



UNIVERSITÉ DE FRIBOURG  
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**THE IMPACT OF THE ARGUMENTATIVE MILLE-FEUILLE  
ON THE BELIEF IN 9/11 CONSPIRACY THEORIES**

—

**An empirical investigation of the Fort effect**

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## **0. Abstract**

The aim of this research was to test empirically the Fort effect, which is the impact of the argumentative mille-feuille on the belief in a conspiracy theory. The argumentative mille-feuille has been defined as an argumentation composed in multiple layers (and each of them can be weak). The Fort effect is the reaction to this mille-feuille: these different arguments will generate the feeling that even if “everything may not be true, everything can’t be false” (Bronner, 2013), which means that it triggers a beginning of conspiracy theory endorsement. In addition, it reduces people’s motivation to find a potential counter-argumentation to these arguments. The results of this research show that the Fort’s effect was more limited than expected: indeed, exposure to arguments in favour of the 9/11 conspiracy theory did not its endorsement, however it reduced participants’ belief in the official version, and they tended to underestimate the argument’s impact on their attitudes. The argumentative mille-feuille also seems not to have had a significant impact on people’s motivation to refute the arguments. The difference of arguments’ quality globally did not have a impact on these measurements. This research is a first step in understanding persuasion mechanisms underpinning the progressive endorsement of conspiracy theories.

**Keywords:** Conspiracy theories, Fort effect, argumentation, persuasion, attitude changes

## **0. Résumé**

Le but de cette recherche était de tester empiriquement l'impact du mille-feuille argumentatif sur la croyance dans une théorie du complot. Le mille-feuille argumentatif a été défini comme une argumentation composée de plusieurs couches (chacune d'elles pouvant être faible). L'effet Fort est la réaction au mille-feuille : ces différents arguments vont générer le sentiment que « tout n'est peut-être pas vrai, mais tout ne peut pas être faux » (Bronner, 2013), ce qui montre que le mille-feuille génère un début d'adhérence aux théories du complot. De plus, il réduit aussi la motivation des gens à réfuter les arguments présentés. Les résultats de cette recherche montrent un effet Fort plus limité que prévu: l'exposition à des arguments en faveur des théories du complot liées au 11 septembre 2001 n'a pas augmenté l'adhésion au complot, mais a, par contre, réduit la croyance des participants dans la version officielle, et ces derniers ont sous-estimé l'impact des arguments sur leurs croyances. Le mille-feuille argumentatif n'a pas eu d'impact significatif sur la motivation des gens à réfuter les arguments. La différence de qualité des arguments n'a globalement pas eu d'impact majeur sur ces mesures. Cette recherche est une première étape dans la compréhension des mécanismes de persuasion sous-tendant une adhésion progressive aux théories du complot.

**Mots-clés:** Théories du complot, effet Fort, argumentation, persuasion, changements d'attitude

## **1. Introduction**

### ***1.1. General introduction***

People in the 2010's have been deeply concerned by the quality of information transmitted on the Internet. Indeed, with the Oxford Dictionaries choosing "post-truth" as its 2016 word of the year (Oxford Dictionaries, 2016), the propensity of Donald Trump to refute the existence of global warming by claiming on Twitter for instance that "The concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive" (2012), or the 2018 new laws "against fake news" promoted by the European governments (Sénecat, 2018), we can see that the quality of the Internet information is a major topic of these past 10 years. Furthermore, as the media economic model has changed, it gets always more difficult for journalists to take time to find the information sources, which results in an always decreasing confidence from the public eye regarding the mainstream media. A major problem is that this lack of confidence in classical media is related to a higher belief in conspiracy theories (Stempel, Hargrove & Stempel, 2007). Now conspiracy theories seem to be widely spread across the population; for example, Oliver and Wood (2014) showed that about half of the U.S.A. citizen believes in at least one conspiracy theory. The endorsement of some conspiracies can have nefarious consequences, such as the fact that belief in climate conspiracy can lower people's will to reduce their carbon footprint (Jolley & Douglas, 2014a) or endorsing vaccination conspiracy reduced people's intention to vaccinate (Jolley & Douglas, 2014b). Therefore, having a better understanding on these phenomenon is very important, and that is why the field of conspiracy theories is getting more and more investigated by the social psychology domain nowadays.

### ***1.2. Theoretical background***

#### *1.2.1. A definition of the conspiracy theories*

A conspiracy theory can be defined as an explanation of an event via the idea that it has been generated by a hidden group of people acting together (Keeley, 1999; Wood & Douglas, 2013). Given the concision of this definition, it has to be completed. Indeed, Keeley (1999) added the

concept of *unwarranted conspiracy theories (UCTs)* to precise his theory. He defined the UCT concept with 5 major ideas:

- “(1) A UCT is an explanation that runs counter to some received, official, or “obvious” account
- (2) The true intentions behind the conspiracy are invariably nefarious.
- (3) UCTs typically seek to tie together seemingly unrelated events.
- (4) As noted, the truths behind events explained by conspiracy theories are typically well-guarded secrets, even if the ultimate perpetrators are sometimes well-known public figures.
- (5) The chief tool of the conspiracy theorist is what I shall call errant data.”

This fifth element will be a major point of this research. Indeed this study will treat the subject of how arguments in favour of a conspiracy theory can change one’s belief in it, and how the building blocks of these same arguments are in fact errant data. We can distinguish two types of errant data: The *unaccounted-for data*, which are data that are not explained by the most accepted version, and the *contradictory data*, which are elements that (if true) belie the accepted version (Keeley, 1999). Two examples related to the 9/11 terrorist attack (as this research will focus in particular on the belief in this conspiracy) of unaccounted-for data could be the fact that one of the terrorists’ passport has been found by the authorities, or also the fact that some pictures of the burning towers showed Satan’s head in the smoke. These events are pure coincidences, and can’t be easily explained by an other cause effect relationship. An example of contradictory data concerning 9/11 events could be the book written by Susan Lindauer that states that, when she (supposedly) worked with CIA, they had been warned of the terrorist attack before 9/11. This testimony reveals that, if it is true, the government let the 9/11 attacks happen on purpose.

### *1.2.2. Main results in psychology concerning conspiracy theories*

Over the past 20 years, numerous researches in social psychology concerning belief in conspiracy theories underpinned the theory of the “monological belief system” (Goertzel, 1994; Wagner-Egger & Bangerter, 2007; Swami et al., 2011; Wood, Douglas & Sutton, 2012). This concept comes from the observation that people who believe in one conspiracy theory are very likely to believe in other ones (Goertzel, 1994) and therefore there would be a “conspiracist” way of thinking.

Multiple empirical researches explored the correlates that can be related to the belief in conspiracy theories. For example, Wagner-Egger and Bangerter (2007) found that belief in conspiracies is positively correlated with anomia (which can be split in two dimensions: a distrust in institutions and a feeling of not controlling the environment), social anxiety, right-wing political affiliation, paranoia, etc. and negatively correlated with confidence. Numerous other correlates have also been investigated across the studies about conspiracy thinking: for example, beliefs in conspiracy theories were also found to be positively correlated with personal willingness to conspire (Douglas & Sutton, 2011), paranoid ideation and schizotypy (Darwin, Neave & Holmes, 2011), political extremism (Van Prooijen, Krouwel & Pollet, 2015), exposure to conspiracy ideation, and negatively correlated with self-esteem, agreeableness (Swami et al., 2011), conscientiousness and age (Galliford & Furnham, 2017).

Conspiracy theory believers can even endorse contradictory theories: for instance Wood and colleagues (2012) presented different mutually incompatible hypotheses surrounding Lady Diana's death (for example: one rogue cell of the British secret service killed Diana; or Diana faked her death so she could live peacefully with her Dodi Al-Fayed), and asked students to rate their degree of agreement with these theories. The analyses showed strong correlation between the incompatible hypotheses. The researchers used the same design but with Osama bin Laden conspiracy (e.g. bin Laden was dead before the U.S.A. intervention, or bin Laden is still alive) and found a mediating effect of the fact that people believed that the U.S. government was engaged in a cover-up. This mediating effect underscores the conspiracy believer's monological belief system: believers distrust official explanations, so they will endorse different, even if contradictory, alternative hypotheses.

### *1.2.3. The attractiveness of conspiracy theories*

#### a) Narrative attraction

Conspiracy theories do not affect only conspiracy theory believers, but also average people, because they are narratively attractive. Indeed, Raab and colleagues (2013a) proposed a new methodology to test people's belief in conspiracy theories: the narrative construction. The researchers proposed participants multiple narrative blocks to construct the story of what happened during the 9/11 attacks. Each item existed in 3 versions: there were official (e.g. terrorists attacked

the U.S.A.), limited conspiratorial (e.g. the U.S. government let the events happen on purpose), and unlimited conspiratorial items (e.g. the U.S. government made it happen on purpose). Researchers then randomly assigned participants either to decks containing the official version and limited conspiratorial items (the modest contents group), or to decks including in addition unlimited conspiratorial items (the extreme contents group). People had to use these items to create a narrative that described what happened during the 9/11 attacks. Then they had to estimate the plausibility of the story they constructed. The research's results showed that each participant's story was different. Furthermore, on 30 subjects, only 1 person didn't use any conspiratorial item; all the other participants used, to some extent, conspiratorial items to create their explanation of the 9/11 events. Besides, only 16.7% of the 9/11 narratives were constituted with one third or less pro-conspiracy items (Raab et al., 2013a). These findings show that most people are attracted to conspiracy theories at different degrees.

Thanks to further analyses conducted on this sample, another paper by Raab and colleagues (2013b) put into light some differences between the modest and the extreme content group. Indeed, they found that people in the modest content group used significantly more official items compared to the extreme content group, whereas the mean use of limited conspiratorial items were not significantly different across the groups, and no significant group difference of self-estimated story's plausibility was found. This led researchers to the conclusion that presenting unlimited conspiratorial items reduces the participants' perception of the official explanations' importance.

#### b) The argumentative mille-feuille and the Fort effect

Errant data also allow conspiracy theorists to constitute what Bronner (2012, 2013) calls the *argumentative mille-feuille*. This concept has been based on Charles Fort's life and argumentative style. Fort was well-known for his ability to accumulate a huge amount of eclectic knowledge that allowed him to have numerous arguments about lots of topics. Thus, he was able to defend ideas that were usually considered as wrong, like, for instance, the fact that the Earth is flat (Bronner, 2012, 2013). His argumentation was based on the arguments quantity instead of their quality. Indeed, the idea of the argumentative mille-feuille is based on the fact that an accumulation of arguments, which layers can be very weak (i.e. each argument does not have to be very consistent), will let the "receiver" of this argumentation, an impression that even if everything may not be true,

everything can't be false. This feeling is what Bronner calls the *Fort effect* (2012, 2013). Another impact of this mille-feuille will be that people's motivation to refute all of these arguments will decrease (due to the multiple knowledge that are necessitated for this).

With the Web 2.0 (defined as "websites that emphasize user-generated content, usability" (Web 2.0, n.d.)), this effect of argumentative mille-feuille has had the opportunity to spread. Indeed, before the democratization of the Internet, people had to memorize arguments in favour of a conspiracy theory in order to convince someone (which considerably reduced the possibility to present a lot of arguments). But now with both the copy and paste functions, it becomes very easy to create a very huge accumulation of arguments by taking numerous elements from different sites (Bronner, 2012). Moreover, this idea is completed by the fact that unverified rumours are far more widely shared on social media (like Facebook or Twitter) compared to rumours proven true or wrong (Zubiaga et al. 2016), which also shows the appealing nature of errant data. In addition to that, conspiracist explanations of errant data are quite appealing compared to scientific explanations because of their narratively attractive nature: "Narratives grounded on conspiracy theories tend to reduce the complexity of reality and are able to contain the uncertainty they generate" (Bessi et al., 2015). In other words, conspiracy theories are also attractive because of their properties that tend to make the environment a bit more predictable (by also explaining, *inter alia*, the events that are usually considered as coincidences); they are a straight-forward and cheap (in terms of energy) method to make sense of eventual errant data, the unaccounted-for data in particular. One other main impact of the Internet on the relationship of people with the conspiracy theories is that before Internet, a conspiracy theory explanation needed time to be spread, and it also needed an infrastructure (like writing an article or a book, which meant finding a printer, an editor, etc) that average people did not have access to; this is what Bronner (2013) calls "the entry cost into the cognitive market". Now this cost has been considerably reduced with the improvement and the democratization of the World Wide Web. Indeed, in the past, when an important event occurred, a conspiracy explanation appeared several months later. But since people's interest for an event is counted in days (or weeks), when the alternative explanation reached the social space, the public's interest for the event had already disappeared (Bronner, 2013). Nowadays, conspiracy explanations are spread as quick as official explanations and sometimes even quicker, like for instance, the Charlie Hebdo terrorist attack (Bronner, 2017), which completely change the way society deals with conspiracy theories.

#### 1.2.4. Mechanisms underlying the Fort effect

##### a) Impact of exposure to conspiracy theories on beliefs

The most important issue related to the incrementation of the argumentative mille-feuilles presence in our society is that they may be a vector for triggering the belief in conspiracy theories. Indeed, if multiple researches (e.g. Goertzel, 1994; Wagner-Egger & Bangerter, 2007) have concluded that conspiracy believers have distinct “cognitive properties” compared to average people, the following studies show how the pro-conspiracy arguments presentation can increase average people’s endorsement of them.

A research conducted by Butler, Koopman, and Zimbardo (1995) looked at the impact of the Oliver Stone’s 1991 *JFK* movie on people’s opinion. This film included some elements in favour of a conspiracist explanation of John Fitzgerald Kennedy’s assassination. Then the researchers compared two populations: people that were about to see the movie, and people that had just seen it. Compared to people that were going to see the movie, participants that came back from their film show had a significantly lower belief in the involvement of Lee Harvey Oswald in JFK’s death (i.e. the official version), and also showed a higher score of belief in different alternative explanation (like the responsibility of the weapon manufacturers or the CIA). With this study, we can assume that exposure to arguments in favour of a conspiracy induces both an incrementation of the belief in different conspiratorial explanations of the events and a reduction of belief in the official version.

Douglas and Sutton (2008) found that exposing people to conspiracy theories increased their endorsement compared to people that were not exposed. Researchers presented several conspiracy theories concerning lady Diana’s death, and asked students to rate them and to estimate how much their classmates would have rated them. In addition, they asked participants to estimate their own attitudes and their classmates’ before having read the pro-conspiracy sentences. The results showed that presenting the pro-conspiracy sentences increased the belief in lady Diana’s conspiracies. Moreover, if subjects tended to estimate other people’s change in endorsing these conspiracy theories correctly, they significantly underestimated to what extent they had changed their attitude concerning Diana conspiracies. Thus, the exposure to conspiracy theories not only increased people’s adhesion to them, but in addition, people were not aware of their attitudinal change concerning this topic, despite the fact that they were aware of other people’s belief change. This can

be summarized as “people appeared to underestimate the extent of their own persuasibility, rather than overestimating the extent of others' convincibility” (Douglas Sutton, 2004).

An article by Jolley and Douglas (2014a) has concluded that an exposure to a text in favour of a conspiracy theory concerning Lady Diana's death increased people's endorsement of conspiracy theory compared to people that were exposed to a text refuting a Lady Di's conspiracy. They did the same measurement with a conspiracy concerning global warming, but they also added a control group where people were exposed to a neutral text. The participants that were in the pro-conspiracy condition showed a higher conspiracy endorsement compared to people in the anti-conspiracy or the control conditions. Moreover, this study showed that conspiracy theories endorsement increased the feeling of powerlessness and uncertainty (toward the government for Diana, and toward climate change for global warming), and therefore had a social impact by reducing the intention to vote (in the Lady Diana's conspiracy) or to reduce one's carbon footprint (in the global warming conspiracy). Here we can see a harmful direct social impact of the exposure to conspiracy on people's attitudes. Another study by Jolley and Douglas (2014b) underscored that people's exposure to a conspiracy theory increased their endorsement to it. Researchers presented participants either a text containing arguments pro-vaccination conspiracy, or arguments against it, or a neutral text. The results showed that the people endorsed more the vaccination conspiracy when they were in the pro-conspiracy condition (compared to the control and the anti-conspiracy conditions). The scientists also found that exposure to conspiracy increased people's feeling of powerlessness, and even reduced their vaccination intention (Jolley & Douglas, 2014b).

Van der Linden (2015) also put into light the potential harmful impact of exposing people to elements in favour of conspiracy theories. Indeed, they presented participants either a short video (about 2 minutes) in favour of a conspiracy concerning global warming, a video in favour of a reduction of our carbon footprint, or a puzzle (the control condition). The results showed that people exposed to the pro-conspiracy clip showed a higher belief that “global warming is a hoax” (Van der Linden, 2015) compared to the two other conditions. People in pro-conspiracy condition also thought that there was a lower scientific consensus about global warming (compared to the two other conditions), showed a lower intention to sign a petition in favour of a reduction of global warming, and were less likely to donate to a charity in the next 6 months. We can therefore see that even a very short exposure to conspiracy theories can have an impact not only on people's belief, but also on people's intention.

Bronner's explanation to these changes from "not believing" to "believing in a conspiracy theory" is that the exposure to pro-conspiracy arguments create some uneasiness in people that "receive" them. Therefore people tend endorse (to a certain degree) some of these arguments to fill this feeling of uneasiness (2013). Coherent with Bronner's idea, two studies by Van Prooijen and Jostmann (2013) brought to light the fact that the belief in a conspiracy theory (here, one was about responsibility of oil companies in Iraq war, and the other was about a fake conspiracy theory about the "death" of the Benin's president) was bigger when the feeling of uncertainty was made salient. Leman and Cinirella's (2013) results were in line with the elements presented above. Indeed, they found that manipulating people's need for cognitive closure, that can be defined as a need for "an answer on a given topic, any answer [...] compared to confusion and ambiguity" (Kruglansky, 1990 in Swami et al., 2014), changed their level of conspiracy theory endorsement. As a matter of fact, when researchers lowered participants need for cognitive closure, arguments in favour of a fictional conspiracy theory had a lower impact than the one observed in the group that need for cognitive closure had not been lowered. Therefore, we can suppose that the exposure to an argumentative mille-feuille in favour of a conspiracy theory may trigger a feeling of uncertainty concerning the reality of the official version, and may also generate a need for cognitive closure. These feelings would be filled by endorsing, to some extent, arguments in favour of the conspiracy theory.

Thus, we see that multiple studies are in favour of the idea that the arguments' presentation will increase people's belief in conspiracy theories. Based on one of Butler and colleagues (1995) results (about JFK's conspiracy), we could add the hypothesis that exposure to conspiracy theory may also reduce one's confidence in the official version. Finally, we could also investigate, as did Douglas and Sutton (2008), if people will tend to underestimate to what extent their belief has changed.

