

# Defining and Explaining Conspiracy Theories: Comparing the Lay Representations of Conspiracy Believers and Non-Believers

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**Supplementary Materials:** Data, Materials, Preregistration [see Index of Supplementary Materials]



## Abstract

Despite a growing literature on the topic, little is known about how individuals perceive the label “conspiracy theory”. In two studies, we compare social representations of conspiracy theories, and how these are influenced by individuals’ own conspiracy beliefs. In addition, we examine how these representations relate to how scholars define and explain conspiracy theories. In Study 1, we used lexicometric analysis to explore the vocabulary that French participants ( $n = 939$ ) spontaneously associated with the notion of ‘conspiracy theory’ and the personal definitions they provided. The representation of participants scoring high on the generic conspiracist beliefs scale was centred on the content of conspiracy theories (e.g., “lies” or “government”). By contrast, the representation of participants scoring low on the conspiracist beliefs scale was centred on the believer (e.g., “paranoia” or “cognitive biases”). They proposed definitions of conspiracy theories centred on the function(s) conspiracy theories supposedly fulfil for the believer (e.g., simplify complex realities). To make sure that these results did not merely express participants’ endorsement or rejection of conspiracy theories, we carried out a second study. In Study 2 ( $n = 272$ ), we found that the more participants endorsed generic conspiracist beliefs, the less they mobilised intra-individual causes (e.g., reasoning biases) to explain why some people believe in conspiracy theories that they did not endorse themselves. This research shows that people’s representations of conspiracy theories differ depending on their conspiracy beliefs.

## Keywords

conspiracy theories, social representations, lexicometric analysis, lay explanations, lay definitions

The media coverage of conspiracy theories (CTs) has drastically increased over the past few years: On Factiva (Johal, 2009; using the following keywords: “conspiracy AND theor\*”), 3,018 articles included “conspiracy theory” in their title in 2021, compared to 606 in 2011. Nowadays, CTs draw attention from the public (e.g., Ifop, 2020), political authorities (éduscol, 2019), and academics alike (for reviews, see Butter & Knight, 2020; Douglas et al., 2019). This generalised interest in CTs is not surprising, given the deleterious consequences of these beliefs in various domains (Jolley et al., 2020a). The topic became even more prominent recently, as the COVID-19 pandemic came with its share of CTs regarding – among other topics – vaccines (e.g., Bertin et al., 2020).



In this research, we pursue two goals. First, we investigate lay representations of the notion of “conspiracy theory”, and how individuals’ level of conspiracy beliefs elicits divergent representations. Indeed, past research suggests that individuals’ conspiracy beliefs affect how they perceive the label “conspiracy theory” (Nera et al., 2020). Second, we put these representations in perspective with how social scientists define CTs and explain why some people believe in them. With regard to the latter, we specifically examine how conspiracy beliefs influence the categories of causes (i.e., individual vs. societal) that individuals tend to mobilise to explain why some people believe in CTs.

For this purpose, we first review how social scientists define and explain CTs. We propose to distinguish definitions that encompass epistemological features (e.g., the notion that CTs tend to be poorly substantiated) from those that do not. As for the potential causes of CTs, based on the categories proposed by Wagner-Egger (2021), we propose to partition them in three broad categories: intra-individual (e.g., paranoia, cognitive biases), intergroup (e.g., prejudice, intergroup threat), and societal (e.g., economic inequalities, actual dysfunctions in the political system). To investigate lay representations of CTs, we mobilise social representation theory (SRT; Moscovici, 1961).

## How Social Scientists Define Conspiracy Theories

In a popular definition, Keeley (1999) proposed that CTs can be defined as “proposed explanation of some historical event (or events) in terms of the significant causal agency of a relatively small group of persons – the conspirators – acting in secret” (p. 116). Similarly, Douglas et al. (2019) proposed that CTs may be defined as “attempts to explain the ultimate causes of significant social and political events and circumstances with claims of secret plots by two or more powerful actors” (p. 4).

Such definitions do not encompass any epistemological features, that is, features that make CTs unwarranted compared to other explanations. Other authors proposed definitions encompassing such features (e.g., Brotherton, 2013; see also Keeley, 1999, who distinguished CTs from *unwarranted* CTs). For instance, Brotherton (2013) proposes that CTs are 1) unfalsifiable in nature, 2) rejected by institutional experts, 3) less plausible than conceptually more parsimonious explanations, and that they depict conspirators as 4) preternaturally potent and 5) malevolent. While such a definition does not take position regarding whether CTs are necessarily false, it implies that CTs, as a general category of beliefs, are intrinsically flawed. Hence, definitions of CTs can vary depending on whether they construe CTs as intrinsically flawed or not.

## How Social Scientists Explain Conspiracy Theories

Regardless of how researchers define CTs, empirical research suggests that the endorsement of CTs is a biased and motivated process. Based on the five categories put forward by Wagner-Egger (2021, i.e., psychopathological, irrational, social, sociopolitical, and informational), we propose that belief CTs can be explained by three categories of causes, grounded in increasingly broad levels of analyses (Doise, 1982): intra-individual (collapsing cognitive biases, irrational beliefs, and psychopathological causes), intergroup, and societal.<sup>1</sup>

At the intra-individual level, research suggests that conspiracy beliefs are associated with – and may be in part caused by – psychopathological traits, irrational beliefs, and cognitive biases. Indeed, CT beliefs are for example predicted by schizotypy (e.g., Brotherton & Eser, 2015), paranoia (for a meta-analysis, see Imhoff & Lamberty, 2018), and state anxiety (Wagner-Egger & Bangerter, 2007). Moreover, CTs are also robustly associated with paranormal beliefs (Barron et al., 2018) and a number of cognitive biases (e.g., Brotherton & French, 2014; Douglas et al., 2016; Wagner-Egger et al., 2018).

At the intergroup level, CTs have been described as a “a maladaptive *us versus them* reasoning” (van Prooijen & van Lange, 2014, p. 238) motivated by feelings of intergroup threat (Bilewicz et al., 2013; Uscinski & Parent, 2014; van Prooijen & van Lange, 2014). Indeed, CTs are associated with prejudice against a variety of groups (Jolley et al., 2020b) and willingness to discriminate against allegedly conspiring minorities (e.g., Bilewicz et al., 2013). CTs are also associated with prejudice against powerful groups (e.g., bankers or capitalists, Imhoff & Bruder, 2014).

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1) Note that the classification proposed by Wagner-Egger (2021) also includes informational causes (e.g., the role of social media). For the sake of brevity, and because this category of causes is less relevant to the analysis of our empirical data, we will not unpack this category of causes.

