INFLUENCE OF VISUAL PRIMING ON CONSPIRACY BELIEF: A RANDOMIZED CONTROLLED TRIAL

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Effect of visual priming on conspiracy belief: A randomised trial

Final Thesis

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1. Introduction

1.1. Conspiracy Theories

Scholars, policymakers, and the public have always been interested in conspiracy theories. Broadly defined, these theories are explanatory tools that suggest that any event or series of occurrences is caused by a hidden plot or that specific causes were concealed (Douglas et al., 2017). Conspiracy theories range from those that can be partially supported by evidence to those that are completely speculative. These conspiracies are not new occurrences (such as believing the Jewish community is to blame for the Black Plague during medieval Europe); they have guided people's understanding of politics as well as responses to health issues for ages (van Prooijen & Douglas, 2017). The greatest concern about conspiracy theories is their ability to produce entrenched beliefs that cannot be changed and often lead to the development of individual and public health-related destructive behaviours (Sunstein & Vermeule, 2009). The belief in conspiracy theories is far more than simply a cultural curiosity; there are real psychological issues at stake.

Several cognitive biases in people make them susceptible to believing in conspiracy theories including proportionality bias (the notion that large events have significant causes), confirmation bias (the interpreting of new evidence as the confirmation of one's preexisting beliefs) and illusory pattern perception (the tendency to perceive patterns where none exist) (Brotherton & French, 2014; Whitson & Galinsky, 2008). Personality traits also contribute to the likelihood of believing in conspiracy theories. Traits such as high openness to experience, low levels of agreeableness, and abnormally elevated levels of distrust and paranoia are associated with increased propensity for such beliefs (Swami et al., 2011). In addition, situational factors like insecurity, anxiety about the future or lack of control can heighten one's predisposition toward conspiratorial thinking (Whitson & Galinsky, 2008). Conspiracy theories do not develop in vacuums but are very much underpinned by sociocultural contexts. Times of extensive uncertainty, large political or social changes or low trust in institutions often go hand-in-hand with the popularity and spread of conspiracy theories (Basham, 2003). The environment where conspiracy theories can prosper is set by the economic disparities, political polarisation, and social fragmentation that we have today.

In contemporary times, the media has a significant role to play in spreading and believing in conspiracy theories. Conspiracy theories have become more widespread and less regulated than ever before due to the rise of internet and social media that has transformed the way information flows (Allcott & Gentzkow, 2017). Such digital proliferation transforms

insular beliefs into broad based movements with consequences for politics or public health outcomes (Starbird, 2019). Unlike traditional media, which had a gate-keeping function, digital platforms now allow for the unfiltered spread of conspiracy theories with algorithms amplifying them according to user tastes rather than facts (Thorson, 2020). This echo chamber effect reinforces existing beliefs, thereby increasing conspiracy theory spread and acceptance (Del Vicario et al., 2016). Additionally, modern media being so graphic means that images, videos, and infographics significantly influence the development and strengthening of conspiratorial views. According to Grimes (2017), visual content can bypass rational analysis and produce emotional responses that text alone cannot achieve. This means that attention should be paid not only to conspiracy theories but also to any other visual manipulations which may misinform people thus affecting their opinions. However, this power of belief creation through visuals is not limited to conspiracy theories alone but has been widely examined within different areas of psychology where it was found that they influence memory, decision-making as well as emotions (Phelps & LeDoux, 2005).

1.2. Visual Priming and Its Influence on Belief Formation

Psychology recognizes visual priming as a well-established phenomenon in psychology where exposure to a visual stimulus leads to an effect on the response to a subsequent stimulus without necessarily being aware of it (Kolb & Whishaw, 1998). Below the level of conscious awareness, this process shapes attitudes and memories. A person's response to related stimuli is increased due to changes in perceptual representation about objects and events during visual priming (Schacter, Chiu, & Ochsner, 1993). Cognitive processing of aesthetic stimuli infuses them with emotional content that influence belief systems and attitudes (Phelps & LeDoux, 2005). This means that pictures which elicit fear, anger or shock are highly useful for preparing individuals' minds for conspiracy theories since they trigger intense emotional reactions which override logical thinking (Brader, 2006).

The types of priming are:

1. Associative Priming: This occurs when an idea or image activates related thoughts or memories (Meyer & Schvaneveldt, 1971). For example, a person seeing an image associated with a specific conspiracy theory may find all related conspiracy claims more believable. This type of priming relies on the brain's tendency to link related concepts making it easier for individuals to accept new information that fits within an existing framework of ideas.

2. Repetitive Priming: This involves repeated exposure to the same stimulus affecting the individual's response to it (Masson, 1995). Constant exposure to certain images such as those suggesting a hidden conspiracy in media or political events can wear down a person's scepticism and create greater acceptance of false narratives. The repetitive nature of these stimuli reinforces specific ideas and beliefs making them more familiar and thus seemingly more credible.

3. Semantic Priming: This occurs when the meaning of a word or image influences the response to another word or image (Neely, 1977). For instance, words or images related to a conspiracy theory can make related conspiracy concepts more accessible in a person's mind.

4. Conceptual Priming: This involves the activation of related concepts or categories in the mind influencing subsequent thoughts and behaviours (Tulving & Schacter, 1990). For example, exposure to conspiracy-related content can prime individuals to think about and interpret subsequent information in a conspiratorial manner.

5. Perceptual Priming: This occurs when the physical form of the priming stimulus influences the response to another stimulus. For instance, visual features such as shapes colours and patterns can prime individuals to recognize or interpret related images or symbols more quickly (Roediger, 1990).

6. Procedural Priming: This type of priming involves the activation of behavioural or cognitive processes through repeated practice or exposure influencing how individuals perform tasks or make decisions in related contexts (Logan, 1988)

From all of the types of priming, associative and repetitive priming are of particular importance to this study. Associative priming depends on the brain's tendency to connect similar ideas thereby, in theory, should make an individual more likely to believe in conspiracy theories when they are shown pictures related to those theories (Leman & Cinnirella, 2013). Repetitive priming can wear down scepticism over time through repeated exposures to particular conspiracy-related images and therefore should, in theory, lead to people accepting such stories as true eventually (American Psychological Association [APA], 2023).

