# Belief in conspiracy theories: The situational factors of uncertainty, powerlessness and collective narcissism inside different cultural contexts

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#### Abstract

In conspiracy theories, a group or coalition of people is assumed to work in secret together as to attain what are commonly considered evil goals. Conspiracy beliefs have been linked to negative perceptions and antisocial behaviors, such as distrust, political alienation, detrimental health choices or radicalization. We investigate whether belief in conspiracy theories is associated with uncertainty, powerlessness and collective narcissism into two different ethnic and cultural groups: Greek and Dutch students, with Greeks hypothesized as a more prone to conspiracy theories group due to high uncertainty, collective narcissism and powerlessness levels. Results supported the view that Greeks have higher conspiracy belief endorsement, yet the analysis revealed only uncertainty to be partially mediating the relationship of conspiracy theory beliefs and nationality.

*Keywords:* conspiracy theories, uncertainty, collective narcissism, powerlessness

Belief in conspiracy theories: The situational factors of uncertainty, powerlessness and collective narcissism inside different cultural contexts

Belief in conspiracy theories still remains present in 21st century's societies. In conspiracy theories, a group or coalition of people is assumed to work in secret together as to attain what are commonly considered evil goals (Moscovici 1987; Bale, 2007). Next to older "classic" conspiracy theories related to the assassination of John F. Kennedy (McHoskey, 1995), the origins of diseases such as HIV (Ross, Essien & Torres 2006), or to hidden evidence of visiting aliens (Harrison & Thomas, 1997), new conspiracy theories followed. For their most part again, important, distressing events seem to bring these narratives into existence: societal and economic crises, wars, assassinations of significant leaders, outbreak of infectious diseases, terrorist attacks even climate change (Oliver & Wood, 2014). In our Information Age, we are constantly exposed and bombarded by multiple conspiracy theories with the most renown being related to suspicions for U.S. governmental implication in the 9/11 attacks on the World Trade Center in New York (Swami, Chamorro-Premuzic & Furnham, 2010), the Climategate, where scientific evidence for climate change was manipulated to show global warming less threatening (Leiserowitz, 2006), or Princess Diana being murdered (Douglas & Sutton, 2008), and Osama bin Laden already dead when the US troops staged a raid for his elimination (Wood, Douglas & Sutton, 2012).

Conspiracy beliefs are distinct to religious, superstitious or paranormal beliefs and are always centered into a powerful group, such as governmental institutions (e.g., CIA), major branches of industry (e.g., banks, oil companies) or negatively stereotyped ethnic groups (e.g., Muslims, Jews; van Prooijen & van Vugt, 2018). Studies indicate that both belief in the supernatural and belief in conspiracy theories occur in non-

pathological persons and both are widely and increasingly researched inside the spectrum of interdisciplinary social sciences (Sunstein & Vermeule, 2009; Swami et al., 2013; Wiseman & Watt, 2006; Oliver & Wood, 2014; Brotherton, 2015; Douglas, Sutton & Cichocka, 2017).

Key ingredients involved in belief in conspiracy theories proved to be a hypothesized *pattern* (Whitson & Galinsky, 2008; Shermer, 2011), *agency* (Imhoff & Bruder, 2014; Douglas, Sutton, Callan, Dawtry, & Harvey, 2016) related to the intentions and actions of the conspirators, *coalition* and *secrecy* (van Prooijen & van Lange, 2014), - it is always the secretive work of a group, while *threat* is always conveyed (Hofstadter, 1966).

Findings also indicate that belief in one conspiracy theory predicts belief not only in other conceptually related conspiracy theories (Goertzel, 1994; Swami et al., 2011; Van Prooijen & Acker, 2015) but even in contradictory conspiracy theories (Wood et al., 2012). Accordingly, there is indication that people's tendency to believe in conspiracy theories varies between individuals and that demographical factor and situational factors among others can predict their conspiracy formation susceptibility (Bilewicz, Cichocka, & Soral, 2015; Van Prooijen & Van Lange, 2014).

Understandably enough, conspiracy beliefs prove linked to negative perceptions and antisocial behaviors, such as distrust, hostility, political alienation, detrimental health choices or radicalization (Goertzel, 1994; Abalakina-Paap, Stephan, Craig, & Gregory, 1999; Thorburn & Bogart, 2005; Jolley & Douglas, 2014; Swami et al., 2011; van Prooijen, Krouwel, & Pollet, 2015). Therefore and opting to extend insight on the underlying mechanisms of a widespread societal phenomenon, it will be here investigated how cultural differences and the situational factors of uncertainty, powerlessness, and collective narcissism may affect belief in conspiracy theories.

