring dispositions rather than malleable opinions in response to events. This challenges the theoretical expectation that specific conspiracy beliefs fluctuate in response to changing contexts (Imhoff et al., 2022). Instead, the results suggest that once individuals form an opinion on the specific conspiracy theories examined in this study, those beliefs tend to become entrenched and resistant to change. However, this pattern may not generalise to all conspiracy theories.

Second, the moderately strong associations between the latent factors in the MSEM show the theoretical link between conspiracy mentality and specific conspiracy beliefs. This suggests a connection between the two; however, they remain distinct from each other. Their slightly different stabilities suggest that specific conspiracy beliefs cannot be fully accounted for by conspiracy mentality alone, but instead reflect additional, stable influences beyond a general conspiratorial worldview. This has important implications for theories that conspiracy mentality lays a foundation for specific beliefs, as the present results show that both constructs capture unique, stable components of an individual’s belief system, rather than one being derived from the other.

Third, these findings underscore the importance of designing longitudinal research that takes into account the trait-like nature of conspiracy beliefs. The high latent ICCs indicated that most changes in these constructs occur between people rather than within them. However, the small but significant within-person fluctuations indicate that longitudinal methods remain essential for identifying which beliefs change over time. At the same time, methodological research has shown that when within-person variance is limited, as is the case for highly stable constructs, longitudinal methods such as random-intercept cross-lagged panel models require large samples, many time periods surveyed, or both to achieve adequate power to detect within-person effects (Mulder, 2023). Consequently, studies of conspiracy beliefs may need especially intensive longitudinal designs or larger samples to provide a comprehensive picture of change, even when mean levels appear highly stable.

Finally, the high stability of specific conspiracy beliefs has implications for intervention methods. Much of the literature assumes that specific conspiracy beliefs are more malleable than a broader conspiracy mentality; however, the present findings suggest that both specific conspiracy beliefs and a conspiracy mentality may be challenging to shift once established. Although the present study did not directly test belief change in response to interventions, these results imply that interventions may need to target earlier stages in the formation of these beliefs or focus on preventing belief consolidation rather than attempting to modify entrenched beliefs. Approaches that focus on corrective information may be insufficient if individual beliefs are highly stable over time.

**Limitations**

Although the results clearly indicate high stability for both constructs, several limitations should be considered when interpreting the findings of this study.

First, although the sample size for this study was substantial ($N$ = 986), it was determined based on the analysis requirements for preregistered aspects of the project, which

are not reported here. This may have constrained the statistical power to detect effects in the present analyses. A larger sample could have increased the precision of parameter estimates and improved the robustness of longitudinal and multilevel results. A related limitation is that participant attrition across survey waves may have introduced bias. Although full information maximum likelihood in MSEM reduces bias when data are missing at random, it cannot correct for missingness that is not at random (Enders, 2010). Thus, if individuals who remained in the study differ in meaningful ways from those who discontinued participation, it could potentially limit the generalisability of the results and affect longitudinal inferences about stability and change. Another related limitation is that the composition of the sample may also have influenced the findings. This study relied on online convenience samples, and many of the participants disagreed with the conspiracy theories presented, indicating that the sample did not target individuals who strongly endorse such beliefs. Consequently, it remains unclear to what extent the observed patterns of stability and change would hold among the important subset of people who believe in multiple conspiracy theories.

Additionally, the study did not develop procedures to identify or screen our insincere responses. Recent research suggests that even small proportions of problematic responding can significantly distort estimates in survey-based studies, particularly when measuring low base-rate attitudes, such as conspiracy beliefs (Ross et al., 2025). For instance, insincere respondents may endorse conspiracy items at higher rates than genuine participants, which would inflate means, correlations and the overall observed stability. Although the repeated measures design of the study may reduce the impact of these possible responses, it remains possible that some degree of insincere participation influenced the results. Without dedicated screening tools, it is challenging to determine whether the observed patterns accurately reflect genuine attitudes or a combination of true and insincere responses.