Historically, visual priming has strong roots within psychological inquiry where early investigations showed how subtle cues could shape perception and behaviour such as improving recognition of stimuli, such as prior exposure to certain words or images, could significantly improve an individual's ability to recognize associated concepts later on (Tulving & Schacter, 1990). Tulving and Schachter (1990) proposed the concept of Perceptual

Representation System (PRS), a theoretical framework that explains how certain types of priming, particularly perceptual priming, occur independently of conscious memory. Visual priming affects how we perceive the world. It shapes personal attitudes and beliefs as well as shared understandings within a society. Visual explanations often seem more believable or recognizable because they resonate with familiar concepts or patterns we've encountered before, often through primed situations where one idea naturally leads to another in a connected sequence. This phenomenon can significantly affect public opinion and behaviour, as the repeated and associative nature of priming can make misinformation more convincing and harder to dispel (Fazio, 2001). Although many studies have been done on this topic, there is still debate among psychologists about how effective visual priming really is and how much it does affect people over time. Some researchers argue that its effects are short-lived and context-dependent while others believe they can be long-lasting even shaping our fundamental views of the world (Kiesel et al., 2010). Also, people are still arguing whether or not using visual priming in media and advertising is ethical because it could lead to the manipulation of public opinion and behaviour (Harris, Bargh, & Brownell, 2009). Therefore, the investigation into visual priming should be conducted considering the current media-saturated society. Additionally, the extent to which visual priming shapes perceptions and behaviours depends on the nature of the ideas being presented. Some conspiracy theories may appear more reasonable than others, depending on the evidence available, which in turn can affect how widely they are accepted and spread in society. For example, health related ones like vaccines hesitancy can lead to immediate public health threats (Jolley & Douglas, 2014)

The importance of priming goes beyond just psychology but also into areas such as religion where symbols may serve as cues for certain behaviours. Religious symbols have deep meanings attached to them; hence when seen by individuals they can make people think and act according to what those signs represent (Bargh, 2006). For instance, if a Christian sees a cross, they might start more consciously thinking about morals that should be followed based on Christian teachings. Such kind of symbolic inducement not only affects personal beliefs or conduct but also shapes the ways communities interact socially with one another within broader society at large. Furthermore, symbolism plays an important role in priming people's thoughts and behaviour, which is why it has been extensively studied by social psychologists interested in learning how environmental factors can influence human cognition. Social psychology uses priming as a tool to study various aspects of social interaction, such as the underlying mechanisms driving these interactions themselves along with attitudes held towards others

based on stereotypes about different groups within society (Forster et al., 2009). Investigating how visual priming influences cognitive and emotional responses would significantly contribute to social psychology. Visual priming can enhance our understanding of how subtle visual cues shape social perceptions, attitudes, and behaviours in various interpersonal contexts. For example, it can reveal how exposure to certain images affects stereotypes, biases, and judgments about others, whether in face-to-face interactions or through digital communication. It can also illuminate the mechanisms by which visual stimuli reinforce social norms, influence group dynamics, and affect decision-making processes. Ultimately, understanding the effects of visual priming provides valuable insights into how people form and maintain social beliefs, which is critical for addressing issues like prejudice, misinformation, and social influence in society.

1.3. The Impact of Visual Priming on Conspiracy Theory Belief

To realize how people form and strengthen opinions, it is important to study the relationship between visual priming and conspiracy theories. This link may also explain why some conspiracy theories gain traction even though they seem implausible. The belief in conspiracy theories can be influenced by visual priming from both cognitive and social psychology points of view. If there is a picture next to information, people are more likely to believe it, regardless of whether or not the picture provides any proof (Newman et al., 2012). The truthiness effect demonstrates that images can make false claims appear more truthful. What this means is that when people see certain pictures, their brains activate associated memories or emotions which then leads them to think that whatever is being said alongside those same images must be true too since they were shown together at once. However, such an impact does not always occur uniformly; it depends on individual, contextual or cultural factors (Hansen & Hansen, 1988). Visual priming works better for those who have a sceptical attitude toward authority figures. People with confirmation bias tend to select evidence that confirms their pre-existing beliefs therefore making them vulnerable to this bias when exposed through pictures rather than through texts only, as pictures, especially shocking or grotesque, have been shown to increase the confirmation bias (Hall et al., 2012; Mercier & Sperber, 2011). Therefore, if someone already holds a belief and then sees an image related to that belief, even if they deny seeing anything like it in reality, they may remember the event more vividly because their awareness was triggered by the visual perception rather than by reading alone. Nisbett & Miyamoto (2005) argue that cultures that emphasize symbolism or visual learning make people more likely to respond positively towards stimuli presented using pictures instead of words

only. It should be noted here that in communities where the members rely more than average on images and visuals as means of communication (such as certain online communities), individuals may be more likely to accept ideas expressed through images than those written down as text. Hence their predisposition greatly enhances the power behind any conspiracy theory which employs captivating visuals.

The relationship between visual priming and conspiracy theories has many complex aspects. For instance, emotional responses caused by pictures can sometimes override logical processing thereby leading one to accept claims that are in line with his or her emotions at that particular moment (Brader, 2006). Fear-inducing images, for instance, can make viewers more susceptible to conspiracy theories that explain or exploit those fears. This emotional manipulation is a powerful tool in shaping beliefs, particularly in an era where visual content is ubiquitous and easily shared. Another aspect to consider is the role of media literacy in mitigating the effects of visual priming. Educating the public about how visual priming works and promoting critical thinking skills can help individuals become more discerning consumers of information. Media literacy programs can teach people to recognize and question the sources and motives behind the images they encounter, reducing the likelihood of falling prey to conspiracy theories. The impact of visual priming on belief formation is also influenced by individual differences in cognitive styles. Some people are more visually oriented and therefore more susceptible to visual priming. Others may have cognitive biases that make them more prone to accepting conspiracy theories. Understanding these individual differences is crucial for developing targeted interventions to counteract the spread of misinformation. While direct systematic reviews linking visual priming to belief in conspiracy theories are scarce, literature examining the broader effects of priming on cognition and behaviour is growing. One comprehensive review by Weingarten et al. (2016) systematically analysed the robustness of priming effects across various domains, including visual priming. They found that priming consistently influenced attitudes, beliefs, and behaviours, with visual cues subtly activating related concepts and making individuals more likely to accept associated information as credible. This research emphasized the power of priming in shaping attitudes, beliefs and behaviours, which provides a basis for understanding its potential influence on conspiracy theories.

However, studies need to be conducted to find out how exactly visual priming affects belief in conspiracy theories, as there are none published yet. This may involve investigating the impact of repeatedly exposing people to conspiracy-related images; considering how

cognitive styles interact with visual priming; and determining what long-term consequences such manipulations have on belief formation. Such an understanding could be useful in revealing ways that misinformation spreads and can thus be countered most effectively. In social psychology, priming is central to any attempt at comprehending the manner in which subtle cues can affect behaviour and cognitive processes. The importance of this within the current context cannot be overstated because it highlights just how easily our views are warped by insignificant triggers, as we are exposed every day to stimuli (which vary wildly in content) via various media and the Internet, which could influence the development of conspiracy theories. Such an observation bears heavy upon conspiracy theory propagation especially when taken together with continuous bombardment of public consciousness using conspiratorial narratives alongside their corresponding pictures or symbols that tend to only serve confirmatory functions while also fostering informational errors along the way. Also, it is necessary to educate people about what happens after one has been visually primed and improve their ability to understand different forms of media messaging.

1.4. Rationale for the study

The basis for this study and its hypothesis is the fact that conspiracy theories have been shown to be linked to certain cognitive biases. This study is exploratory in its nature, due to the limited research on conspiracy theories, so the hypothesis is based on the evidence of previous research that showed that visual priming affects belief formation/alteration, rather than conspiracy theories specifically. These previous works provide a solid foundation for the hypothesis and aim of this study:

Kolb and Whishaw (1998) explained that visual priming can shape attitudes and memories by altering perceptual representations of objects and events, even without conscious awareness.

Phelps and LeDoux (2005) emphasize that emotional content associated with visual stimuli can override logical thinking, making individuals more susceptible to forming or altering beliefs when exposed to emotionally charged images.