At an even broader level, some structural features of societies likely fuel citizens' susceptibility to believe in CTs. Economic inequality, for instance, has been shown to be robustly associated with belief in CTs. Indeed, people tend to report a stronger endorsement of conspiracy beliefs in countries with important economic inequalities (as captured by the GINI coefficient, Imhoff et al., 2022; Wagner-Egger, 2021). Casara et al. (2022) provided evidence for causality, as an experimental induction of inequalities perception drastically enhanced belief in CTs.

Other societal causes pertain to the perception of the political system. CT beliefs are associated with feelings of loss of political control (Kofta et al., 2020), distrust of political authorities (Nera et al., 2021; Wood et al., 2012), and feelings of anomie (e.g., Brotherton et al., 2013; Swami et al., 2010; Wagner-Egger & Bangerter, 2007). In this regard, it is worth noting that CTs are susceptible to thrive on actual dysfunctions of the political system (Imhoff, 2022). Indeed, it is highly plausible that real instances of political manipulations or public health scandals (e.g., in France, the contaminated blood or Depakine scandals) foster distrust of authorities in the population, which in turn facilitates the endorsement of CTs.

### Confronting Lay and Expert Representations of Conspiracy Theories: Social Representations Theory

In this research, we examine how laypeople define and explain CTs, and how participants' features (and specifically, their conspiracy beliefs) are associated with different representations. To elaborate these lay perceptions of CTs, we rely on social representation theory (SRT, Moscovici, 1961) – which is a relevant tool to investigate CTs (Franks et al., 2013; Moscovici, 1987, 2020).

Social representations consist of socially shared naive knowledge about any topic (Jodelet, 1984). Social representations are created, shaped, and shared through social interactions. This is possible thanks to practices such as education, traditions, or communication (Moscovici, 2013). With regards to CTs, social representations can be shaped, for instance, through informal discussions on social media. Social representations allow people to view as ordinary what is strange or disturbing (Bauer & Gaskell, 1999). They fulfil the human need to control their social environment (Moscovici, 1961). As such, social representations are grounded in individuals' social environment and pre-existing knowledge. For example, due to their pre-existing beliefs, people who endorse CTs might construe the label “conspiracy theory” as a rhetorical weapon used by the elites to silence dissent (Nera et al., 2020).

SRT is relevant to our line of investigation for three reasons. First, SRT is particularly relevant to study the relationships between expert and lay knowledge. In fact, Moscovici (1961) proposed that social representations consist of expert knowledge, transformed into lay representations through the intertwined socio-cognitive processes of objectification (i.e., the creation of a concrete image out of an abstract concept) and anchoring (i.e., the grounding of new information in pre-existing knowledge, values and norms, Jodelet, 1984; Licata et al., 2006).

Second, as said earlier, belief in CTs can be explained by both intra-individual and social (i.e., intergroup, societal) mechanisms. SRT is specifically useful in understanding the links between individuals' cognitive functioning and the social meta-system in which people interact (Doise et al., 1993). Therefore, the holistic approach of SRT, that articulates the individual functioning with broader social dynamics, appears adequate to comprehend the complexity of CTs.

Finally, SRT is particularly adapted to the study of polemical objects (i.e., a complex and/or socially sensitive object, Kalampalikis & Apostolidis, 2021). Because they are scientifically controversial, politically polemical, and non-consensual in nature, CTs are a social object in tension, likely to elicit a wide variety of potentially conflicting representations (Nera et al., 2020).

### Research Overview

In this research, we investigate and compare lay representations of CTs. To do so, in Study 1, we analyse the vocabulary that individuals spontaneously associate with the notion, and the personal definitions they provide. Moreover, we examine how these representations are influenced by participants' own conspiracy beliefs. Indeed, Nera et al. (2020) have shown that conspiracy beliefs are associated with polemical social representations (i.e., antagonistic representations of the same social object grounded in intergroup conflict, Moscovici, 1988). Specifically, CT believers tend to reject the label “conspiracy theory” and to view it as a rhetorical weapon. We further this line of research by examining the specific content of these representations – which remained uninvestigated in Nera et al. (2020).

Second, we examine how these lay representations of CTs relate to scientific research. We put lay definitions of CTs in perspective with academic definitions. In addition, we examine how lay representations relate to the different categories of causes of CT beliefs identified in research (intra-individual, intergroup, and societal). In Study 2, we examine the types of causes (i.e., intra-individual vs. societal) individuals tend to mobilise when explicitly asked to explain why some people believe in CTs that they do not personally believe in (see [Supplementary Materials](#) for detailed information about the data and analyses for both studies).

## Study 1

### Method

#### Participants

Participants were recruited online in September 2019 via social networks. The only prerequisite to participate was to have already heard of the term “Conspiracy Theory”. One thousand and twenty-two participants completed our online questionnaire. Our final sample included 939 participants ( $M_{Age} = 36.2$ ,  $SD = 12.1$ ; 260 women; 23 non-binary), after excluding participants who did not answer correctly to the seriousness or attention checks. Participants were all educated in France. Information about participants’ levels of education, professional activity, as well as the distribution of participants’ level of generic conspiracist beliefs, is available in the [Supplementary Materials](#).

#### Material and Procedure

Our questionnaire was disseminated on Facebook. The questionnaire was shared on a number of Facebook pages, and disseminated using a sponsored Facebook ad (see online [Supplementary Materials](#) for more information about the recruitment). The link to the questionnaire was posted with the following message: “Nowadays, we hear a lot about “conspiracy theories”. But what is a “conspiracy theory”? This questionnaire allows you to express yourself freely on this issue and takes about 15 minutes (or more if you have a lot to say)”. The questionnaire started with a statement informing participants about their rights, the use of the data, and the topic of the questionnaire (i.e., the label “conspiracy theory” and its use). We told participants that we expected them to answer our questions based on their current knowledge, without any external help (e.g., internet, dictionary, relatives).

Second, participants completed the verbal association task: “Please report the four first words that come to your mind when you read the expression “CONSPIRACY THEORY””. This exploratory method provides access to the semantic and symbolic universe surrounding a concept and is therefore highly relevant in the field of social representations (Abrieu, 2005; De Rosa, 2005). Concretely, participants are asked to provide spontaneous and non-reflexive answers associated with the word (or expression) presented. The spontaneity of this approach provides a privileged access to the most salient and central notions in individuals’ memory.

Third, we asked participants to provide a personal definition of CTs (“How would you define a “conspiracy theory”?”). This question aimed at catching the specific meanings that participants attribute to a social object (Lahlou, 1996).

The use of such very generic questions allows participants to be spontaneous, which is adequate to capture the diversity of individuals’ representations without pushing participants towards the authors’ preconceptions. These two questions aimed at grasping complementary facets (i.e., spontaneous and elaborated) of participants’ representations of CTs.