#### b) Impact of pro-conspiracy arguments on motivation

The definition of the Fort effect includes an other implication than the incrementation of the endorsement of a conspiracy theory: it also reduces the motivation for potential opponents to refute the different arguments proposed (Bronner, 2013). As numerous arguments are presented, it is difficult to have the different knowledge to refute each of them: for instance, not many people have enough knowledge in building physics to find counter-arguments to refute the fact that "jet-fuel doesn't melt steam beams", and have the flying skills to refute that (according to conspiracists) it is impossible even for a trained pilot to fly into the Pentagon, and have the knowledge in economy to

understand why the American Airline business actions have been far more sold a few weeks before the attacks. Bronner (2013) explains this phenomenon with the Olson's paradox, which is the fact that there are some situation into which people should work together, but, as some people only want to have the benefits of the collective action without having the costs, very few people are actually active.

To our knowledge, no study has been conducted on the impact of exposure to conspiracy theories in the motivation to find a counter-argumentation. But some studies about persuasion (Wright, 1974; Fuegen & Brehm, 2004) are in line with Bronner's hypothesis. Wright (1974) explains that when a person is exposed to a persuasive message, a counter-argumentation is far more difficult and "expensive" (in term of energy) than simply discredit the source or find arguments in favour of the message. This phenomenon is explain by the fact that "To counterargue, a person must search back through his belief system for rebuttal evidence to discredit multiple, often unexpected, message arguments." (Wright, 1974).

Fuegen and Brehm (2004) showed that the motivation is related to the difficulty to attain a goal. Their idea is that the motivation will be at its paroxysm if the obstacles to the goal are unknown. When the difficulties are salient but easy, the motivation will be very low. The arousal will increase with the difficulty until there are too many obstacles perceived by the person, which will generate a "drop" in the motivation. Thus, if we look at Bronner's assumption concerning the impact of argumentative mille-feuille on the motivation to refute conspiratorial arguments, the amount of arguments should generate a drop in people's motivation to refute them.

### c) Arguments quality and belief change

Finally Bronner's (2013) definition of the Fort effect states that each layer of the argumentative mille-feuille could be weak, which means that there should not be a significant difference between a collection of only good arguments, and a collection of weak ones (or a mix of both). There still should be a progressive endorsement to the conspiracy theory due to the exposition of arguments in favour of it. The idea will be that the arguments' quantity will have a greater impact than their quality.

As for the motivation, it seems that no study has been conducted on the impact of arguments' quantity or quality on the belief in a conspiracy theories. Indeed, in most of researches about

exposure to conspiracy theories (like the studies presented in the section 1.2.5.a), the researchers exposed participants to texts in favour (or not) of the conspiracy theories, but they did not measure in the first place first participants' perception of the arguments' quality. We can nevertheless consider one study (Nera, Pantazi & Klein, 2018) that showed that exposure to fictional conspiracy theories did not trigger an incrementation of belief in the related conspiracy theories. Indeed, they presented participants an episode of the X-files serial that was related to multiple conspiracies (like visits from alien, evil elites, assassination of witnesses, etc). Participants had to estimate their endorsement of three conspiracy theories (two items were about evil elites, and one was about hiding advanced technologies) either before or after having seen the episode. No significant difference of conspiracy theory endorsement between people that had first been exposed to the X-files episode compared to people that had not seen it yet was found. Thus, we see that we cannot propose people any kind of arguments in order to change people's beliefs, and it is not due to the fact that this study is about fictional conspiracy (e.g. Leman & Cinnirella (2013) found an incrementation in conspiracy theory endorsement by also exposing participants to a fictional conspiracy theory).

Therefore we looked at different studies about persuasion in the context of advertisement that have measured the impact of arguments quality and quantity on people's attitudes toward a product. Johnson and colleagues (2004) showed in a meta-analysis that there actually could be an impact of the arguments' quality on people's attitude changes. First, if the arguments are in favour of the person's initial attitudes, there effectively is no difference between strong and weak arguments on people's attitude, but there is an impact of the arguments' quality for the counter-attitudinal messages. Indeed, if the arguments are strong, there will be an attitudinal change, but if they are weak there is the possibility that there either will be no change (which is called the resistance), or a reinforcement of the attitudes that are in opposition with the message (defined as the boomerang effect), whether the receiver is under respectively high or low involvement concerning the message.

Researches about the impact of advertisement on people's attitude have put into light the Elaboration Likelihood Model (ELM). This model explains that there is two ways (related to people's involvement) to persuade people: the central and the peripheral routes (De Barnier, 2006). The central route is related to the fact that people look at the information perceived as relevant for them, they therefore are active and will look more for the quality of the arguments. The potential induced changes will be stable across time, will be resistant to counter-persuasion and will predict behaviours. The peripheral route is related to a lower motivation to process information. Thus,

people will focus on more superficial information like the number of arguments, the credibility of the source or its sincerity, etc (De Barnier, 2006). Thus, we can see the importance of the involvement on people's attitude changes. Several empirical researches have concluded that the arguments' quantity will be the most persuasive element in situation of low involvement whereas their quality will be the most important in case of high involvement (De Barnier, 2006). We can connect Bronner's vision of the impact of the argumentative mille-feuille to the peripheral route to persuasion: the arguments' quality is not important (unlike their quantity) and the changes may not be really deep. Indeed, this idea that "everything can't be false" can be related to a low involvement: its quite different to a complete conspiracy theories endorsement (like in the monological belief system for instance).

However, a study by Park and colleagues (2007) have found that people were more persuaded by high quality arguments compared to low quality ones regardless of participants' type of involvement. Indeed, they presented students an argumentation in favour of a topic (either about reducing cellphone use, adding more green space in the campus, or modify the university admission) which could be highly involving or not, and was constituted of either strong or weak arguments. The results showed that the good arguments generated changes that went in the direction of the persuasive messages, whereas weak arguments generated a boomerang effect.

### ***1.3. Hypotheses of this study***

To sum up, the main purpose of this research is to investigate empirically the "Fort effect" generated by the argumentative mille-feuille (Bronner, 2012, 2013). In other words we want to see if an accumulation of arguments of different quality will trigger an incrementation of the conspiracy endorsement and also a reduction of the motivation to refute the arguments related to the conspiracy theory. Therefore, three main hypotheses (summarized in Table 1) can be drawn from Bronner's definition of the Fort effect (2012, 2013).

First, the belief in conspiracy theory should increase after the arguments' presentation (H1A). Several studies seem to support this affirmation (Jolley & Douglas, 2014a, 2014b; Douglas & Sutton, 2008). Moreover, we can even complete this hypothesis with the observation of Butler and colleagues (1995), that the arguments' presentation will also reduce the belief in the official version (H1B). As this study is exploratory, and as the Fort effect has never been empirically investigated

before, we also postulated one hypothesis that comes from Douglas and Sutton (2008) research's results: the presentation of several arguments in favour of a conspiracy theory not only increases its endorsement, but people will also underestimate to what extent they have been influenced by them. Thus, we postulate that people will underestimate their belief changes (H1C).

Second, the motivation to find a counter-argumentation to the 9/11 conspiracy arguments will be reduced (H2). This hypothesis is also supported by different studies about persuasion (Wright, 1974; Wegener et al., 2004) that showed that motivation is related to the difficulty to attain a goal. Consequently, motivation to refute conspiratorial arguments should decrease after having different arguments presented, because their presentation should make the difficulty of a counter-argumentation more salient.

Finally, in his definition, Bronner explained that each layer of the mille-feuille could be weak. Thus, all of the effects presented should be the same regardless of the argumentation's constitution: the motivation, and the belief in conspiracy theory should decrease whether we present participants only good arguments or only weak ones. Despite some studies (e.g. Park et al., 2007) are not in line with this hypothesis, we will still fit to the original vision of the Fort effect, which is close to the associated idea of a peripheral route to persuasion (Johnson et al., 2004; De Barnier, 2006): the arguments quality should not have an impact on people's attitudes change (H3A); the persuasive impact will be generated by their quantity. As an indicator of the impact of the arguments quantity, we suppose that an argument presented in the beginning will be perceived as weaker than the same argument presented in the end (H3B).

**Table 1:** Summary of the hypotheses that will be tested in this study.

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<b>H1: About the conspiracy theory endorsement</b>
<i>H1A: The belief in conspiracy theory should increase after the arguments' presentation</i>
H1B: The confidence in the official version should decrease after the arguments' presentation
H1C: People will underestimate their belief change

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<b>H2: About the motivation</b>
<i>The motivation to find a counter-argumentation will decrease after the arguments presentation</i>

---

<b>H3: About the arguments' quality</b>
<i>H3A: The arguments quality should not have an impact on people's attitudes change</i>
H3B: The arguments quantity will have an impact on the perception of their quality

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N.B.: the elements presented in italics come directly from Bronner's (2013) definition of the Fort effect.

#### ***1.4. General research design***

Despite the fact that other conspiracies (like Big Pharma conspiracy or JFK assassination) can encounter more success in Switzerland (Wagner-Egger & Bangerter, 2007), we chose to work on the 9/11 conspiracy, because there are numerous and eclectic arguments in favour of the conspiracy theory (Bronner, 2013).

To investigate our hypotheses concerning the impact of the argumentative mille-feuille (i.e. an accumulation of arguments of different quality) on people's beliefs, we first had to determine which arguments in favour of the 9/11 conspiracy were good and which were weak. Thus, we needed to do two different studies: the first one, the preliminary study, will determine the difference in quality between different arguments in favour of the 9/11 conspiracy theories, and the second one, the main study, will test experimentally the impact of these arguments' quality on participants' attitudes.

## **2. Preliminary study**

### **2.1. Introduction**

We did this first study to determine which were the best and the worst arguments in favour of the 9/11 conspiracy theory. In order to test this, we randomly presented to participants 40 arguments taken from the Internet.

We also took the opportunity to test the progression of the arguments' quality across the survey. In other words, we wanted to look if the arguments' mean was significantly different at the end of the survey compared to the arguments' mean in the beginning. If we observe significant differences, it would be a clue suggesting that the number have an impact on people's perception of the arguments' quality.

### **2.2. Method**

#### *2.2.1. Survey's design*

The structure of the questionnaire (that we will call "survey 1") was constituted of two main parts: after a little introduction text (explaining that we wanted participants only to rate the quality of each argument without taking into account their belief or disbelief in the 9/11 conspiracy, and that these rating would be used in a further experiment), 40 arguments were randomly presented to them (one at a time). We then asked some demographic information, and finally, we thanked and debriefed them before redirecting them to a site debunking most of the arguments presented (CentriLoque, 2013). You can see an excerpt of the code used for this survey in Appendix A.

To constitute the arguments of this questionnaire, we used principally two types of sources: the first one was an article on a French blog presenting and refuting the main arguments in favour of the 9/11 conspiracy (CentriLoque, 2013) ; the second one was based on 5 videos from a French YouTube channel debunking the main arguments that are the most often used on Internet debates (DebunKer des Etoiles, 2016a, 2016b, 2016c, 2016d, 2017). There is two important reasons for using debunking sites instead of looking at believers in conspiracy theories sites: the first one is that most of the main arguments that can frequently be found on diverse sources on the Internet are reunited.

The second reason is that we could have the certitude that the arguments in favour of a conspiracy theory we presented in the survey would find a sourced counter-argumentation, which was a major ethical concern for us. Indeed, as we worked on the argumentative mille-feuille, whose main purpose is to change people's opinion concerning the 9/11 conspiracy, it was important that, at the end of the survey, we could offer the possibility to have access to a refutation to the elements that might trigger a conspiracy belief. Thus, participants would not stay with this feeling that "everything can't be false" (Bronner, 2013). From these sources, we could generate 30 arguments concerning the major elements of 9/11 (the World Trade Center Twin Towers, the Pentagon and the World Trade Center Tower 7), and necessitating knowledge in particular fields, like building physics, chemistry, economy, etc. A typical argument presented and refuted in debunk sites is for example the argument Q8:

“En 2009, une équipe de 9 scientifiques, dont le physicien Steven E. Jones, publient les résultats de leurs analyses des décombres du site dans la revue *The Open Chemical Physics Journal*. Leur recherche sur les échantillons d'acier qu'ils ont pu obtenir démontre la présence de restes d'un explosif très puissant appelé "nanothermite" sur le site des 2 tours; ils ont aussi découvert des résidus de soufre, lesquels pourraient être liés à de la "thermate" (mélange de thermite, soufre et nitrate de baryum). Ces composés chimiques peuvent dégager une chaleur allant jusqu'à 2'500 degrés et sont prévus pour accélérer la fonte de l'acier (le composant principal de la structure des WTC). De plus, les rapports officiels expliquent que des morceaux d'acier corrodé ont été trouvés et les ont qualifiés d'"élément très inhabituel pour un incendie de ce type.”  
(see Appendix A, Q8)

We completed these arguments with 10 elements coming from the conspirational documentary *Loose change 9/11: second edition* (Avery et al., 2007), and other eclectic sources (Comfort, 2001; Freeman, 2014; Dean. 2014). These arguments were chosen for their unlikely status, and the poorness of their argumentation. The argument Q35 is a good example of this:

“Les cartes du jeu « Illuminati: The Game of Conspiracy » édité en 1995 créé par Steve Jackson pourraient révéler que l'attentat était prévu de longue date. En effet, la carte "terrorist nuke" montre une image des World Trade Center en train de brûler. Une autre carte, la carte "Pentagon" montre une partie du Pentagone en train d'exploser.” (See Appendix A, Q35)

The construction of the web questionnaire was realized with the free online web survey designer PsyToolkit (Stoet, 2010, 2017). We chose this web service because it provided one very crucial function for this research that other questionnaire designers (like Limesurvey for instance) did not have: the ability to present elements randomly, combined to the possibility to retrieve the order in which the program presented the latter elements. This way we could have the possibility to test the impact of the argument's position (e.g. the same argument presented at the beginning of the survey might be rated lower than if it had been presented at the end), and we also could have a better idea of the argument's "true quality" regardless of its position in the questionnaire. One other interesting function was that we had the possibility to generate a redirection from its last question to another site at the end of the survey. We took this opportunity to redirect people to the Centrilogue (2013) blog, so people could easily find a refutation of the arguments presented during the experiment.

### *2.2.2. Measurements*

We first measured the arguments' quality. People had to rate each of the 40 arguments randomly presented on a Likert scale from 1 to 10 (1 corresponding to arguments "Of bad quality" and 10 to arguments "Of very good quality").

At the end of the survey, we also took some socio-demographic information: we asked them their birth date, their gender (male, female or other), their main study domain, and finally, their mother tongue (as this research takes place in the university of Fribourg, lots of students speak either French, German or Italian).

### *2.2.3. Procedure and participants*

We presented this first survey to students in second year of bachelor who were taking part to Dr. Pascal Wagner-Egger's "social psychology" course in the university of Fribourg. As we estimated that the duration for a lay person to complete the survey was about 30 minutes, the students who participated to this research received half an hour of experiment credits. The recruitment has been realized by Dr. Wagner-Egger who sent to all of his course's students a mail containing a link

directing to a PsyToolkit survey Internet page. 70 people took part to this first questionnaire, but only 48 students completed it from the first to the last question.

All of the students who completed the survey followed the bachelor in psychology curriculum. Participants mean age was 22.042 years ( $SD = 3.396$ ). There was a majority of women (87.5%), and of native French-speaking people (68.75%) compared to people with an other mother tongue.

#### 2.2.4. Analyses

The data preprocessing has been realized with the software MATLAB 2016b. The classical Analyses of Variance (ANOVA) were computed with IBM SPSS Statistics (version 25), the Welch-modified ANOVA was computed with the package “car” (Fox & Weisberg, 2011) for RStudio (RStudio Team, 2017, 2018).

We first computed the means according to each created arguments (see Table 2 for a good overview of these information). We then created the 3 conditions that would be used in the main study. These categories were constituted with the questions that had the 10 highest means (to constitute the “good condition”), the 10 lowest scores (for the “weak condition”) and the 5 highest and lowest means (for the “mix condition”). We then examined the difference between each condition’s means and the mean of all arguments with a one-way analysis of variance (ANOVA). This ANOVA (if significant) would then be followed by a Tukey’s Honest Significant Difference (HSD) post-hoc comparison.

To test the significance of the progression of the arguments’ notation according to their position, we computed a one way ANOVA with repeated measures.

### 2.3. Results

#### 2.3.1. Differences of arguments’ quality

The mean of all arguments’ score was 4.80 ( $SD = 2.03$ ). The weakest score mean (see Table 2) was obtained with the argument Q31 ( $M_{Q31} = 2.54$ ,  $SD_{Q31} = 1.95$ ), and Q11, the best argument, obtained the highest mean ( $M_{Q11} = 6.27$ ,  $SD_{Q11} = 2.24$ ).

We created the “good condition” with the arguments Q2, Q5, Q6, Q8, Q9, Q10, Q11, Q18, Q20 and Q21, the “weak condition” with Q13, Q27, Q29, Q30, Q31, Q32, Q33, Q34, Q35, and Q36, and the “mix condition” with Q2, Q6, Q8, Q11, Q20, Q27, Q31, Q32, Q35, and Q36. You can see the Table 2 for the means and standard deviations of each of these questions, and Appendix A to see which text each Qi corresponds to).

