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**The Effectiveness of a Paradoxical Thinking Intervention on
Attitudes towards Immigrants and the Influence of Political
Orientation**

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Abstract

Attitudes towards immigrants continually grow more negatively, while the number of immigrants coming to Europe keeps growing. As traditional interventions proved to be ineffective, the current study investigated the effectiveness of a Paradoxical Thinking intervention compared to a traditional intervention on the problem of negative attitudes towards immigrants. Paradoxical Thinking interventions expose individuals to extreme information that is congruent with their attitude, but too extreme to agree with. This paradox of not agreeing with information that is congruent with one's attitude then leads to a re-evaluation of the current attitude. A traditional intervention instead uses information that is incongruent with individuals' attitudes in order to achieve attitude change. A total of 86 participants (members of the general public) were asked to give their opinion on immigrants three times. In the first survey, this opinion was measured twice: once before exposure to either a Paradoxical Thinking intervention or a traditional intervention, and once after. In the second survey a week later, this opinion was asked again after exposure to the intervention. The Paradoxical Thinking intervention did not result in a more positive attitude change than the traditional intervention, and political orientation did not influence this. The importance and limitations of the current research are discussed, and suggestions for further research are provided.

Keywords: Paradoxical Thinking, attitude change, attitudes towards immigrants, influence technique, freezing

The Effectiveness of a Paradoxical Thinking Intervention on Attitudes towards Immigrants and the Influence of Political Orientation

In 2014, the right winged United Kingdom Independence Party became the single strongest party by winning over a quarter of the country's total votes (Czaika & Di Lillo, 2018). More recently, in 2017, elections in Austria broke a post-war record with two far right winged parties collecting over 60% of the vote. Since the sixties, there has been a steady increase in immigrants coming to Europe, and with this increase, the number of people holding negative attitudes towards immigrants has increased as well (Brezna, 2018; Czaika & Di Lillo, 2018). According to Brezna's analysis, 15% of the total votes in Europe will be in the hands of far right anti-immigrant parties by 2035.

Although the attitudes towards immigrants continually seem to grow more negatively, a sizeable body of evidence shows that immigration can have several positive consequences to the general welfare of a region and country. Sequeira et al. (2020) for example, found that immigration provides huge economic benefits in the long term, as a result of growing innovation and industrialisation, and a decline in unemployment and poverty. Additionally, Ager and Brückner's (2013) research focussed on cultural differences that come accompanied with an increase of immigrants. In their study, they found that a higher cultural fractionalisation increased the economic welfare of a region as a result of a greater variety of workers' skills. On the other hand, the authors also found that a higher level of polarization in the region is associated with lower economic welfare. In order to realise prosperity in the long term, then, it seems important to attempt to counter the growing negativity towards immigrants. The goal of the current study therefore was to investigate a new influence technique to reduce this negativity towards immigrants: Paradoxical Thinking.

Over the past two decades, researchers have investigated and utilized several techniques to change deeply felt attitudes. Most methods however, directly provide information that is incongruent with the target's held beliefs. For example, these methods would try to persuade individuals with a negative attitude towards immigrants by exposing them to arguments that state the positive consequences of immigration. Whether or not this new information is factually true, when people are aware of the fact that they are the target of a persuasion attempt against their strongly held beliefs, they tend to enact a defence mechanism called freezing (Bar-Tal, 2011). Freezing is characterized by close-mindedness and encourages tunnel vision, which results in individuals rejecting any information that is incongruent with their beliefs. In its very essence, Kruglanski and Webster (1996) argue that the freezing mechanism stems from a general need for closure, which refers to the aversion

towards ambiguity and the desire for a firm answer to a question. The authors posit two tendencies that this need for closure entails: the urgency tendency and the permanence tendency. The urgency tendency explains that individuals with a high need for closure may seize on closure quickly. As a result, less time may be spent to thoroughly consider the issue in question, increasing the chances that decisions will be made through the use of primes and stereotypes. The permanence tendency refers to the desire to maintain closure. Once answers on a given issue are found, individuals under a high need for closure may freeze on these answers. This way, maintenance of closure is guaranteed. As individuals' strongly held beliefs are challenged by incongruent information then, the maintenance of closure on these beliefs is in jeopardy. As a response, individuals may use the freezing mechanism, holding on to their beliefs and disregarding any incongruent information to maintain closure. Thus, if one is attempting to change someone's deeply rooted attitudes, one should somehow circumvent the target's freezing mechanism (Hameiri et al., 2014).

In their study, Hameiri, et al. (2014) introduced a new persuasion method looking to bypass the freezing defence mechanism. This Paradoxical Thinking intervention exposes targets to extreme, exaggerated attitudes that are congruent with one's held beliefs. So instead of trying to persuade individuals by exposing them to information that is congruent with the desired attitude, this intervention looks to induce Paradoxical Thinking within the individuals by exposing them to information that is congruent with their attitude. The Paradoxical Thinking process should then make them aware that something is off within the currently held attitude as they realise that they does not fully agree with the extreme information, although their attitude is congruent with this information. This should then lead to a re-evaluation of the currently held beliefs (Hameiri et al., 2019).

In an early study on this topic, Swann et al. (1988) examined the process of Paradoxical Thinking. They advocated that, no matter how extreme one's attitude is on a given dimension, he or she usually is rather shy of the very end point of that dimension. The authors further exemplify this with a very conservative belief: "Why do you think it's a good thing to keep women barefoot and pregnant?". Even conservative people then tend to react somewhat liberal, distancing themselves from the conservative position. This paradox then results in self-reflection of one's attitude, inferring that he or she might be more liberal than initially believed (Bern, 1972; Swann et al., 1988).

Building upon these findings, Hameiri et al. (2014) investigated the Paradoxical Thinking intervention by applying it in context of the Israeli-Palestinian conflict. In their nine-wave longitudinal field study, they assigned 161 Israelis to be exposed to either a

Paradoxical Thinking intervention or a control group. Participants went through the first eight waves during the 2013 Israeli elections campaign, whereas the ninth wave was conducted one year after the elections. In wave two to seven, participants were asked to watch a number of short clips. In the Paradoxical Thinking intervention, these clips were carefully constructed to serve as Paradoxical Thinking clips, resembling political campaign clips. These clips presented the Israeli-Palestinian conflict as a positive factor for society. Each clip showed one core Israeli identity theme and ended with saying that the Israelis could not afford to end the conflict, since it helps maintain beliefs of injustice. This way the authors tried to unfreeze the belief that the Palestinians alone are to blame for the continuing conflict. One example of such a clip was one that concerned the idea that the Israeli are moral at all times. The clip showed Israeli soldiers helping Palestinians, while “What a Wonderful World” was played in the background. It ended with the message that in order to feel moral, the Israeli need the conflict. This way, the clip did not challenge the belief in their morality, but it took it to its extreme form. In the control condition, regular TV commercial clips were used. In wave eight, the participants were asked what they had voted for during the elections a few days ago. In the last wave, they were asked to fill in a survey regarding the negotiations between the Palestinians and Israel, measuring the participants’ willingness to compromise.