Subjective uncertainty is a stimulator of a sense-making process usually following impactful, harmful societal events, such as a terrorist strike, a war, or a natural disaster in order to re-establish a sense of order, consistency and predictability to the world (Kramer, 1998; Park, 2010; van den Bos, 2009). Hence, belief in conspiracy theories is seen as deriving from this sense-making process, namely as being an explanatory belief (Hofstadter, 1966; Bale, 2007; Shermer, 2011;). Indeed, everyday life and empirical findings suggest that conspiracy theories gain momentum particularly after threating and uncertainty-eliciting societal events (McCauley & Jacques, 1979; van Prooijen & van Dijk, 2014). Yet, uncertainty can also be elicited by factors unrelated to impactful or distressing societal events and again stimulate the sense-making process associated to conspiracy beliefs; a typical such example is people's own death anxiety correlating with increased conspiracy beliefs (Newheiser, Farias, & Tausch, 2011).

Likewise, evidence indicated that the factor of powerlessness or of lack of personal control closely relates to the experience of uncertainty, therefore eliciting similar sense-making processes (Park, 2010; van den Bos, 2009). In this frame, powerlessness is again a predictor of conspiracy beliefs (Whitson & Galinsky, 2008; Sullivan, Landau, & Rothschild, 2010; van Prooijen & Acker, 2015). As in early findings (Hofstadter 1966), conspiratorial mindset keeps consistently proven associated with the human desire to make sense of their social environment; people who feel powerless or voiceless to understand complex and impactful societal events turn to conspiracy beliefs (Bale, 2007). In parallel, other theoretical perspectives, on meaning-making (Heine, Proulx, & Vohs, 2006; Van den Bos, 2009), compensatory control (Kay, Whitson, Gaucher, & Galinsky, 2009; Rutjens, van Harreveld, & van der Pligt, 2013), or paranoia (Kramer, 1998), suggest that threats to control increase

people's mental efforts to make sense of the social world. Impactful societal events are likely experienced as control threats, hence as a losing of power by citizens thus motivating the sense-making process and predicting belief in conspiracy theories. In Whitson and Galinsky's study (2008), the experimentally induced control threats influenced the extent to which participants perceived patterns, either images in random noise, or patterns in stock market information, and conspiracies. Also, Prooijen in investigating why adults with high education level are less prone to believe in conspiracies (2017) indicated that they feel less powerless within their social environment, and higher in social class; these factors among others contribute to the relationship between education and conspiracy mindset.

Last, Golec de Zavala and Cichocka (2012) in their study indicate that collective narcissism predicts conspiracy beliefs against a competing group. They define collective narcissism as "in-group identification tied to an emotional investment in the exaggerated greatness of an in-group". Similarly, findings showed that members of cohesive but marginalized societal groups, such as ethnic minority groups also endorse belief in conspiracy theories (Turner, 1993; Crocker, Luhtanen, Broadnax, & Blaine, 1999; Simmons & Parsons, 2005). Additionally and in a wider context, Bruder and his colleagues (2013) showed that conspiracy mentality, meaning people's tendency to engage in conspiracy beliefs, varies across cultures. In their large-scale study and at a cross-cultural level, Turkish participants showed a higher propensity to believe in conspiracy theories than participants from Western countries, namely, German, American, English and Irish participants, while these showed no systematic differentiation in their conspiracy mentality (Bruder et al., 2013). This finding proved consistent with suggestions that conspiracy beliefs are particularly widespread in the Middle East (Pipes, 1998; Gray, 2010). In a similar vein, a number of findings point

out that subcultures within national groups are differently prone to belief in conspiracy theories. As an example, in the US, the African American and Latin communities were found more susceptible to engage in the conspiracist belief that HIV was spread in order to extinguish specific ethnic groups (Ross et al., 2006). Within this frame and opting to broaden our field of research, we have chosen participants between two different cultures, thus aiming to investigate the differences in conspiracy mentality between Dutch and Greek people.

A point of inspiration for deciding first on a Greek sample and concomitantly on a Dutch sample was the speech of George Papandreou at the World Economic Forum in Davos (2010). The former Greek Prime minister seemed openly prone in to conspiracy theories when he stated:

"This is an attack on the Eurozone by certain other interests, political or financial, and often countries are being used as the weak link, if you like, of the Eurozone. We are being targeted, particularly with an ulterior motive or agenda, and of course there is speculation in the world markets".

As per the prime minister's statement, the Greek economic crisis' explanation seemed to stem out of a conspiracy against the Eurozone and Greece in particular instead of a factual and reasoned report (The Economist Online, 2010). Unfortunately, a vast majority of Greeks falls into the same category as the prime minister. According to a poll conducted by the University of Macedonia in Greece (2014) a 75.3% of the Greek population believed that the crisis in Greece was orchestrated by economic interests outside Greece (E-Kathimenrini online, 2014).