Brader (2006) supports the argument that fear-inducing or emotionally charged images are particularly effective in influencing belief formation, which is relevant in the context of conspiracy theories.

Newman et al. (2012) demonstrate the "truthiness" effect, where images make accompanying statements appear more truthful, thereby altering belief formation by enhancing the credibility of conspiracy-related information.

The inspiration for the design of this study was sparked by the dramatic and eye-catching visuals used by late night "educational" TV channels, which often use these visuals while presenting random unfounded theories, such as aliens building the pyramids in Egypt and the link between the Illuminati and the founding of the United States.

1.5. Research aim

The research aim of this study was to examine the effect of visual priming on conspiracy theory belief strength.

1.6. Hypothesis

Participants primed with images related to conspiracy theories will exhibit a higher score on the general conspiracy belief questionnaire compared to participants primed with neutral images.

2. Methods

2.1. Study design

This was a face-to-face randomized controlled trial with a between-subjects study design. This research has been preregistered on the OSF Registries website. (Check Appendix 8.5. for preregistration link)

2.2. Participants

Participants were recruited on a voluntary basis by researchers at the Faculty of Humanities and Social Sciences, University of Split, using convenient sampling but with randomization of groups (via coinflip). The inclusion criterion was that participants had to be students from the Faculty of Humanities and Social Sciences, University of Split. The exclusion criterion was the presence of any visual impairments that would prevent participants from viewing the images. Students from all study programs were approached for recruitment, apart from 2nd and 3rd year Psychology students. Recruitment occurred in person, after lectures in classrooms. Students who agreed to participate were, if necessary, divided into two subgroups if the number of participants was sufficient (cutoff for insufficient participants was 20). These subgroups were then randomly assigned to experimental groups.

The sample size was calculated based on the population number of students at the Faculty of Humanities and Social Sciences in Split, which is approximately 2200, a power level of 0.8, a larger effect size (Cohen's d, d=0.6), the number of groups (2), the number of items (18) in the scale and on the fact that the items are 1 to 5 Likert scale. The larger effect size was accepted based on the laboratory nature of the study and the previous studies suggesting a significant efficiency in visual priming affecting attitudes. Also, the instrument used shows a high level of internal consistency, and the limited nature of the population (due to the limitations enforced by the Ethical Committee) which results in a certain level of homogeneity in the population. These factors amount to 45 participants per group, which means a total of 90 participants overall was needed. More participants were recruited as a safeguard for participant dropout, resulting in 114 participants being recruited. This calculation was made using G*Power version 3.1.9.7. (Faul et al., 2020)

2.3. Recruitment

Between February and March of 2024., 114 participants were successfully recruited to participate in the study. 59 participants were assigned to the control group and 55 participants were assigned to the experimental group. No participants withdrew from participation.

2.4. Demographic data

Of all the participants that participated in the study, 92 (80% of total participants) were female, 6 (5% of total participants) were male and 16 (14% of total participants) chose not to disclose their sex (Table 1) The age range of participants was 18 to 26 years old (Table 1).

Table 1

Control and Experimental group Differences in Sex and Age

Group	Female (n)	Male (n)	Not Disclosed Sex (n)	Median Age (IQR)	Minimum age	Maximum age
Control	56	2	1	19 (1.0)	19	26
Experimental	36	4	15	19 (1.0)	18	26

Note. Median Age is reported with the interquartile range (IQR) in parentheses

2.5. Materials

The materials used for the experiment are 2 different presentations (for control and experimental groups), papers to write down remembered numbers for the participants, and questionnaires for the participants. Each presentation consisted of 8 images found on the Internet, with the images in the control group being neutrally themed, while half of the images in the experimental group were neutrally themed and half related to conspiracy theories.

2.6. Instruments

The Expanded scale of general conspiracy theory belief by Blanuša (2009) and Kapitanović (2018) in Croatian language was used to determine the level of conspiracy theory belief. The scale was developed to determine general conspiracy beliefs by Blanuša in 2009 and was further expanded upon by Kapitanović in 2018. The scale consists of 18 statements on which the participants rate their level of agreement with each statement on a 5-point Likert-type scale (*1 - I completely disagree, 2 - I partially disagree, 3 - I neither agree nor disagree, 4 - I partially agree, 5 - I completely agree*) The total score is calculated by summing up the responses on all statement, with higher scores suggesting higher belief in conspiracy theories. The scale doesn't include any subscales, and no items are negatively scored. The scale demonstrated high reliability in previous studies with a Cronbach's alpha coefficient of .93

(95% CI [.88, .97]) (Periša, 2020). In this research, a calculation of the reliability of the scale resulted in a high reliability with a Cronbach's alpha coefficient of .895 (95% CI [.888, .902]). An example of an item translated from Croatian) is "*World powers control the numbers of the population by implanting contraceptive microchips under the skin of women and thus control hormones and prevent ovulation and the possibility of pregnancy.*"

The original items of the scale were presented alongside 32 personality-based items with the same response scale (1 to 5 Likert type scale [*1 - I completely disagree, 2 - I partially disagree, 3 - I neither agree nor disagree, 4 - I partially agree, 5 - I completely agree*]) that were developed for blinding purposes and modelled after quasi-psychological personality tests, popular on social media websites. They are often marketed as a tool for the user to determine which fictional character are they most similar to. Item example translated from Croatian is *"I usually feel very comfortable around people who are different from me."*

2.7. Blinding

Single blinding was required as the study is based on visual priming. For the intervention to be effective, participants weren't allowed to know the true nature of the experiment. The participants were told the research is based on visual perception, memory, and personality. Furthermore, blinding was needed to obscure the true nature of the questionnaire. For blinding of the true nature of the questionnaire, the statements of the scale with statements had fabricated for the role of blinding.

2.8. Interventions

One group was the control group while the other group was the experimental group. The control group was shown neutral images in the priming phase of the study, while the experimental group was shown images related to conspiracy theories in the priming phase of the study.

2.9. Piloting

To determine the length of time the images are shown, and the number of images shown, a pilot pre-experiment was conducted with 3 participants using both the control and experimental images. Based upon the feedback of the 3 participants, the images chosen were the ones determined to be clear enough for the participants to see at all distances, the number of images were chosen based on the feedback of the 3 participants on account of how easy it was them to remember, and the length of time for the flashing of the images and writing down

the numbers was based on the feedback of the 3 participants on account of how long it took them to count and write down their answers.

2.10. Procedures

Participants were randomly assigned to either the control or experimental group. They were seated in groups in classrooms and informed that the research was testing personality and memory. They were presented with the images from the corresponding presentations and tasked to count and remember the number of specific items in the images. Each image was shown for 25 seconds, and after they had seen all the images, they wrote down the numbers they remembered on the answer sheet, for which they had 2 minutes. After they completed writing down their remembered numbers, they moved on to answering the conspiracy belief questionnaire, which with the blinding statements, was presented as a personality questionnaire. After they completed the questionnaire, they put the questionnaire inside the envelope they were given by the researchers. After that, the researchers explained the true nature of the study and were told they could withdraw their participation if they wished to. The experimenters collected all the participants still willing to participate in the study. Lastly, participants were requested not to disclose their participation in the study to anyone. Overall, the experiment with a group of participants lasted about 20 minutes, depending on the speed at which the participants completed the questionnaire.