The authors found that the Paradoxical Thinking intervention successfully led to the unfreezing of the Israeli participants’ attitudes towards Palestinians and this, in turn, led to a more positive perception of the Palestinians. Additionally, rather than mere attitudes, even actual behaviour was reported to be influenced by the Paradoxical Thinking intervention. As was measured in the eighth wave, participants who were exposed to the Paradoxical Thinking intervention were found to have voted for pro peace political parties more than those who were exposed to the control condition. Even after one year, as was reported in the ninth wave, the effects of the Paradoxical Thinking intervention still persisted. It was found that participants who were exposed to the Paradoxical Thinking condition showed more willingness to compromise on matters regarding the conflict than the participants who were exposed to the control condition.

Moreover, it has to be noted that Hameiri et al. (2014) also found that the Paradoxical Thinking intervention was more effective the more right-winged the participants were, as is in line with Swann et al.’s (1988) findings as well. In fact, the intervention did not result in a positive attitude change for left-winged participants at all. Both studies also found that repeated exposure to the Paradoxical Thinking intervention was necessary in order for it to

have maximum effect, as it is argued that people may have difficulties in comprehending the extreme message.

After establishing the effectiveness of the Paradoxical Thinking intervention, Hameiri et al. (2019) turned their attention to its underlying psychological mechanisms. The authors distinguished four concepts. Firstly, they argued that, in order for a Paradoxical Thinking intervention to work, the message needs to be a non-judgmental one. When the message is non-judgmental, the intention of the messenger is ambiguous, reducing any social pressure possibly implied in the communication. Additionally, it is argued that a key aspect of Paradoxical Thinking is that targets come to their own conclusions in order to avoid defence mechanisms (Perloff, 2010). A message that would be perceived as judgmental could prevent targets from drawing their own conclusions and thus potentially activating those defence mechanisms. As a second underlying mechanism, Hameiri et al. (2019) found that the Paradoxical Thinking message should fall within the target's level of acceptance. One's level of acceptance refers to the range around one's personal attitude on a given dimension. If the message does not fall within this range, it will not be tolerated and considered, and will be rejected immediately. For example, if individuals are neutral towards immigrants living in their country, an extremely right-winged message may not fall within their level of acceptance and thus will not induce the Paradoxical Thinking process.

The third mechanism was the extent to which the message is perceived as surprising. The authors mentioned that the concept of Paradoxical Thinking relies on the target being surprised and then somewhat disturbed and put off balance, which should then result in cognitive change and the realisation that something is off. Lastly, as a fourth mechanism, the extent to which a message is threatening to one's social identity was explained. Hameiri et al. (2019) argued that the Paradoxical Thinking message should, once the target's realisation comes through that something within the currently held attitude is off, elicit a sense of social identity threat. The attitude then should be contributed to the social identity, rather than to the individual's personal identity. This identity threat would consequently result in the unfreezing of the attitude.

The initial results of this new intervention seem promising, but as the authors themselves state, more research is required to evaluate and confirm its effects. As such, the current study aimed to solidify the findings on the Paradoxical Thinking intervention by implementing it on the problem of negative attitudes towards immigrants. This study compared the Paradoxical Thinking intervention with a traditional intervention. The traditional intervention, as opposed to the Paradoxical Thinking intervention, used

information that was incongruent for those with a negative attitude towards immigrants, by inviting them to think about why a negative statement about immigrants would be untrue.

Based on the current body of research on this topic, three hypotheses have been formulated:

H1: The Paradoxical Thinking intervention will be more effective compared to the traditional intervention: it will result in more positive attitude change towards immigrants compared to the traditional intervention.

H2: The Paradoxical Thinking intervention will be more effective than the traditional intervention the more right-winged the participant was.

H3: The Paradoxical Thinking intervention will only have its hypothesised effects after repeated exposure to the intervention: no effects are expected after the first exposure.

Methods

Overview of the experiment

In order to test these hypotheses, an online study was conducted consisting of two surveys. The initial survey measured the dependent variable (attitude towards immigrants) twice: once before exposure to the Paradoxical Thinking/traditional intervention (pre1 measure), and once after this exposure (pre2 measure). One week later, in the follow-up survey, the attitude towards immigrants was measured again (post measure) after exposing participants again to the Paradoxical Thinking/traditional intervention. Importantly, it has to be noted that the pre2 measure served to test H3. As H3 stated, this measure was not expected to yield any effects regarding to the pre1 measurement. Consequently, H1 was tested with the pre1 and post measures, hypothesising that participants who were exposed to the Paradoxical Thinking intervention would show a more positive change of attitude towards immigrants compared to those who were exposed to the traditional intervention. Lastly, H2 was also tested using only the pre1 measure and the post measure.

Participants and design

A total of 194 people participated in the study of whom 129 completed the initial survey. The follow-up survey was fully completed by 88 participants. Two of the participants who completed the follow-up survey used a different set of initials for the first survey than the follow-up survey, which made it impossible to link the data of their completed surveys together. A reason for the typical (Ployhart & Vandenberg, 2010) but sizeable drop-out (55%) could lie in the nature of the questions. The fact that people were asked to answer open ended

questions about a somewhat sensitive issue may have discouraged some participants to fully complete the study. Only the data of the 86 participants who finished the whole experiment were analysed (30 men, 56 women, over 90 percent was between the age of 18 and 34). Participants were recruited either through social media such as Facebook and WhatsApp or through the use of the SONA system of the Utrecht University. Through this system, Bachelor Psychology students were able to be granted 0.5 credits (out of 12 they require to graduate) upon fully completing the experiment. Participants who finished the experiment also had a chance of winning a 20 euro Amazon voucher, which was given to a randomly selected participant at the end of the data collection process. This study used an online survey with a 3 (time: pre1/pre2/post measurement of the attitude towards immigrants) x 2 (condition: Paradoxical Thinking/traditional intervention) mixed design. The attitude towards immigrants was measured through repeated measures and the condition was manipulated between subjects.