Undoubtedly, this Greek conspiratorial mindset did not exist in a vacuum, but the last ten years of harsh economic recession, – a most impactful and distressing event – created the most fertile grounds for it to flourish. Inflated consumer prices, increased

taxation, imposition of an austerity regime, reduced to half incomes, social welfare dismantled, high unemployment rates especially among youth causing a new wave of emigration, brought great societal discomfort (Petrova, 2017; Matsaganis, 2013). The economic crisis became a societal crisis with important ideological and political implications affecting institutional practices, party formations, the national discourse and national self-image but also patterns of behavior and popular attitudes (Vasilopoulou, Halikiopoulou, & Exadaktylos, 2014). Amidst generalized feelings of uncertainty, powerlessness, stress and stigmatization, the concepts of a 'foreign occupation' and of an external enemy blamed for the economic and social consequences of the crisis were shaped; it was expressed as an anti- German discourse using memories and symbols of the Second World War, of Nazism and of Nazi occupation of Greece. Pre- existing stereotypes and belief systems of the perception of Germany and historical expressions of Greek nationalism were evident, retrieved and recycled because of the financial crisis (Lialiouti & Bithymitris, 2013). A new Greek collective narcissism can be traced in the angry words of the Greek President of Democracy, Karolos Papoulias, genuinely considered a moderate and calm politician, in February 2012. The following statement was his answer to German and some EU members' warnings about Greece testing Europe's patience and to their pressure for Greek elections to be postponed:

"We all have a duty to work hard to get through this crisis... I will not accept Mr Schäuble insulting my country. I don't accept this as a Greek. Who is Mr Schäuble to insult Greece? Who are the Dutch? Who are the Finns? We always had the pride to defend not only our own freedom, not only our own country, but the freedom of Europe" (Spiegel Online, 2012).

The above reference to the "Dutch" is explicable because Dutch politicians gave similar warnings to Greece especially during the Dutch presidency at the committee surveying the set economic policy conditionality between Greece and its EU creditors. Moreover, a nationalistic, condescending rhetoric against "the lazy and careless with money Greeks (and the rest problematic Southerns)" was building up in the strong Northern EC members. Certainly, signs of the 2008 economic crisis were evidenced in the Netherlands too: a sharp drop of almost 4% in GDP in 2009 and more modest drops in 2012 and 2013, a continuous drop of investment until 2013, declines in production or sales, in particular construction, retail and industry, while several banks and insurance companies either collapsed (DSB), split up and got nationalized (ABN-AMRO, SNS REAAL) or subsided (ING). Yet, the Netherlands continuously recorded a large trade surplus (35.3 billion euros in 2009 and 47.5 billion euros in 2015) and its traditionally strong international competitive position was not affected by the crisis. Equally, the unemployment rate has been and still is relatively limited compared with most other EU countries (Lehndorff, Dribbusch & Schulten, 2017).

We can therefore conclude that although Netherlands was also hit by the 2008 economic crisis, the impact of the financial pressures was not as harsh as in Greece. In fact, compared to other Eurozone countries facing similar financial pressures such as Ireland, Portugal, Spain, Cyprus and Italy, Greece has presented the most problematic case (Vasilopoulou et al., 2014)

Using Becker and Jäger's description of the EEC in crisis (2011), "the coreperiphery divide", *a central feature of the crisis*", Netherlands and Greece perfectly represent the two ends of this divide. Netherlands' strong economic condition allowed to play together with Germany an important role in the Eurozone crisis (Hübner, 2012), while Greece has been described as the weakest link in the Eurozone crisis (Kutlay, 2011).

This may indicate that the Dutch are a more "in control" and stable society, not experiencing feelings of uncertainty, powerlessness or lack of control, but only a limited collective narcissism emanating from a perception of superiority against poorer countries. On the other hand, a Greek sample may be representative of a society afflicted by feelings of uncertainty, powerlessness or lack of control and indications of a collective narcissism particularly against the strong economy countries. Under this prism and in light of previous findings, we expect that participants scoring higher on the uncertainty, collective narcissism and powerlessness scales will be more prone to believe in conspiracy theories. In addition, we hypothesize that the Greek sample will score higher on the uncertainty, collective narcissism and powerlessness scale and as result will endorse stronger conspiracy beliefs than the Dutch sample.