2.11. Experimental image choice explanation

The 4 images chosen for priming are all related to conspiracy theories. However, they all have an ominous context so even without any prior knowledge, a person observing the image inside of a regular situation would assume nefarious activity (uncanny, evil or impious) in the images.

Image 1

This image has been chosen for several reasons, as the CIA has long been related to many conspiracy theories and confirmed conspiracies, such as the John Fitzgerald Kennedy assassination, Area 51 conspiracy theories, the MKUltra project, etc (Doe, 2013) (United States Congress Senate Select Committee on Intelligence, 1977).

Image 2
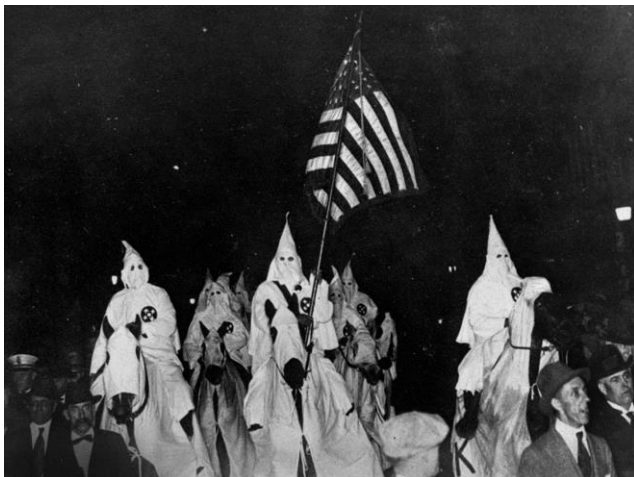
This image has been chosen for multiple reasons, mostly based on the KKK's claims of the white genocide conspiracy theory, and being a somewhat secretive and exclusive extremist group, representing an archetype of secret societies and conspiracies. (Trelease, 1971)

Image 3

This image has been chosen for the famous 9/11 conspiracy, that the disaster wasn't caused by the hijacked planes crashing, but by demolition via explosives planted by the government, to cover up the budget losses and kickstart the War on Terror (Popular Mechanics, 2023).

Image 4

This image has been chosen due to the fact that Bohemian Grove (the location shown in the image) has become known as a place of gathering for the secretive society's members and hypothesized that they conduct acts of child abuse and human sacrifice on its grounds. The mystery and built-up conspiracy theories around it were popularized by Alex Jones, an

American radio show host that infiltrated Bohemian Grove and subsequently filmed a movie named "Dark Secrets: Inside Bohemian Grove". (Jones, 2000)

2.12. Ethics

This study was conducted in accordance with the ethical standards of the University of Split and adhered to the principles outlined in the Declaration of Helsinki. All participants were fully informed about the nature of the study and provided their informed consent prior to participation. All participants were provided with 2 copies of Informed consent to read and sign, should they choose to participate in the study. One of which was kept by the participant after the end of the experiment, while the other was given back to the experimenter at the end of the experiment. They were assured of their right to withdraw from the study at any point without any repercussions. To maintain the integrity of the study and ensure unbiased results, participants were blinded to the true purpose of the research. No manipulation checks were conducted after the end of the experiment. The experiment was designed to minimize any potential psychological distress by carefully selecting the visual stimuli and by providing a thorough debriefing after the completion of the study, where participants were informed about the true nature of the study. The confidentiality of the participant's data was strictly maintained, with all data being anonymized and securely stored. No sensitive personal information was collected, and the results were reported in aggregate form to prevent any identification of individual participants.

2.13. Statistical methods

Participants' scores in the Expanded scale of general conspiracy theory belief by Blanuša (2008) and Kapitanović (2018) were presented as the central tendency (mean) and standard deviation, all the scores were analysed for normality using the Shapiro-Wilk test, which is the preliminary analyses, and then compared using independent sample T-test based on their assigned group. This is the main analysis, as in the analysis conducted to test the hypothesis of the study and the main focus of the study. As a follow up, a Spearman correlation analysis of the scores was conducted based on the age of participants. This is the additional analysis of the study, an analysis with no predetermined hypothesis, but with the goal being to use the existing data and explore if there are any other possibilities for insights to be made from the collected data. Beforehand, an assumption check was made for the correlation analysis. This assumption check was of normality (Shapiro-Wilk test). A p-value of 0.05 or less was considered statistically significant. All analysis was performed using Rstudio version: 2024.04.0+735 (RStudio Team, 2022) and Jamovi version 2.5.3. (The Jamovi project, 2021).

3. Results

3.1. Preliminary analyses

The central tendency of scores (mean) of the participants in both the control and experimental group were calculated and presented (see Table 2). The results of the participants were first checked for normality using Shapiro-Wilk normality test which resulted showed that the data followed a normal distribution both in the control group (p = .982) and in the experimental group (p = .547).

Table 2

Comparison of Mean Scores Between Experimental and Control Groups

Group	N	Mean	SD
Experimental group	55	47.4	11.5
Control group	59	50.1	12.1

3.2. Main analysis

The results of an independent sample T-test (p = .219) showed no statistically significant differences in conspiracy theory beliefs between the control and experimental group.

3.3. Additional analysis

As a secondary analysis, a Spearman correlation was conducted as the Shapiro-Wilk normality tests showed a normal distribution for Score (p = .693) but the same did not apply for age (p > .001)., The Spearman correlation analysis resulted in a p = .756 and a Spearman's correlation coefficient, ρ = .034, indicating a statistically nonsignificant correlation between age and score.

4. Discussion

The objective of the study was to assess how visual priming affects belief in conspiracy theories. It was hypothesized that people who saw pictures relating to conspiracy theories would have a higher score in belief in them than those who were shown neutral images. However, this hypothesis was not supported by the results. There were no significant differences found between the experimental group, which saw conspiracy-related images, and the control group which viewed neutral ones when it came to their level of belief in conspiracy theories. Main and additional analyses using independent sample T-tests and correlation analysis respectively confirmed these outcomes. This lack of significant difference may indicate some underlying factors that were not considered during the study design, and limitations in the design of the experiment itself. One possibility is that types or numbers used for visual priming were insufficient for triggering any measurable change in beliefs while another might point out strong enough pre-existing convictions among participants (within-person stability in conspiracy theory beliefs) resistant even towards such influences, these individual differences should also be considered concerning susceptibility levels regarding priming effects, which has been in the case in several previous studies (Lord, Ross, & Lepper, 1979; Taber & Lodge, 2006). In contrast to earlier studies, such as by Lord, Ross, and Lepper (1979) and Taber and Lodge (2006), which demonstrated that priming can influence belief formation, the findings of this study suggest that visual priming had no significant impact on conspiracy theory beliefs. This difference could be attributed to the strength of pre-existing beliefs among participants, which could have made them more resistant to the priming, or the types and emotional intensity of the visual stimuli used, which might have not been powerful enough to trigger measurable changes in belief.