Finally, the limitations of the scales and measures used should be acknowledged. The Conspiracy Mentality Questionnaire (CMQ; Bruder et al., 2013a) is a well-established tool and showed acceptable reliability in this study (Bruder et al., 2013a; Stojanov & Halberstadt, 2019). However, previous research has raised concerns about its factorial validity, suggesting it may not fully capture a single, coherent construct of conspiracy mentality (Swami et al., 2017). Similarly, the measure of specific conspiracy beliefs (Williams et al., 2024) demonstrated good internal consistency; however, its construct validity is less well-established, and responses may not always accurately reflect participants' true beliefs. In this study, CMQ responses were collected initially on an 11-point scale and subsequently rescaled to match the 5-point SCB scale. Although this rescaling enabled comparability across measures, it may have slightly affected variance and the relative weighting of responses. As a result, the present findings may not generalise to other measures of conspiracy mentality, alternative item sets, or different collections of specific conspiracy theories, nor can they be assumed to reflect the properties of underlying constructs independently of the specific measures used in this study. Additionally, the present study did not formally test measurement variance across countries. Given that the dataset included three subsamples, establishing measurement invariance across countries would have provided stronger evidence that the CMQ and SCB items were interpreted equivalently across cultural contexts. Overall, given the lack of other well-validated measures, both measures used provide functional but imperfect assessments of conspiracy mentality and specific conspiracy beliefs. Conclusions about the relative stability of these constructs should be interpreted as measure-specific rather than definitive claims about conspiracy mentality and specific conspiracy beliefs as theoretical constructs.

## Future Research

Building on the limitations identified above, several directions for future research could extend the present findings and deepen our understanding of conspiracy beliefs.

Studies that focus on individuals who endorse multiple conspiracy theories would be particularly valuable. The current sample showed relatively low endorsement of most specific conspiracy beliefs, and it is possible that the stability patterns may differ in groups with stronger and more affirmative opinions on specific conspiracy beliefs. Specifically targeting high-endorsers may clarify whether the high stability observed in conspiracy mentality and belief in specific conspiracy theories generalises to other populations.

Future research would also benefit from refining the measurement of both conspiracy mentality and specific conspiracy beliefs. Although the scales used in this study demonstrate reasonable validity and reliability, and are acceptable given the options, using alternative item formulations or incorporating the six-facet model from Imhoff (2025) may help strengthen the conclusions drawn from conspiracy research.

Finally, research spanning a more extended time period would also provide a stronger test of the trait-like nature of these constructs. While the two-year period examined here captured a highly stable pattern, it remains unknown whether this stability would persist over a five-, ten-, or twenty-year period, especially during the formation of these beliefs. Tracking individuals across developmental stages, societal shifts or changes in political leadership may reveal longer-term patterns that are not detectable in these two years.

## Conclusion

Overall, the present study investigated whether conspiracy mentality and specific conspiracy beliefs differ in their temporal stability across a two-year longitudinal study. Contrary to assumptions that specific conspiracy beliefs fluctuate more, while conspiracy mentality reflects a stable predisposition, the results showed that both constructs are highly

stable over time. Specific conspiracy beliefs were, in several cases, even more stable than conspiracy mentality, suggesting that once a belief (whether agreement or disagreement) is established, such beliefs may become deeply ingrained and resistant to change.

These findings have important implications for theory, measurement and intervention. They suggest that stability cannot be relied upon as a distinguishing feature between a conspiracy mentality and a specific conspiracy belief. They also highlight the need for interventions that recognise the entrenched nature of conspiracy beliefs and target the mechanisms that maintain them over time. Understanding these mechanisms remains a crucial goal for future research.

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## Appendix A: Exclusion Criteria

*Note*. The following exclusion criteria are reproduced from the preregistrations of Williams et al. (2025); Williams et al. (2023) and Williams et al. (2023), under the CC BY 4.0 International and CC BY-SA 4.0 International licenses. They were not developed as part of this study. Minor edits have been made for clarity.

Participants who met any of the following criteria were excluded from the study:

1. Indicating a country of residence other than Australia, New Zealand or the United Kingdom at time 1. Such participants will not be invited back for subsequent waves. However, residence will not be checked in subsequent waves, so participants who move countries during the longitudinal study will be retained.
2. Not providing a correct response to the attention checks included in the time 1 survey. Two attention checks will be included:
    a. The first is a nonsensical item, which will read “Every morning I run up Mount Everest to eat breakfast”. Participants who respond “somewhat agree” or “strongly agree”, or who do not respond to this item, will be considered to have failed this attention check.
    b. The second is an instructional manipulation check (IMC), which will read “The city test you are about to take part in is very simple, when asked for your favourite city you must select “Pawnee”. This is an attention check. Based on the text you read above, what city have you been asked to enter?” Participants who give any response other than “Pawnee” or who do not respond to this item will be considered to have failed this attention check.