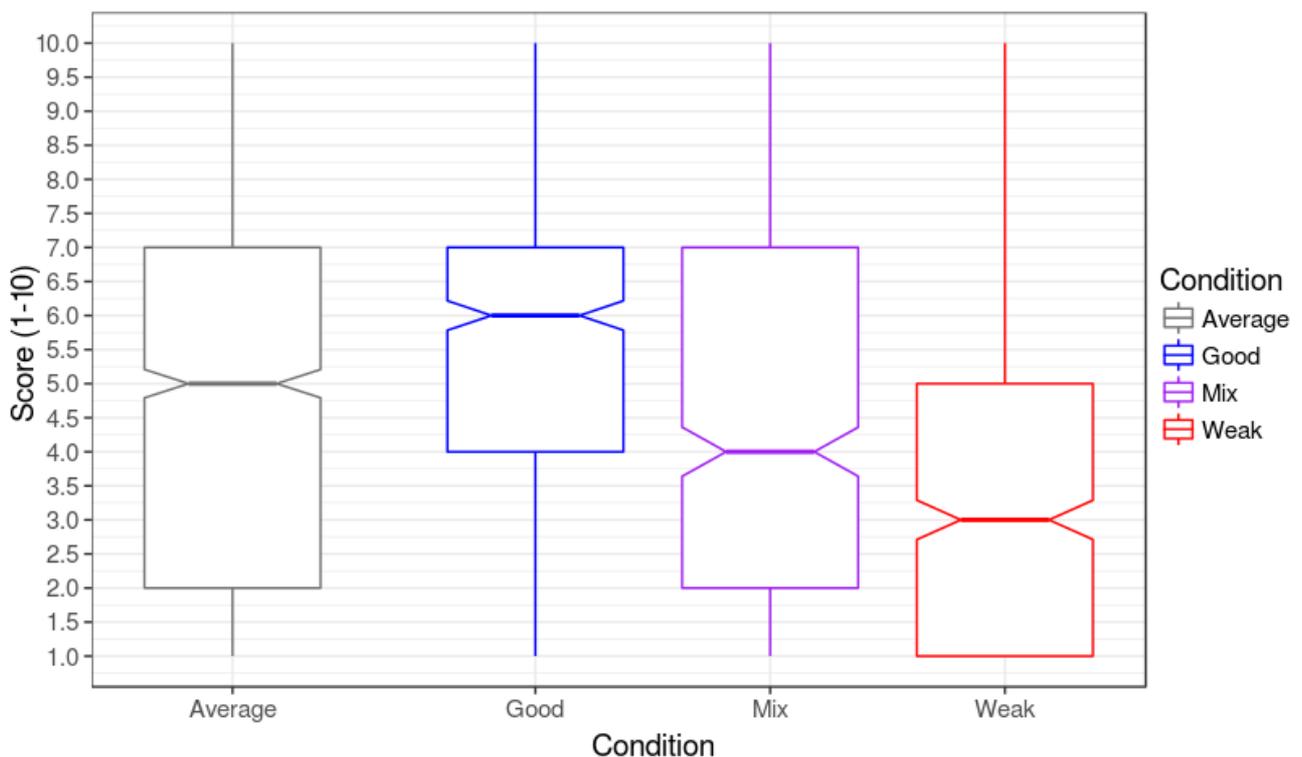
**Table 2:** Means, standard deviations and condition attribution of each arguments presented in Survey 1 (in decreasing order according to the mean).

Item	Rating		Condition <sup>b</sup>	Item	Rating		Condition <sup>b</sup>
	M <sup>a</sup>	SD			M <sup>a</sup>	SD	
Q11	6.27	2.24	G / M	Q24	5.10	2.65	—
Q8	5.94	2.21	G / M	Q15	5.08	2.30	—
Q2	5.92	2.32	G / M	Q25	4.81	2.30	—
Q20	5.85	2.19	G / M	Q19	4.77	2.10	—
Q6	5.69	2.27	G / M	Q40	4.77	2.16	—
Q10	5.63	2.34	G	Q7	4.71	2.17	—
Q5	5.60	2.39	G	Q26	4.69	2.57	—
Q18	5.44	2.20	G	Q28	4.61	2.53	—
Q9	5.35	2.18	G	Q38	4.52	2.76	—
Q21	5.33	2.30	G	Q39	4.44	2.19	—
Q12	5.31	2.03	—	Q33	4.23	2.59	W
Q23	5.31	2.08	—	Q34	4.23	2.36	W
Q1	5.29	2.41	—	Q30	4.08	2.58	W
Q22	5.27	2.30	—	Q29	3.92	2.40	W
Q3	5.21	2.28	—	Q13	3.67	2.47	W
Q4	5.21	2.11	—	Q36	3.42	2.41	W / M
Q14	5.19	2.52	—	Q35	3.19	2.49	W / M
Q17	5.17	2.12	—	Q32	3.04	2.07	W / M
Q37	5.17	2.25	—	Q27	2.75	2.30	W / M
Q16	5.13	2.45	—	Q31	2.54	1.95	W / M

<sup>a</sup>1=Of bad quality, 10=Of very good quality. <sup>b</sup>G=“Good condition”, M=“Mix condition”, W=“Weak condition”, — =“not assigned”.

We then performed a one-way ANOVA to see the difference between each condition (Good, Mix, Weak) and with the average (fig. 1). We first performed a Levene test to verify the assumption

of homogeneity of variance:  $F(3, 2876) = 15.36, p < .001$ . As this test was significant, we had to reject the hypothesis that there is a homogeneity of variance. Thus, to avoid type I errors, we performed a Welch-modified ANOVA (Gastwirth, Gel & Miao, 2009). The analyse showed a significant effect of the group  $F(3, 2876) = 71.09, p < .001$ , partial  $\eta^2 = .059$ . The Tukey's Honest Significant Difference showed that arguments in the Good condition ( $M_G = 5.70, SE_G = .067$ ) had a significantly higher score than the average and all the other conditions (all  $p_s < .001$ ). The weak condition's mean ( $M_W = 3.51, SE_W = .116$ ), was significantly lower than the other conditions and the average (all  $p_s < .001$ ) and the mix condition ( $M_M = 4.46, SE_M = .116$ ) showed no significant difference with the average ( $M = 4.56, SE = .067$ ),  $p = .891$ .

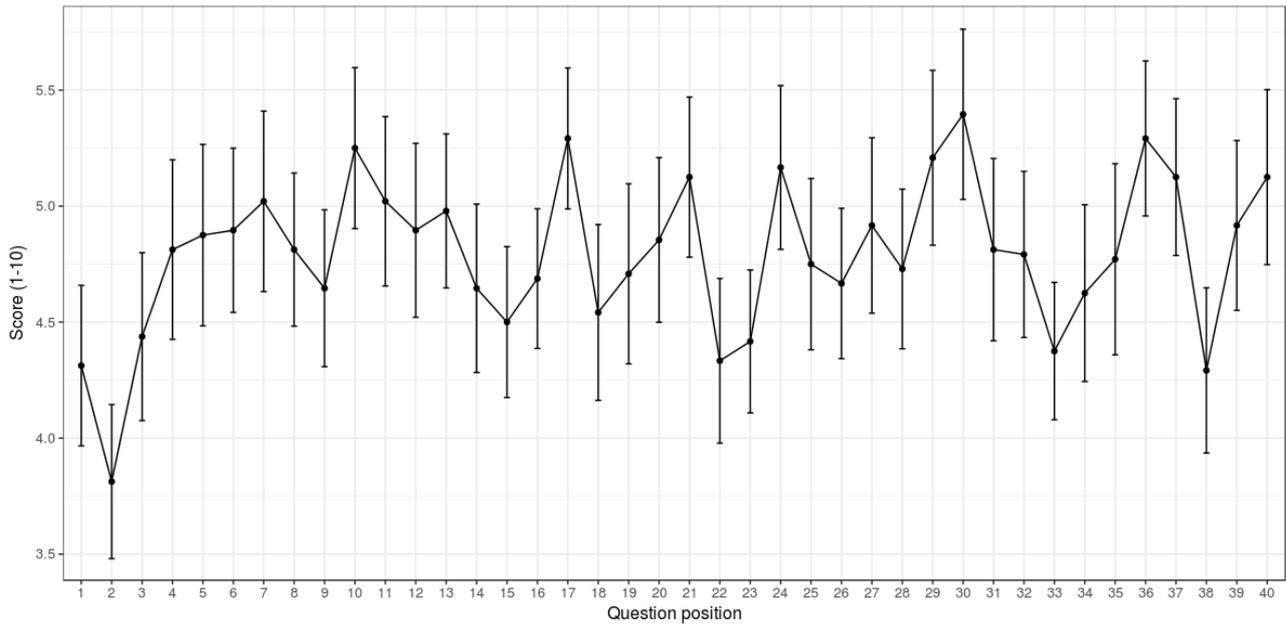


**Figure 1:** Notched boxplots of all scores' distributions (1=Of bad quality, 10=Of very good quality) on average and for each created condition (Good in blue, Mix in purple and Weak in red).

### 2.3.2. Progression of the arguments' notation

To see the impact of the arguments' position on their notation, we performed a one-way ANOVA with repeated measures (fig. 2). We first performed a Mauchly's test,  $\chi^2(779) = 1010.32, p < .001$ , which indicated a violation of the sphericity assumption. Therefore, we used the Huyhn-Feld

method (Field, 2009) to correct the degrees of freedom ( $\epsilon = .897$ ). The test was not significant ( $F(35, 1645) = 1.22, p = .169$ ), which means that there is no significant difference between the arguments presented in the beginning and the arguments presented at the end of the survey.



**Figure 2:** Progression of the arguments' score (1 = Of bad quality, 10 = Of very good quality) according to their position in survey 1. Error bars indicate  $\pm 1$  standard error to the mean.

## 2.4. Discussion

This preliminary study provided us a first overview of people's perception of strong and weak arguments. The ANOVA indicates that there is a possibility to significantly distinguish good arguments from weak ones. It will be interesting to see, in the main study, if people will score the arguments the same way as participants rated them in this first experiment.

Despite a slight upward tendency, this preliminary study did not underscore a significant difference between the arguments' mean in the beginning compared to the end. This indicates that if there is an effect of the arguments' quantity (H3B), it is not strong enough to trigger participants some biases about their perception of quality. This observation may be different in the main study, as some conditions will comport only good or weak arguments, and as the students will be in slightly different experimental conditions than those in this study.

### **3. Main study**

#### **3.1. Introduction**

The aim of this main study will be to use the 3 categories that emerged from the preliminary study to test the Fort effet: we will constitute argumentative mille-feuilles with good, weak and mix arguments. We will then see the differences of impact of these different argumentations on our dependant variables (e.g. participants' belief in the official version, in conspiracy theories, their motivation, etc.)

#### **3.2. Method**

##### *3.2.1. Surveys' design*

We constituted 3 different surveys with PsyToolkit. Indeed, each survey's experimental part was different: the survey with the good condition contained the arguments with the 10 best score means, the survey with the weak condition contained the 10 worst arguments and the survey with the mix condition contained the 5 best and worst arguments. For more concision, we will now call the survey with the mille-feuille part constituted with the good arguments "survey G", the one with the weak arguments "survey W", and the one with the mix arguments "survey M".

There were 4 phases in each questionnaire: the first one, was the pre-tests, which contained an introduction and a question about how well the person thought he/she knew the 9/11 events, 2 measurements of belief in 9/11 conspiracy theory randomly presented, and a motivational scale. The second part was the mille-feuille, our independent variable, including 10 arguments randomly presented (which was different between Surveys G, M and W). The post-tests contained all of our dependant variables: the same measurements as in the pre-tests were taken, but there also were three questions testing to what extent people underestimated the influence (if there was one) of the arguments on their beliefs. Finally we asked some socio-demographic information before thanking, debriefing and redirecting participants to a site debunking the main arguments presented to them.

### 3.2.2. Measurements

#### a) Introduction and pre-tests

The first question of the survey asked participants what was their level of knowledge about the events that happened during the 11 of September 2001 on a Likert scale from 1 to 9 (1=Very short, 9=Very broad). All of these pre-test measurements taken are available in Appendix B.

Two different measurements about the belief in the 9/11 conspiracy theory were taken. The first measurement we took about the belief in the 9/11 conspiracy was an adaptation of the French version of the single-item scale of Conspiracy belief (Lantian et al., 2016) to the 9/11 events. Indeed, we replaced the first sentence “Différents évènements politiques ou sociaux importants (comme par exemple les attentats du 11 Septembre 2001, la mort de Lady Diana, l’assassinat de JFK) font l’objet de discussions [...]” (Lantian et al., 2016) by the sentence “Les attentats du 11 Septembre 2001 font l’objet de discussions [...]”. People had to say on a Likert scale from 1 to 9 to what extent they thought that the conspirational affirmation was true (1=Real, 9=False). The second measurement we took presented a summary of the 9/11 official version and participants had to say how much they believed that this version was real on a Likert scale from 1 to 9 (1=Real, 9=False). These two elements were randomly presented to participants.

We also measured on a Likert scale from 1 to 9 (1=Weak, 9=Strong) the participants’ motivation to defend the official version in a potential discussion or a debate.

#### b) Experimental phase

In this phase, people had to determine the quality of 10 arguments randomly presented one at a time on a scale from 1 to 10 (1=Of bad quality, 10=Of very good quality). People were randomly assigned to one of the 3 surveys constituted with the arguments rated in the preliminary study.

In the “survey G”, people had to rate the arguments Q2, Q5, Q6, Q8, Q9, Q10, Q11, Q18, Q20, and Q21; the arguments Q13, Q27, Q29, Q30, Q31, Q32, Q33, Q34, Q35, and Q36 were presented in the “survey W”; and the “survey M” contained the arguments Q2, Q6, Q8, Q11, Q20, Q27, Q31, Q32, Q35, and Q36 (see Appendix A for the texts corresponding to each Qi).

### c) Post-tests and conclusion

The measurements taken in the post-tests were exactly the same as those in the pre-test (i.e. the belief in conspiracy theory, the confidence in the official version and the motivation), except for the fact that the question about the participant's previous knowledge of the 9/11 events was not asked. We also took a measurement regarding the possibility that people might neglect their change of beliefs in conspiracy endorsement by asking them to try to remember the score they gave to the official version during the pre-test.

We concluded with a question that measured the participant's motivation to get information about the 9/11 events and finished with the classical socio-demographic questions: their birth date, their gender (male, female, other), their main study domain, and if their mother tongue was French (see Appendix C to have access to the code corresponding to these measurements).

#### 3.2.3. Procedure and participants

We presented these surveys to students in their first year of bachelor who attended the course "statistics" with Dr. Pascal Wagner-Egger in the university of Fribourg. We estimated that the duration to complete the questionnaire was around 30 minutes, so the participants to this experiment were rewarded with half an hour of experiment credits. They were semi randomly assigned to one of the 3 questionnaires (according to their first name alphabetical order). The recruitment was realized by Dr. Wagner-Egger who sent students a link to one of the three PsyToolkit surveys. In total, 103 people took part to one of the three surveys (31 in survey G, 44 in survey M and 28 in survey W), but we kept the 86 participants (28 in survey G, 34 in survey M, and 24 in survey W), who answered all the questions presented in the survey.

Almost all of the students (94.19%) who completed the questionnaire were following the bachelor in psychology curriculum. Indeed, in condition G, 2 students (7.14%) were in the political science bachelor, and in condition W, 2 students (8.33%) were in sociology, and 1 (4.17%) was in informatics. All students in condition M were in psychology. Participants' mean age was 23.38 (SD = 10.90) years ( $M_G = 21.82$ ,  $SD_G = 3.83$ ;  $M_M = 24.06$ ,  $SD_M = 15.42$ ;  $M_W = 24.26$ ,  $SD_W = 8.62$ ). There was a majority of women compared to men (84.90% across the 3 surveys: 89.30% in Survey G, 88.25% in M, and 75% in W), and of French-speaking people compared to people with another mother tongue (74.42% across the 3 surveys: 67.86% in Survey G, 79.41% in M, and 75% in W).

### 3.2.4. Analyses

The ANOVAs were realized with SPSS version 25 except for the Welch-modified ANOVAs that were computed with the “car” package (Fox & Weisberg, 2011). We used the package “Rcmdr” (Fox, 2017) for the hierarchical regressions analyses on Rstudio (RStudio Team, 2018).

We tested the impact of the arguments on the score of belief in conspiracy theory by comparing these scores in the pre-test and the post-test with a 2 x 3 mixed ANOVA. The intra-subject factor was the measurement (which levels were the pre- and the post-test measurements), and the inter-subject factor was the survey condition (i.e. survey G, M, W). We did the same analyses of variance for the pre-/post-test comparison with the variables motivation and belief in the official version.

To test the effect of the arguments on the the official version in the pre-test score’s memory, we computed a mixed 2 x 3 ANOVA. The intra-subject’s factor was the measurement (which two levels were the belief in the official version rated in the pre-test and the participant’s estimation of this pre-test score), the inter-subject factor was the survey condition (G, M and W).

Like in the preliminary study, we also analysed the progression of the arguments notation according to their position. Therefore, we performed a Mixed 3 x 10 ANOVA. The inter-subject factor was the survey assignation (i.e. Survey G, M, and W), and the intra-subject factor was the argument’s position (from 1 to 10).

We compared the notation of the common questions in the mix and the two other conditions. We did these comparisons with two 2 x 5 ANOVA. The first 2 x 5 ANOVA compared the arguments Q1, Q6, Q8, Q11, and Q20 according to the survey G and M, and the second ANOVA compared the arguments Q27, Q31, Q32, Q35, and Q36 according to the survey M and W.

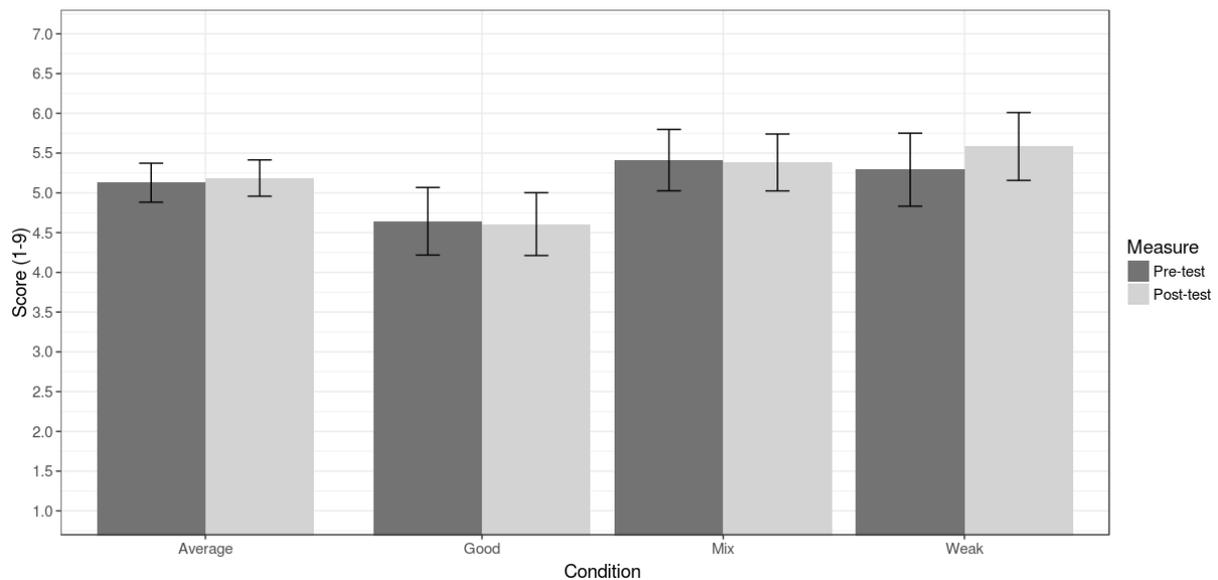
To see what would be the best predictors for the measurement of the belief in the 9/11 conspiracy in the post-test, the belief in official version in the post-test, the motivation in the post-test and the score mean of the arguments in position 6 to 10, we performed four different multiple regression analyses. To obtain the best model, we used a backward/forward step-by-step regression analysis method, which means that we began with a complete model and removed the predictor that did not allow to produce the best fit of the model (i.e. the backward method); to avoid type I error (Field, Miles & Field, 2012), at each step, we looked if re-adding a removed variable could improve the model’s fit (i.e. the forward method). Each model fit was measured with the Bayesian information criterion (BIC).