The findings of this research are opposed with the existing data we have on visual priming and conspiracy theory belief in several ways. Previous studies, such as by Newman et al. (2012) and Brader (2006), have suggested that visual priming, particularly when paired with emotionally charged images, can significantly influence belief formation, and although not stated, would include the belief in conspiracy theories. These studies showed how much of an impact visual stimuli can have on making accompanying statements appear more truthful and enhance the credibility of conspiracy-related information. This discrepancy could be due to the fact that the effects of visual priming on belief formation are more complex than previously understood and are potentially influenced by factors such as the strength of pre-existing beliefs, the specific images used, or the context in which the priming occurred.

4.1. Implications

Even though the results were not statistically significant, this study contributes greatly to our understanding of the psychological processes behind belief in conspiracy theories. In today's digital age where visual media is often used as a method of communication, it is particularly important to understand how visual priming affects what people come to believe. The findings suggest that there are challenges in effectively using visual priming; simply showing someone pictures related to conspiracies may not be enough to shift their deeply held beliefs such as those surrounding conspiracy theories. For practitioners such as psychologists, media professionals, teachers and public health officials this research points out the relevance of conducting more robust and extensive research of visuals shaping individual perceptions. Given the lack of statistical significance, these results suggest a need for further investigation into the role of visual content when designing interventions to address conspiracy theory spread.

The insignificant statistical results of this study imply that interventions aimed at dispelling conspiracy beliefs should not rely solely on altering message content or the use of visual stimuli. Instead, a broader approach that considers the complexity of belief systems and individual differences is necessary. Educators and policymakers should take into account that visual interventions alone will probably be insufficient and that more specifically designed strategies, that take into account varying demographic, personal and educational backgrounds are essential. Specifically, different populations, such as those in humanities versus natural sciences, might require distinct methods based on their exposure and prior knowledge, which reflects the need for more comprehensive, context-specific approaches.

4.2. Limitations

Several limitations could have influenced the outcomes of this study. One significant limitation is related to the manipulation of the independent variable (IV). The stimuli used for visual priming might not have been impactful enough to influence participants' beliefs in conspiracy theories. Additionally, the study did not account for participants' preexisting knowledge or beliefs regarding conspiracy theories (although it would have been obvious if they were surveyed about their beliefs regarding the CIA and 9/11), and their personality traits, cognitive styles and political beliefs, which could have affected their susceptibility to the priming and therefore the results of the research. Another issue is the lack of manipulation checks conducted, which means that it is unclear whether the visual priming had the intended effect, leaving a gap in verifying the effectiveness of the IV manipulation. These factors suggest

that the design of the experiment may have limited the ability to detect significant effects of visual priming on conspiracy theory beliefs.

Another significant limitation is the reliance on self-reported measures for determining the level of belief in conspiracy theories. Self-reported measures are susceptible to various biases such as social desirability bias and neutral responding. Participants might have provided responses they deemed socially acceptable rather than their true beliefs about conspiracy theories. Implementing a mixed-method approach, including qualitative interviews and observational methods (observing and logging situations where they might have been primed, such as watching certain TV channels, social media websites, news platforms or public spaces, and observing their reactions and behaviours), could provide a better understanding of the specific beliefs of participants and mitigate the biases associated with self-reporting. However, due to the limited development of instruments measuring conspiracy belief, this represents a challenge for researchers.

Moreover, visual priming stimuli were limited to a small number of images. The effect of the visual primers was impacted by their scarcity, diversity and context in which they were used, as in the small number of images, diverse conspiracy theories presented and the laboratorial context. Future research should look at how using a wider range and more varied set of such stimuli can influence conspiracy theory beliefs. More complex and effective priming could be done by introducing other forms of stimuli such as videos or audio messages instead of mere static images. This will also increase participants' exposure time to the materials used in addition to making it more diverse. Furthermore, for future studies it is important that pictures chosen are powerful enough to change participants' beliefs about something they may not have considered before viewing them. Again, since this study was conducted under controlled conditions it does not capture all the intricacies involved in real-life situations where people are exposed continuously over long periods across different media platforms with numerous images being displayed constantly. It would be better if researchers used places like shopping malls or outdoor public spaces so that their findings reflect everyday life experiences rather than laboratory settings which lack ecological validity because here individuals encounter many other stimuli simultaneously throughout each day including but not limited to sounds, voices, music, smells, tastes, touch, feelings, etc.

Another significant limitation concerns novelty effects given that this experiment took place within an artificial environment where everything felt staged, and participants might have

been overly conscious about what was happening around them leading them to act differently than usual thereby reducing effectiveness level achieved during priming phase itself due to heightened awareness levels. Also, the sample was almost entirely female and just students from Humanities & Social Sciences Faculty of Split. This lack of diversity restricts generalizability across broader populations since college students typically process information more critically than average people. So, while using undergraduate subjects has its benefits it also comes with some drawbacks too — being more critical than most people thus possibly affecting susceptibility toward visual priming strategies employed here (Sears, 1986). Furthermore, it's possible that students possess greater knowledge about the topic area covered within course material taught classes taken during college years compared to non-highly educated individuals.

4.3. Future Research

Future research should address the limitations identified in this study by employing larger, more diverse samples and incorporating mixed-method approaches. Longitudinal studies are especially recommended to examine how visual priming influences belief formation over time and to identify any long-term effects of visual priming on conspiracy theory belief. Additionally, exploring the impact of various types and contexts of visual stimuli will offer deeper insights into the mechanisms of visual priming. Future research would also benefit from examining the interaction between visual priming and other cognitive and emotional factors. For example, how do existing cognitive biases, such as confirmation bias and proportionality bias, interact with visual priming to influence belief in conspiracy theories? Understanding these interactions could help in developing comprehensive models of belief formation and maintenance. Moreover, examining the role of emotional responses triggered by visual stimuli can better define how visual content influences belief systems.

Another possible direction for future research is the investigation of the role of social media algorithms in amplifying the effects of visual priming. Given that social media platforms often curate content based on user preferences, understanding how algorithm-driven exposure to conspiracy-related visuals affects belief formation could provide critical insights for developing effective countermeasures against misinformation. Future research could explore the impact of personalized content streams developed by media platform algorithms by using them for manipulating participants' streams on reinforcing or challenging pre-existing conspiracy beliefs. Additionally, future studies should explore the role of individual differences in susceptibility to visual priming. Personality traits, cognitive style, political beliefs, prior

exposure to conspiracy theories are other factors that may moderate the effect of visual priming on belief formation, such as according to previous research, individuals with heightened scepticism towards authority being more susceptible to confirmation bias. Understanding such differences among individuals can be used to create interventions for certain groups of people thereby increasing their effectiveness. It is also important to investigate cross-cultural differences in how visual priming affects the beliefs about conspiracy theories. Cultural context plays a key role in determining how people process visual information and develop beliefs. Comparative studies across different cultural settings could provide insights into universal as well as culture-specific aspects of visual priming and conspiracy belief formation.