Fourth, participants completed the French version of the Generic Conspiracist Beliefs scale (GCBs scale; Brotherton et al., 2013). This scale consists of 15 items measuring individual differences in the tendency to endorse CTs (e.g., “The power held by heads of state is second to that of small unknown groups who really control world politics”, “The government uses people as patsies to hide its involvement in criminal activity”,  $\alpha = .91$ ). Participants indicated their agreement with the items on a scale ranging from 1 (“definitely not true”) to 5 (“definitely true”). Note that we removed the “alien contacts” subscale as these items seem to reflect a distinct construct (Swami et al., 2017).

Finally, participants were asked to report the following sociodemographic information: gender, age, political orientation (on a scale ranging from 1 “radical left” to 9 “radical right”), professional situation, and level of education. The questionnaire ended with the seriousness check. The complete questionnaire is available in [Supplementary Materials](#).

### Data Analysis Method

We used IRaMuTeQ (Loubère & Ratinaud, 2014; Ratinaud, 2009) for lexical analysis. This software performs lexicometric analyses, that is, statistical analyses of texts, in which each word is treated as a unit (Leblanc, 2016). The purpose of lexicometric analyses is to deliver a purely statistical, and therefore more objective, analysis of textual data (i.e., participants’ responses to open-ended questions in this case).

For both corpora (word associations and definitions), we used two complementary methods (Loubère, 2016): Descending Hierarchical Classification analyses (DHC, Reinert, 1983, 1990) and Similarity Analyses (Degenne & Vergès, 1973). The goal of DHC is to explore recurring themes in textual corpora (Ratinaud & Marchand, 2015). This method divides a textual corpus into classes of words that tend to appear together (Loubère, 2016; Reinert, 1990). The DHC provides a graphical representation of the distribution of the classes in the textual corpus, called a dendrogram (i.e., a distribution tree of the different classes and their affiliated words, see [Figures 2 and 4](#)). Each lexical class is characterised by a set of representative words, as well as a set of passive variables, and prototypical text segments (more detailed descriptions of the statistical logic underlying the procedures are available in [Supplementary Materials](#)).

The DHC presents the thematic partitioning of a text but offers separated and decontextualized vocabulary classes. The similarity analysis provides a context for these vocabulary classes. It provides a visual representation (see [Figures 1 and 3](#)) of the strength of the relationships between salient words (i.e., the most frequently used words) in a textual corpus (Degenne & Vergès, 1973). Concretely, the bigger a word appears on the graph, the more frequently it came up in participants’ responses. The shorter and thicker the line is between two words, the more often they appeared together in participants’ responses. In sum, the similarity analysis returns an overview of the thematic structure of the elements of the corpus (Flament & Rouquette, 2003; Marchand & Ratinaud, 2012). The similarity analysis therefore allows one to examine how the vocabulary classes identified by the DHC are related to each other. In our case, we expected these two methods to give access to the content and structure of participants’ discourse on CTs.

For both corpus we applied basic corrections (spelling, grammar, etc.) and lemmatisation (Loubère & Ratinaud, 2014). Each individual response was coded with the following passive variables: participant’s number (sorted in ascending GCBs scores), gender, age range (categorisation based on quartiles; range 1, from 18 to 25 years old; range 2, 26-37 years old; range 3, 38-49 years old; range 4, 50-86 years old), GCBs score (ordered in deciles), political orientation, professional situation, and level of education. In order to minimise the influence of researchers’ subjectivity in our analysis we used a researchers’ triangulation for the interpretation of our results (Denzin, 1970). In other words, each author separately proposed names for vocabulary classes, after which we discussed the propositions until we reached a consensus.

## Results

In the following section, we report the results of the analyses carried out on the two corpora: participants’ verbal associations and definitions of CTs. For both corpus the table frequency of the top cited words is available in the Appendix ([Tables A1 and A2](#)). The data was collected and analysed in French.

### Verbal Associations

**Similarity Analysis** – The similarity analysis reveals that the concept of “illuminati” ( $n = 164$ )<sup>2</sup> is the most frequently evoked in verbal associations, the most central and the most strongly related to other examples of CTs (e.g., “September 11”, “flat earth”, “reptilians”). This cluster of words (in green) is connected to another group through the words: “government” and “secret”. In this other group, we find two clusters of words (in red and purple). In the first cluster (in red), the terms “manipulation” ( $n = 125$ ) and “lie” ( $n = 109$ ) are the most salient. They are strongly associated with each

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2)  $N$  refers to the number of times the word appears in the entire corpus (i.e., the frequency of appearance of the form).

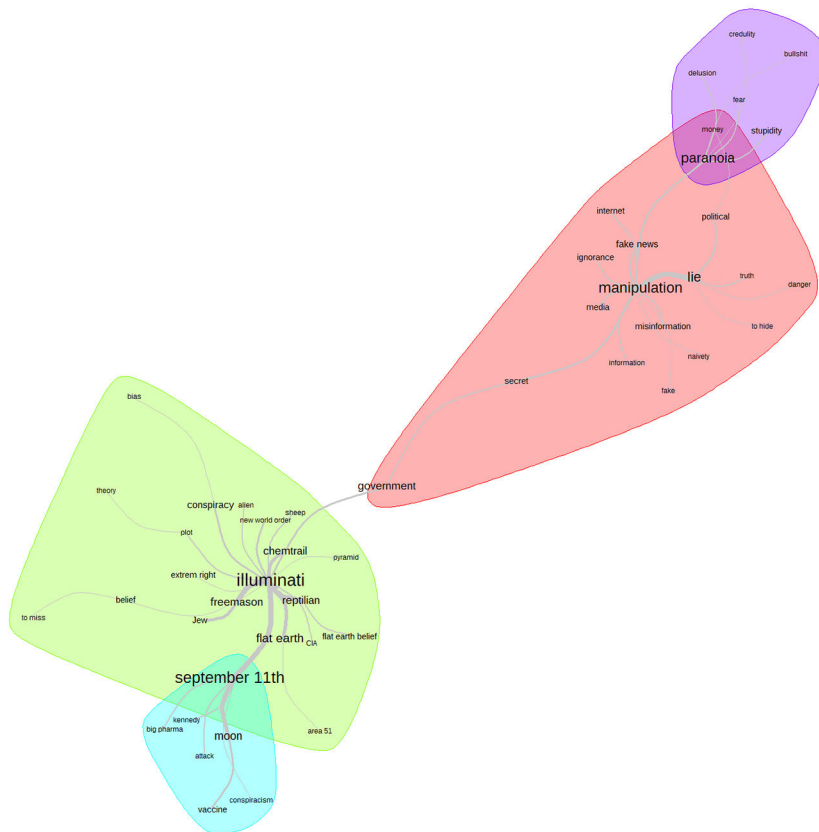


other. The concept of “manipulation” is surrounded by semantically related terms (e.g., “misinformation”, “fake news”, “naivety”). Finally, for the second cluster (in purple), the term “paranoia” ( $n = 107$ ) is the most important and is related to the term manipulation. The emotion of “fear” is linked to “paranoia”, as well as notions of “delusion”, “stupidity”, “bullshit” or “credulity”.