Materials

A set of questions was going to be used in order to implement the intervention in the experiment. Prior to the creation of the main experiment, a pilot study was conducted to decide what questions to use for the intervention in the main surveys. A total of 22 people (8 men, 14 women) participated in the pilot study. Inspired by the material of Hameiri et al. (2014), a set of 16 presumably extremely right-winged statements were formulated. Participants were asked to rate these statements on a 5 point Likert scale with 1 meaning extremely left-winged and 5 meaning extremely right-winged.

The total mean scores for the traditional and the Paradoxical Thinking condition's questions were, respectively, 2.30 ($SD = 0.55$) and 4.36 ($SD = 0.62$). A one-way ANOVA was conducted to see whether there was a significant difference between the traditional condition and the Paradoxical Thinking condition. The ANOVA results showed a significant difference between the traditional and Paradoxical Thinking questions' mean scores $F(1) = 84.79, p < .001$. After calculating the mean scores of each question, the three highest scoring questions were initially picked as they appeared to be found the most extreme. Furthermore, questions were also picked so that they would cover three different conceptual categories. Additionally, some questions were deemed inappropriate for the main study as the COVID-19 crisis struck. The highest scoring question was: "Non-EU immigrants will lead to the spread of lethal diseases which will inevitably lead to the human extinction". Given the COVID-19 crisis at the date of the data collection process, it was argued that this question could be interpreted

differently. Therefore, another question was picked: “Non-EU immigrants will make the pricing of houses rise so high that most of us will have to live on the streets” ($M = 4.50$, $SD = 0.67$). The second question was: “Non-EU immigrants will make our streets so dangerous that we won’t be able to leave our houses anymore” ($M = 4.50$, $SD = 0.96$). For the last question, the fourth highest score was picked, since the third one belonged to the same conceptual category as the second question. The last picked question thus was: “Non-EU immigrants coming to Europe will lead to the destruction of all of our churches” ($M = 4.45$, $SD = 0.91$). The traditional equivalents were: “Non-EU immigrants coming to Europe will not have an extreme effect on the pricing of houses” ($M = 2.32$, $SD = 0.65$), “Non-EU immigrants will not impact on the danger of our streets significantly” ($M = 2.18$, $SD = 0.85$), and “Non-EU immigrants coming to Europe will not cause religious turmoil in our countries” ($M = 2.27$, $SD = 0.88$).

After the participants finished the questions, a detailed explanation of the aim and implication of the pilot study was revealed, and the participants were thanked for their cooperation. People who participated in the pilot study were not allowed to participate in the main experiment.

Both the first (pre1 and pre2 measure) and the follow-up (post measure) surveys of the main experiment as well as the pilot survey can be found in the appendix (Appendix A, B and C respectively). The surveys for the main experiment were offered in both English and Dutch. This was done in an attempt to also be able to reach a part of the Dutch population that does not fluently speak English. As a moderate level of English is fairly common throughout the Dutch population, it was argued that the lack of one’s ability to understand the English language would be either due to one’s age (very young or old) or due to one’s educational attainment. Given the nature of the participant recruitment process, a substantial proportion of the participants were expected to have an above average education. A high level of education has been linked to a more left-winged political orientation (Gaasholt & Togeby, 1995). In order to properly test H2 then, the choice to translate the surveys in Dutch was made to increase the chances of getting right-winged oriented participants.

Political orientation was measured by one item that asked what political orientation participants identified most with on a 1-6 scale, with 1 meaning extremely left-winged and 6 extremely right-winged. The dependent measure of attitude towards immigrants consisted of three statements using a thermometer format, inspired by Haddock and Zanna and Esses’ (1993) work. Instead of using one question however, in this study it was chosen to make use of three items to increase validity. Cronbach’s alphas for the Pre1, Pre2 and Post measures

were .95, .96 and .96 respectively. All three statements were to be answered on a 0-100 interval scale. Using a slider, participants were asked to indicate how they felt about the statement with 0 meaning unfavourable, 50 meaning neutral, and 100 meaning favourable. The three statements were: “Non-EU immigrants living in a EU country”, “Non-EU immigrants moving to a EU country” and “Non-EU immigrants working in a EU country”.

At the end of the follow-up survey, a manipulation check was implemented to see to what extent the Paradoxical Thinking/traditional questions met the criteria Hameiri et al. (2019) found. Taken from their work, a set of four items were presented. The four concepts found to be underlying mechanisms of Paradoxical Thinking were: 1) the extent to which one feels a question is judging one’s personal beliefs, 2) to what extent the question is surprising, 3) the extent to which the question falls within one’s level of acceptance, and 4) the extent to which one feels the question to threaten one’s social identity. For each of these four concepts, participants were to judge to what extent they felt it was applicable on a 5-point Likert scale, with 1 meaning totally inapplicable and 5 meaning totally applicable (e.g.: “Please, rate to what extent you were surprised by each question.”).

Procedure

Upon clicking the link that led to the first survey, participants were shown a welcome screen with information about the study including that participation was strictly on a voluntary basis, that they could win a 20 euro Amazon voucher, contact information, and that data would be processed anonymously. On this screen, participants were also informed that the aim of the study was to investigate people’s attitudes towards immigrants. This was done in order to cover the actual purpose of the study. When participants continued, they were asked to give informed consent. Only when they verified that they had read and understood the informed consent form, they could continue to the demographic section of the survey.

After the demographic section of the survey including the political orientation question, participants were asked about their attitude towards immigrants using three questions on an interval scale (0-100). This was the dependent measure (pre1 measure) as described in the materials section. Then, on the next screen, the participants went through either the traditional condition or the Paradoxical Thinking condition. Participants were assigned to one of two conditions based on their day of birth: the Paradoxical Thinking condition containing the Paradoxical Thinking intervention (uneven numbers), or the traditional condition containing the traditional intervention (even numbers). The Paradoxical Thinking condition consisted of three open ended questions asking why the participant had an

extreme attitude towards immigrants (e.g. Why do you think non-EU immigrants coming to Europe will lead to the destruction of all of our churches?). In the traditional condition, these questions were framed negatively (e.g. Why do you think non-EU immigrants coming to Europe will not cause religious turmoil in our countries?). One question per screen was presented. As an instruction for these questions, participants were asked to give their most honest opinion. It was also stated that there were no right or wrong answers. Lastly, given the state of the world at the time of data collection, participants were asked to give their answers pretending that the scenarios concerned immigration during normal political and societal situations, i.e. non-coronavirus situations. After this, participants were asked the three attitude questions again (pre2 measure). As an incentive to participate in the follow-up survey, at the end of the first survey it was again noted that they could win a 20 euro Amazon voucher. After filling in their e-mail addresses, they were thanked for participating and then reminded that they would receive the follow-up survey after one week.