Furthermore, future research should explore the potential of using different types of visual stimuli beyond static images. For instance, videos, interactive media and virtual reality can be incorporated into investigating more immersive and potentially more effective priming experiences. These mediums can provide richer contexts and more engaging content, which might have a stronger impact on belief formation. Another path for future study will involve investigating the duration and frequency of exposure necessary to create significant effects with respect to visual priming. How long does priming last? How often must a person receive priming stimuli before it changes their beliefs? Thus, this research may be useful in developing effective interventions by having an idea on how long do these effects last and at what extent people must be constantly exposed to such stimuli in order for them to alter their beliefs. Future research should also consider the role of visual priming when combined with other types of primes such as auditory or textual primes according to empirical evidence available at the moment. Consequently, exploring various kinds of priming could help understand how they influence one another during belief formation leading to a better understanding in general terms on parts played by the several mechanisms at work behind them. Additionally, questions are raised about whether attempts through visual means alone can ever work against particular conspiracies; indeed, efforts here might have a counterproductive effect. It is, therefore, important to understand under what conditions backfire effects can occur and how they can be mitigated in order to develop effective interventions.

Additionally, future research should also focus on the ethical implications of using visual priming in interventions. Essential principles that should guide the deployment of this technique are moral responsibility as well as ensuring that no damage happens to people through manipulation while using it. Consequently, creating ethical guidelines for the use of visual priming in research and practice would help prevent its misuse, as although this research

hasn't found any significant effect of visual priming on conspiracy theory belief, the previous research which has found significant effects of visual priming on belief formation behoves researchers to create rigid ethical guidelines concerning visual priming and belief formation. The power of visual stimuli to shape beliefs and behaviours means that these ethical considerations are crucial. Therefore, transparency, rigid guidelines and informed consent are essential when conducting such studies ethically. Furthermore, further investigations could be done into whether a combination of both audience development sessions together with critical thinking exercises will have more impact than only any one approach independently? For instance, combining visual priming with interactive workshops or digital platforms may enhance their effectiveness by helping users cultivate critical thinking skills about conspiracy theories. Moreover, exploring the role of community and social influences in visual priming can provide valuable insights. For example, how group dynamics affect, and social networks support the efficacy of pictorial priming is useful in designing interventions that address conspiracy beliefs via social support systems. Future research should also consider the impact of technological advancements on visual priming due to recent developments in technology which has introduced new platforms used in delivery of images at higher levels compared to before. In addition, it would be interesting to explore how augmented reality (AR), and artificial intelligence (AI) can facilitate application of visual priming methods aimed at reducing conspiratorial beliefs among individuals, this means studying how emerging technologies like AR or AI could potentially be utilized as part of intervention strategies involving pictures which will allow for further exploration within this area on how current practices may be improved. Finally, it is important to investigate the long-term sustainability of changes in beliefs induced by visual priming. To maintain the changes in beliefs over time, a study should track changes in beliefs of subjects over a number of years.

4.4. Conclusion

In conclusion, while this study did not find significant evidence to support the hypothesis that visual priming increases belief in conspiracy theories, it shows the complexity of belief formation and the challenging nature of visual influencing. The non-significant findings point to a need of further and more detailed analysis concerning the power of visual priming in belief formation and the need for more nuanced and comprehensive research in this domain. By addressing the limitations of this study and expanding the scope of future studies, researchers can better understand the dynamics of visual priming and its implications for addressing the issue of conspiracy theories in contemporary society. This study also highlights

the need for continuous exploration of the factors that contribute to the formation and reinforcement of conspiracy beliefs. Understanding these mechanisms is essential for developing effective interventions to combat misinformation and promote a more informed and information-critical public. Despite the challenges, advancing research in this field holds significant value for enhancing societal resilience against the detrimental impacts of conspiracy theories.

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6. Abstract

6.1. Abstract in English

This study aimed to investigate the impact of visual priming on the belief in conspiracy theories. It was hypothesized that participants exposed to conspiracy-related images would exhibit higher belief in conspiracy theories compared to those exposed to neutral images. A total of 114 students from the Faculty of Humanities and Social Sciences in Split participated in a randomized controlled trial. Participants were divided into an experimental group, exposed to conspiracy-related images, and a control group, exposed to neutral images. Both groups completed the Expanded Scale of General Conspiracy Theory Belief. Results indicated no statistically significant difference in conspiracy theory belief between the experimental and control groups. The findings suggest that visual priming, in the context of this study, did not significantly influence belief in conspiracy theories. Limitations include the homogeneity of the sample, predominantly female and university students, which may limit generalizability. Future research should explore the impact of visual priming using more diverse samples and varied stimuli to better understand its role in belief formation. These findings contribute to the broader understanding of the psychological mechanisms behind conspiracy beliefs and highlight the complexities involved in altering such beliefs through visual means.

6.2. Sažetak (Abstract in Croatian)

Cilj ove studije je bio istražiti utjecaj vizualnog priminga na vjerovanje u teorije zavjere. Hipoteza je da će sudionici izloženi slikama povezanim s teorijama zavjere pokazivati veće vjerovanje u teorije zavjere u usporedbi s onima koji su bili izloženi neutralnim slikama. Ukupno 114 studenata s Filozofskog fakulteta u Splitu sudjelovalo je u randomiziranom kontroliranom ispitivanju. Sudionici su bili podijeljeni u eksperimentalnu skupinu, koja je bila izložena slikama povezanim s teorijama zavjere, i kontrolnu skupinu, koja je bila izložena neutralnim slikama. Obje skupine su ispunile Proširenu skalu općeg vjerovanja u teorije zavjere. Rezultati nisu pokazali statistički značajnu razliku u vjerovanju u teorije zavjere između eksperimentalne i kontrolne skupine. Nalazi sugeriraju da vizualni priming, u kontekstu ove studije, nije značajno utjecao na vjerovanje u teorije zavjere. Ograničenja uključuju homogenost uzorka, koji je pretežno sastavljen od žena i sveučilišnih studenata, što može drastično ograničiti generalizaciju rezultata. Buduća istraživanja trebala bi istražiti utjecaj vizualnog priminga koristeći raznovrsnije uzorke i različite podražaje kako bi se bolje razumjela njegova uloga u formiranju vjerovanja. Ovi rezultati pridonose širem razumijevanju psiholoških mehanizama iza vjerovanja u teorije zavjere i ističu složenost promjene takvih vjerovanja putem vizualnih sredstava.

7. CONSORT checklist

Section/Topic	Item No.	Checklist Item	Reported on Page No.
Title and abstract	1a	Identification as a randomized trial in the title	Title Page
	1b	Structured summary of trial design, methods, results, and conclusions	Abstract (Page 38)
Introduction	2a	Scientific background and explanation of rationale	Introduction (Page 1)
	2b	Specific objectives or hypotheses	Research Aim, Hypothesis (Page 8)
Methods	3a	Description of trial design (such as parallel, factorial) including allocation ratio	Methods - Study Design (Page 9)
	3b	Important changes to methods after trial commencement (such as eligibility criteria) with reasons	N/A
Participants	4a	Eligibility criteria for participants	Methods - Participants (Page 9)
	4b	Settings and locations where the data were collected	Methods - Participants (Page 9)
Interventions	5	The interventions for each group with sufficient details to allow replication, including how and when they were actually administered	Methods - Interventions (Page 11)