### 3.3. Results

#### 3.3.1. About the conspiracy theory endorsement

##### a) Impact on the scale of belief in the 9/11 conspiracy theory

To determine the impact of the arguments on the belief in the conspiracy version of the 9/11 events according to the survey (G, W and M), we performed a 2 x 3 mixed ANOVA with the pre-test and post-test as the intra-subject factor, and the type of questionnaire as the inter-subject factor (fig. 3). The Box's test showed that the assumption of equality of covariance matrices was respected,  $F(6, 109682.83)$ ,  $p = .193$ , and as we only had 2 levels of intra-subjects factor, we did not perform a Mauchly test of sphericity. The ANOVA showed no significant effect of the measurement score ( $F(1, 83) = 0.114$ ,  $p = .737$ , partial  $\eta^2 = .001$ ), the type of questionnaire ( $F(2, 83) = 1.61$ ,  $p = .206$ , partial  $\eta^2 = .037$ ), or of their interaction ( $F(2, 83) = 0.215$ ,  $p = .807$ , partial  $\eta^2 = .005$ ).

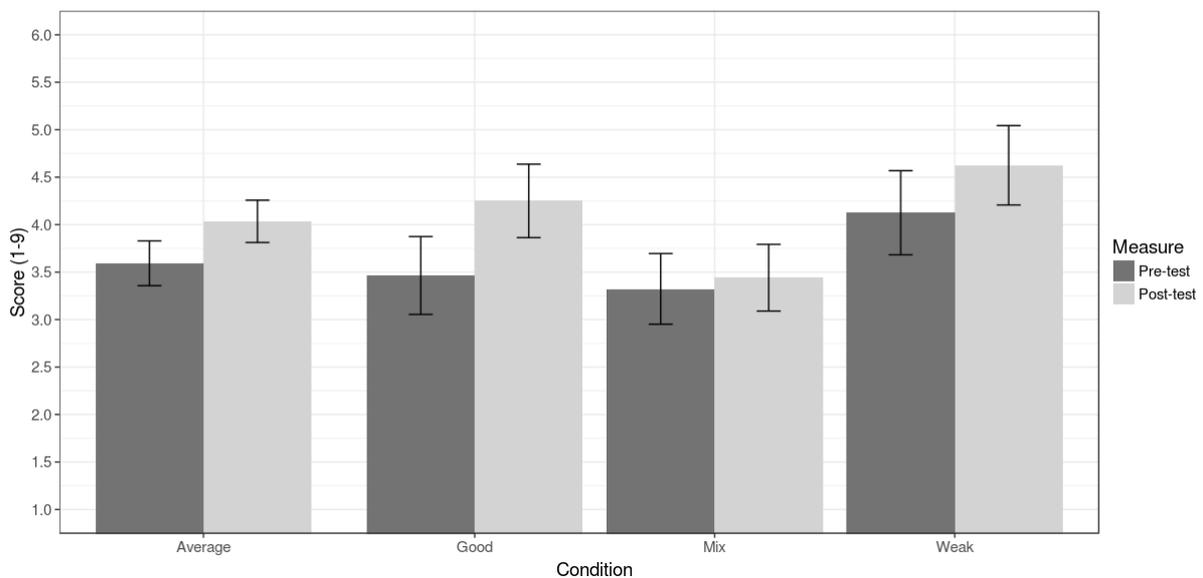


**Figure 3:** Score differences of belief in a conspiracist explanation of the 9/11 events (this explanation is considered as: 1=True, 9=False) between the pre- and the post-test on average and according to the survey (G, M and W). Error bars indicate  $\pm 1$  standard error to the mean.

##### b) Impact on the belief in the official version

To determine the impact of the arguments on the belief in the official version according to the questionnaire, we performed a 2 x 3 mixed ANOVA with the pre- and post-test measurement of the belief in the official version as the intra-subject factor, and the type of questionnaire (G, W, M) as

the inter-subject factor (fig. 4). The Box's test showed that the assumption of equality of covariance matrices has been violated,  $F(6, 109682.83)$ ,  $p = .028$  (i.e.  $p < .05$ ), but Verna (2015) recommends, as this test is very sensitive, to consider a threshold of significance at  $p < .001$ . Thus, here we can consider the equality of the covariance matrices. As we have less than 3 levels of intra-subjects factor, we do not have to perform a Mauchly test of sphericity. The ANOVA highlighted a significant effect of the measurement ( $F(1, 83) = 5.50$ ,  $p = .021$ , partial  $\eta^2 = .062$ ). Thus, we can conclude that the score of belief in the official version was significantly lower in the pre-test ( $M = 3.64$ ,  $SE = .236$ ) than in the post-test ( $M = 4.11$ ,  $SE = .223$ ), which means that, as we could expect, the belief in the official version decreased in the post-test. The ANOVA also showed that there was no significant effect of the type of test (i.e. good, weak or mix),  $F(2, 83) = 1.93$ ,  $p = .151$ , partial  $\eta^2 = .044$ , or of the measure-condition interaction ( $F(2, 83) = 1.04$ ,  $p = .358$ , partial  $\eta^2 = .024$ ).

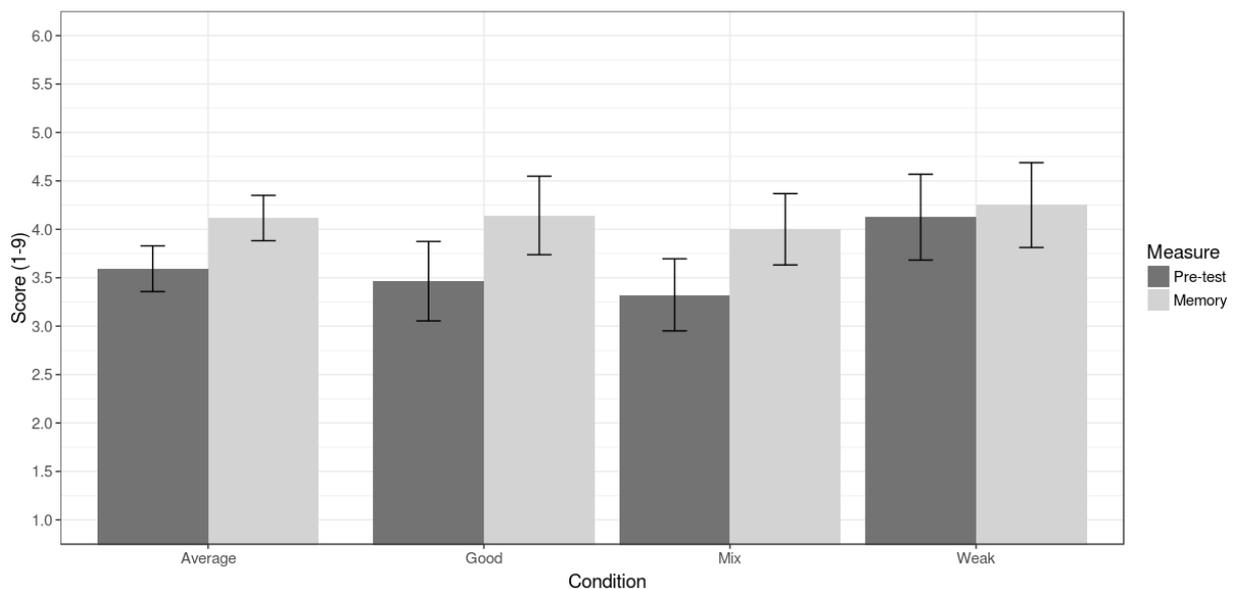


**Figure 4:** Scores differences of confidence in the official version (the official version is considered as: 1=True, 9=False) between the pre- and post-test on average and according to the survey. Error bars indicate  $\pm 1$  standard error to the mean.

### c) Impact on participants' estimation of belief change

To see the impact of the argumentative mille-feuille on the memory of the score given to the official version in the pre-test (vs the actual score), we performed a 2 x 3 mixed ANOVA (fig. 5). The intra-subject's factor was the measurement (with the belief in the official version rated in the pre-test and the estimation taken in the end of the survey of this pre-test measurement as the 2

levels), the inter-subject factor was the survey condition (i.e. good, mixed or weak). The Box's test of equality of the covariance matrices showed that this assumption has been violated, even with the Verna's (2015) correction  $F(6, 109682.83)$ ,  $p < .001$ . So we had to randomly exclude some subjects from groups (4 from group G, 10 from group M) to have the same amount of participants as in condition W ( $n = 24$ ), because with groups of same size, we can ignore the Box's test results (Field, 2009). With the reduced sample size, the ANOVA showed a significant effect of the intra-subjects factor,  $F(1, 69) = 7.00$ ,  $p = .010$ , partial  $\eta^2 = .092$ . We can see that the belief in the official version's score is significantly higher in the participant's memory ( $M = 4.13$ ,  $SE = .206$ ) than in the pre-test in reality ( $M = 3.64$ ,  $SE = .236$ ). This means that people tend to underestimate the score they gave to the official version. There was neither a significant effect of the groups ( $F(2, 69) = 0.816$ ,  $p = .446$ , partial  $\eta^2 = .023$ ), nor an effect of the interaction ( $F(2, 69) = 1.05$ ,  $p = .354$ , partial  $\eta^2 = .030$ )<sup>1</sup>.



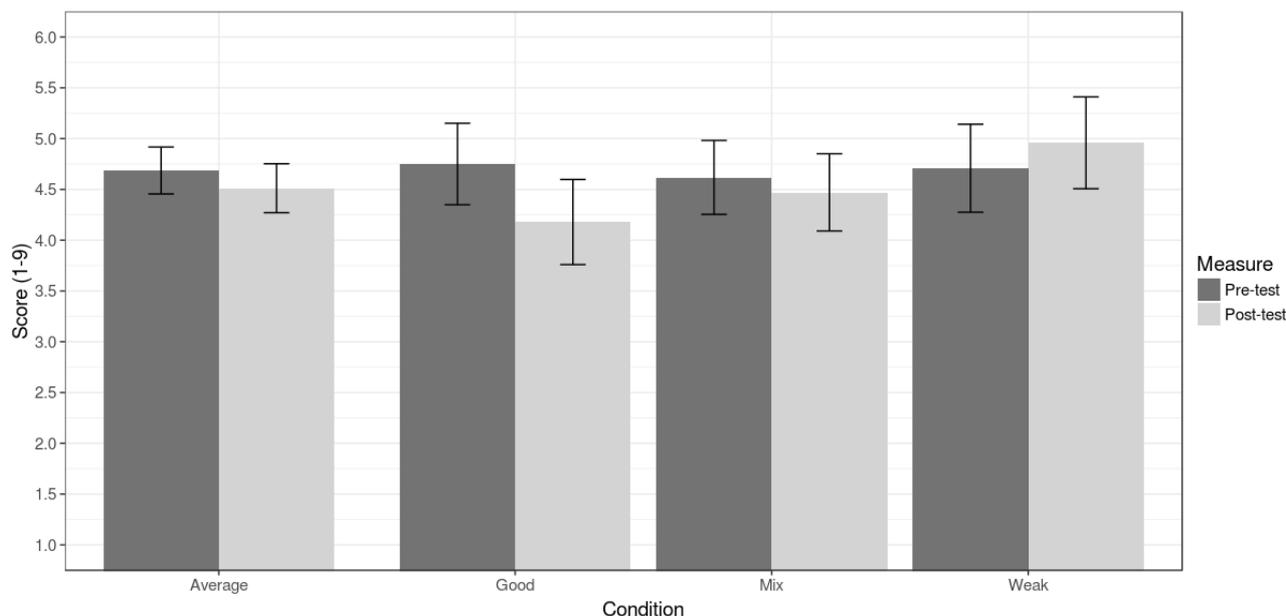
**Figure 5:** Difference between the measurement of belief in the official version (i.e. the official version is: 1=True, 9=False) during the pre-test, and the participants' memory of this measure, on average and according to the survey condition (Good, Mix, Weak). Error bars indicate  $\pm 1$  standard error to the mean.

### 3.3.2. Impact on the motivation to refute the arguments

We did a 2 x 3 mixed ANOVA to determine the impact of the arguments on the motivation to find a counter-argumentation (the intra-subjects factor) according to the type of questionnaire (i.e. survey G, M, W) the inter-subjects factor (fig. 6). The Box's test of equality of covariance was

<sup>1</sup> N.B.: We obtained similar results with the groups of different size.

significant with an alpha level a 5%,  $F(6, 109682.83)$ ,  $p = .023$ ). But with the Verna's (2015) recommendation concerning the significance threshold (i.e.  $p < .001$ ), this Box's test can be considered as not significant, that's why we can assume the equality of the covariance matrices. The ANOVA showed neither a significant effect of the intra-subjects factor,  $F(1, 83) = 0.169$ ,  $p = .304$ , partial  $\eta^2 = .013$ , nor an effect of the type of questionnaire ( $F(2, 83) = 0.228$ ,  $p = .797$ , partial  $\eta^2 = .005$ ), or of their interaction ( $F(2, 83) = 2.28$ ,  $p = .109$ , partial  $\eta^2 = .052$ ).

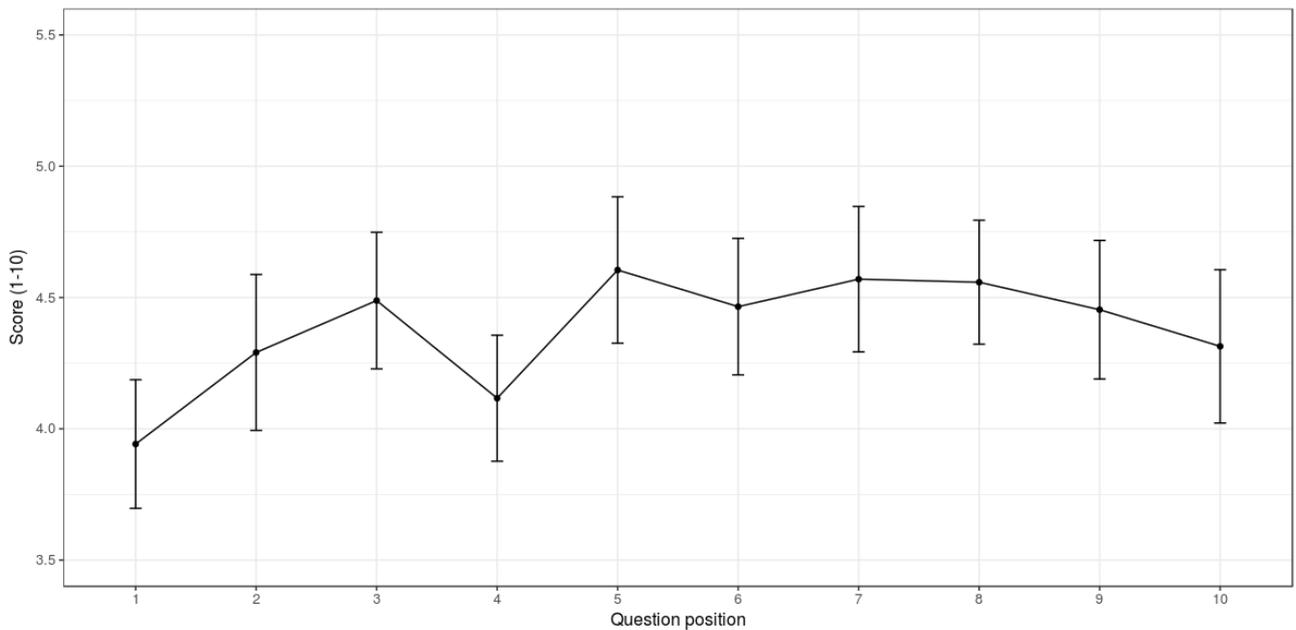


**Figure 6:** Pre- and post-test differences of score of motivation to find a counter-argumentation in a debate with a conspiracy believer (1=Weak, 9=Strong) on average and according to the survey. Error bars indicate  $\pm 1$  standard error to the mean.

### 3.3.3. About the arguments' quality

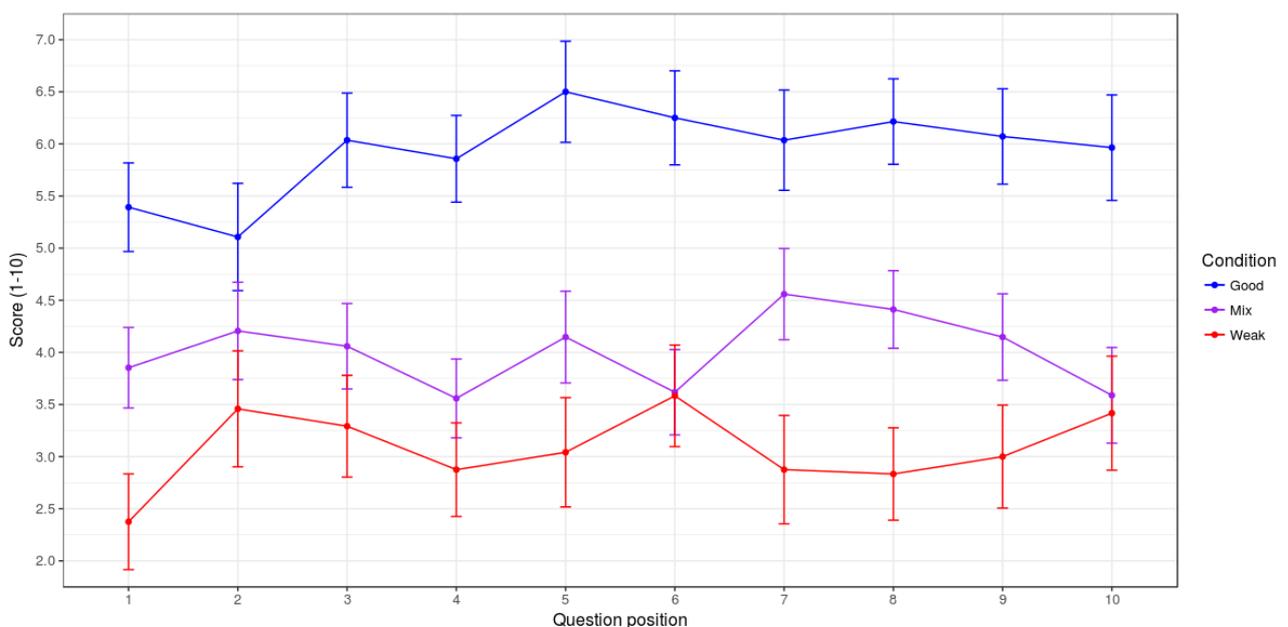
#### a) Evolution of the arguments' notation

We wanted to see the impact of the arguments' position in the 3 surveys of this main study. Thus, we performed a mixed 10 x 3 ANOVA with the argument's position (from 1 to 10) as the intra-subject factor, and the condition (Good, Weak and Mixed) as the inter-subject factor. The Box's test of equality of covariance matrices showed that this assumption has been violated,  $F(110, 16101.89)$ ,  $p = .006$ ). But as this test is very sensitive, we can consider that the threshold of significance is  $p = .001$  (Verna, 2015). The Mauchly's test showed that the hypothesis of sphericity was respected  $\chi^2(44) = 38.64$ ,  $p = .701$ . The analyses showed that there was no significant impact of the arguments' position on their notation,  $F(9, 747) = 0.908$ ,  $p = .518$ , partial  $\eta^2 = .011$  (fig. 7).