This first analysis provides a visual illustration of the concepts that constitute the participants’ representations of CTs. It clearly appears that the notion of CT evokes not only specific examples of CTs, but also perceived psychological features of CT believers (e.g., paranoia), as well as elements echoing the content of CTs (e.g., lies, manipulation).

**Figure 1**

Similarity Analysis for the “Verbal Association” Corpus



**Descending Hierarchical Classification** — The lexicometric treatments analysed 91.30% of the textual data.<sup>3</sup> The Descending Hierarchical Classification (DHC) divided the textual corpus into four distinct classes. The dendrogram (Figure 2) summarises the classification and representativeness of each class within the corpus. It also reports the variables significantly associated with each class (see [Supplementary Materials](#) for the complete analyses).

The dendrogram shows that the DHC separates the corpus in two distinct parts. On the left side of the dendrogram, we find two large classes: Classes 4 (22.21% of the corpus<sup>4</sup>) and 1 (38.02%). Both classes contain vocabulary that appears to evoke *psychological and societal processes* related to CTs. Class 1 (the largest class for this analysis) mostly includes terms referring to *psychological phenomena related to CTs*, often with a strong negative connotation. Most of

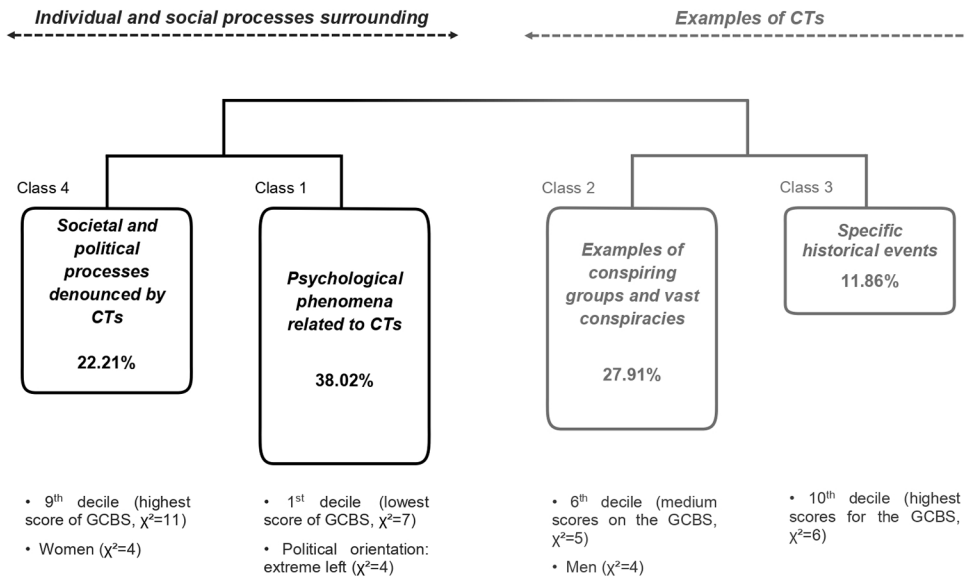
3) In other words, 9.7% of the forms in the text could not be included in this analysis, because they did not fit into the lexical categories generated by the procedure. The acceptability threshold for corpus analysis should generally be at least 80% of the textual data set.

4) Which means that 22.21% out of the 100% of the words analysed by the software were distributed in this class.

this class echoes the intra-individual category of causes of CTs described in the introduction. Indeed, we find terms such as “paranoia”, “ignorance”, or “fear”. Note that even though some of these words are associated with mental disorders (e.g., “paranoia”, “delirium”) and intellectual deficiency (e.g., “ignorance”, “stupidity”, “irrationality”), others are associated with critical thinking (e.g., “scepticism”, “critical thinking”), and normal mechanisms of the human mind (e.g., “fear”, “belief”, “cognitive biases”). We also find vocabulary pertaining to ideology (e.g., “antisemitism”, “obscurantism”, “extremism”), or to one’s belonging to specific social groups (e.g., “far-right”, “conspiracy theorists”). Class 1 was associated with the lowest decile of GCBs and a left-leaning political orientation.

**Figure 2**

*Dendrogram of the DHC Analysis for the “Verbal Association” Corpus*



By contrast, Class 4 corresponds to *societal and political processes denounced by CTs*. Thus, terms such as “lie”, “secret”, “manipulation”, “conspiracy”, “truth”, and “political” are salient in this class. The terms employed seem to evoke a distrust (e.g., “lie”, “dishonesty”) of institutions (e.g., “politician”, “media”, “lobbies”, “state”) and their (alleged) conspiratorial activities (e.g., “manipulation”, “secrecy”, “mystery”, “hiding”, “plotting”). Two non-exclusive interpretations are plausible here. First, these words can be interpreted as referring to the content of CTs (i.e., the message broadcasted by CT advocates). Alternatively – and not exclusively – this lexical class also echoes some of the sociopolitical causes identified by researchers, as these words can be perceived as some of the causes of why people believe in CTs (e.g., people believe in CTs because there are many instances of actual political manipulations). The ninth decile of GCBs (i.e., high level of conspiracy beliefs), as well as identification as a woman, were the variables significantly associated with this class.

The second group of classes encompasses examples of CTs, as well as groups stereotypically involved in CTs. Class 2 (27.91% of the corpus) is centred on *examples of conspiring groups and vast conspiracies* and included the following examples: “illuminati”, “freemasons”, “reptilians”, etc. Vast conspiracies included expressions such as “flat earth”, “chemtrail”, or “new world order”. Medium scores of GCBs (i.e., 6<sup>th</sup> decile) as well as the male gender were significantly associated with this vocabulary class. By contrast, in Class 3 (11.86%), the examples refer to more *specific historical events associated with popular CTs*: “moon”, “Kennedy”, “September 11th”, “Roswell”, “area 51”, and so on. Only one variable was significantly associated with this class: A high level of GCBs (i.e., 10<sup>th</sup> decile).