Outcomes	6a	Completely defined pre-specified primary and secondary outcome measures, including how and when they were assessed	Methods - Instruments (Page 10)
	6b	Any changes to trial outcomes after the trial commenced with reasons	N/A
Sample size	7a	How sample size was determined	Methods - Participants (Page 9)
	7b	When applicable, explanation of any interim analyses and stopping guidelines	N/A
Randomization	8a	Method used to generate the random allocation sequence	Methods - Interventions (Page 11)
	8b	Type of randomization; details of any restriction (such as blocking and block size)	Methods - Interventions (Page 11)
Allocation concealment mechanism	9	Mechanism used to implement the random allocation sequence (such as sequentially numbered containers), describing any steps to conceal the sequence until interventions were assigned	Methods - Interventions (Page 11)
Implementation	10	Who generated the random allocation sequence, who enrolled participants, and who assigned participants to interventions	Methods - Interventions (Page 11)

Blinding	11a	If done, who was blinded after assignment to interventions (for example, participants, care providers, those assessing outcomes) and how	Methods - Blinding (Page 11)
	11b	If relevant, description of the similarity of interventions	Methods - Interventions (Page 11)
Statistical methods	12a	Statistical methods used to compare groups for primary and secondary outcomes	Methods - Statistical Methods (Page 15)
	12b	Methods for additional analyses, such as subgroup analyses and adjusted analyses	Methods - Statistical Methods (Page 15)
Results	13a	For each group, the numbers of participants who were randomly assigned, received intended treatment, and were analysed for the primary outcome	Methods - Participants (Page 9)
	13b	For each group, losses and exclusions after randomization, together with reasons	Methods - Participants (Page 9)
Recruitment	14a	Dates defining the periods of recruitment and follow-up	Methods - Participants (Page 9)
	14b	Why the trial ended or was stopped	N/A
Baseline data	15	A table showing baseline demographic and clinical characteristics for each group	Methods - Participants (Page 9)

		For each group, the number of participants (denominator) included in each analysis and whether the analysis was by original assigned groups	Results – Main and additional analyses (Page 16)
Numbers analyzed	16		
Outcomes and estimation	17a	For each primary and secondary outcome, results for each group, and the estimated effect size and its precision (such as 95% confidence interval)	Results - Main and additional analyses (Page 16)
	17b	For binary outcomes, presentation of both absolute and relative effect sizes is recommended	Results - Main and additional analyses (Page 16)
Ancillary analyses	18	Results of any other analyses performed, including subgroup analyses and adjusted analyses, distinguishing pre-specified from exploratory	Results - Additional Analyses (Page 16)
Harms	19	All important harms or unintended effects in each group (for specific guidance see CONSORT for harms)	N/A
Discussion	20	Trial limitations, addressing sources of potential bias, imprecision, and, if relevant, multiplicity of analyses	Discussion - Limitations (Page 18)
Generalizability	21	Generalizability (external validity, applicability) of the trial findings	Discussion - Limitations (Page 18)

Interpretation	22	Interpretation consistent with results, balancing benefits and harms, and considering other relevant evidence	Discussion (Page 17)
Other information	23	Registration number and name of trial registry	Not reported (N/A)
	24	Where the full trial protocol can be accessed, if available	Preregistration (Page 55)
	25	Sources of funding and other support (such as supply of drugs); role of funders	Not applicable (N/A)

8. Appendix

8.1. Expanded scale of general conspiracy theory belief by Blanuša (2009) and Kapitanović (2018) (translated from Croatian)

Scale anchoring:

1 - I completely disagree

2 - I partially disagree

3 - I neither agree nor disagree

4 - I partially agree

5 - I completely agree

1. Events that seem unrelated to ordinary people are often the result of secret activities.

2. In our country, there are secret associations and organizations that have a significant influence on government decisions.

3. Secret services intercept the phone calls and emails of most citizens daily.

4. There are many groups in the world that are bothered by the existence of our country.

5. The government has data on who every citizen voted for in the elections.

6. In the developed world, governments secretly monitor the daily lives of their citizens.

7. Many public figures - who the media claimed died in accidents or from illness - were actually killed on someone's orders or given new identities.

8. Data is collected daily on every person that legally should not be available (books you borrow, products you buy...).

9. The spread of new diseases in the world (AIDS, bird flu, etc.) is deliberately caused by secret laboratories.

10. The world is run by five wealthy families who make decisions about everything that happens in the world.

11. Food, clothing, and other products differ in quality depending on which part of the world they are sent to, and they are of better quality in the Western world than in Eastern Europe and other poorer countries.

12. The white trails in the sky left by airplanes are actually toxic gases with which secret associations want to poison us.

13. Secret services have insight into our private lives and our daily activities through social networks (Facebook, Twitter, Skype, WhatsApp, Viber, etc.).

14. The MMR vaccine is dangerous and the main cause of autism in many children.

15. Our private lives are recorded and monitored through the cameras of our mobile devices, televisions, and other household appliances.

16. China's population increase represents a global economic and peace threat.

17. The terrorist organization ISIS was founded and financed by the American government with the aim of destabilizing Europe.

18. World powers control the population number by implanting contraceptive microchips under the skin of women, thereby controlling hormones and preventing ovulation and the possibility of pregnancy.

8.2. Fabricated blinding items (translated to English)

Scale anchoring:

1 - I completely disagree

2 - I partially disagree

3 - I neither agree nor disagree

4 - I partially agree

5 - I completely agree

1. I accept people as they are.

2. I change moods very easily.

3. I have a very vivid imagination.

4. I usually feel very comfortable around people who are different from me.

5. Religion is very important in my life.

6. The world is generally a good place.

7. I like to be the centre of attention.

8. I am able to say something nice about everyone.

9. I am a very positive person in others' lives.

10. I bring a positive environment to my home.

11. Art is important in the world.

12. Humanitarian work is an important activity in the world.

13. I believe in world peace.

14. Every religion is generally positive.

15. I am able to manage in different social situations.

16. Other people generally have a positive influence on me.

17. Global health is an important goal to strive for.

18. A healthy diet is important to me in life.

19. I can handle bad news.

20. Petty arguments don't interest me.

21. It is important to discuss world events.

22. Other cultures are as important as mine.

23. I often change plans.

24. My energy varies often throughout the day.

25. I feel in control of my life.

26. I like meeting other people.

27. I avoid participating in philosophical discussions.

28. Partying is important in young people's lives.

29. Natural remedies have their effectiveness and purpose.

30. The smartphone is one of the best inventions of our civilization.

31. It is important to be politically active in your community.

32. It's okay to break the rules sometimes if the consequences aren't serious.

8.3. Fabricated items and conspiracy theory belief inventory items in order presented to participants

Scale anchoring:

1 - I completely disagree

2 - I partially disagree

3 - I neither agree nor disagree

4 - I partially agree

5 - I completely agree

1. It is important to be politically active in your community.

2. The world is generally a good place.

3. The white trails left by airplanes are actually toxic gases released by secret organizations to poison us.

4. It is okay to break the rules sometimes if the consequences are not serious.

5. I am a very positive person in others' lives.

6. I avoid participating in philosophical discussions.

7. Humanitarianism is an important activity in the world.

8. Partying is important in the lives of young people.

9. I am capable of saying something nice about everyone.

10. Global health is an important goal to strive for.

11. There are many groups in the world that resent the existence of our country.

12. Art is important in the world.

13. I change moods very easily.

14. I can handle bad news.

15. Secret services intercept phone calls and emails of most citizens daily.

16. Our private lives are recorded and eavesdropped on through the cameras of our mobile phones, televisions, and other household devices.