**Figure 7:** Average progression of the arguments' score (1 = Of bad quality, 10 = Of very good quality) according to their position in survey regardless of the survey quality. Error bars indicate  $\pm 1$  S.E.M.

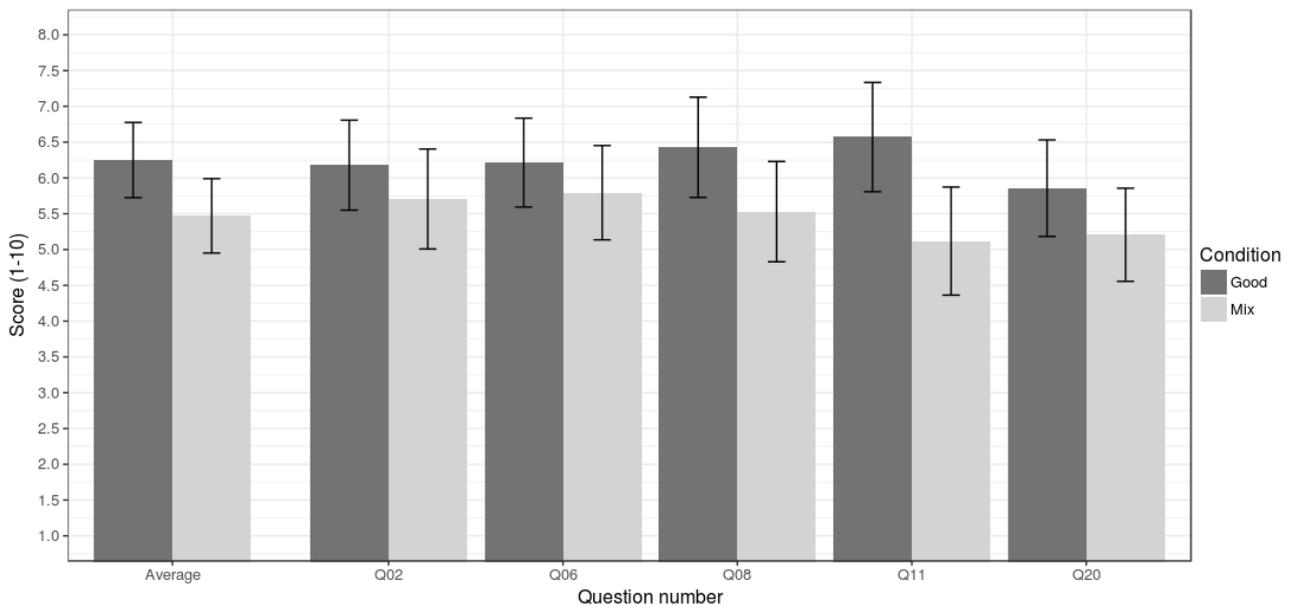
The inter-subject effect was significant (fig. 8),  $F(2, 83) = 27.34$ ,  $p < .001$ , partial  $\eta^2 = .397$ . The Tukey HSD showed that the survey G questions were significantly better rated ( $M_G = 5.94$ ,  $SE_G = .273$ ) than in survey M ( $M_M = 4.02$ ,  $SE_M = .247$ ), and W ( $M_W = 3.075$ ,  $SE_W = .294$ ), all  $p_s < .05$ . Survey M's arguments were also significantly better rated than in survey W ( $p < .044$ ). Finally, the intra-/inter-subject interaction was not significant ( $F(18, 747) = 0.944$ ,  $p < .05$ , partial  $\eta^2 = .022$ ).



**Figure 8:** Mean progression of the arguments' score (1 = Of bad quality, 10 = Of very good quality) according to their condition (Good, Mix and Weak). Error bars indicate  $\pm 1$  standard error to the mean.

b) Differences of arguments' notation between the conditions Good, Mix and Weak

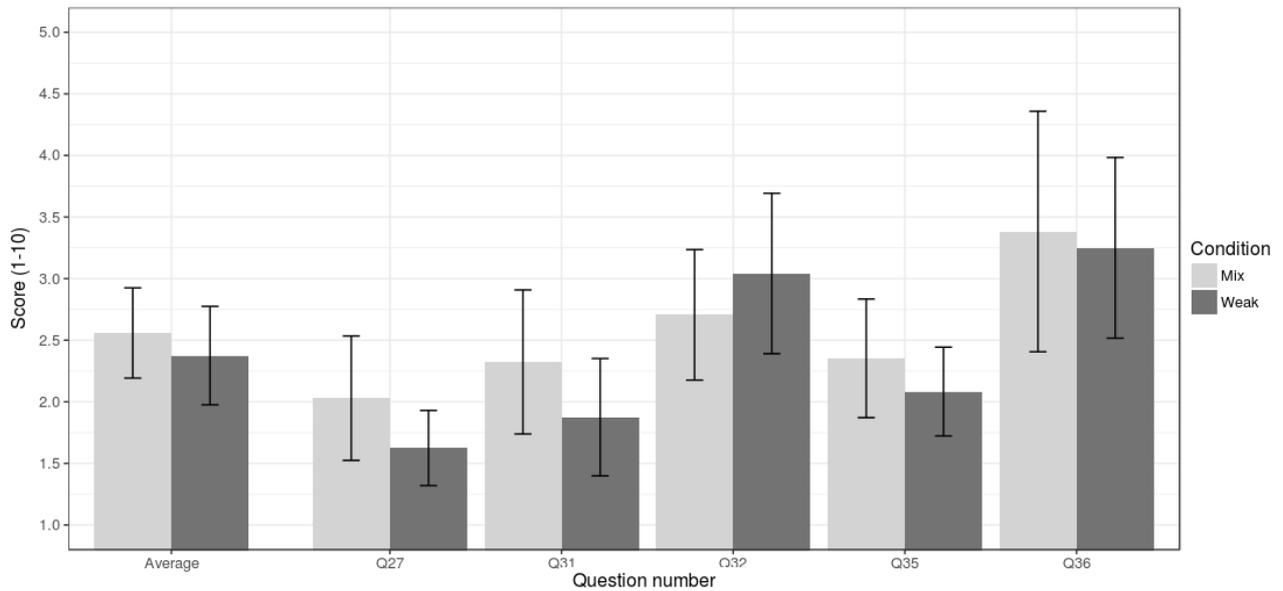
To determine the differences between the common arguments presented in the survey G and in the survey M (see table 3 for more precise information), we performed a 2 (survey M and G) x 5 (argument Q2, Q6, Q8, Q11, Q20) ANOVA (fig. 9). We first computed a Levene's Test for equality of error variances which showed that the hypothesis of homogeneity can be assumed ( $F(9, 300) = 0.380, p = .944$ ). The ANOVA showed a significant difference between the arguments presented in the group G ( $M_G = 6.25, SD_G = 2.33$ ) and in the group M ( $M_W = 5.47, SD_W = 2.39$ ),  $F(1, 300) = 8.23, p = .004$ , partial  $\eta^2 = .027$ . The post-hoc pairwise comparisons confirmed that the good condition provided higher scores than the mix condition ( $p = .002$ ). There was no significant effect of the type of question ( $F(4, 300) = 0.423, p = .792$ , partial  $\eta^2 = .006$ ) or of the interaction ( $F(4, 300) = 0.480, p = .750$ , partial  $\eta^2 = .006$ ).



**Figure 9:** Differences of the scores (1=Of bad quality, 10=Of very good quality) of the arguments presented in survey G and M. Error bars indicate  $\pm 1$  standard error to the mean.

To look at the differences of the arguments present in survey M and W (i.e. Q27, Q31, Q32, Q35, Q36), we then computed a 2 x 5 ANOVA (fig. 10). The Levene's Test showed that the hypothesis of homogeneity cannot be assumed ( $F(9, 280) = 2.36, p = .014$ ). So we performed a Welch-modified ANOVA to avoid type I error (Gastwirth et al., 2009). The analysis showed a significant effect of the type of argument:  $F(4, 280) = 5.31, p < .001$ , partial  $\eta^2 = .077$ . The pairwise comparisons showed that arguments Q32 ( $M_{Q32} = 2.84, SD_{Q32} = 2.01$ ) and Q36 ( $M_{Q36} = 3.33, SD_{Q36} = 2.27$ ) had

significantly higher scores than Q27 ( $M_{Q27} = 1.86$ ,  $SD_{Q27} = 1.50$ ), Q31 ( $M_{Q31} = 2.14$ ,  $SD_{Q31} = 1.88$ ) and Q35 ( $M_{Q35} = 2.24$ ,  $SD_{Q35} = 1.50$ ) (all  $p_s < .05$ ). There was no significant effect for the survey condition ( $F(1, 280) = 1.43$ ,  $p = .233$ , partial  $\eta^2 = .002$ ) or for the interaction ( $F(4, 280) = 0.357$ ,  $p = .839$ , partial  $\eta^2 = .006$ ).



**Figure 10:** Difference of the scores (1=Of bad quality, 10=Of very good quality) of the arguments present in survey M and W. Error bars indicate  $\pm 1$  standard error to the mean.

**Table 3:** Means and standard errors of the scores of each argument presented in the surveys 1, G, M and W (in decreasing mean order of survey 1)

Item <sup>a</sup>	Survey 1		Survey G <sup>b</sup>		Survey M <sup>b</sup>		Survey W <sup>b</sup>	
	M <sub>1</sub>	SE <sub>1</sub>	M <sub>G</sub>	SE <sub>G</sub>	M <sub>M</sub>	SE <sub>M</sub>	M <sub>W</sub>	SE <sub>W</sub>
Q11	6.27	.323	6.57	.500	5.12	.448	—	—
Q8	5.94	.318	6.43	.458	5.53	.416	—	—
Q2	5.92	.335	6.18	.412	5.71	.415	—	—
Q20	5.85	.317	5.86	.442	5.21	.386	—	—
Q6	5.69	.328	6.21	.406	5.79	.391	—	—
Q10	5.63	.338	5.71	.420	—	—	—	—
Q5	5.60	.346	6.25	.404	—	—	—	—
Q18	5.44	.318	5.14	.407	—	—	—	—
Q9	5.35	.314	5.82	.446	—	—	—	—
Q21	5.33	.332	5.25	.373	—	—	—	—
Q33	4.23	.373	—	—	—	—	4.71	.579
Q34	4.23	.341	—	—	—	—	3.08	.356
Q30	4.08	.373	—	—	—	—	4.08	.555
Q29	3.92	.346	—	—	—	—	3.79	.514
Q13	3.67	.357	—	—	—	—	3.21	.485
Q36	3.42	.348	—	—	3.38	.361	3.25	.519
Q35	3.19	.359	—	—	2.35	.286	2.08	.255
Q32	3.04	.299	—	—	2.71	.315	3.04	.460
Q27	2.75	.332	—	—	2.03	.300	1.63	.216
Q31	2.54	.281	—	—	2.32	.347	1.88	.337

<sup>a</sup>The score is from 1 to 10: 1=Of bad quality, 10=Of very good quality. <sup>b</sup>G=Good, M=Mix, W=Weak, — =not measured.

### 3.3.4. Linear models

Finally, we performed multiple linear models in order to see what were the best predictors for each of our main dependant variables (i.e. the belief in conspiracy theory, the belief in the official version, the motivation and the 5 last arguments' mean score). We had a stepwise approach with a backward/forward method: we began with a complete model, and removed each predictor that did not improve the model. At each step, the program also checked if the addition of a variable that had been previously removed could improve the model, which allowed us to avoid type II error (Field et al., 2012). The criterion we used to measure the model's improvement was the Bayesian Information Criterion (BIC). The predictors we proposed in the complete model were: participants' preliminary knowledge of the 9/11 events, the belief in the official version in the pre-test, the belief in the conspiracy theory in the pre-test, the motivation in the pre-test, the mean of the arguments in the positions 1 to 5 and in the positions 6 to 10 and the survey to which they were assigned (i.e. it measured the impact of the assignation to the model M and W; the assignation to model G was by default). We compared the complete model with the reduced model to see which one has the optimal fit to the data. We finally verified the quality of the new model by inspecting its residuals. Field's (2012) recommendation concerning this point is to verify the assumption of independence, of no multicollinearity, of linearity, of normality, and to look for the impact of the outliers. If one of these assumptions was violated, we removed the outliers before computing the model again (like recommended in Crawley, 2012).

The first model we created (table 4) had the score of belief in conspiracy in the post-test as the dependant variable. The complete model was significant ( $F(8, 77) = 7.07, p < .001$ ). The best reduced model we kept was the one including only the belief in 9/11 conspiracy in the pre-test as the predictor ( $F(1, 84) = 39.17, p < .001$ ). The comparison of the two models' partial F-test showed that we can't reject the null hypothesis that the predictors' estimates of the complete model are different from zero once the Belief in 9/11 conspiracy was in the model ( $F = 2.02, p = .064$ ). That's why we can conclude that the most optimal model is the most parsimonious one. This model explains 31% of the variance, and the inspection of the residuals highlighted no violation of the assumptions recommended to construct a linear model. The resulting equation of the model is: Belief in conspiracy 2 = 2.48 + 0.53\*Belief in conspiracy 1.

**Table 4:** Summary of the two linear regressions with the score of the belief in conspiracy theory in the post-test as the dependant variable.

<b>DV: Belief in conspiracy 2</b>	<b>Adj. R<sup>2</sup></b>	<b>BIC</b>	<b>B</b>	<b>S.E. B</b>	<b>β</b>	<b>T</b>	<b>P</b>
<b>Model BCT 1</b>	.363	368.32					<b>&lt;.001</b>
Constant			1.37	1.27		1.08	.285
Knowledge about 9/11			0.08	0.11	.062	0.68	.498
Belief in conspiracy 1			0.49	0.10	.520	4.76	<b>&lt;.001</b>
Belief in official version 1			0.19	0.11	.193	1.76	.082
Motivation 1			0.18	0.10	.179	1.77	.081
Arguments' position 1 to 5			0.31	0.16	.280	1.99	.051
Arguments' position 6 to 10			-0.43	0.16	-.406	-2.74	<b>.008</b>
Belong to group M			0.09	0.53	.032	0.17	.869
Belong to group W			0.08	0.67	.082	0.12	.908
<b>Model BCT 2</b>	.310	351.61					<b>&lt;.001</b>
Constant			2.48	0.47		5.25	<b>&lt;.001</b>
Belief in conspiracy 1			0.53	0.08	.564	6.26	<b>&lt;.001</b>

Note: **Adj. R<sup>2</sup>** = adjusted R-Squared, **BIC** = Bayesian information criterion, **B** = unstandardized coefficient, **S.E. B** = standard error of the coefficient (B), **β** = standardized coefficient, **T** = t-value (i.e. the distance of the estimate (B) to 0), and **P** is the p-value of each unstandardized coefficient (element in bold are significant at threshold  $p < .05$ ).

The second model (table 5) had the belief in official version in the post-test as the dependant variable. The complete model was significant ( $F(8, 77) = 9.52, p < .001$ ), so was the reduced model which predictors were the belief in conspiracy and in the official version in the pre-test ( $F(2, 83) = 33.05, p < .001$ ). The comparison of the two models showed that the reduced model was the best model ( $F = 1.38, p = .235$ ). The Durbin-Watson test verifying for the assumption of independence was significant ( $DW = 2.48, p = .028$ ). But as the p-value fluctuates (here between .05 and .02) each time we compute this test, we cannot only rely on the test's p-value. Field et al. (2012), have a rule of thumb for this test: a DW value lower than 1 or bigger than 3 is a cause of concern. Thus we don't have to modify our model. The resulting equation of the reduced linear model is: Belief in official version 2 = 3.42 + 0.50\*Belief in official version 1 – 0.23\*Belief in conspiracy 1. The model explains 43% of the variance.

**Table 5:** Summary of the two linear regressions with the score of the belief in the official version in the post-test as the dependant variable.

<b>DV: Belief in official version 2</b>	<b>Adj. R<sup>2</sup></b>	<b>BIC</b>	<b>B</b>	<b>S.E. B</b>	<b>β</b>	<b>T</b>	<b>P</b>
<b>Model Belief in official version 1</b>	<b>.445</b>	<b>354.68</b>					<b>&lt;.001</b>
Constant			3.79	1.18		3.23	<b>&lt;.001</b>
Knowledge about 9/11			-0.10	0.10	-.084	-0.98	.333
Belief in conspiracy 1			-0.17	0.09	-.178	-1.75	.085
Belief in official version 1			0.41	0.10	.423	4.13	<b>&lt;.001</b>
Motivation 1			-0.13	0.09	-.129	1.36	.177
Arguments' position 1 to 5			0.14	0.14	.129	0.98	.332
Arguments' position 6 to 10			0.01	0.14	.006	0.04	.965
Belong to group M			-0.31	0.49	-.117	-0.65	.521
Belong to group W			0.68	0.62	.734	1.11	.272
<b>Model Belief in official version 2</b>	<b>.430</b>	<b>336.73</b>					<b>&lt;.001</b>
Constant			3.42	0.68		5.06	<b>&lt;.001</b>
Belief in conspiracy 1			-0.23	0.09	-.244	-2.63	<b>.010</b>
Belief in official version 1			0.50	0.09	.516	5.56	<b>&lt;.010</b>

Note: **Adj. R<sup>2</sup>** = adjusted R-Squared, **BIC** = Bayesian information criterion, **B** = unstandardized coefficient, **S.E. B** = standard error of the coefficient (B), **β** = standardized coefficient, **T** = t-value (i.e. the distance of the estimate (B) to 0), and **P** is the p-value of each unstandardized coefficient (element in bold are significant at threshold  $p < .05$ ).