In summary, for verbal associations, participants with low scores of GCBs tended to mobilise a vocabulary echoing the intra-individual, psychological aspects of CTs (and mostly terms associated with a perception of irrationality). Thus, their representation may be described as centred on the CT believer (the *messenger*) rather than the content of CTs (the

message). By contrast, participants with high scores of GCBs mobilised a vocabulary echoing the content of CTs, both in terms of salient historical events (Class 3) and in terms of sociopolitical processes condemned by CTs (Class 4). While the vocabulary in Class 4 could be viewed as merely reflecting the content of CTs (i.e., CTs are all about the “lies” of “governments”), it could also be viewed as related to some hypothetical societal explanations as to why people believe in CTs (i.e., people believe in CTs because governments lie to the public).

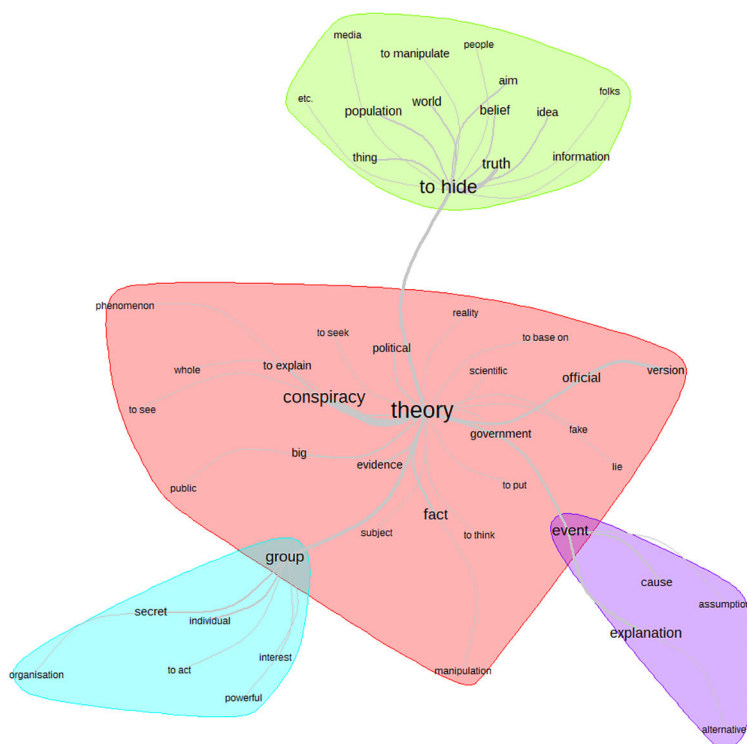
## Definitions

**Similarity Analysis** — The words “theory” ( $n = 377$ ) and “conspiracy” ( $n = 224$ ) are the most salient and central words in this analysis (Figure 3). Many verbs gravitate around the term “theory” (e.g., “to explain”, “to seek”, “to think”, “to see”). We also find terms related to scientific investigation (e.g., “scientific”, “evidence”), politics (e.g., “political”, “government”) as well as the notion of “official version”. Hence, among participants, a central defining feature of CTs seems to be that they act as an *investigative process that questions official narratives*.

Around the “theory” central hub, we find three distinct lexical groups. First, in purple on the figure, we find a group of words articulated around the salient notion of “event” ( $n = 178$ ). Around “event”, we find notions such as “explanation”, “cause”, and “assumption”. Thus, CTs seem to be defined as *attempts to explain events*. Another lexical group (in light blue) is centred on the notion of “group” ( $n = 188$ ). Associated with “group”, we find words such as “secret”, “organisation”, “individuals”, as well as “to act”, “powerful” and “interest”. Indeed, CTs *involve powerful groups that act in secrecy for their self-interests*. Finally, at the centre of the third peripheral lexical group, we find the term “to hide” ( $n = 200$ ). For this group, the most prominent and strongly associated word is “truth”. To this notion are related terms designating the people involved (e.g., “people”, “population”, “media”), words referring to “what” is hidden (e.g., “truth”, “thing”, “information”, “idea”, “aim”), and terms echoing the reasons why it is hidden (e.g., “to manipulate”). Hence, CTs usually *imply that information, or some important truth, is being hidden from the public eye*.

**Figure 3**

Similarity Analysis for the “Definitions” Corpus



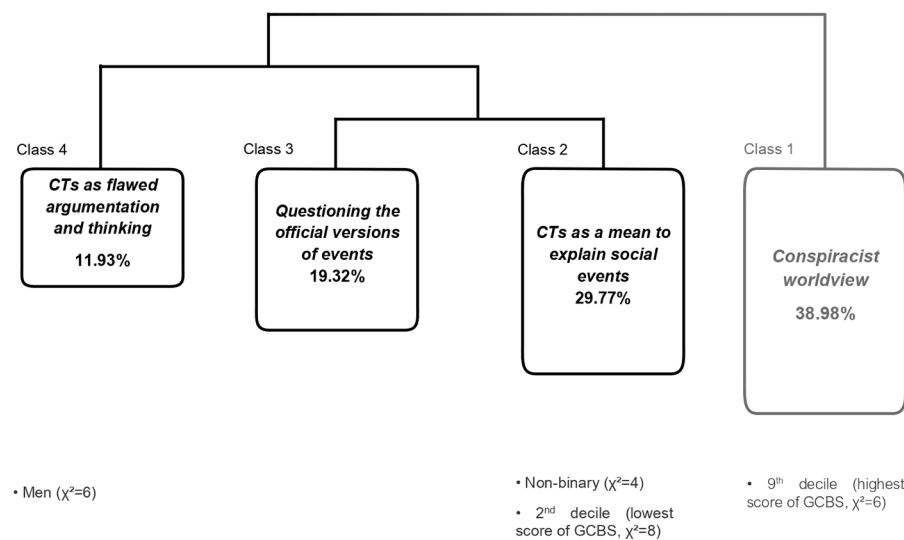


This analysis highlights the structure of the arguments brought forward by the participants to define CTs. The central aspect mobilised is that a CT is at its core an investigation process – a search for evidence – and a way to question “official versions”. Moreover, CTs usually attempt to explain events, by invoking acts of concealment and manipulation, carried out by powerful groups and/or institutions.

**Descending Hierarchical Classification** – The software classified 81.41% of the textual data for the corpus of definitions. The textual data of the second corpus was divided into four classes. The dendrogram (see Figure 4) shows the distribution of words in the corpus of participants’ personal definitions of CTs. Classes 2, 3 and 4 are more centred on the functions and processes underlying CTs, while Class 1 appears to focus on the content of CTs.