#### Method

# **Participants**

The study participants consisted of a total of 210 students from Greece and the Netherlands. There were 86 Greek participants and 130 Dutch participants. Dutch participants were students of Tilburg University and were recruited from the departmental student pool. On the other hand, the majority of the Greek sample was found at the Greek National Library. The researcher handed them a tablet with the questionnaire and stayed away from the participants until they finished completing it. A small part of Greek participants was also selected using the Internet through different sites, through social networking sites, online groups and forums, and links in relevant articles of mainstream media outlets.

Participants' ages ranged from 18 to 44, 80% were on the range of 18-24 years old, 18,5% were on the range of 25-34 years old. There were 146 females, 61 males and 3 preferred not to say. 48% of the participants were high school graduates, 18.6% of them had some college education, 15,2% had four-year college degree, 9% had a professional degree and 7.6% had two years in college (See Table 1).

## Design

The research design of this study was correlational. The predictor variables were subjective uncertainty, collective narcissism and powerlessness investigated into two different cultural contexts, namely a Greek and a Dutch sample. The dependent variable was belief in conspiracy theories.

#### **Procedure**

At the beginning of the experiment, participants were presented with an inform consent form including both a brief description of the researcher and a confirmation that their participation is only voluntary, with the right of anonymity and of withdrawal at any given point they decide. Upon agreement, participants were presented with the questionnaires, measuring uncertainty, powerlessness, collective narcissism and conspiracy theory beliefs.

After completion, participants were presented with a demographics section, a debriefing form indicating the purpose of the study, contact information and a section for comments related to the study (see Appendix E & Appendix F). The order of the scales was random, except for the Conspiracy Belief Scale, which was only presented last. The scale was presented last because answering the scale in the beginning might have given out the purpose of the experiment or influenced the following answers.

#### **Materials**

Conspiracy theory beliefs. To measure conspiracy theories beliefs participants were presented with the single-item Conspiracy Belief Scale produced by Lantian, Muller, Nurra, & Douglas (2016; see Appendix A). The single-item Conspiracy Belief Scale measures people's tendency to believe in conspiracy theories in a valid psychological and behavioral setting by asking participants to indicate on a 9-point Likert-Scale the extent to which they agree with the statement "I think that the official version of the events given by the authorities very often hides the truth" after reading a passage indicating that the "official version" of some political and social events might be hidden from the public by powerful individuals or organizations.

Collective Narcissism. The Collective Narcissism Scale (Golec de Zavala, Cichocka, Eidelson & Jayawickreme, 2009; see Appendix B) was used to assess participants' "belief in the in-group's greatness and lack of its proper recognition". To assess such beliefs participants were asked to answer 9 items (e.g. "I wish other groups would more quickly recognize the authority of my group; "My group deserves special treatment") and indicate their agreement on a 6-point scale (1 = I strongly disagree and 6 = I strongly agree).

Subjective uncertainty. To assess subjective uncertainty the Intolerance of Uncertainty Scale – Short form (IUS-12; Carleton, Norton, & Asmundson, 2007; see Appendix C) was used. The items on the scale measure responses to uncertainty, to future and to ambivalent situations while participants are asked to rate on a 5-point Likert Scale, the extent to which statements such as "Uncertainty keeps me from living a full life" and "The smallest doubt can stop me from acting" characterize them.

**Powerlessness.** To assess powerlessness the Neal and Rettig's (1963)

Powerlessness Scale was used (Neal & Groat, 1974; see Appendix D). This 10 items scale measures expectations for control over the results of political and economic events, with the participants responding on a scale from 1 (*strongly agree*) to 4 (*strongly disagree*). Relative examples are items stating, "The world is run by the few people in power" and "there is not much the little guy can do about it" or "The average citizen can have an influence on government decisions".

#### Results

To test our hypothesis that participants scoring higher on the uncertainty, collective narcissism and powerlessness scales will be more prone to believe in conspiracy theories we conducted a bivariate correlation. First, results of the Pearson correlation revealed a positive correlation between conspiracy theory beliefs and subjective uncertainty, r(210) = 0.286, p < .001. Second, conspiracy theory beliefs and collective narcissism indicated that there was a significant positive association, r(210) = 0.257, p < 0.001. Last, there was a significant negative correlation between conspiracy theory beliefs and powerlessness, r(210) = -0.158, p = 0.02 (see Table 2). An independent samples t-test was also conducted to compare uncertainty, collective narcissism, powerlessness and conspiracy theory belief scales in Greek and Dutch conditions. There was a significant difference in the uncertainty scores for Greek participants (M= 3.36, SD= 0.798) compared to Dutch (M= 2.95, SD= 0.703), t(209)= 3.89, p< 0.001. In addition, significant higher scores were found on the powerlessness scale for the Greek sample (M= 2.17, SD= 0.479) than the Dutch (M= 2,50, SD= 0.388), t(141) = -6.01, p<0.001. Scores on the conspiracy theory belief scale were significantly higher for Greek (M= 6.96, SD= 1.84) than Dutch participants (M= 5.48,

SD= 1.93), t(176)=5.565, p<0.001. Scores on the collective narcissism scale were not significantly different for Greeks (M=2.92, SD= 0.986) compared to Dutch (M= 2.78, SD= 0.791), t(142)=1070, p=0.286.