The score of motivation in the post-test was taken as the dependant variable of the third linear model (table 6). Again the complete ( $F(8, 77) = 21.50, p < .001$ ) and the reduced model ( $F(2, 83) = 81.88, p < .001$ ) were both significant. The models comparison underscored no significant difference ( $F = 1.13, p = .354$ ) between the complete and the reduced model, so we kept the parsimonious one. The analysis of the residuals showed that the assumption of their normality has been violated; indeed the Shapiro-Wilk normality test ( $W = 0.949, p = .002$ ) and the Anderson-Darling normality test ( $A^2 = 1.20, p = .003$ ) were significant, so we had to reject the hypothesis of normality. An inspection of the residuals' normality plot showed that individuals 5, 14, 16, 66, 79 were considered as outliers. The corrected model's normality tests were now insignificant ( $W = 0.991, p = .822; A^2 = 0.223, p = .821$ ). The other assumptions were also respected in the new model. The resulting equation of this model is: Motivation 2 = 1.34 + 0.89\*Motivation 1 - 0.22\*Arguments position 6 to 10. The portion of variance that is explained by the model is 81.4%.

**Table 6:** Summary of the two linear regressions with the score of motivation in the post-test as the dependant variable.

<b>DV: Motivation 2</b>	<b>Adj. R<sup>2</sup></b>	<b>BIC</b>	<b>B</b>	<b>S.E. B</b>	<b>β</b>	<b>T</b>	<b>P</b>
<b><i>Model Motivation 1</i></b>	.659	323.11					<b>&lt;.001</b>
Constant			2.32	0.98		2.38	<b>.020</b>
Knowledge about 9/11			-0.03	0.09	-.027	-0.40	.691
Belief in conspiracy 1			-0.04	0.08	-.040	-0.50	.619
Belief in official version 1			-0.20	0.08	-.201	-2.50	<b>.015</b>
Motivation 1			0.75	0.08	.711	9.57	<b>&lt;.001</b>
Arguments' position 1 to 5			0.07	0.12	.060	0.58	.563
Arguments' position 6 to 10			-0.18	0.12	-.158	-1.46	.148
Belong to group M			0.18	0.40	.064	0.45	.654
Belong to group W			0.67	0.51	.677	1.30	.198
<b><i>Model Motivation 2</i></b>	.656	303.63					<b>&lt;.001</b>
Constant			1.80	0.50		3.60	<b>&lt;.001</b>
Motivation 1			0.80	0.07	.759	11.81	<b>&lt;.001</b>
Arguments' position 6 to 10			-0.23	0.07	-.209	-3.25	<b>.001</b>
<b><i>Model Motivation 2 (corrected)</i></b>	.814	235.69					<b>&lt;.001</b>
Constant			1.34	0.39		3.51	<b>&lt;.001</b>
Motivation 1			0.89	0.05	.850	17.36	<b>&lt;.001</b>
Arguments' position 6 to 10			-0.22	0.05	-.199	-4.06	<b>&lt;.001</b>

Note: **Adj. R<sup>2</sup>** = adjusted R-Squared, **BIC** = Bayesian information criterion, **B** = unstandardized coefficient, **S.E. B** = standard error of the coefficient (B), **β** = standardized coefficient, **T** = t-value (i.e. the distance of the estimate (B) to 0), and **P** is the p-value of each unstandardized coefficient (element in bold are significant at threshold  $p < .05$ ).

The last model we created had the arguments' mean notation when they were in position 6 to 10 as the dependant variable (table 7). Obviously, we didn't put the arguments' position 6 to 10 as a predictor. The complete ( $F(7, 78) = 21.47$ ) and the reduced model ( $F(4, 81) = 36.52$ ) were both significant (all  $p_s < .001$ ). The models' comparison was in favour of the parsimonious model ( $F = 1.14, p = .337$ ). The Shapiro-Wilk test indicated a non-normality of the residuals ( $W = 0.966, p = .023$ ), but this test is known to be easily significant with big samples. Furthermore, other tests like the Anderson-Darling normality test ( $A^2 = 0.739, p = .052$ ), or the Cramer-von Mises test ( $W^2 = 0.117, p = .065$ ) indicated to keep  $H_0$  (i.e. the assumption of normality of the residuals). Thus, we will keep the parsimonious model unchanged. Three equations resulted from this reduced model

(one per survey). The first one (related to survey G): Mean of the arguments in positions 6 to 10 =  $(2.28 + 0) + 0.16 \cdot \text{Belief in official version 1} + 0.57 \cdot \text{Arguments position 1 to 5 mean}$ ; the second one for people assigned to survey M: Mean of the arguments in positions 6 to 10 =  $(2.28 - 0.99) + 0.16 \cdot \text{Belief in official version 1} + 0.57 \cdot \text{Arguments position 1 to 5 mean}$ ; the third one for people assigned to the survey W: Mean of the arguments in positions 6 to 10 =  $(2.28 - 1.49) + 0.16 \cdot \text{Belief in official version 1} + 0.57 \cdot \text{Arguments position 1 to 5 mean}$ . We can see that the survey assignment only has an impact of the constant. The model explains 62.6% of the variance.

**Table 7:** Summary of the two linear regressions with the mean score of the arguments' 6 to 10 as the dependant variable.

<b>DV: Arguments' position 6 to 10</b>	<b>Adj. R<sup>2</sup></b>	<b>BIC</b>	<b>B</b>	<b>S.E. B</b>	<b>β</b>	<b>T</b>	<b>P</b>
<b><i>Model Position 6-10 1</i></b>	<b>.628</b>	<b>309.72</b>					<b>&lt;.001</b>
Constant			2.66	0.87		3.05	.003
Knowledge about 9/11			0.09	0.08	.075	1.08	.283
Belief in conspiracy 1			-0.11	0.07	-.119	-1.44	.153
Belief in official version 1			0.13	0.08	.146	1.78	.080
Motivation 1			0.03	0.07	.031	0.39	.694
Arguments' position 1 to 5			0.52	0.10	.494	5.35	<b>&lt;.001</b>
Belong to group M			-1.06	0.36	-.414	-2.93	<b>.004</b>
Belong to group W			-1.62	0.45	-1.82	-3.61	<b>&lt;.001</b>
<b><i>Model Position 6-10 2</i></b>	<b>.626</b>	<b>300.06</b>					<b>&lt;.001</b>
Constant			2.28	0.54		4.20	<b>&lt;.001</b>
Belief in official version 1			0.16	0.07	.169	2.33	<b>.022</b>
Arguments' position 1 to 5			0.57	0.09	.546	6.22	<b>&lt;.001</b>
Belong to group M			-0.99	0.35	-.387	-2.81	<b>.006</b>
Belong to group W			-1.49	0.44	-1.62	-3.42	<b>&lt;.001</b>

Note: **Adj. R<sup>2</sup>** = adjusted R-Squared, **BIC** = Bayesian information criterion, **B** = unstandardized coefficient, **S.E. B** = standard error of the coefficient (B), **β** = standardized coefficient, **T** = t-value (i.e. the distance of the estimate (B) to 0), and **P** is the p-value of each unstandardized coefficient (element in bold are significant at threshold  $p < .05$ ).

### **3.4. Discussion**

#### *3.4.1. About the belief in 9/11 conspiracy (Hypotheses 1)*

##### a) The impact on the belief in the 9/11 conspiracy and on the official version

As presented in Table 1, three main hypotheses stemmed from Bronner's vision of the Fort effect generated by the argumentative mille-feuille, and we completed them with different elements brought out by other studies.

The first hypotheses were about the impact of the argumentative mille-feuille on the endorsement of the 9/11 conspiracy theory and on the confidence in the official version. The mille-feuille should increase the belief in conspiracy theory, and decrease the confidence in the official version. The results did not show a significant incrementation of the belief in conspiracy theory; however, it put into light a reduction of people's belief in the official version. This is quite contradictory with precedent studies about exposure to conspiracy theories (e.g. Douglas & Sutton, 2008).

One explanation could be that the population was constituted of students in social psychology with Dr. Wagner-Egger, a specialist about conspiracy theories. It may be possible that they have had access to a definition of what is a conspiracy theory during a lecture. As the single-item scale's (Lantian et al. 2016) formulation is very close to the most spread definitions of conspiracy theories in the scholar environment, people that would have been conspiracy theory believer may reject the label "Conspiracy theory believer". This is coherent with other studies which found that conspiracy theory believers had a tendency to reject this label (Franks et al., 2017; Wood & Douglas, 2015). We also have seen numerous people who did not complete the survey until the end (n = 17). This also may be related to the fact that conspiracy theory believers don't want to be studied by scientists (Franks et al., 2017), but these conclusions are highly speculative.

These results may also be explained by the fact that the modified Single-item scale (Lantian et al., 2016) refers to people acting in secret, whereas in the second cycle of survey, no item in favour of a reduced hidden group was present in the surveys G and M and only 3 were present in survey W (Q13 that is related to a possible responsibility of Larry Silverstein, Q30 and Q33 which declare the implication respectively of the MOSSAD and of the US government in the 9/11 event). Thus, only a limited portion of the participants had access to items in favour of the hypothesis of people acting in

secret. On the other hand, 7 arguments against the official version described were presented in survey G (e.g. Q2 that put the twin towers' destruction due to a plane crash into question, or Q18 that supposed that the Pentagon may not have been hit by a plane), 5 were in the survey M and 2 in the survey W. In addition to that, the measurement of belief in the 9/11 official version was taken after a brief description summarizing the most important events that happened that day. Maybe the presentation of pro-official version items creates a basis onto which participants can think when they are looking at pro-conspiracy (or anti-official version) arguments. In sum, the arguments presented in the mille-feuille may contribute to discredit the official version, but they do not constitute a real argumentation in favour of a coherent conspiracy theory.

On the other hand, the way we presented the arguments to participants may also explain why we didn't observe a change in participants belief in conspiracy theories. Indeed, we presented one argument after the other, with each time a question concerning their quality, which is quite different to other studies about exposition to conspiracy theories that, most of time only presented arguments in a flowing text (e.g. Douglas & Sutton, 2008). Besides, each presented arguments were quite long (i.e. more than one line per argument). These differences of results can be related to a study (Swami et al., 2014) that underscored a negative correlation between the belief in conspiracy and the analytical thinking. Thus, the arguments presented one after the other (compared to a flowing text), the fact that they were long and the fact that participant were asked to determine the quality of the arguments (which means that participants had to think about what an argument of a good quality is and thus, they were put into a more proactive position) may have triggered a more analytical thinking which may have reduced the impact of the argumentative mille-feuille.

We can also relate the differences in our results with the other studies to the Franks and colleagues' (2017) interpretation of the theory of the monological belief system. Indeed, as presented in the introduction, numerous researches in social psychology investigated this theory suggesting that there is a "conspiracist" way of thinking (Goertzel, 1994; Wagner-Egger & Bangerter, 2007; Swami et al., 2011; Wood, Douglas & Sutton, 2012). Our linear regressions results are also, to some extent, in line with the monological belief system: indeed, the results of the regression (Table 4) put into light that the best predictor of the belief in conspiracy in the post-test is the pre-test's score of belief in conspiracy ( $\beta = .564$ ). In addition, the best predictors of the post-test confidence in the official version are the pre-test score of belief in the official version ( $\beta = .516$ ), and in the conspiracy theory ( $\beta = -.244$ ). This means that people's "baseline" of conspiracy theories

endorsement will have an impact on the belief in conspiracy theories in the end and on the confidence in the official version.

Franks et al. (2017) enlarged this monological belief system by theorizing different typologies of conspiracy believers: with semi-structured interviews of several conspiracy theory believers, researchers deduced that there were 5 different typologies of believers based on 6 main topics: “the nature of reality, the self, the outgroup, the ingroup, relevant social and political action, and possible future change” (Franks et al., 2017). Type 1 is related to people putting into question our world organization, but do not endorse conspiracy theories; Type 2 is related to people that also reject mainstream solutions, and consider some conspiracy theories as believable (but did not privileged them); Type 3 people endorse some conspiracies to explain several events, but do not believe in a majority of them; Type 4 is related to the fully monological belief system, and Type 5 also includes some paranormal and non-human agents. Therefore, the doubt in the official version may be a good indicator of Type 1 and 2 (maybe 3) believer whereas the Lantian et al (2016) single-item scale is maybe better to spot Types 4 and 5 conspiracy believers. The study conducted by Lantian and colleagues (2016) to validate their single-item scale is quite in line with this hypothesis. Indeed, researchers found a very good stability of their scale over two weeks. Moreover, the two time measurement of the scale had provided a good correlation ( $r = .50$  and  $.54$ ) with the Tobacyk’s (2004) PBS-R (Revised Paranormal Belief scale). This can support the hypothesis that the single-item scale may be very good to measure monological conspiracy theory believers, with a deep conspiracy theory endorsement (i.e. Type 4 and 5), which also explains its stability. Thus, we can suppose that the argumentative mille-feuille has “only” a limited impact: it may trigger a change from Type 0 (i.e. people who do not put any mainstream explanations in question) or Type 1 to Type 2 (or maybe Type 3) of conspiracy theory endorsement. This interpretation of conspiracy theories endorsement is coherent with Bronner’s metaphor of the “cognitive market” (Bronner, 2013). Indeed, just like an attractive product in a supermarket, conspiracy theories arguments are attractive to undecided people (e.g. Type 1 or 2 on Franks et al. (2017) typology). But individuals that are strictly not interested by this kind of “products” (e.g. Type 0) will never “buy” them, and people that are already consuming them (e.g. Type 3, 4 and 5) would have “bought” them anyway.

We could also relate these findings to the Elaboration-likelihood model (see the chapter 1.2.5.a for a more detailed description of the concept). Indeed, the ELM states that the central route to persuasion will generate a people’s attitudes change more persistent across time and will predict behaviours, whereas the peripheral persuasion will be less resistant to change. The two

measurements of conspiracy theory endorsement we took (i.e. the belief in conspiracy theory and the confidence in the official version) could be considered as indicators of respectively the central and the peripheral route to persuasion. Indeed, the Lantian et al. (2016) scale could be an indicator of an attitude obtained with a central route, which could explain its stability over two weeks, whereas the confidence in the official version could be an indicator of a more peripheral influence.

Another possible explanation of why we did not observe a change in the Lantian and colleagues' (2016) scale can also be related to other studies about persuasion. Indeed, Petty and Cacioppo (1977) have found that there was a resistance from participants when they knew that they were going to be under persuasion. They then tended to deeply reject the arguments of weak quality and to avoid to take into consideration arguments of good quality. Maybe the way we designed our questionnaires and the fact that participants were used to take part to experiments increased the saliency of the persuasion attempt, which have triggered a resistance to it.

Related to this hypothesis, some researches about persuasion found that the most important for people was to keep their central values, even if they had to refuse to take into consideration persuasive messages, even if the arguments quality was strong (Johnson & Eagly (1990) in De Barnier (2006)). This would be coherent with what is observed here: the difference of attitudinal change may be explained by the fact that doubt about the official version implicates a less central change than what is described by Lantian and colleagues' (2016) single-item scale (i.e. believing in an alternative explanation including a secret group being active, with nefarious intentions, etc). In addition, we know that the 9/11 conspiracy theories are not the most endorsed in the Swiss students population. Indeed, Wagner-Egger and Bangerter (2007) found that other conspiracy theories (like JFK assassination or Big Pharma conspiracy) encountered more adhesion. Maybe the resistance to persuasion would be less strong if it concerned a conspiracy theory that is more accepted, as the acceptance of this conspiracy theory would be related to a less central value.

Another element to have in mind related to our participants is that we worked on a population constituted of university students, which means that they have a high educational level. Some studies have underlined that fact that there was a negative correlation between the belief in conspiracy theories and the educational level (Douglas et al., 2016; Oliver & Wood, 2014). This could explain why the stability of the measurement of belief in 9/11 conspiracy theory.

## b) The estimation of people's belief change

The additional hypothesis (H1C) concerning the fact that people would tend to underestimate their belief change has been validated.

Indeed, the results indicate that participants significantly underestimated their original confidence in the official version. We can even see that the estimations' mean ( $M = 4.13$ ) is very close to the mean post-test score of confidence in the official version ( $M = 4.11$ ). This finding is coherent with Douglas and Sutton's (2008) study that found that participants significantly underestimated to what extent they had changed their attitude concerning Diana conspiracies. Their explanation that "people may not want to admit that they are influenced by conspiracy theories because this may make them appear vulnerable, easily led astray, or weak-minded" (Douglas & Sutton, 2008) is very congruent with our findings. It seems that participants did not (or did not want to) remark that the exposure to arguments had an impact on their original confidence in the 9/11 official version. This underlines that people were not aware of their vulnerability to the persuasion.

We can explain these results with the process of anchoring and adjustment (Tversky & Kahneman, 1974). The anchoring and adjustment process can be defined as making first an estimation with the available information and then adjusting the estimation with further information. In favour of this hypothesis, as presented in the last paragraph, the estimation of the initial confidence in the official version is very close to the score of confidence in the official version measured in the post-test. It may be possible therefore that participants used the score they gave in the post-test as an anchor for estimating the score they gave in the pre-test, as they did not have in mind the score they gave to the official version in the pre-test. But the proximity of the post-test ( $M = 4.11$ ) and the estimation ( $M = 4.13$ ) scores still shows that participants estimated anyway that their confidence in the official version was stable across time. Otherwise the adjustment should have had an impact on the estimation.

### *3.4.2. About the motivation to counter-argue (Hypothesis 2)*

One of the postulates of the Fort effect was that the exposure to the argumentative mille-feuille would reduce people's motivation to find a counter-argumentation (H2). It seems that our

experimental manipulation is not in line with Bronner's (2013) postulate. Indeed, in our 3 conditions no significant differences between the pre- and the post-test has been put into light. We can however see a slight upward tendency in the weak condition and a downward tendency in the good and mix condition.

These tendencies are, to some extent, coherent with Fuegen and Brehm's (2004) description of the motivation's progression. Indeed, they explain that motivation increases with the obstacles until they are too difficult. When the difficulty is too salient, we would observe a drop in people's motivation. The tendencies we observed are coherent with this theory of motivation. Indeed, weak arguments could have increased the motivation to refute them as the difficulty is present but not insurmountable, whereas the mixed and the good arguments would make the difficulty more salient, which could have generated a beginning of drop in motivation. However it is complicated to be satisfied with this conclusion as we don't have neither a significant difference between the pre- and post-test, nor a group effect.

We also cannot avoid to put into question the measurement itself. As we wanted to measure the progression of people's motivation, and as it was difficult to find a correct formulation concerning the arguments before participants have read them (i.e. in the pre-test), we asked them to estimate to what extent they would be motivated to defend the official version in a debate (which means that the idea of refute conspiratorial arguments was implicit). Thus, we did not completely focused on the arguments themselves. However, as this question was asked after an item concerning the official version, we should have seen a drop in the motivation to defend the official version with the reduction of the belief in it.