**Figure 4**

*Dendrogram of the DHC Analysis for the “Definitions” Corpus*



The largest class in this corpus is Class 1 (38.98% of the corpus). In this class, the most representative words are: “to hide”, “secret”, “group”, “interest”, “manipulating”. We propose that these definitions try to capture the *common content of CTs*, and to unveil a *conspiracist worldview* underlying CTs. Indeed, the main idea here seems to be that a powerful minority of elites is manipulating the masses. We find words referring to both groups: The elites (e.g., “elite”, “government”, “secret”, “group”) and the people (e.g., “population”, “people”, “masses”). Other words further characterise the relationships between the elites and the people: “to hide”, “interest”, “manipulating”, “goal”, “to control”, “world”, “lying”, etc. The following example illustrates the central content of Class 1:

*“Belief in a narrative that explains current events through the supposed manipulation of a group whose power and influence allows them to keep their actions secret from the public, establishing a truth far removed from the official versions and facts as portrayed by the media and other official sources of information” (participant N\_348).*

Class 1 was associated with a high decile on the GCBS scale (i.e., 9<sup>th</sup> decile). These definitions do not seem to directly imply that CTs are necessarily false or biased.

By contrast, vocabulary in Class 2 highlights definitions that tend to interpret *CTs as a mean to explain social events*. Hence, these definitions define CTs through the epistemic function they allegedly fulfil for those who endorse them: CTs allow believers to explain events whose explanation is complex and/or psychologically unsatisfactory. Words refer to the process of seeking explanations (e.g., “to explain”, “to understand”, “to seek”) for world events (e.g., “phenomenon”, “situation”, “fact”). Additionally, in this category, some words suggest a negative connotation (e.g., “simplistic”,

“biased”, “victimisation”). Participants’ responses associated with this class instantiate this negative connotation. For example, CTs are defined as a “*Theory explaining in a sensational way situations and facts that are little known or understood*” (participant N\_155). This Class was associated with a low score of generic conspiracy beliefs (i.e., 2<sup>nd</sup> decile). These definitions assume that CTs are biased explanations aimed at fulfilling epistemic motives.

Class 3 seems to be centred on the idea of *questioning the official versions of events*. Indeed, the main terms associated with this class are: “official”, “version”, “questioning”, “to admit”. This class might reflect definitions of CTs as an alternative (e.g., “alternative”, “different”) to a dominant theory: CTs go against (e.g., “challenge”, “refusal”, “opposition”) official versions (e.g., “official”, “version”, “media”), they call into question (e.g., “verify”, “prove”, “explain”, “substantiate”) information that is accepted by the majority (e.g., “common”, “consensus”, “mainstream”). The following response describes the main idea associated with this category of definitions: “*Questioning the official version of events or facts leading to an alternative explanation centred around the notion that the true cause of these facts/events is hidden by the “official” authorities.*” (participant N\_850). A moderate GCBs score (i.e., 4<sup>th</sup> decile) was associated with this class, as well as a right-wing political orientation (point 7 on the 9-points scale). In sum, another way to define CTs among participants is to emphasise their opposition to “official versions”, or “mainstream” information.

Finally, Class 4 (11.93% of the corpus) offers definitions of *CTs as flawed argumentation and thinking*: CTs are defined by the biased reasoning that (allegedly) underpins them. Indeed, we find words related to argumentation and thinking (e.g., “argument”, “mind”, “discourse”, “rational”) as well as verbs putting these elements into operation (e.g., “to bring”, “to find”, “to refute”, “to suspect”). Finally, we also find words with negative connotations describing hypothetical reasons for such processes (e.g., “scapegoat”, “naive”, “delusion”). Participants’ answers show that some define CTs as intrinsically flawed reasoning:

“*A distrust of official information and a desire to find clues that would validate the hypothesis of a global conspiracy.*” (participant N\_883)

In sum, participants with high scores of GCBs tended to propose definitions focusing on the common content of CTs. By contrast, participants with low scores of conspiracy beliefs tended to propose definitions emphasising the fact that CTs fulfil epistemic motives (e.g., alleviate anxiety, provide simple answers to complex answers). Other categories of definitions – that were not associated with a specific level of conspiracist beliefs – focused on the flawed argumentation of CTs, or on the fact that CTs are opposed to an accepted understanding of the same events (i.e., an “official version”).

## Intermediary Discussion

In line with our expectations, both verbal associations and personal definitions of CTs suggested that participants scoring low on the GCBs scale hold a different representation of CTs compared to participants scoring high on the scale. Among participants with low levels of GCBs, the representation of CTs seems centred on the irrationality of individuals who believe in CTs (i.e., the *messenger*). By contrast, the representation of participants scoring high on the GCBs scale was centred on the content of CTs themselves (i.e., the *message*). Thus, Study 1 corroborates past research showing that individuals’ GCBs seem to elicit different (and potentially, antagonistic) representations of the label “conspiracy theory” (Nera et al., 2020).

These representations, respectively centred on the psychology of the CT believer and the content of CTs, may be put in perspective with the different categories of causes of belief in CTs (Wagner-Egger, 2021). Among participants with low scores on the GCBs scale, the vocabulary mobilised in verbal association and definitions echoes the intra-individual level of explanation of CTs, as well as some of the causes highlighted by researchers (e.g., paranoia, Imhoff & Lamberty, 2018). By contrast, the vocabulary mobilised by participants with high GCBs scores may be viewed as echoing the societal level of explanation of CTs – as real instances of government manipulations and political corruption are susceptible to fuel the population’s tendency to believe in CTs (e.g., Imhoff, 2022). Hence, it is possible that individuals’ level of GCBs impacts how individuals explain why people believe in CTs. Specifically, GCBs may be associated with a reduced mobilisation of intra-individual causes, and increased mobilisation of societal causes.

It is however also possible that the mobilisation of this vocabulary merely reflects individuals' belief, or disbelief, in CTs. Indeed, words such as "paranoia" may express one's rejection of CTs, while words such as "lobbies" may express one's endorsement of CTs. To rule out this interpretation of our results, we carried out a second study to examine if individuals' level of GCBs influenced the explanations (individual vs. societal) mobilised to explain why people believe in CTs – even when considering CTs participants did not believe. Indeed, a high level of GCBs does not entail that someone necessarily believe in all CTs. For instance, even participants scoring very high on the GCBs scale are unlikely to believe the most counterintuitive CTs (e.g., about Flat Earth). As such, it is possible to ask participants to position themselves regarding a CT they do not believe in – which is what we did in Study 2. Doing so, we sought to dissociate individuals' own belief in CTs, and how they explain why some people believe in CTs.

If our interpretation is correct, participants scoring high on the conspiracist beliefs scale should be less likely to mobilise intra-individual causes (H1), and more likely to mobilise societal causes (H2), when asked to explain why some people believe CTs in which they do not personally believe. The hypotheses and analyses plan of this study were preregistered on AsPredicted (see [Supplementary Materials](#)).