Table 3.

t-test Results Comparing Greeks and Dutch.

	Greeks		Du		
	M	SD	M	SD	<i>t</i> -test
Uncertainty	3.31	.79	2.95	.70	3.89**
Conspiracy Theory Beliefs	6.96	1.84	5.48	1.93	556**
Collective					
Narcissism	2.92	.98	2.78	.79	1070
Powerlessness	2.17	.47	2.55	.38	-6.01**
1 Owellessiless	2.17	.47	2.55	.50	-0.

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed)

To test whether the high scores of subjective uncertainty, powerlessness and collective narcissism mediated the higher scores of conspiracy theory beliefs for Greek participants a mediation analysis was also conducted. There were three sets of regression tested so as each set to investigate mediation of the relationship between nationality and conspiracy theory beliefs by one of the three variables. Again and as per standard procedures, each mediated model was tested in three steps (Baron & Kenny, 1986; Warner, 2008).

At the first step, associations of the independent variable (nationality) with the possible mediators (uncertainty, collective narcissism and powerlessness) were tested. Nationality was found able to significantly predict only uncertainty (F(44,165)=1.516, p=0.033) and powerlessness (F(23,186)=2.633, p<0.001). Therefore, collective narcissism was dropped from the next steps of examinations, F(32,178)=1.034, p=0.034

<sup>\*.</sup> Correlation is significant at the 0.05 level (2-tailed)

0.426 (see Table 4).

Table 6.

At the second step, the dependent variable (conspiracy theory beliefs) was regressed on the possible mediators (uncertainty & powerlessness). The two sets of regression demonstrated that only uncertainty had a significant positive relationship with conspiracy theory beliefs, F (44,165)=2.065, p= 0.001. Therefore, powerlessness was dropped from the next step of the examination, F(44,166)= 1.516, p= 0.366 (see Table 5).

At the third step, the association of nationality and conspiracy theory beliefs when uncertainty was added to the equation resulted in uncertainty remaining a significant predictor, F(44, 164) = 1.828, p = 0.004 (see Table 6). Therefore, uncertainty can be considered as partially mediating the relationship, indicating that there is not a direct effect and that other factors may underlie the observed association.

Testing for Uncertainty as Mediator for Conspiracy Theory Beliefs

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	F	Sig.				
Uncertainty	1.82	0.004*				
Nationality	15.91	0.000**				

Note: Dependent Variable Conspiracy Theory Beliefs

#### **Discussion**

In this study we aimed to investigate some of the mediators of conspiracy beliefs for a sample of different cultural contexts participants, namely Dutch and Greek students. More specifically, we have explored the relation between the factors of uncertainty, powerlessness, collective narcissism and conspiracy beliefs.

Regarding the study's first hypothesis, where participants scoring higher on the uncertainty, collective narcissism and powerlessness scales were hypothesized to be more prone to believe in conspiracy theories, results were found consistent. More specifically, all three hypothesized mediators indicated a strong correlation with higher belief in conspiracy theories. As for the study's second hypothesis, where the Greek sample was hypothesized to score higher on the uncertainty, collective narcissism and powerlessness scales and as a result would endorse stronger conspiracy beliefs than the Dutch sample, results confirmed that overall Greeks scored higher than the Dutch on all scales but the mediation analysis demonstrated that their high score in conspiracy beliefs cannot be solely attributed to those three variables. The results of the analysis have not revealed collective narcissism or powerlessness as significant predictor variables and mediating higher scores on conspiracy theory beliefs for the Greek than the Dutch sample. Uncertainty was found the only factor that can partially explain the association of Greek participants to higher conspiracy beliefs.