One week later participants got the follow-up survey, where they went through the intervention again. Participants who were in the Paradoxical Thinking condition received Paradoxical Thinking questions again, and the participants who were in the traditional condition received the traditional intervention questions again. As in the initial survey, after the three open ended questions, participants were asked about their attitude towards immigrants (post measure).

Lastly, after the participants answered the attitude questions using the slider, they were presented with the manipulation check. On each screen, one of the four concepts was presented, and all three open ended questions from the Paradoxical Thinking/traditional condition were to be rated. This process then was repeated for all four concepts. Participants who were exposed to the Paradoxical Thinking condition rated the Paradoxical Thinking questions and vice versa. On the debriefing screen, participants were fully informed about the purpose of the study. Optionally, they could fill in their e-mail address to be inserted in the prize draw for the 20 euro Amazon voucher. Given contact information for any questions or concerns, the participants were thanked for their contribution.

Results

Manipulation check

In order to test the extent to which the manipulation was successful, the data of the manipulation check questions were analysed. Firstly, the mean scores for all questions per concept were calculated. The Cronbach's alphas were .98 for the judgmental concept, .96 for

surprise, .93 for level of acceptance and .98 for social identity threat for the Paradoxical Thinking questions, and .99, .95, .97 and .97 for the traditional intervention questions respectively. Then, four one-way ANOVA's with the concept means as the dependent variables and the condition (Paradoxical Thinking intervention/traditional intervention) as the independent variable were conducted to analyse whether there was a difference between the ratings of the Paradoxical Thinking intervention questions versus the traditional intervention questions for all four concepts.

For the judgmental concept, no effect of condition was found $F(1) = 2.51, p = .117, \eta p^2 = .029$. Whether participants were exposed to the Paradoxical Thinking intervention ($M = 2.92, SD = 1.36$) or the traditional intervention ($M = 3.35, SD = 1.15$) did not influence the extent to which they felt the questions were judging their personal beliefs. For the surprise concept, an effect of condition was found $F(1) = 4.26, p = .042, \eta p^2 = .048$. Participants who were exposed to the Paradoxical Thinking intervention ($M = 3.37, SD = 1.07$) felt more surprised by the questions than the participants who were exposed to the traditional intervention ($M = 2.94, SD = 0.87$). An effect of condition was also found for the level of acceptance concept $F(1) = 19.83, p < .001, \eta p^2 = .191$. The Paradoxical Thinking intervention questions were considered to fall less within participants' level of acceptance ($M = 1.91, SD = 0.93$) than the traditional intervention questions ($M = 2.95, SD = 1.22$). Lastly, for the social identity threat concept, there was no effect of condition $F(1) = 0.43, p = .522, \eta p^2 = .005$. Participants who were exposed to the Paradoxical Thinking intervention questions ($M = 2.10, SD = 1.18$) were not threatened more or less than participants who were exposed to the traditional intervention questions ($M = 2.26, SD = 1.16$).

Interpreting these results per concept, it firstly was noted that, on the judgmental concept, the manipulation was successful. As described in the introduction section, the Paradoxical Thinking questions were required to be non-judgmental in order for the manipulation to work. The questions of both interventions were rated neutrally (close to 3, the middle of the scale), which implied the participants did not feel judged by them. Additionally, as the traditional intervention questions were assumed to be non-judgmental as well, the fact that there was no difference between the two sets of questions on how judgmental they were added up to the extent the manipulation was deemed successful on the judgmental concept.

Secondly, the manipulation was somewhat successful on the surprise concept as well. For the manipulation to be successful, the Paradoxical thinking questions had to be surprising. The Paradoxical Thinking intervention questions were rated as more surprising than the traditional intervention questions, which strengthens the argument that the manipulation was

successful. On the other hand, the Paradoxical Thinking questions were still rated fairly neutrally, which might weaken the argument that the manipulation was successful.

Thirdly, the manipulation was unsuccessful on the level of acceptance concept. The Paradoxical Thinking intervention questions had to fall within participants' level of acceptance for the manipulation to be successful, but the results showed that the traditional intervention questions were found to fall more within the participants' level of acceptance. The Paradoxical Thinking questions were rated very low by themselves as well, which was a further indication of the manipulation being unsuccessful on this concept.

Lastly, the Paradoxical Thinking questions had to elicit a sense of social identity threat. For both interventions however, participants reported that the questions did not really threaten their social identity. Additionally, there was no difference between the Paradoxical Thinking intervention and the traditional intervention on this concept. Therefore, the manipulation was deemed unsuccessful regarding the social identity concept.

Main analysis

In order to test the hypotheses, the mean scores for all three repeated measurements (Pre1, Pre2 and Post) were calculated per participant. Then, a mixed model ANOVA was conducted to analyse if the conditions differed from each other with time (Pre1, Pre2 and Post) as within-subject variable, and the condition (Paradoxical Thinking intervention/traditional intervention) as between-subject variable.

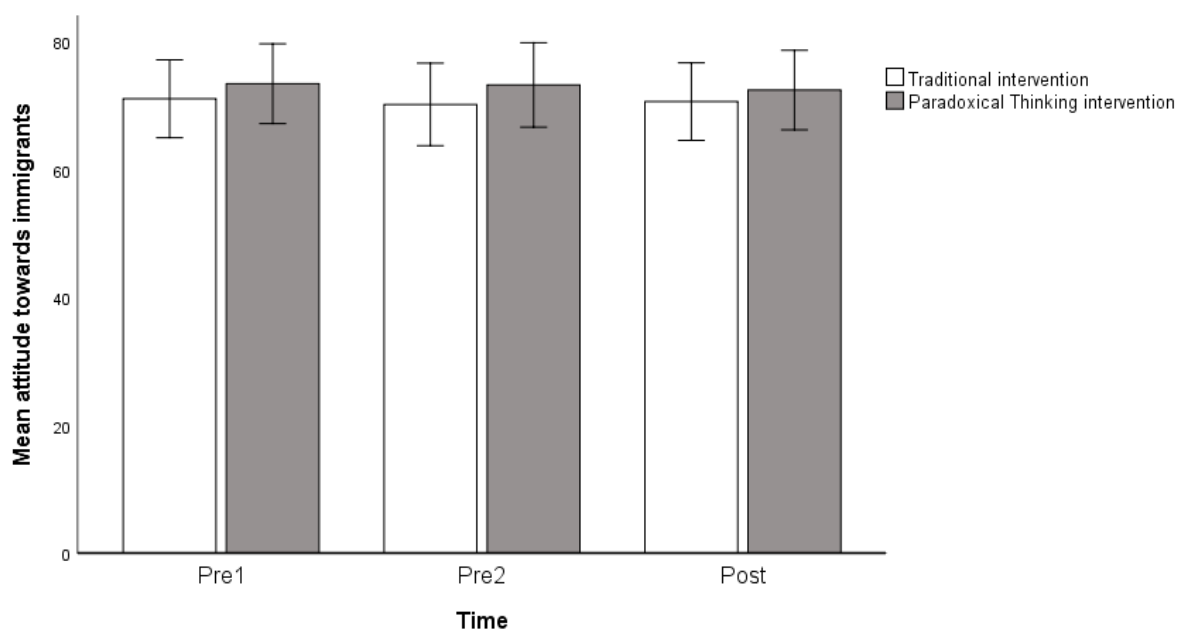


Figure 1. Mean scores on attitude towards immigrants per condition and time.