## Study 2

### Method

#### Participants

Participants were recruited by sharing the questionnaire on social media (Twitter, Facebook). In total, 294 French-speaking participants completed the questionnaire, out of which 271 (229 from Belgium, 42 from France) remained after removing participants who were under 18 years old or failed the attention check (79 females, 7 "other",  $M_{age} = 40.7$ ,  $SD = 11.5$ ). Information about occupation, level of education, and distribution of participants' GCBs is available in [Supplementary Materials](#).

#### Materials and Procedure

Participants were explicitly told at the beginning of the study that it was about how people explain the success of beliefs labelled as "conspiracy theories" by the media. After giving their consent to participate in the study, they were introduced to the issue of CTs with the following paragraph:

"We live in a time where numerous groups are accused of conspiring in secret against the rest of society. Among these accusations of conspiracy, some were proven to be true, or will be proven to be true in the future. Other accusations of conspiracy were proven to be false, or will be proven to be false in the future."

They were then asked to write down a CT that, in their opinion, was *not* true. After that, participants were asked to explain why they thought some people believed in this specific CT. On a 5-point Likert scale (1 = *not important at all*, 5 = *extremely important*), they rated the importance of 5 intra-individual causes (paranoid tendencies, lack of education, lack of critical thinking, need for simple answers to complex questions, reasoning biases,  $\alpha = .59$ ) and 5 societal causes (economic inequalities, the precarity experienced by some parts of the population, feelings of political powerlessness, real instances of political manipulations, real instances of public health scandals,  $\alpha = .67$ ).

Finally, participants answered to sociodemographic questions: gender, age, political orientation, occupation, level of education. They completed the GCBs scale ([Brotherton et al., 2013](#),  $\alpha = .83$ ) without the "alien contact" subscale. Before being debriefed about the hypotheses of the study, they could leave an open comment.

### Results

Correlations and descriptive statistics are displayed in [Table 1](#). As expected from H1, GCBs were associated with reduced mobilisation of intra-individual causes,  $B = -0.26$ ,  $t = -3.59$ ,  $p < .001$ ,  $R^2 = .05$ . When controlling for political

orientation, the relationship remained significant,  $B = -0.20$ ,  $t = -2.76$ ,  $p = .006$ ,  $R^2 = .09$ . In line with H2, GCBs were associated with increased mobilization of societal causes,  $B = 0.20$ ,  $t = 2.58$ ,  $p = .01$ ,  $R^2 = .02$ . However, the relationship became non-significant when controlling for political orientation,  $B = 0.13$ ,  $t = 1.72$ ,  $p = .087$ ,  $R^2 = .08$ . This suggests that in the sample, the relationship between GCBs and increased mobilisation of societal causes can be explained by an increased propensity of left wingers to mobilise societal causes to explain why people believe in CTs.

**Table 1**

*Correlations and Descriptive Statistics for Study 2*

Variable name	<i>M</i> ( <i>SD</i> )	1	2	3	4
1. Generic Conspiracist Beliefs (1-5)	1.92 (0.57)	—			
2. Intra-individual causes (1-5)	3.78 (0.68)	-.21**	—		
3. Societal causes (1-5)	3.58 (0.74)	.16*	-.01	—	
4. Political orientation (1-9)	3.37 (1.60)	-.22**	.25**	-.27**	—

\* $p < .05$ . \*\* $p < .01$ .

## General Discussion

In this research, we analysed and compared lay representations of CTs among participants endorsing CT beliefs to varying degrees. We examined how these representations relate to each other, and to academic research on CTs. In line with our expectations, high and low scores of generic conspiracist beliefs (GCBs) were associated with distinct vocabularies, echoing distinct aspects of CTs and therefore suggesting different social representations. For verbal associations, participants with low scores of GCBs tended to mobilise a vocabulary echoing intra-individual aspects of CTs. Interestingly, the term “paranoia” appeared a number of times in the corpus, which is in line with research showing a robust relationship between conspiracy beliefs and paranoia (for a meta-analysis, see Imhoff & Lamberty, 2018). We also found vocabulary related to critical thinking – which has also been found to be negatively associated with GCBs (Lantian et al., 2021). In addition, participants regularly evoked the notion of cognitive biases, which is an important field of research on CTs (e.g., Brotherton & French, 2014; Douglas et al., 2016; Wagner-Egger et al., 2018). Also in line with the literature, participants evoked the notions of political extremism (see van Prooijen et al., 2015; Imhoff et al., 2022) and antisemitism (see Bilewicz et al., 2013; Kofta et al., 2020). In addition, the definitions of CTs proposed by these participants were centred on the epistemic function that CTs allegedly fulfil for the believer. The use of disparaging vocabulary in the definitions proposed by these participants suggest that unsurprisingly, these participants assume that CTs are biased in nature. It therefore appears that among participants with lower scores of GCBs, the representation of CTs is mostly centred on the people who believe in CTs (i.e., the *messenger*) – and specifically, on the irrationality of CT believers.

By contrast, participants with higher scores of GCBs tended to mobilise a vocabulary echoing the content of CTs (e.g., the fact that CTs are about powerful, evil groups conspiring against the population). In addition, participants with higher scores of GCBs also tended to write down specific events associated with CTs. Thus, instead of being centred on the messenger, the representation of participants scoring higher on the GCBs scale appears to be centred on the *message* – the content – of CTs. The definitions proposed by these participants were also centred on the common content of CTs. These participants were less likely to define CTs as intrinsically flawed beliefs. Importantly, these participants’ definitions did not imply that CTs are likely to be true either. This is in line with the fact that CT believers usually acknowledge the existence of irrational CTs (Harambam & Aupers, 2016).

This discrepancy between social representations among participants scoring higher or lower on the GCBs scale may be explained by divergent anchoring processes. In social representation theory, anchoring is the process through which new information is integrated into the pre-existing cognitive framework (e.g., our systems of information, values, social identities, Bauer & Gaskell, 1999; Jodelet, 1984). Depending on these frameworks, people and groups may anchor information pertaining to CTs differently, resulting in distinct representations of the phenomenon.