If we look at the linear regression concerning motivation, we can see that the 2 best predictors of the motivation in the post-test is the motivation in the pre-test ( $\beta = .850$ ) and the notation of the 5 last presented arguments ( $\beta = -.199$ ). Indeed, the more people were motivated to counter-argue 9/11 conspiracy beliefs in the beginning of the test, the less good they would rate the arguments in position 6 to 10, and the more they will be motivated in the end of the survey. This observation underlines that there is a link between the arguments' notation and the motivation to find a counter-argumentation. These results of the linear model can be related to the monological belief system. Indeed, conspiracy theories believers would not be very motivated to argue against the conspirational explanation of the 9/11 attacks, which means that they also won't rate the arguments presented in the end as weak, thus, they won't either increase their motivation in the end. The same observation can be done with the non-believers (they are motivated to defend the official version,

thus conspiratorial arguments are considered as weak, and they don't have an impact on their initial belief). However the regression also means that if people are convinced by the 5 last arguments presented, the motivation to counter-argue would be reduced.

In addition, it's important to take into account that we presented written arguments, which put people in a more active position than other "media". Indeed, as Banas and Miller (2013), stated "Watching a film is a more passive process than reading, which should reduce the ability to counterargue". This shows that maybe a medium like video would increase the effect of argumentative mille-feuille resulting in a greater drop in motivation.

### 3.4.3. About the arguments quality (Hypotheses 3)

#### a) The impact of arguments' quality on people's attitudes change

Concerning the argument quality *per se*, we have found an effect of the survey. Indeed, the survey G's mean was significantly greater than surveys M and W's, and the survey W's mean was significantly lower than the two others (all  $p_s < .05$ ). It's interesting (and reassuring) to see that we have the same three significantly distinct categories of arguments as in the preliminary study, and this underlines that that some arguments are constantly perceived as weaker than other ones. Besides, there is an additional confirmation that there is an impact of the experimental condition assignment by looking at the linear regression having the score of the 5 last arguments presented as the dependant variable. Indeed, we see that the people assigned to the mix and weak conditions would significantly rate the arguments lower (respectively  $\beta = -0.387$  for the mix condition and  $\beta = -1.62$  for the weak one) than if they were in the good condition. This shows us an additional indication that there is a significant difference between the good, mixed and weak conditions. However, one analysis underscores that the arguments' perceived quality is not absolute: the same arguments presented in the survey G and M (i.e. Q2, Q6, Q8, Q11, Q20) were significantly better rated in survey G ( $p = .002$ ), whereas the same arguments presented in the surveys M and W (Q27, Q31, Q32, Q35, Q36) were not significantly different ( $p = .233$ ). This underlines the fact that the argument's quality can be relative: the presence of weak arguments reduced the perceived quality of the good arguments.

The first hypothesis concerning the arguments' quality was that the mille-feuille's layers' constitution should not have an impact on people's change of attitudes (H3A), which means that we should not see an impact of the type of survey on people's motivation or belief in conspiracy theories. This hypothesis has been validated.

We have to be a bit careful with this conclusion. Indeed, we did not have a group effect on our measurement, but there also was no effect of the arguments *per se* on the measurement of belief in conspiracy theories (measured with Lantian et al. (2016) scale) and on the measurement of the motivation to counter-argue. We can even see that there are two contradictory tendencies in the measurement of motivation to counter-argue (which underlines a possible impact of the arguments' quality). Thus, the present conclusion that the arguments' quality don't have an impact on people's attitudes is not immune to a possible further refutation.

Out of this consideration, we can see that these results correspond with what Bronner (2013) hypothesized when he defined the Fort effect. It is also coherent with the idea that the Fort effect would be related to the elaboration-likelihood model's peripheral route to persuasion. Indeed, it seems that the arguments' quality, which is related to the central route, did not have an impact on participants' attitudes.

#### b) The impact of the arguments quantity on the perception of their quality

Finally, the implication behind the idea that the argumentative mille-feuille's quality did not matter was that the Fort effect would be related to a peripheral route of persuasion. Therefore, the arguments quantity should have an impact on people's attitudes. To measure that, as in this study it was not possible to add the number of arguments presented (e.g. a mille-feuille with 5 vs 10 vs 20 arguments) as an additional experimental manipulation, we chose to look at the progression of the arguments' score. The idea was, as that they should benefit from the previous presented arguments, the arguments presented in the end would have a higher score than those presented in the beginning (H3B). Concerning this hypothesis, as in the preliminary study, the results we obtained, whether on average, or on one of our 3 conditions, were not significant. This put into doubt the impact of the number of arguments on their perceived quality.

Looking at the linear regression with the notation of the 5 last presented arguments as the dependant variables gives us an additional information to understand the stability of the measure.

Indeed, except the condition assignment, the two best predictors of the score of the 5 last presented arguments are the score mean of the 5 first presented arguments ( $\beta = .546$ ), and the score of distrust in the official version ( $\beta = .169$ ). This underlines that the least a person trust the official version, the better will be the score of the 5 first arguments, the better the 5 last arguments will be rated. The relation between the distrust in the official version and the arguments' notation in an additional information in favour of the monological belief system. The people less confident in the official version would find the arguments quite strong whereas the people more confident in the official version would more consider the arguments as weak.

Besides, the way we presented the arguments (i.e. one after the other and asking them to focus on the quality) may have reduce the feeling of arguments' accumulation (compared to a film or a flowing text). This could also explain why we did not observe a progression in the arguments' notation.

#### *3.4.4. General limitations and further studies*

One of the major limitation that could be underlined in this research (in the main and the preliminary study) is the way we presented arguments. First, we presented one argument after the other with each time a question concerning their quality, which is quite different to other studies about exposure to conspiracy theories that presented a continuous text or a film (e.g. Jolley & Douglas, 2014a or Leman & Cinnirella, 2013).

In addition, even if it permitted us to have several interesting findings, the arguments presentation is not very close to what we can observe in reality. Most of time, on the internet, arguments are presented with additional sentences like “wake up”, “don't be a sheep”, “open your eyes”, which may change people's involvement, and therefore change the impact of the persuasive message (De Barnier, 2006). Besides, none of our arguments have been presented with pictures, which are elements that are very often present in pro-conspiracy websites. The typical example of this phenomenon is the argument Q23 (concerning the fact that the hole in the Pentagon was too small compared to the size of the plane that hit the building, see the Appendix A for more precisions) that is most of time presented with a picture of the burning building. Furthermore, the written media is not the only one that is used in the spreading of conspiracy theories (Stempel, Hargrove & Stempel, 2007); nowadays conspiracy theories are also widely spread through video

(on Twitter, YouTube or Facebook) that combine text, pictures, motion video, music etc. As some studies about persuasion have shown that these elements are important for persuasion, we can suppose that other type of argumentative mille-feuilles could be generated with these elements, and may trigger Fort effects of a different nature.

Different parameters could be modified to improve the quality of this research (the main study in particular). First, it would be interesting to work with a more representative sample. Indeed, as we only presented our surveys to students, and as some studies (e.g. Douglas et al., 2016) have found a negative correlation between the educational level and the belief in conspiracy theories. We could also improve our study by having a more egalitarian sample concerning the proportion of male and female participants.

We also could have checked for the impact of the different type of arguments (like their theme, the type of sources, if they are limited or unlimited, if they are negatively or positively presented) to see more precisely to what parameters is related a “good quality” perceived argument.

It would also be important to create a control group: maybe our results are due to the length of the task and not because of the arguments themselves.

It would also be interesting to modify the scale concerning arguments and instead of asking them their opinion concerning the arguments quality, asking them if the arguments is true or false. This could give us an additional indicator of the conspiracy theory endorsement.

Having a bigger sample would also be better for this research, as our effects are quite small (Field, 2009). Besides, this could also give us the opportunity to split each of our sample in three different categories: believers, non-believers (e.g. respectively + and – 1 SD on the conspiracy theory belief scale) and undecided. This would allow us to have a bigger sensitivity about the monological belief system, and the impact of conspiracy theory exposure on believers, non-believers and undecided people.

Concerning further studies (out of the potential researches that could improve the parameters of our experiment), some interesting topics could be explored to go beyond the results we have put into light here.

In this study, we exposed participants to 9/11 conspiracy theories, but as explained before, Wagner-Egger and Bangerter (2007) found other conspiracy theories that had more adhesion in the Swiss students population. Thus, working with the exposure to conspiracy theories concerning other topics may generate different impacts of the argumentative mille-feuille. Maybe exposing participant to arguments in favour of a more accepted conspiracy theory (like Big Pharma, for

instance) may reduce the resistance, whereas exposing arguments in favour of a far less accepted conspiracy (like the Jewish conspiracy) may increase the resistance.

It would also be interesting to construct a new type of argumentation quality: the “medium” mille-feuille. Indeed, instead of having only the good, mix or weak argumentations, as we did in this research, it would be interesting to see the impact of a “medium” mille-feuille constituted with the 10 arguments the most close to the mean.

As our results seem to show that we only had an impact on participants’ peripheral attitudes, we could also see the stability of the impact of the argumentative mille-feuille across time. With a long-term design, we could also see the impact of repeated exposure to conspiracy theories on people’s belief in conspiracies. Indeed, as explained by Swami and colleagues (2011), the conspiracy belief thinking is positively correlated to exposure to conspiracy ideation. Expose repeatedly people to conspiracies could also give us some new clues about how people get into the monological belief system. It would also permit us to empirically test Franks and colleagues’ (2017) conspiracy believers’ thinking system (i.e. the 5 types of believers).

We could also investigate the modality of the mille-feuille’s constitution. For example instead of working on the arguments quality as we did here, we could work with their quantity. For instance we could compare the impact of a 5, 10 and 20 arguments mille-feuilles.

Working with different media would provide a better ecological validity. Indeed, our setting was quite well controlled, but it is not very close to what people are confronted in their everyday life. In addition, our study did not take into account all of the rhetorical related to the conspiracy theories. Indeed, conspiracy theories are often presented with pictures on written sites, or they can also be in the documentary format with multiple additional factors like the music, slow motion, etc. Moreover, the film media has been defined to put people in a more passive position, which reduce their capacity to counter-argue the presented arguments (Banas & Miller, 2013). Maybe this differences of mille-feuilles’ modalities may lead to differences in their impact.

More generally, it would be anyway important to work on each of the parameters that are generally related to the persuasion mechanisms. Indeed, as an exposure to a conspiracy theory can be considered as a persuasive attempt, understanding all the modalities that are at stake could give us a better comprehension of the progressive endorsement of a conspiracy theory, or even the shift toward the monological belief system.

## 4. Conclusion

To sum up, the goal of this research was to test the Fort effect, which is the impact of a collection of arguments (the argumentative mille-feuille) of different quality on people's belief in conspiracy theories as well as their potential motivation to find a counter-argumentation to the presented arguments.

The first hypothesis of the study has been partially validated. Indeed, we did not observe an incrementation of belief in conspiracy theory, but however, we saw a diminution of confidence in the official version, and even an underestimation of their belief change. This shows that the argumentative mille-feuille has an impact on people's belief, but it is not deep enough to change one's belief system, but it is a first step in endorsing conspiracy theories. The second hypothesis has not been validate: people's motivation did not change with the presentation of arguments; but the tendencies and some analysis give us a clue that there might be a possible effect of the arguments. The third hypothesis has been partially validated. We did not observe an effect of the surveys on the measurement of motivation or belief in conspiracy theories, but we have to be cautious, because there may be a possibility to have a group effect with a bigger sample. However, we couldn't see that the arguments' quantity improved their perceived quality.

This first investigation permitted us to have a better empirical understanding of the argumentative mille-feuille and the related Fort effect. We also have had the occasion to put into light some processes related to persuasion that are at stake in the study of the impact of the exposure to conspiracy theories on people's beliefs. Working on a sociological topic with the methods in psychology also gives us the occasion to take part to the interdisciplinary construction of knowledge, which is important nowadays. In addition, as the argumentative mille-feuilles are more and more present in our society (Bronner, 2013), and as we know that belief in conspiracy theories can have harmful impacts (Jolley & Douglas, 2014a, 2014b; Van der Linden, 2015), understanding how people get to endorse conspiracy theories could be a first step to do prevention concerning this topic.

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## 7. Appendix

**Appendix A:** Excerpts of the survey 1's PsyToolkit code containing the 40 arguments (Q1-Q40).

scale: quality

- De mauvaise qualité <ul> </ul> 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- De très bonne qualité <ul> </ul> 10

l: intro\_message

t: info

q: Vous allez maintenant voir différents arguments trouvés sur internet qui vont à l'encontre de la version présentée dans le rapport officiel des attentats. Nous vous demandons de les juger indépendamment de ce que vous pensez des événements qui ont eu lieu lors du 11 septembre 2001. Ces arguments seront ensuite utilisés dans une prochaine étude.

random: begin

l: Q1

q: Les Tours jumelles du World Trade Center ont été conçues, à l'instar de l'Empire State Building, pour résister aux incendies et aux crashes d'avion. Or, si l'Empire State Building (conçu il y a près de 100 ans) a pu résister au crash d'un bombardier B-25 en 1945 sans trop d'encombres, il semble très improbable que les Twin Towers (construites 40 ans plus tard) n'aient pas pu résister au crash d'un avion civil. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q2

q: Si l'on regarde des vidéos de l'effondrement, on voit que les tours s'écroulent de manière verticale et à la vitesse de la chute libre, ce qui est incohérent avec les effondrements dus aux incendies observés habituellement. Un effondrement dû à un incendie devrait être beaucoup plus lent et irrégulier (puisque chaque étage offre une résistance et réduit la vitesse de chute), contrairement aux démolitions contrôlées (dont les explosifs détruisent le bâtiment étage après étage, n'offrant donc pas de résistance et augmentant donc la vitesse de la chute du bâtiment). <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q3

q: Lorsqu'on regarde de plus près l'effondrement des deux tours, on voit une succession d'explosions qui crachent de petites gerbes de matières à chaque étage, similaires à celles que l'on peut observer lors des destruction de bâtiments à l'explosif. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q4

q: Le géophysicien André Rousseau, a publié un article stipulant que des pics sismiques (que l'on peut aussi voir lors d'explosions) ont été enregistrés au nord de Manhattan très peu de temps avant que les tours jumelles ne s'effondrent. Un autre pic a aussi été repéré avant la destruction de la troisième tour du WTC (la tour 7), laquelle n'a été, rappelons-le, percutée par aucun avion. De plus, beaucoup de témoins, surtout des pompiers, rapportent avoir entendu divers bruits d'explosion peu avant l'effondrement des Tours jumelles. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q5

q: Les éléments proposés dans la version officielle ont semblé tellement incohérents pour beaucoup d'architectes et ingénieurs en bâtiment qu'ils ont fondé l'association « Architects and engineers for 9/11 truth ». Actuellement, près de 2'500 spécialistes pour qui les faits présentés dans la version officielle ne collent pas avec leurs connaissances de la physique du bâtiment ont rejoint cette association. Parmi ces spécialistes, on peut compter plusieurs ingénieurs spécialisés en structure du bâtiment. Cela semble très improbable qu'autant de scientifiques se réunissent pour rouvrir le dossier si la version officielle était exempte de zones d'ombres. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q6

q: Les rapport officiels expliquent que la structure en acier des tours jumelles a fondu, ce qui a engendré l'effondrement des bâtiments. De plus, plusieurs témoins ont vu des des flaques d'acier en fusion dans les jours qui ont suivi l'incident, observations confirmées par le rapport de la FEMA (l'Agence fédérale des situations d'urgence, laquelle s'est occupée du contrôle des incendies, du sauvetage des personnes sur le site du WTC, et de la gestion des débris après l'effondrement) et par les relevés thermiques au sol de la NASA. Or l'incendie provoqué par le crash des avions (alimenté par les fournitures de bureau dans l'immeuble et du kérosène dans l'avion) ne permet d'atteindre qu'une température maximale de 800 degrés Celsius, ce qui est loin d'être suffisant pour faire fondre les poutres d'acier (dont le coefficient de fusion est de 1600 degrés Celsius) qui étaient en plus dotées d'un revêtement contre le feu. Il semble donc peu probable que la destruction des Twin