Mauchly's test of Sphericity showed that the assumption of sphericity was violated $\chi^2(2) = 32.75, p < .001$, so Greenhouse-Geisser degrees of freedom were used. The mixed model ANOVA showed no main effect of time $F(1.51) = 0.46, p = 0.58, \eta p^2 = .005$ in between Pre1 ($M = 72.29, SD = 20.27$), Pre2 ($M = 71.75, SD = 21.48$) and Post measures ($M = 71.58, SD = 20.17$). The analysis also showed no main effect of condition $F(1) = .302, p = .584, \eta p^2 = .004$, so no significant differences were found between the Paradoxical Thinking intervention ($M = 73.11, SD = 3.13$) and the traditional intervention ($M = 70.70, SD = 3.06$). Lastly, the mixed model ANOVA showed no interaction between the time and condition $F(1.51) = 0.33, p = 0.66, \eta p^2 = .004$. The mean attitude scores are shown in Figure 1 per condition and time.

To test H1, a mixed model ANOVA was conducted with time (Pre1 and Post) as the within-subject variable, and condition (Paradoxical Thinking/traditional intervention) as the between-subject variable. The mixed model ANOVA showed no main effect of time $F(1) = 0.77, p = 0.38, \eta p^2 = .009$ in between Pre1 ($M = 72.29, SD = 20.27$) and Post measures ($M = 71.58, SD = 20.17$). The analysis also showed no main effect of condition $F(1) = .233, p = 0.63, \eta p^2 = .003$, so no significant differences were found between the Paradoxical Thinking intervention ($M = 73.00, SD = 3.03$) and the traditional intervention ($M = 70.92, SD = 3.01$). Lastly, the mixed model ANOVA showed no interaction between the time and condition $F(1) = .112, p = .738, \eta p^2 = .001$. H1 hypothesised that the Paradoxical Thinking intervention would be more effective than the traditional intervention. Because of the lack of an interaction effect between time (Pre1 and Post) and condition however, this hypothesis was rejected.

To test H3, a mixed model ANOVA was conducted with time (Pre1 and Pre2) as the within-subject variable, and condition (Paradoxical Thinking/traditional intervention) as the between-subject variable. The mixed model ANOVA showed no main effect of time $F(1) = 1.03, p = 0.31, \eta p^2 = .012$ in between Pre1 ($M = 72.29, SD = 20.27$) and Pre2 measures ($M = 71.75, SD = 21.48$). The analysis also showed no main effect of condition $F(1) = .365, p = .548, \eta p^2 = .004$, so no significant differences were found between the Paradoxical Thinking intervention ($M = 73.41, SD = 3.21$) and the traditional intervention ($M = 70.70, SD = 3.14$). Lastly, the mixed model ANOVA showed no interaction between the time and condition $F(1) = .452, p = .503, \eta p^2 = .005$. H3 hypothesised that the Paradoxical Thinking intervention would have no effect after the first exposure. Based on the absence of an interaction effect between time (Pre1 and Pre2) and condition, this hypothesis was confirmed.

To test H2, a mixed model ANOVA was conducted with time (Pre1 and Post) as the within-subject variable, and condition (Paradoxical Thinking/traditional intervention) and

political orientation as the between-subject variables. The mixed model ANOVA showed no main effect of time $F(1) = .047, p = .829, \eta p^2 = .001$ in between Pre1 ($M = 72.29, SD = 20.27$) and Post measures ($M = 71.58, SD = 20.17$). The analysis also showed no main effect of condition $F(1) = .431, p = .513, \eta p^2 = .006$, so no significant differences were found between the Paradoxical Thinking intervention ($M = 73.00, SD = 3.03$) and the traditional intervention ($M = 70.92, SD = 3.01$). Lastly, the mixed model ANOVA showed no interaction between time, condition and political orientation $F(3) = .753, p = .524, \eta p^2 = .029$. H2 hypothesised that the Paradoxical Thinking intervention would be more effective than the traditional intervention the more right-winged the participant was. Since the analysis showed no three-way interaction between time, condition and political orientation, the extent to which the participants were right-winged did not influence the effectiveness of the Paradoxical Thinking intervention compared to the traditional intervention. Therefore, H2 was rejected.

Discussion

The current study attempted to solidify the findings of Hameiri et al. (2014) by applying a Paradoxical Thinking intervention to the problem of the increasing negative attitudes towards immigrants. Research from Hameiri et al. (2014) showed that the implementation of a Paradoxical Thinking intervention resulted in a more positive attitude of the Israelis towards the Israeli-Palestinian conflict. They also found that the Paradoxical Thinking intervention was more effective the more right-winged participants were, and that repeated exposure to the intervention was required in order for it to have effect. Based on this work, a new intervention was built to test the effectiveness of the Paradoxical Thinking paradigm on a different problem. The results of the current study however, did not show that the Paradoxical Thinking intervention was more effective compared to a traditional intervention. It did not result in a more positive attitude change towards immigrants than the traditional intervention did. The analysis furthermore showed that the Paradoxical Thinking intervention was not more effective than the traditional intervention the more right-winged the participants were. The results did show however, that there was no difference in attitude change between the two interventions after only one exposure to the intervention, which was in line with the expectations. Explanations for the found results as well as limitations of the current study and suggestions for further research are discussed.

The finding in the current study that the Paradoxical Thinking intervention was not more effective than a traditional intervention is in conflict with the expectations. One explanation for this unexpected result may lie in the extent to which the manipulation was

successful. On two of the four concepts described by Hameiri et al. (2019), the manipulation was reported to be unsuccessful. They argued that the Paradoxical Thinking questions should fall within participants' level of acceptance and threaten their social identity in order to be effective. According to their framework, the message would be rejected and ignored if it fell outside the level of acceptance. Furthermore, participants would only feel their social identity threatened if they would realise something was off regarding their currently held attitude. However, the manipulation check showed the Paradoxical Thinking questions fell outside the participants' level of acceptance and did not threaten their social identity.