Hence, mediation analysis results advocate that various other factors which might have explained Greek participants' higher endorsement of conspiracist beliefs were not included and investigated here. As an example, the work of Crocker and his colleagues showed that in the cases where political powerlessness derives from disadvantage and discrimination, it may not account for conspiracist beliefs, namely as shown with belief in American government conspiracies against African Americans (Crocker, Luhtanen, Broadnax, & Blaine, 1999). Rather, this belief in conspiracies may mirror an externalisation of problems African Americans face as a group, what Crocker and colleagues call a 'system blame' interpretation (1999). In the case of the Greeks also, conspiracist beliefs may be rooted in attributions of blame against their European partners that currently but also historically have disadvantaged and discriminated

Greece. Again, in the last ten years of economic recession, many of its European partners emphatically made a scapegoat out of Greece pointing it as the main responsible for any crises in the EEC. Undoubtedly, due to the economic recession with all its critical implications (Vasilopoulou, Halikiopoulou, & Exadaktylos, 2014), the Greek sample experienced a great loss of control over their social environment and their lives, which could explain their higher scores in powerlessness compared to the Dutch sample. Similarly for collective narcissism, the Greek sample's higher scores are understandable since among all other EEC members, Greece suffered a longer and harsher impoverishment while was targeted by the international media as the principal reliable of this deterioration (Vasilopoulou et al., 2014). Yet, factors such as the "system blame" interpretation, or participants' political beliefs (support for democratic principles) or political cynicism and attitudes to authority (Swami et al., 2010; Swami, 2012; Swami and Furnham, 2012), or personal characteristics (the 'Big Five' personality factors; Swami et al., 2010; 2011), the individual difference (anomia, low levels of interpersonal trust, feelings of social and political alienation, and perceptions of being disadvantaged; Goertzel, 1994; Abalakina-Paap et al., 1999; Crocker et al., 1999) and strong socio-political and religious ideologies (Byford, 2011; Furnham, 2013; Oliver & Wood, 2014) that have not been taken into account here may have annulated powerlessness and collective narcissism as significant predictors for the Greek higher belief in conspiracy theories.

Keeping in mind the disadvantaged position of Greece inside the larger

European Community, this evidence can also be consistent for the interpretation of
higher uncertainty scores of the Greek sample and uncertainty's mediation to their
higher belief in conspiracies when compared to the Dutch sample. In a broad
theoretical platform, the present findings reaffirm the results of previous studies about

people's need to reduce uncertainty and restore understanding of their environment (Douglas, Sutton, & Cichocka, 2017, Bale, 2007) by eliciting a sense-making process leading to conspiracist beliefs (Park, 2010; van den Bos, 2009; Newheiser et al., 2011). In essence, this sense-making process seeking causal explanations which may reduce uncertainty has been indicated as a central ingredient of belief in conspiracy theories (Hofstadter, 1966; Bale, 2007; Van Prooijen & Van Dijk, 2014). Relatedly, societal and economic crises are also proven to bring forth conspiracy scenarios (Oliver & Wood, 2014) as they are also linked to high uncertainty.

We had only relied on validated scales to measure conspiracy beliefs and factors. For example, conspiracy beliefs have been frequently measured in the context of fabricated scenarios or events (Newheiser et al., 2011; van Harreveld et al., 2014; Van Prooijen & Van Dijk, 2014; Whitson & Galinsky, 2008), or similarly lack of control (in this case powerlessness and uncertainty) by asking participants to describe an event where they felt (or would possibly feel) or not in control (Rothschild, Landau, Sullivan & Keefer, 2012; Sullivan et al., 2010). In a different approach, participants here indicated the degree of their uncertainty, powerlessness, collective narcissism and of course of their belief in conspiracy theories that closer corresponded to the items of the relative scales. From the point of view of practicality and since the study investigated the link of not one but three predictors of belief in conspiracy, the use of scales rendered the study easier to complete for the participants.

In the theoretical frame of previously discussed compensatory conviction (McGregor & Marigold, 2003), the three factors here investigated have been already and thoroughly researched separately in their relation to conspiracy beliefs. Yet, this study not only includes simultaneously three core factors to conspiracy beliefs but also uses participants from different cultural settings. As previously stated, studies have

already shown that subcultures within national groups are differentially prone to conspiracist theories (Ross et al., 2006). Few studies provided insight on belief in conspiracy theories and its association to the individual psychological differences among participants of different ethnicity (Swami, 2011; Swami, 2012; Swami et al., 2013). Undoubtedly, the international study for the validation of the Conspiracy Mentality Questionnaire (CMQ) of Bruder and his colleagues provided an extensive cross-cultural presentation of individual characteristics and cultural factors interacting with belief in conspiracy theories (2013). Future research would benefit from larger samples of different cultures participants taking into account personality and individual differences, political positions, ideological variables, self-perceived wealth, optimism-pessimism, and social and political alienation.