In our studies, the discrepancy between representations may be in part explained by the extent to which individuals endorse a derogatory stereotype of CT believers. Indeed, “conspiracy theorists” are negatively stereotyped by the general public (Klein et al., 2015). This derogatory stereotype seems central in the representation of participants with lower GCBs scores. On the other hand, individuals scoring higher on the GCBs scale might have a lesser propensity to endorse this derogatory stereotype, as GCBs are positively associated with the belief that so-called “conspiracy theorists” are smarter than the mainstream (Nera et al., 2022). Because they reject this stereotype, these participants may be more open to scrutinise what “conspiracy theorists” have to say, that is, the content of CTs. Doing so, they may subjectively enact a willingness to be “critical thinkers” (Harambam & Aupers, 2016), distinguishing themselves from both the mainstream (i.e., “the sheeple”, Franks et al., 2017) and more radical CT believers (i.e., people who endorse CTs that they do not personally believe in, see Byford, 2011; Harambam & Aupers, 2016). Thus, a representation centred on the content of CTs may allow to distinguish oneself from both the mainstream (who are prejudice against “conspiracy theorists” and believe official narratives) and radical CT believers (who will believe in just any CT).

On a more general note, it is worth noting that despite the diversity of CTs, the examples of CTs provided by participants were relatively consistent (e.g., Illuminati, 9/11, JFK, Freemasons). Moreover, participants seemed to have a relatively converging understanding of the “conspiracist worldview” (i.e., a worldview in which a group of people set up plans to serve their interests at the expense of the general population). This worldview provides a standard pattern made of stable and converging criteria that can be applied to all CTs. To match and embody this pattern people employ concrete examples of CTs. As a result, CTs involving stereotypical figures (e.g., Illuminati, freemasons) and/or historically and emotionally salient events (e.g., 9/11, the death of JFK) appear to be particularly prevalent and prototypical in individuals’ representations. To represent the complexity and diversity of a social object, individuals may rely on concrete images, models or narratives – which is the core of the objectification process (Bauer & Gaskell, 1999; Jodelet, 1984, 2015). For CTs, the objectification process might occur through the reliance on concrete supports such as symbols associated with the different CTs (e.g., the illuminati eye, Freemasons’ square and compass), or historical images (e.g., photos and videos representing the destruction of the Twin Towers, the pictures of Kennedy’s car, the first step on the moon).

Finally, the contrasted representations highlighted in Study 1 made plausible the notion that participants may be inclined to provide different lay explanations for the success of CTs, depending on their level of GCBs. Study 2 provided support for the first hypothesis, as GCBs were associated with decreased mobilisation of intra-individual (e.g., irrationality) causes to explain the success of CTs – even when controlling for political orientation. By contrast, the relationship between GCBs and mobilisation of societal causes (e.g., inequalities), while significant and positive as expected, became non-significant when controlling for political orientation. This suggests that in our sample, the increased propensity of participants scoring higher on the GCBs scale to explain the success of CTs with societal causes may be accounted by the fact that conspiracy believers were on average more left-wing, and that left-wingers were more susceptible to mobilise societal causes.

## Limitations and Future Directions

These elements should be qualified by some limitations. First, the recruitment method has a number of limitations. Indeed, recruitment using social media has limitations in terms of population representativity and sampling biases (for issues raised by Facebook, see Zhang et al., 2020). In addition, the samples are exclusively French speaking, from France (Studies 1-2) and Belgium (Study 2). Hence, our conclusions may be limited by this cultural framework. Moreover, the sample probably included many members of the French sceptic movement (i.e., the “Mouvement Zététique”), as the questionnaire was massively shared (i.e., hundreds of times) through sceptic Facebook pages (among which, “La Tronche en Biais”, a prominent Youtube channel which aims at popularising scientific scepticism). As a result, the average GCBs level in the sample was relatively low (like in most research, see Klein & Nera, 2020). Thus, it would be interesting to investigate the social representations of CTs in other cultural systems. It would be also valuable to further this line of research among more conspiracy-minded participants – who are difficult to recruit for research (see Franks et al., 2017).

Second, we used very generic open-ended questions. This was justified by the fact that we did not want to influence the representations that would emerge from participants’ responses with complex questions or tasks. Consequently,



our results are relatively generic, and sometimes ambiguous due to the lack of context – especially for verbal associations. Thus, future research might benefit from asking less ambiguous and/or more specific questions to further the understanding of social representations of the label “conspiracy theory”. It might want to consider additional measures, such as the positivity/negativity of the word association task (e.g., Guimelli & Deschamps, 2000).

Third, while the use of language is a relevant approach to investigate social representations (Marková, 2000), it does not provide information on individuals’ behaviour, societal and historical contexts, and so on. Future research might benefit from an examination of how societal and historical contexts impact social representations of CTs.

Finally, while we investigated perceived causes of belief in CTs in Study 2, the relatively low reliability of the scales suggest that it might be useful to distinguish between different categories of causes, within the individual and societal causes. For instance, one may rely on the more specific categories proposed by Wagner-Egger (2021).

## Conclusion

Despite these limitations, our study highlights social representations of CTs in the French context, as well as the relations between these lay representations and scientific approaches of CTs. We found that the representations of participants scoring higher on the GCBs scale were centred on the content of CTs (i.e., the message), and that the representations of participants scoring lower on the scale were centred on the CT believer (i.e., the messenger). This may be due to individuals’ endorsement, or rejection, of derogatory stereotypes of “conspiracy theorists”.

We found a number of connections between these lay representations and the scientific literature. The higher the GCBs score, the less participants mobilised intra-individual explanations to explain the success of CTs. The fact that participants’ level of conspiracy beliefs affected their representations shows the importance of the anchoring process in apprehending the social representations of CTs.

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**Competing Interests:** The authors declare that they have no competing interests.

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**Data Availability:** For this article, a data set is freely available (Leveaux, Nera, Fagnoni, & Klein, 2022)

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## Supplementary Materials

The data, analyses, and preregistration form (for Study 2), and all additional materials (i.e., detailed descriptions of the samples and analysis methods, pdf of the questionnaires) for both studies are available via the OSF repository (for access see [Index of Supplementary Materials](#) below).

### Index of Supplementary Materials

Leveaux, S., Nera, K., Fagnoni, P., & Klein, P. P. P. L. (2022). *Supplementary materials to "Defining and explaining conspiracy theories: Comparing the lay representations of conspiracy believers and non-believers"* [Research data, analyses, preregistration protocol, and additional materials]. OSF. <https://osf.io/yz84w/>

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## Appendix

**Table A1**

*Most Frequently Cited Words in the Verbal Association Corpus*

Rank	Word	Frequency
1	Illuminati	164
2	Manipulation	125
3	September 11	124
4	Lie	109
5	Paranoia	107
6	Flat earth	81
7	Moon	79
8	Freemasons	65
9	Reptilian	64
10	Government	62

**Table A2**

*Frequency Tables of the Most Cited Words for the Corpus of Definitions*

Rank	Word	Frequency
1	Theory	377
2	Conspiracy	224
3	To hide	200
4	Group	188
5	Event	178
6	Fact	156
7	Truth	139
8	Explanation	118
9	World	109
10	Official	108