It has to be noted though, that the fact that participants did not feel their social identity threatened was not necessarily a result of the quality of the questions themselves. It was theorised by Hameiri et al. (2019) that this social identity threat should arise once participants realised that something was not right with their currently held attitude. For this to happen though, participants first must have processed the questions properly. Based on the results of the manipulation check, the questions did not fall within participants' level of acceptance, and thus may have never received full consideration, and may have been rejected immediately. Therefore, participants might have never felt like something was off within the currently held attitude, which denied the chance of a social identity threat to arise completely. Although the current study did not systematically investigate this, this finding may be seen as a solidification of Hameiri et al.'s (2019) theory about the four underlying concepts of the Paradoxical Thinking process, in that messages outside individuals' level of acceptance are rejected and cannot elicit Paradoxical Thinking.

Why the questions did not fall within participants' level of acceptance then becomes more important. The answer could very well lie in the nature of the sample used in this study. Notably, very few participants reported to have a right-winged political orientation, and most of those who were right-winged, reported to be only moderately right-winged. Additionally, none of the participants reported to be extremely right-winged. The questions that were chosen for the main study however, were picked based on the extent they were reported to be right-winged during the pilot study. Consequently, the main study then showed questions that were reported to be extremely right-winged to participants that were mostly left-winged, and importantly, never extremely-right winged. It seems unsurprising then, that participants in this study found that the Paradoxical Thinking questions fell outside their level of acceptance, and that they were not affected by the intervention. Concludingly, although at first glance the absence of an effect of the Paradoxical Thinking intervention on the attitude towards

immigrants may be caused by a defect in the intervention itself, it seems more likely that a politically one-sided sample is the underlying factor at play.

Based on the research of Hameiri et al. (2014), it does not come as a surprise that the Paradoxical Thinking intervention yielded no effects for a mostly left-winged sample. Although very few right-winged participants were able to be recruited for this study, it has to be stressed that special effort was made to increase the chances of getting more right-winged individuals to participate. Most notably, for this reason alone it was decided to translate both surveys into Dutch. Nevertheless, the current research seems to have suffered from a WEIRD (Western, Educated, Industrialised, Rich and Democratic) sample (Henrich et al., 2010). Over the past few years, social scientists have been discussing and acknowledging the fact that these WEIRD samples are a relevant problem, since most psychological research tries to generalise its findings far further than to just this WEIRD population. Importantly, researchers do not opt for these WEIRD samples, but it has proven to be extremely difficult to reach non-WEIRD individuals. To some extent, the current study fell victim to this bias as well.

Another reason why the current study did not find the hypothesised effects of the Paradoxical Thinking intervention could lie in the context it was applied to. The problem of negative attitudes towards immigrants does differ from the Israeli-Palestinian conflict the study of Hameiri et al. (2014) applied the Paradoxical Thinking intervention to. The Israeli-Palestinian conflict can be considered an intractable conflict. These conflicts are unique in that they are morally conflicted, deadlocked and extremely difficult to resolve (Coleman, 2003). People involved in difficult conflicts like these usually favour a competitive approach to the conflict and desire to hold a simple view of the world in which the in-group is right and the out-group is wrong. Indeed, it is argued that competitive conflicts, as intractable conflicts are to an extreme degree, cause a high need for closure for matters regarding the conflict within the people involved (Golec & Federico, 2004). As explained by Kruglanski and Webster (1996), this high need for closure can consequently result in individuals freezing their beliefs when information is presented that is incongruent with the currently held attitude. This is where a Paradoxical Thinking intervention is argued to have its most impact, since it is theorised to circumvent this freezing defence mechanism.

In his work, Coleman (2003) identified five characteristics of intractable conflicts: Context (history of oppression, periods of rapid substantial change), Issues (high interconnection of the issues within the conflict), Relationships (polarised collective identities, destructive and inescapable relationships with one's surroundings), Processes (highly emotional and extremely complex), and Outcomes (community trauma and

intergenerational destructive norms). It can quickly be noted that the problem of the Israeli-Palestinian conflict matches these characteristics to a substantial extent. It seems unlikely however, that the increasing number of immigrants coming to Europe was considered to be such an extreme issue for the (mostly left-winged) participants in the current study. Therefore, participants' need for closure may not have been high enough to have them freeze on their currently held beliefs, leaving the Paradoxical Thinking intervention to have little impact. To further investigate the possible applications of the Paradoxical Thinking paradigm, it is then suggested to take the elicited need for closure into account. Additionally, it could be interesting to investigate the effectiveness of the intervention on groups for whom the immigration problem very well might be an intractable conflict (e.g. skinheads). Valuable research can also be done in identifying what societal problems indeed cause people to feel a higher need for closure, in order to narrow down where Paradoxical Interventions could have their largest effect.

Based on Hameiri et al.'s (2019) work, the Paradoxical Thinking intervention in the current study was not expected to have an effect on the attitude towards immigrants after the first exposure, as they found that at single exposure did not result in immediate unfreezing of people's attitudes. The findings of the current study support this prediction, as no attitude change was found between the measurements right before and after the first exposure to the intervention. Hameiri et al. (2019) noted themselves however, that they did not systematically investigate to what extent the intervention should be repeated. The current study did specifically test whether a second exposure to a Paradoxical Thinking intervention would have an effect on attitudes, and found none. This study thus added a new body of evidence that a single exposure to a Paradoxical Thinking intervention is insufficient for the intervention to have an effect, but importantly, it also provided new key knowledge about the extent to which such interventions should be repeated to have an effect, as it showed that as much as two exposures still yielded no results. Further research needs to be conducted to pinpoint exactly how many exposures are required for Paradoxical Thinking interventions to have an effect, and what factors may be influencing this number.

Lastly, a methodological difference between the current study and Hameiri et al.'s (2014) should be mentioned. The current study used carefully constructed questions, in advance tested and picked through a pilot study, to induce Paradoxical Thinking. Hameiri et al. on the other hand, made use of video clips to shape the intervention. While both methods were in theory able to serve as a Paradoxical Thinking intervention, and neither one of them could initially be considered better or worse, there was one key difference. As Blascovich et

al. (2002) pointed out, the perceived realism of a study increases the engagement of the individuals participating. They furthermore found that the more engaged participants are, the more sensitive they are to manipulations within the study. Although perceived realism was not measured in either of the Paradoxical Thinking studies, it seems plausible that the videoclips used in Hameiri et al.'s (2014) study were perceived as more realistic than the three questions in the online survey in the current study. Therefore, participants in the current study may have been less sensitive to the intervention than the participants in Hameiri et al.'s study, which could explain why the current study did not find the hypothesised effects of the Paradoxical Thinking intervention. For further research then, it would be interesting to create a more realistic setting for the intervention.