17. Healthy eating is important to me in life.

18. The government has data on who every citizen voted for in elections.

19. I have a very vivid imagination.

20. I like being the centre of attention.

21. Other people generally have a positive impact on me.

22. Petty quarrels do not interest me.

23. The smartphone is one of the best inventions of our civilization.

24. My energy varies often throughout the day.

25. Every religion is generally positive.

26. There are secret associations and organizations in our country that have a significant impact on government decisions.

27. Global powers control the population number by implanting contraceptive microchips under women's skin to control hormones and prevent ovulation and pregnancy.

28. Natural remedies have their efficacy and purpose.

29. I believe in world peace.

30. Data is collected on every person daily, which legally should not be accessible (books you borrow, products you buy...).

31. I usually feel very comfortable around people who are different from me.

32. Events that seem unrelated to ordinary people are often the result of secret activities.

33. Food, clothing, and other products vary in quality depending on which part of the world they are sent to and are of higher quality in the Western world than in Eastern Europe and other poorer countries.

34. The world is controlled by five wealthy families, and they make decisions about everything that happens in the world.

35. I can handle different social situations.

36. I often change plans.

37. The MMR vaccine is dangerous and the main cause of autism in many children.

38.   In the developed world, governments secretly monitor the daily lives of their citizens.

39.   I bring a positive atmosphere into my home.

40.   It is important to discuss world events.

41.   Other cultures are just as important as mine.

42.   I feel in control of my life.

43.   I like meeting other people.

44.   The terrorist organization ISIS was founded and funded by the American government with the aim of destabilizing Europe.

45.   China's population increase poses a global economic and peace threat.

46.   Secret services have insight into our private lives and daily activities through social networks (Facebook, Twitter, Skype, Whatsapp, Viber... etc.).

47.   The spread of new diseases in the world (AIDS, bird flu, etc.) is intentionally caused by secret laboratories.

48.   Many public figures - whom the media claimed died in accidents or from diseases - were actually killed on someone's order or given a new identity.

49.   I accept people as they are.

50.   Religion is very important in my life.

8.4. Experimental group presentation slides (translated to English)

Research of correlation between memory and personality

Final thesis

Bartul Javorcic

Basics of the research

- Topic: Research on the correlation between personality and memory (7+-2)
- Duration: 15-20 minutes
- Consent: Please read carefully before participating.
- Anonymity: Participation is anonymous.
- Data Access: Data accessible only to researchers; anonymized results can be requested via email.
- Compensation: No reward for participation.
- Voluntary Participation: You may leave at any time during the research

Rules of the research

- You will be shown images with a counting task. You must count the specified items in the image and memorize the number. The task includes 8 images, and each image is shown for 25 seconds.
- After the images, you have 2 minutes to write down the memorized numbers on paper.
- After writing them down, you will proceed to the personality questionnaire. Please double-check that you have answered all the questions in the questionnaire. There are no correct answers in the questionnaire.
- After you have finished, please remain silent in your place while we collect your papers.
- Please do not communicate with each other, do not write down the numbers before it is allowed, and keep your mobile phones away during the experiment.

Count the number of red arrows in the center of the emblem.

Count the number of people you see in the image.
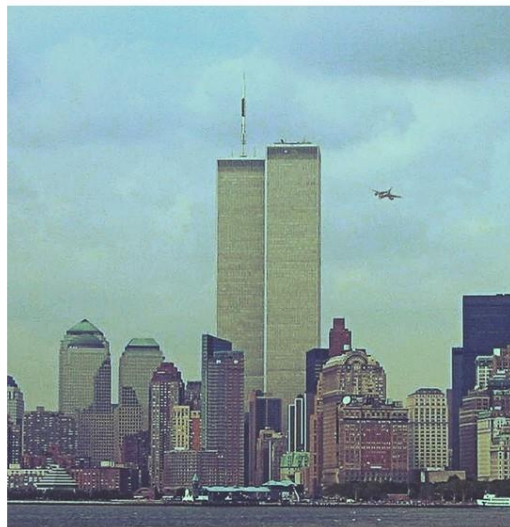
Count the number of stars on the flag.

Count the number of people with white masks you see in the image.

Count the number of mobile phones you see in the image.

Count the number of skyscrapers you see in the image.

Count the number of women you see in the image.

Count the number of people you see in the image.

Recording memorized numbers

- 2 minutes
- Place the paper with your answers in an envelope when you are done.

Personality Questionnaire

- Make sure you have answered all the questions.
- Place the questionnaire in an envelope when you are done.

Thank you for your participation.

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- After you have finished, please remain silent in your place while we collect your papers.
- Please do not communicate with each other, do not write down the numbers before it is allowed, and keep your mobile phones away during the experiment.

Count the number of people you see in the image.

Count the number of people with blue masks you see in the image.

Count the number of mobile phones you see in the image.

Count the number of women you see in the image.

Count the number of stars on the flag

Count the number of airplanes you see in the image.

Count the number of dogs you see in the image.

Count the number of houses you see in the image.

Recording memorized numbers

- 2 minutes
- Place the paper with your answers in an envelope when you are done.

Personality Questionnaire

- Make sure you have answered all the questions.
- Place the questionnaire in an envelope when you are done.

Thank you for your participation.

8.6. Preregistration

This research has been preregistered on the OSF Registries website

DOI link: https://doi.org/10.17605/OSF.IO/BGVAU

Statement on the Storage and Publication of Assessment Paper

(final/graduate/specialist/doctoral thesis- underline as appropriate)

Student: Bartul Javorčić

Work title: Effect of visual priming on conspiracy belief: A randomised trial

Scientific area and field: Psychology

Type of work: Final Thesis

Thesis Supervisor (first and last name, academic degree and title)

Ivan Buljan, Doc. Dr. Sc.

Thesis Co-supervisor (first and last name, academic degree and title)

Committee members (first and last name, academic degree and title):

Goran Kardum Prof. Dr. Sc.

Ivan Buljan Doc. Dr. Sc.

Lana Pehar, Mag.

By this statement, I confirm that I am the author of the submitted assessment paper (final/graduate/specialist/doctoral thesis - circle as appropriate) and that the content of its electronic version fully corresponds to the content of the work defended and edited after defense. As the author, I declare that I agree to have my assessment paper published permanently and publicly in open access, free of charge, in the Digital Repository of the Faculty of Humanities at the University of Split and the repository of the National and University Library in Zagreb (in accordance with the provisions of the *Law on Higher Education and Scientific Activity* (Official Gazette no. 119/22).

Split, 17.09.2024.

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by which I, as an applicant for obtaining a title university Bachelor's degree in psychology, I declare that this graduation thesis is the result of my own work only, that it is based on my research and draws on the published literature as indicated by the notes and bibliography used. I declare that not a single part of the thesis was written in an impermissible manner, that is, that it is not copied from an uncited work, and that it does not violate anyone's copyright. I also declare that no part of this thesis has been used for any other work at any other time higher education, scientific or work institution.

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