This study, despite the use of two different cultures faces the limitation of young age samples that do not allow generalizations for either the Greeks or the Dutch of older age. We also consider a limitation the use of English language and not of participants' mother tongue in our study's questionnaire; a different language version questionnaire correspondent to the participant's language (as used in Bruder et al., 2013) would have excluded any confusions of meaning possibly leading to unintentionally wrong answers. In the Dutch sample, the female participants are importantly more than the male participants. Yet, in line with Darwin et al.'s (2011) findings that do not support systematic sex differences in conspiracy mentality, we do not consider this a limitation of the study. Nevertheless, there are suggestions that women may be more prone to believe in conspiracy theories than men (Abalakina-Paap et al., 1999). This may be due to their disadvantaged position in many societies and powerless individuals and groups are more susceptible to conspiracy beliefs (Abalakina-Paap et al., 1999). Furthermore, women are more likely to believe in

paranormal phenomena (Irwin, 1993), a tendency that in itself is linked to higher conspiracy beliefs (Darwin et al., 2011). If this is the case, the larger number of women participants might have nuanced the results of the Dutch sample and such samples' gender deviations should be avoided in future studies.

#### **Conclusion**

Belief in conspiracy theories is an eminent and global characteristic of contemporary culture. Conspiracy theories aided by the ease and speed of Internet communication disseminate and proliferate (Coady, 2006) in a substantial portion of the populations. The contribution offered by the current and related studies is to illuminate the underlying mental processes and underlying factors of belief in conspiracy theories but hopefully provide insight of how this can be attenuated. Conspiracist ideation has been proven harmful to health (Jolley & Douglas, 2014; Lamberty & Imhoff, 2018), to people's interpersonal relationships (Harambam & Aupers, 2015; Lantian, Muller, Nurra, Klein, Berjot, & Pantazi, 2018), to political and environmental awareness and prosocial behavior (Goertzel, 1994; Jolley & Douglas, 2014; Douglas & Sutton, 2015; Van der Linden, 2015). It is therefore the important task of policy makers to use these findings in order to implement strategies to responsibly influence the behavior of citizens. Promoting feelings of security and a sense of empowerment among the public have proved to reduce conspiracy beliefs (Van Prooijen and Acker 2015) as well as the cultivation of analytic and critical thinking do (Swami et al., 2014; Douglas et al., 2016). Since conspiracy beliefs are particularly prevalent among stigmatized minority groups (Crocker et al., 1999; Davis et al., 2018), reducing prejudice and discrimination are also likely to decrease these beliefs. It is our hope that adequate policy interventions will stem from all above referred literature's precious considerations.

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Table 1.

**Tables** 

Frequencies and Percentages for the Demographic Characteristics of Participants

Variable	N	%
Nationality		
Dutch	130	60.2
Greek	86	39.8
Gender		
Male	61	29
Female	146	69.5
Prefer not to say	3	1.4
Age		
Under 18	2	0.9
18 - 24	169	80.1
25 - 34	39	18.5
35 - 44	1	0.5
Education		
High School Graduate	102	48.6
Some College	39	18.6
2 year Degree	16	7.6
4 year Degree	32	15.2
Professional Degree	19	9.0
Doctorate	2	1.0

Table 2.

Correlations Between the Scales				
Measure	1	2	3	4
1. Conspiracy Theory Beliefs	_			
2. Collective Narcissism	.000**	_		
3. Uncertainty	.000**	.000**	_	
4. Powerlessness	.022*	0.032*	.000**	_

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed)

Table 4.

Association of the Independent Variable with Possible Mediators

	F	Sig.
Uncertainty	1.51	0.033*
Collective Narcissism	1.034	0.426
Powerlessness	2.63	0.000**

Note: Dependent Variable Nationality

<sup>\*.</sup> Correlation is significant at the 0.05 level (2-tailed)

Table 5.

Association of the Possible Mediators with Conspiracy Theory Beliefs

	F	Sig.
Uncertainty	2.06	0.000**
Powerlessness	1.08	0.36

Note: Dependent Variable Conspiracy Theory Beliefs

# Appendix A

# Single – Item Conspiracy Belief Scale

#### English version

Some political and social events are debated (for example 09/11 attacks, the death of Lady Diana, the assassination of John F. Kennedy). It is suggested that the "official version" of these events could be an attempt to hide the truth to the public. This "official version" could mask the

fact that these events have been planned and secretly prepared by a covert alliance of powerful individuals or organizations (for example secret services or government). What do you think?

To answer, please indicate to what extent the sentence below represents how you think about this:

	(	Completely false			Co	Completely true			
	1	2	3	4	5	6	7	8	9
I think that the official version of the events given by the authorities very often hides the truth									

# Appendix B

## Collective Narcissism Scale

- 1. I wish other groups would more quickly recognize authority of my group.
- 2. My group deserves special treatment.
- 3. Not many people seem to fully understand the importance of my group.
- 4.I insist upon my group getting the respect that is due to it.
- 5.It really makes me angry when others criticize my group.
- 6.If my group had a major say in the world, the world would be a much better place.
- 7. I do not get upset when people do not notice achievements of my group. (reversed)[1]
- 8. The true worth of my group is often misunderstood.
- 9.I will never be satisfied until my group gets the recognition it deserves.