    If participants fail one (or both) of the attention checks at time 1, their responses will be excluded, and they will not be invited to subsequent waves.

(They may still receive payment for time 1 since we will apply Prolific's policies on Approvals, Rejections and Returns).

3. Having a study duration (recorded by Qualtrics) of less than the sum of the number of items in the survey at time 1 (89) multiplied by 2, equaling 178 seconds (see Huang et al., 2012). Such participants will not be invited back for subsequent surveys.
4. Not reaching the end point of the survey (i.e., Finished = FALSE in Qualtrics) or being timed out of the survey (on Prolific) at time 1. Such participants will not be invited back for subsequent surveys.
5. Completed less than 2 survey waves across all 25 waves. Such participants effectively provide no relevant information for estimating within-person parameters, and including them might increase the risk of estimation failures.
6. "Returning" their submission for time 1 in the Prolific system, indicating that they revoke their consent.

Participants who met any of the following criteria were excluded from that specific wave but were able to participate in subsequent surveys:

1. Not providing a correct response to every attention check included in the wave. We plan to include one instructional manipulation check and one nonsensical item check (both forms of attention check) in each wave, with the content of these checks changing each wave. Participants who fail (or do not respond to) any attention check in a wave will have their data from that wave excluded. The instructional manipulation checks will always have just one correct answer that participants are instructed to select. The nonsensical item checks will always be on a Likert-type (agreement) scale, and each will be constructed such that just two of the choices are scored as objectively correct. For example, one

nonsensical item will be “I run 10,000km every day”, where only responses of “strongly disagree” or “somewhat disagree” are scored as correct.

2. Having a study duration (recorded by Qualtrics) of less than the sum of the number of items in the survey multiplied by 2 (Huang et al., 2012)
3. “Returning” their submission in the Prolific system, indicating that they revoke their consent (unless the participant subsequently indicates via the messaging system that they are willing for their data to be retained contingent on payment being awarded).
4. Duplicate submissions from the same participant to the same wave, as detected via Prolific ID (in which case the most complete response will be retained; if both are fully complete, the most recent will be retained).
5. Qualtrics status other than 0 (normal response) - i.e., removing duplicate, preview and test responses.

The exclusion criteria described above will be applied in the order shown.

## Appendix B: Nonsensical Item Attention Checks

| Wave | Item |
|---|---|
| 1 | Every morning I run up Mount Everest to eat breakfast. |
| 2 | I have personally visited the planet Neptune. |
| 3 | I have never used a computer. |
| 4 | Every day I crash my car into a brick wall at high speeds because it is fun. |
| 5 | I own a pet stingray and take it to work every day. |
| 6 | I own a pet stingray and take it to work every day. |
| 7 | I own a submarine and use it to fly amongst the clouds. |
| 8 | I work  27 hours in a typical work day. |
| 9 | I am a human. |
| 10 | I own a pet blue whale. |
| 11 | Every day I swim to Antarctica to go sightseeing. |
| 12 | I have never used the internet. |
| 13 | I am exactly 10 meters tall. |
| 14 | I am a robot. |
| 15 | I am currently completing a survey. |
| 16 | I own a living Tyrannosaurus dinosaur. |
| 17 | I import all my food from the planet Venus. |
| 18 | Every afternoon I eat 1000 chicken eggs. |
| 19 | I am the Prime Minister of the Netherlands. |
| 20 | I am the captain of the Springboks rugby team. |
| 21 | I can read English. |
| 22 | I own a Concorde aeroplane. |
| 23 | A carrot is a vegetable. |

| | |
|---|---|
| 24 | I live on Earth. |
| 25 | I ate a woolly mammoth for breakfast today. |

*Note*. This table lists the nonsensical items (where only a subset of responses could be justified as correct) for each wave. A 4-point Likert response scale was used for all non-sensical items. Responses of "somewhat disagree" or "strongly disagree" were scored as correct for all waves other than waves 15, 21, 23 and 24. For these waves, responses of "somewhat agree" or "strongly agree" were scored as correct.