Towers soit due aux incendies provoqués par les crash des avions. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q7

q: Une grande partie de l'acier qui composait les tours a été fondu et revendu par des entreprises privées juste après la destruction des bâtiments, ce qui a considérablement réduit la possibilité de faire des recherches sur la manière dont les tours ont été détruites. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q8

q: En 2009, une équipe de 9 scientifiques, dont le physicien Steven E. Jones, publient les résultats de leurs analyses des décombres du site dans le revue The Open Chemical Physics Journal. Leur recherche sur les échantillons d'acier qu'ils ont pu obtenir démontre la présence de restes d'un explosif très puissant appelé "nanothermite" sur le site des 2 tours; ils ont aussi découvert des résidus de soufre, lesquels pourraient être liés à de la "thermate" (mélange de thermitite, soufre et nitrate de baryum). Ces composés chimiques peuvent dégager une chaleur allant jusqu'à 2'500 degrés et sont prévus pour accélérer la fonte de l'acier (le composant principal de la structure des WTC). De plus, les rapports officiels expliquent que des morceaux d'acier corrodé ont été trouvés et les ont qualifiés d'"élément très inhabituel pour un incendie de ce type". <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q9

q: Quelques semaines avant les attentats, un nombre anormal de ventes d'actions (près de 5000 le jour précédent le 11 septembre) de la compagnie aérienne American Airlines (à laquelle appartenaient les vols détournés par les terroristes) ont été observées. C'est un taux de transactions qui est 25 fois supérieur à ce que l'on peut observer en temps normal. Après l'incident, American Airline a vu le cours de ses actions fortement chuter suite à la baisse de fréquentation de leurs lignes. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q10

q: Malgré le fait que les quatre détournements ont duré plusieurs heures, les avions de chasse des États-Unis (disposant de la meilleure flotte aérienne au monde) étaient tous réquisitionnés pour un exercice. Aucune interception militaire n'a donc été réquisitionnée pour abattre les boeing détournés, et ce, même quand le vol 11 a percuté la première tour du World Trade Center et que la

trace des trois autres vols avait été perdue. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q11

q: Il est très surprenant qu'on ait retrouvé les passeports des terroristes faiblement abîmés dans les gravats des deux tours alors qu'ils sont censés avoir subi une explosion, un incendie de plusieurs heures et un effondrement. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q12

q: Le 24 juillet 2001, soit un mois et demi avant les attentats, Larry Silverstein rachète le complexe du World Trade Center pour 3 milliards de dollars, bien que les bâtiments étaient des gouffres financiers. En effet, les tours n'étaient plus rentables et il était nécessaire de mener une opération de désamiantage (estimée à 1 milliard de dollars). Silverstein assure ensuite ces bâtiments contre divers risques, et y ajoute une clause spéciale concernant la destruction totale des bâtiments causée par un attentat terroriste. La compagnie Silverstein properties avait aussi négocié le droit de reconstruire l'infrastructure dans le cas où les bâtiments seraient détruits. Après les attentats, l'entreprise a réclamé près de 7 milliards de dollars et réussi à en obtenir 4 (soit 1 milliard de plus que le prix d'achat du complexe) auprès des assurances qu'elle avait contractées. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q13

q: Le jour des attentats, Larry Silverstein (propriétaire des tours depuis moins de 2 mois) avait un rendez-vous chez le dermatologue et n'est pas venu travailler ; ses deux enfants sont eux aussi arrivés en retard ce jour-là. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q14

q: Après les attentats, la CIA a admis avoir eu une succursale secrète de leur organisation dans la tour 7 du World Trade Center. En effet, ces bureaux étaient destinés à l'espionnage économique (d'où la proximité des tours jumelles). Étonnamment, la tour s'est effondrée de la même manière que les tours jumelles, et ce, sans avoir été percutée par le moindre avion. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q15

q: Les rapports officiels du 11 septembre indiquent que les gravats en feu des World Trade Center 1 et 2 ont généré un incendie sur la tour 7, lequel a engendré son effondrement. Or si l'on regarde les images disponibles de l'effondrement, on ne voit pas de traces de l'incendie avant la chute du bâtiment. De plus, la plupart des débris des tours jumelles sont tombés à une cinquantaine de mètres alors que la tour 7 est située à une centaine de mètres des tours. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q16

q: Ce sont les étages correspondant aux bureaux de la CIA qui ont été ravagés par les flammes qui auraient touché la tour WTC 7 avant son effondrement. Beaucoup de journalistes rapportent qu'il y avait des centaines de dossiers compromettant George Bush et son gouvernement. C'est étonnamment le seul bâtiment dont les systèmes de régulation d'incendie n'ont pas pu être déclenchés, et sur lequel il n'y a eu aucune intervention des pompiers pendant les 7 heures où le bâtiment brûlait. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q17

q: L'enquête concernant la "petite affaire de mœurs" de Bill Clinton avait un budget de 40 millions de \$. Celui alloué à la Commission d'enquête des attentats du 11 septembre est de 15 millions, soit près de 3 fois moins d'argent. Ceci peut faire supposer que le gouvernement Bush a cherché à freiner la recherche de ce qui s'est passé lors des incidents. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q18

q: Concernant l'attaque du Pentagone, l'avion a percuté le bâtiment de face. Plusieurs pilotes militaires expérimentés déclarent que la manœuvre effectuée par les terroristes était très précise, et trop compliquée pour être effectuée par un pilote amateur ; en effet, le boeing 757 volait à moins de 10 mètres de haut à une vitesse de 800km par heure. Pourquoi les terroristes ont frôlé le sol (et donc pris le risque s'écraser avant d'atteindre leur cible) pour arriver dans le bâtiment par le côté alors qu'il aurait été plus logique et plus facile de simplement s'écraser sur un des toits du Pentagone. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q19

q: Il est très étonnant que les terroristes aient décidé de détruire l'aile Ouest du Pentagone. C'était la seule aile du complexe dont les bureaux étaient, au moment des faits, totalement désaffectés en raison de travaux de rénovation, ce qui fait que cet attentat n'a généré « que » 190 morts (les passagers de l'avion et quelques ouvriers dans le bâtiment), sur les 30'000 employés du Pentagone travaillant ce jour-là. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q20

q: Malgré le nombre conséquent de caméras présentes sur le site du Pentagone, quartier général du département à la défense, il n'y a que deux images disponibles relatant le crash du vol 77 de l'American Airlines sur le bâtiment. Ces deux images ne permettent que de distinguer vaguement le nez de l'appareil, et l'explosion de l'aile Ouest. Les autres images ont été réquisitionnées par le gouvernement et classées secret défense. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q21

q: Plusieurs témoins admettent ne pas avoir vu de débris d'avion sur le site du Pentagone. Les seules « preuves » de la présence d'un avion sont : un phare (qui n'a jamais été montré), et les deux boîtes noires, lesquelles ont été exhibées avec beaucoup de retard. Si un avion a percuté le bâtiment, on aurait dû retrouver beaucoup plus de pièces. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q22

q: Si l'on regarde le peu d'images disponibles montrant l'attaque du Pentagone, on voit une explosion détruire l'aile ouest du complexe. Or un avion est rempli de kérosène, une substance inflammable, mais pas explosive. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q23

q: En regardant les images prises après le crash du vol 77 dans le Pentagone, on ne voit qu'un trou de 18 mètres de diamètre dans le bâtiment ; or un boeing 757 fait environ 50 mètres d'envergure. Il est étonnant qu'on n'ait donc aucune trace des ailes d'un boeing aussi grand. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q24

q: Alors qu'en général, il faut plusieurs mois pour trouver le coupable d'un meurtre aux USA, il semble très étonnant que les coupables des attentats du 11 septembre ont été trouvés en moins de 3 jours. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q25

q: Il est vraiment surprenant que, quand les Etats-Unis étaient à la recherche de Ben Laden, sa fiche publique du FBI ne mentionnait pas sa responsabilité dans les attentats du 11 septembre, alors qu'il les avait revendiqués. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q26

q: Susan Lindauer a écrit un livre en 2010 affirmant qu'elle travaillait pour la CIA. Dans cet ouvrage, elle déclare qu'elle et ses associés avaient été informés qu'il allait y avoir un attentat le 11 septembre 2001. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q27

q: Lorsque l'on plie les billets de 20 dollars édités en 1996 de manière à faire un avion en papier, on peut voir, d'un côté, deux bâtiments ressemblant étrangement aux deux tours en train de brûler, et de l'autre une explosion d'un bâtiment similaire au pentagone. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q28

q: Le pilote militaire John Lear a déclaré que personne n'a réussi à reproduire l'attaque du 11 septembre en simulateur tant les manœuvres étaient difficiles. Il a aussi ajouté que la technologie holographique militaire a des dizaines d'années d'avance sur la technologie publique. Le gouvernement aurait donc projeté de faux avions pour cacher le fait qu'ils avaient prévu une démolition contrôlée des Twin Towers. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q29

q: On sait maintenant que les sous-sol des deux tours abritaient des réserves d'or. La plus importante d'entre elles était celle de la Dragon Family (un groupe de sociétés secrètes chinoises), et était censée être transférée au gouvernement chinois à partir du 12 septembre 2001. Après la destruction des deux tours, on a perdu toute trace de cet argent que les USA devaient à la Chine. <ul> </ul>

Veillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q30

q: Le 10 septembre 2001, le MOSSAD (l'agence de renseignement israélienne) aurait prévenu 4000 juifs de ne pas aller travailler le 11 septembre. C'est pourquoi on ne dénombre aucune victime juive lors des attentats. <ul> </ul> Veillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q31

q: On retrouve énormément de fois le nombre 11 en lien avec les attentats. En effet, New York City a 11 lettres, Afghanistan a 11 lettres, Ramsin Yuseb (le terroriste qui avait menacé de détruire les tours jumelles en 1993) a 11 lettres, George W Bush a 11 lettres. De plus, New York est le 11e Etat, le premier avion à s'écraser sur les tours jumelles était le vol n°11, le vol n°11 transportait 92 passagers:  $9 + 2 = 11$ . Il y a des dizaines d'éléments de ce type. <ul> </ul> Veillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q32

q: Il semble que Nostradamus aurait prédit la destruction des 2 tours. En effet, on peu lire que "Dans l'année du nouveau siècle et neuf mois, Du ciel viendra un grand roi de terreur [...] Dans la ville d'York, il y aura un grand effondrement, Deux frères jumeaux déchirés par le chaos [...] La troisième grande guerre commencera quand la grande ville brûlera." <ul> </ul> Veillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q33

q: Plusieurs sources affirment que les attentats du 11 septembre ont été perpétrés par les gouvernements des États-Unis et d'Israël afin de discréditer le monde arabe au yeux du grand public et de générer un "choc des civilisation". <ul> </ul> Veillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q34

q: Certaines analyses montrent que la destruction des tours pourrait avoir été causée par une détonation nucléaire. En effet, "Veterans today" déclare avoir eu accès, par le biais des renseignements russes, à un rapport caché du Ministère de l'énergie américain. Ce rapport traite de l'analyse d'échantillons de poussières et d'eau par un laboratoire affilié au dit ministère et qui a révélé la présence de retombées et de déchets par transformation dont la présence sur place ne peut être dûe qu'à des détonations nucléaires. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q35

q: Les cartes du jeu « Illuminati: The Game of Conspiracy » édité en 1995 créé par Steve Jackson pourraient révéler que l'attentat était prévu de longue date. En effet, la carte "terrorist nuke" montre une image des World Trade Center en train de brûler. Une autre carte, la carte "Pentagon" montre une partie du Pentagone en train d'exploser. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q36

q: Le gouvernement a décrit les pirates comme des intégristes religieux. Or le jour précédant les attentats, plusieurs témoins ont vu certains pilotes de l'air aller en boîte de nuit, consommer de l'alcool, engager des prostituées, etc. Ces actes sont contraires à ce qui est enseigné par le Coran. Il semble donc incohérent que des personnes censées respecter la charia aient ce genre de comportements. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q37

q: Les débris d'avion qui ont été retrouvés ne présentaient aucun numéro de série, or, en temps normal, toutes les pièces d'un avion sont censées porter le numéro de série correspondant à l'appareil. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality

o: width 27%

- cet argument est:

l: Q38

q: Quand le gouvernement des États-Unis a compris que les détournements des avions étaient des actes terroristes, tous les vols ont été interdits dans le pays, sauf un. C'était l'avion qui transportait la famille Ben Laden, laquelle a pu retourner au pays sans subir aucun interrogatoire. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality  
o: width 27%  
- cet argument est:

l: Q39

q: Depuis les attentats, les chaînes BBC et NBC ont annoncé que plusieurs des 19 terroristes impliqués dans les détournements (et donc officiellement morts) auraient été repérés vivants en Arabie Saoudite et en Tunisie. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality  
o: width 27%  
- cet argument est:

l: Q40

q: Il y a eu une forte coupure de courant de 50 heures la semaine précédent les attentats. C'est bien assez de temps pour pouvoir installer des explosifs dans les étages des bâtiments sans que les systèmes de sécurité ne puissent le repérer. <ul> </ul> Veuillez noter ci-dessous la qualité de l'argument présenté dans le texte que vous venez de lire.

t: scale quality  
o: width 27%  
- cet argument est:

random: end

**Appendix B:** Excerpts of the survey G's PsyToolkit code containing the Pre-tests.

# Belief in CT - good arguments

scale: quality

- De mauvaise qualité <ul> </ul> 1

- 2

- 3

- 4

- 5

- 6

- 7

- 8

- 9

- De très bonne qualité <ul> </ul> 10

scale: belief

- Vraie <ul> </ul> 1

- 2

- 3

- 4

- 5

- 6

- 7

- 8

- Fausse <ul> </ul> 9

scale: motivation

- Faible <ul> </ul> 1

- 2

- 3

- 4

- 5

- 6

- 7

- 8

- Forte <ul> </ul> 9

scale: connaissance

- Très petite <ul> </ul> 1

- 2

- 3

- 4

- 5

- 6

- 7

- 8

- Très grande <ul> </ul> 9

l: Renseignement\_1

q: Quel est votre niveau de connaissance sur les événements qui ont eu lieu lors du 11 septembre 2001 ?

t: scale connaissance

o: width 27%

- Ma connaissance du sujet est:

random: begin

l: BVOff\_1

q: Veuillez noter sur l'échelle ci-dessous, après avoir lu attentivement ce texte, à combien s'élève votre degré de confiance concernant la version officielle des attentats du 11 septembre 2001, qu'on peut résumer par : plusieurs terroristes affiliés à l'organisation Al-Qaïda ont détourné quatre avions de lignes, dont deux ont percuté les tours du World Trade Center (WTC1 et 2) à New-York (provoquant ensuite leur effondrement ainsi que la destruction partielle ou totale des bâtiments alentours, notamment la tour WTC 7), le troisième a percuté le Pentagone à Washington D.C. (détruisant une partie du complexe), et le dernier s'est écrasé à Pittsburgh avant d'atteindre sa cible. <ul> </ul> Que pensez-vous de cette affirmation? :

t: scale belief

o: width 27%

- Cette version officielle est:

l: BCT\_1

q: Les attentats du 11 Septembre 2001 font l'objet de discussions. Il est suggéré que la « version officielle » de ces événements serait une tentative de dissimulation de la vérité au grand public. Cette « version officielle » masquerait le fait que ces événements aient été planifiés à l'avance et secrètement préparés par une alliance cachée d'individus ou d'organisations puissantes ayant des intentions malveillantes. <ul> </ul> Que pensez-vous de cette affirmation? :

t: scale belief

o: width 27%

- Cette affirmation est:

random: end

l: Motiv\_1

q: Dans une discussion ou un débat, dans quelle mesure seriez-vous motivé à défendre la version officielle ?

t: scale motivation

o: width 27%

- Ma motivation serait:

l: intro\_message

t: info

q: Vous allez maintenant voir différents arguments trouvés sur internet qui vont à l'encontre de la version présentée dans le rapport officiel des attentats.

random: begin

**Appendix C:** Excerpts of the survey G's PsyToolkit code containing the Post-tests and demographic information.

random: begin

l: BCT\_2

q: Différents événements politiques ou sociaux importants (comme par exemple les attentats du 11 Septembre 2001) font l'objet de discussions. Il est suggéré que la « version officielle » de ces événements serait une tentative de dissimulation de la vérité au grand public. Cette « version officielle » masquerait le fait que ces événements aient été planifiés à l'avance et secrètement préparés par une alliance cachée d'individus ou d'organisations puissantes ayant des intentions malveillantes. 

 </ul> Et vous, que pensez-vous de cette affirmation? :

t: scale belief

o: width 27%

- Cette affirmation est:

l: BVOff\_2

q: Veuillez noter sur l'échelle ci-dessous, après avoir lu attentivement ce texte, à combien s'élève votre degré de confiance concernant la version officielle des attentats du 11 septembre 2001, qu'on peut résumer par : plusieurs terroristes affiliés à l'organisation Al-Quaïda ont détourné quatre avions de lignes, dont deux ont percuté les tours du World Trade Center (WTC1 et 2) à New-York (provoquant ensuite leur effondrement ainsi que la destruction partielle ou totale des bâtiments alentours, notamment la tour WTC 7), le troisième a percuté le Pentagone à Washington D.C. (détruisant une partie du complexe), et le dernier s'est écrasé à Pittsburgh avant d'atteindre sa cible. 

 </ul> Que pensez-vous de cette affirmation? :

t: scale belief

o: width 27%

- Cette version officielle est:

random: end

l: Motiv\_2

q: Dans une discussion ou un débat, dans quelle mesure seriez-vous motivé à défendre la version officielle ?

t: scale motivation

o: width 27%

- Ma motivation serait:

l: N\_arguments

t: textline

q: Veuillez maintenant indiquer, en essayant de vous rappeler des arguments présentés précédemment, le nombre d'arguments qui vous ont convaincu(e) (i.e. que vous avez noté au dessus de 5), ainsi que le nombre total d'arguments que vous avez lus.

- {min=0,max=100} Nombre d'arguments qui m'ont convaincu(e) :

- {min=0,max=100} Nombre d'arguments qui ont été présentés :

l: BVOff\_3

q: Veuillez essayer de vous rappeler de la note que vous avez donnée à la version officielle des attentats du 11 septembre au tout début début de questionnaire.

t: scale belief

o: width 27%

- J'ai estimé que la version officielle était :

l: Renseignement\_2

q: Avez vous maintenant l'intention de vous renseigner sur la réalité des éléments qui vous ont été présentés concernant les attentats du 11 septembre 2001 ?

t: scale motivation

o: width 27%

- Ma motivation à me renseigner est:

l: Demogr\_message

t: info

q: Pour finir, veuillez nous indiquer quelques informations vous concernant.

l: Age

t: textline

q: En quelle année êtes-vous né(e)?

- {min=1900,max=2017} Entrez votre année de naissance

l: Sexe

t: radio

q: Vous êtes:

- Un homme

- Une femme

- Autre

l: Diplome

t: textline

q: veuillez indiquer quelle est votre domaine d'étude principal.

- Mon domaine principal est:

l: Langue

t: radio

q: Votre langue maternelle est-elle le français?

- Oui

- Non

**« Je déclare sur mon honneur que j'ai accompli mon mémoire de master seul et sans aide extérieure non autorisée »**

**« I declare upon my honour that I accomplished my master thesis on my own and without unauthorized external help »**

Fribourg, le 13 août 2018

Didier Dorsaz

## Didier Dorsaz



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Student in University of Fribourg

### Education

- 2016-now : Master of Science in Psychology in University of Fribourg  
Option : Cognitive neuroscience  
– Master thesis: *The impact of the argumentative millefeuille on the belief in 9/11 conspiracy theories* (supervised by lecturer Pascal Wagner)
- 2013-2016 : Bachelor Of Science (bsc) In Psychology in University of Lausanne  
– Bachelor final work: *Enthousiasme et réussite scolaire – Étude de la dynamique entre engagement affectif et performance académique* (supervised by Prof. Alain Clémence)
- 2007-2013 : Matura in Collège de l'Abbaye de St-Maurice  
Specific & complementary options in biology-chemistry and in pedagogy-psychology

### Work experience

- Spring 2018 : Internship in « Kognitive Biopsychologie und Methoden » department, experiments about sleep and memory
- Spring 2017 : Internship in iBM Laboratory, Eye tracking
- Summer 2014 : St-Maurice's heritage conservation work (communal archives maintenance)
- 2011 to 2013 : Extra lessons for Secondary I and II students
- Summers 2010 to 2012 : Maintenance work in Collège de l'Abbaye de St-Maurice

### Spoken languages

- French : Mother tongue
- English : First Certificate in English and daily use
- German : Matura level

### Computer skills

- Statistical computing software : RStudio, Rcmdr, Matlab, Octave, SPSS
- Graphical creation software : Gimp, Kdenlive, Blender, DVDStyler
- Office automation software : Word, PowerPoint, LibreOffice Writer...

### Other areas of interest

Astronomy, Cinematography, History, Video creation (from the conception to the DVD)