# Appendix C

Intolerance of Uncertainty Scale – Short form

# Intolerance of Uncertainty Scale - Short Form

(Carleton, Norton, & Asmundson, 2007)

E .	Please circle the number th	at best corres	ponds to how	much you agr	ee with eac	
		Not at all	A little	Somewhat	Very	Entirely
		cnaracteristic of me	characteristic of me	cnaracteristic of me	characteristic of me	cnaracteristic of me
		me	ille	me	me	1116
1. Unfore	seen events upset me greatly.	1	2	3	4	5
	rates me not having all the nation I need.	1	2	3	4	5
3. Uncert	ainty keeps me from living a e.	1	2	3	4	5
	nould always look ahead so as pid surprises.	1	2	3	4	5
	Il unforeseen event can spoil thing, even with the best of ing.	1	2	3	4	5
	it's time to act, uncertainty yses me.	1	2	3	4	5
7. When very	l am uncertain I can't function well.	1	2	3	4	5
8. I alway	s want to know what the future store for me.	1	2	3	4	5
9. I can't	stand being taken by surprise.	1	2	3	4	5
	mallest doubt can stop me acting.	1	2	3	4	5
11. I shou	ıld be able to organize thing in advance.	1	2	3	4	5
	t get away from all uncertain	1	2	3	4	5

## Appendix D

#### Powerlessness Scale

- 1. A lasting world peace can be achieved by those of us who work toward it. (Reversed scoring).
- 2. This world is run by the few people in power, and there is not much the little guy can do about it.
- 3. There's very little that persons like myself can do to improve world opinion of the United States.
- Wars between countries seem inevitable despite the efforts of men to prevent them.
- 5. The average citizen can have an influence on government decisions. (Reversed scoring).
- 6. People like me can change the course of world events if we make ourselves heard. (Reversed scoring).
- 7. More and more, I feel helpless in the face of what's happening in the world today.
- 8. I think each of us can do a great deal to improve world opinion of the United States. (Reversed scoring).
- 9. It is only wishful thinking to believe that one can really influence what happens in society at large.
- 10. There's very little we can do to keep prices from going higher.

# Appendix E

# Study: 'Personal Preferences and Society'

You have been invited to participate in an online study of the department of Social Psychology at Tilburg University. This study has been approved by the Ethics Review Board. Before you begin, we kindly ask you to read this form carefully and sign for consent.

We would like to ask you to volunteer to participate in an online study. This study consists of multiple questionnaires that cover a variety of topics, including personal and group preferences, your attitude towards uncertainty, and your interpretation of political and social events. We will also ask for your demographics information such as age and gender.

The study will take about 10 minutes to complete. [For your participation, you will receive 0.5 course credit.]<sup>1</sup>

You have the right to decline to participate and withdraw from the research once participation has begun, without any negative consequences, and without providing any explanation.

Sleegers	<b>5.</b>					
Please c	ontact the principa	l investigator bef	ore particip	oating in the	study if you	have
any ques	stions about the inf	ormed consent. A	After partic	ipating, you	can contact t	the

If you have have any questions, you can contact the principal investigator W.W.A.

Your data will be anonymized. There will be no record that links the data collected from you with any personal data from which you could be identified (e.g., your name, address, e-mail, etc.). Once anonymized, these data may be made available to researchers via accessible data repositories and possibly used for novel purposes. Your

After completing this study you will learn the motive behind the study.

principal investigator with questions about the study.

anonymized data will be stored for at least 10 years.

If you have any remarks or complaints regarding this research, you may also contact the Ethics Review Board of Tilburg School of Social and Behavioral Sciences.

By clicking 'Next' you indicate that you have read the informed consent and that you agree to participate in the study.

# Appendix F

#### **Debriefing**

Thank you for participating in this study. You helped contribute to our understanding of human behavior.

In this study we measured a variety of preferences and attitudes. We were mainly interested in your interpretation of political and social events, and whether you believe that the official version provided by authorities often hides the truth. We conduct the present study in both a Dutch and Greek sample. One of our goals is to see whether Dutch people and Greek people differ in the extent to which they believe authorities hide the truth about political and social events. In case we find such a difference, we aim to explain this difference with the other questionnaires you filled in. Research has shown for example that preferences for uncertainty and some personal and group preferences may be related to whether people are more or less likely to trust authority figures.

If you'd like to know more about the study, you can contact the principal researcher: Willem Sleegers.

Finally, thank you for your participation!