To take the example of specifically designed videoclips, participants could be shown clips which visualise the content of the Paradoxical Thinking questions used in the current study. One of those clips could show proposedly immigrants that are destroying churches all over Europe, and end with stating that all immigrants coming to Europe will result in the death of our religions. Another way to increase realism could be to apply the intervention within a virtual-reality context. Researchers could have participants walk around in a virtual-reality version of, for example, their hometown. This town could then be portrayed as uninhabitable, as immigrants have made the streets too dangerous. Within the virtual-reality world, participants would be told that immigrants caused the destruction of this town and all others in the area. With interventions like these, perceived realism can be boosted, and more information can be gained on how Paradoxical Thinking interventions could help solve the issue of the increasing negative attitudes towards immigrants in Europe.

Concludingly, the current study investigated a new intervention aiming to change individuals' attitude through the use of Paradoxical Thinking, by applying it to the issue of the ever increasing negative attitudes towards immigrants in Europe. No differences in attitude change were found between a traditional intervention and a Paradoxical Thinking intervention, and political orientation did not influence this. The finding that the Paradoxical Thinking intervention did not have any effects after a single exposure solidified earlier results, and the fact that a second exposure proved to be insufficient as well provided more information on how to implement these newly emerging types of interventions.

By the time of writing, it is estimated that in only 15 years, 15% of the political votes across whole Europe will be in the hands of extreme right-winged anti-immigrant parties (Breznau, 2018), all the while research has shown that immigrants continually bring positive consequences to a country's welfare, both culturally and economically (Ager & Brückner,

2013; Sequeira et al., 2020). It is most important then, that researchers continue to look for ways to change this growing tendency of having negative attitudes towards immigrants. The current study was the first to apply a Paradoxical Thinking intervention within this context, and further research is necessary to investigate to what extent these kind of interventions can help in solving this problem.

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Appendix A: First survey

Paradoxical Thinking

Start of Block: Block 1

Information Sheet Welcome to the "Attitudes towards Immigrants" study. Please, read the information below before you participate in our research.

If you would like to change the language of the survey, please click on the button above and choose your preferred language.

Information for Participants

Project Title: Attitudes towards Immigrants

Research team: Andrea De Palma and Omar van Tol

Supervisor: Dr. Madelijn Strick

What is the aim of the study?

This study aims at investigating people's attitudes towards immigration, in particular immigrants coming from non-EU countries to Europe.

What will I have to do if I take part?

This is a two-part study. If you are interested in participating to this study, you will first answer a few general demographic questions and then you will be asked to answer a few questions concerning your personal opinions regarding this topic. You will then be emailed a week later with a link to a follow-up survey. This first part of the study will take approximately 10 minutes to complete.

Do I have to take part?

No. It is up to you to decide whether or not to take part. You can stop taking part in the study at any time, without giving any reason.

What are the possible disadvantages and risks of taking part?

There are no known disadvantages and/or risks the authors are aware of.

What are the possible benefits of taking part?

Taking part in the study will help with the understanding of individuals' political attitudes. Moreover, if you participate to our follow-up study, you have the chance of winning a 20€/£ Amazon voucher.

What will happen to the information that you give?

The information collected will be analyzed and reported in a final year Master thesis. The responses that you provide will be anonymised and treated in confidence.

What happens next?

If you decide to participate in the study after reading this information sheet, you will be redirected to a consent form. The consent form applies to both parts of this study. If you give your consent to participate, you will be redirected to the study's questionnaire.

Further information and contact details

If you would like more information about the study or share any concern you may have about your participation, you can contact the research team, Andrea De Palma (a.depalma2@students.uu.nl), Omar van Tol (o.vantol@students.uu.nl), or supervisor Dr. Madelijn Strick (m.strick@uu.nl).

End of Block: Block 1

Start of Block: Block 7

Consent Form **Consent form** I confirm that I have read and understood the Participant Information Sheet I confirm that the research has been explained to me and that I understand the explanation, and what my participation involves I understand that my participation is voluntary and that I am free to withdraw at any time without any penalty or needing any justification I understand that all personal information will remain confidential and that all efforts will be made to ensure I cannot be identified I understand that data gathered in this study will be stored anonymously and securely I agree to participate in this study

If you agree and understand all of the above, please select the option below.

Otherwise, you can leave the study now. No data from you will be kept or used.

☐ I agree to and understand all of the above. (1)

End of Block: Block 7

Start of Block: Block 3

Initials First, we would like you to create an anonymous ID so that we can safely save your responses without associating them to any personal information. Hence, write in the box below your initials (for instance, my name is Andrea De Palma so my initials are "ADP").

Day of Birth Now, please select from the list below the day you were born (for instance, I was born on the first so I would choose : "1").

▼ 1 (7) ... 31 (51)

Text

Now, we would like you to answer a series of demographic questions about yourself.

Age How old are you?

- ☐ Under 18 (1)
 - ☐ 18 - 24 (2)
 - ☐ 25 - 34 (3)
 - ☐ 35 - 44 (4)
 - ☐ 45 - 54 (5)
 - ☐ 55 - 64 (6)
 - ☐ 65 - 74 (7)
 - ☐ 75 - 84 (8)
 - ☐ 85 or older (9)
 - ☐ Prefer not to say (10)
-

Gender What is your gender?

- ☐ Male (1)
 - ☐ Female (2)
 - ☐ Prefer not to say (3)
-

Education What is the highest degree or level of school you have completed? If you are still currently enrolled, please indicate the highest degree achieved so far.

- ☐ Elementary school (1)
 - ☐ High school graduate (2)
 - ☐ Professional degree (5)
 - ☐ University degree (4)
 - ☐ Prefer not to say (8)
-

Nationality What nationality do you identify most with?

- ☐ Austrian (11)
- ☐ Belgian (12)
- ☐ Bulgarian (13)
- ☐ Croatian (14)
- ☐ Cyprian (15)
- ☐ Czech (16)
- ☐ Danish (17)
- ☐ Dutch (40)
- ☐ English (39)
- ☐ Estonian (18)
- ☐ Finnish (19)
- ☐ French (20)
- ☐ German (21)
- ☐ Greek (22)
- ☐ Hungarian (23)
- ☐ Irish (24)
- ☐ Italian (25)
- ☐ Latvian (26)
- ☐ Lithuanian (27)
- ☐ Luxembourg (28)
- ☐ Maltese (29)
- ☐ Polish (31)

- ☐ Portuguese (32)
 - ☐ Romanian (33)
 - ☐ Slovak (34)
 - ☐ Slovenian (35)
 - ☐ Spanish (36)
 - ☐ Swedish (37)
 - ☐ Outside the EU (38)
-

Political Views What political orientation do you identify most with?