## Appendix C: Instructional Manipulation Checks

| Wave | Item | Response options |
|---|---|---|
| 1 | The city test you are about to take part in is very simple, when asked for your favourite city you must select ‘Pawnee'. This is an attention check. Based on the text you read above, what city have you been asked to enter? | Auckland, Pawnee, Scranton, Eagleton, Perth |
| 2 | The weekday test you are about to take part in is very simple, when asked for the last day of the traditional work week, you must select 'Friday'. This is an attention check. Based on the text you read above, what is the last day of the traditional working week? | Monday, Tuesday, Wednesday, Thursday, Friday |
| 3 | To ensure data quality, please choose "Strongly disagree" for this item. | 5-point Likert |
| 4 | The giraffe test you are about to take part in is very simple, when asked for the task a giraffe (a large African mammal) cannot do, you must select 'Perform open heart surgery'. This is an attention check. Based on the text you read above, what is a task a giraffe cannot do? | Eat leaves off trees, Eat grass, Perform open heart surgery, Run fast over short distances |
| 5 | The name test you are about to take part in is very simple, when asked to select a name, you must select 'Harper'. This is an attention check. Based on the text you read above, what name have you been asked to select? | Tanya, Valentina, Daphne, Harper, Eathan |
| 6 | The name test you are about to take part in is very simple, when asked to select a name, you must select 'Joel'. This is an attention check. Based on the text you read above, what name have you been asked to select? | Ellie, Bill, Marlene, Joel, Tess |
| 7 | The name test you are about to take part in is straightforward. When asked to select a name, you must select 'Ted'. This is an attention check. Based on the text you read above, what name have you been asked to select? | Zava, Will, Coach Beard, Ted, Rebecca |
| 8 | If you are paying attention, please select "Slightly agree". | Strongly disagree, Moderately disagree, Slightly disagree, Neither agree nor disagree, Slightly agree, Moderately agree, Strongly agree |
| 9 | If you are paying attention, please select "Neither agree nor disagree". | Strongly disagree, Moderately disagree, Slightly disagree, Neither agree nor disagree, Slightly agree, Moderately agree, Strongly agree |

| | | |
|---|---|---|
| 10 | If you are paying attention, please select "Moderately agree". | Strongly disagree, Moderately disagree, Slightly disagree, Neither agree nor disagree, Slightly agree, Moderately agree, Strongly agree |
| 11 | If you are paying attention, please select "Strongly agree". | Strongly disagree, Moderately disagree, Slightly disagree, Neither agree nor disagree, Slightly agree, Moderately agree, Strongly agree |
| 12 | If you are paying attention, please select "Moderately disagree". | Strongly disagree, Moderately disagree, Slightly disagree, Neither agree nor disagree, Slightly agree, Moderately agree, Strongly agree |
| 13 | If you are paying attention, please select "Neither agree nor disagree". | Strongly disagree, Moderately disagree, Slightly disagree, Neither agree nor disagree, Slightly agree, Moderately agree, Strongly agree |
| 14 | If you are paying attention, please select "Strongly agree". | Strongly disagree, Moderately disagree, Slightly disagree, Neither agree nor disagree, Slightly agree, Moderately agree, Strongly agree |
| 15 | If you are paying attention, please select "Somewhat disagree". | Strongly disagree, Moderately disagree, Slightly disagree, Neither agree nor disagree, Slightly agree, Moderately agree, Strongly agree |
| 16 | If you are paying attention, please select "Somewhat agree". | Strongly disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Strongly agree |
| 17 | If you are paying attention, please select "Strongly agree". | Strongly disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Strongly agree |
| 18 | If you are paying attention, please select "Somewhat disagree". | Strongly disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Strongly agree |
| 19 | If you are paying attention, please select "Strongly agree". | Strongly disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Strongly agree |
| 20 | If you are paying attention, please select "Somewhat disagree". | Strongly disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Strongly agree |

| | | |
|---|---|---|
| 21 | If you are paying attention, please select "Somewhat agree". | Strongly disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Strongly agree |
| 22 | If you are paying attention, please select "Strongly disagree". | Strongly disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Strongly agree |
| 23 | If you are paying attention, please select "Somewhat disagree". | Strongly disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Strongly agree |
| 24 | If you are paying attention, please select "Somewhat agree". | Strongly disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Strongly agree |
| 25 | If you are paying attention, please select "Neither agree nor disagree". | Strongly disagree, Somewhat disagree, Neither agree nor disagree, Somewhat agree, Strongly agree |

*Note*. This table lists each wave's instructional manipulation checks (where participants were instructed to select a specific response).