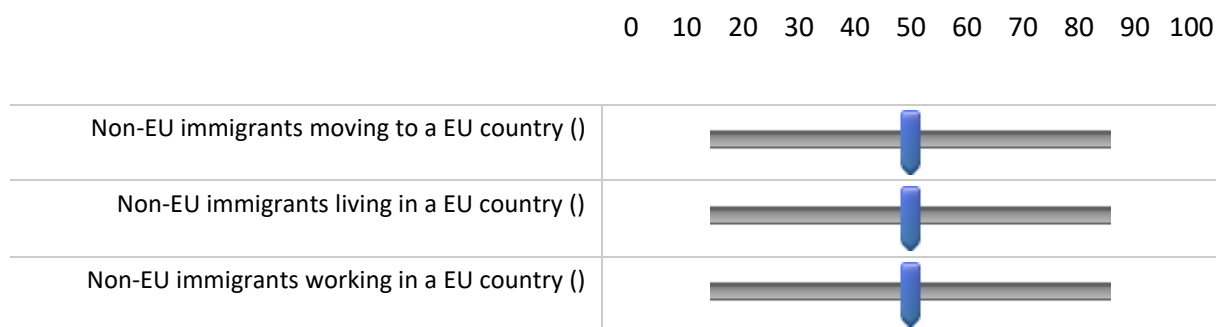
- ☐ Extremely left-wing (18)
 - ☐ Left-wing (19)
 - ☐ Moderately left-wing (23)
 - ☐ Moderately right-wing (24)
 - ☐ Right-wing (21)
 - ☐ Extremely right-wing (22)
-

Attitude_Pre Using the slider, state how unfavorable (0) or favorable (100) you are on a scale from 0 to 100 to the following scenarios.

When giving your answers, please consider that these scenarios concern immigration during **NORMAL** political and societal situations; i.e.: **NON-CORONAVIRUS** times.

For the purpose of this study, non-EU immigrants are defined as immigrants coming from a country outside Europe.

Unfavourable Neutral Favourable



End of Block: Block 3

Start of Block: Block 4

Text

This part of the study will consist of a series of questions regarding non-EU immigrants. We would like you to carefully read the questions you will be shown and answer giving your most honest opinion. There is no right or wrong answer and all the answers are completely anonymous.

When giving your answers, please consider that these scenarios concern immigration during NORMAL political and societal situation, i.e: NON-CORONAVIRUS times.

For the purpose of this study, non-EU immigrants are defined as immigrants coming from a country outside Europe.

Q1

Why do you think non-EU immigrants will make the pricing of houses rise so high that most of us will have to live on the streets?

Q2

Why do you think non-EU immigrants will make our cities so dangerous that there will be only chaos and violence in the streets?

Q3

Why do you think non-EU immigrants coming to Europe will lead to the destruction of all of our churches?

End of Block: Block 4

Start of Block: Block 5

Text

This part of the study will consist of a series of questions regarding non-EU immigrants. We would like you to carefully read the questions you will be shown and answer giving your most honest opinion. There is no right or wrong answer and all the answers are completely anonymous.

When giving your answers, please consider that these scenarios concern immigration during **NORMAL** political and societal situation, i.e: **NON-CORONAVIRUS** times.

For the purpose of this study, non-EU immigrants are defined as immigrants coming from a country outside Europe.

Q4

Why do you think non-EU immigrants coming to Europe will not have an extreme effect on the pricing of houses?

Q5 Why do you think non-EU immigrants will not make our cities more dangerous?

Q6 Why do you think non-EU immigrants coming to Europe will not cause religious turmoil in our countries?

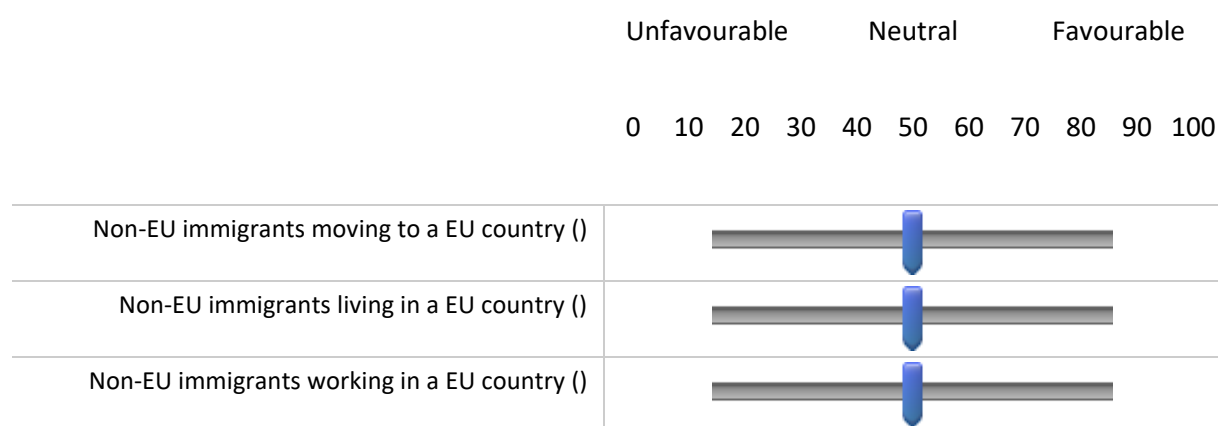
End of Block: Block 5

Start of Block: Block 6

Attitude_Post Using the slider, state how unfavorable (0) or favorable (100) you are on a scale from 0 to 100 to the following scenarios.

When giving your answers, please consider that these scenarios concern immigration during NORMAL political and societal situation, i.e: NON-CORONAVIRUS times.

For the purpose of this study, non-EU immigrants are defined as immigrants coming from a country outside Europe.



End of Block: Block 6

Start of Block: Block 7

Email Write in the text box below your email address to be sent an invitation to the second part of this survey (this will be emailed to you in a week). Please, make sure the email inserted below is correct and there is no spelling mistakes.

Text

The study consists of two parts. The second part will be emailed to you in a week from now and

should not take more than 5 minutes to complete. At the end of the second part, you will be entered into a prize draw to win a 20€ Amazon voucher.

To complete the participation to this study, please insert your email in the box above.

All data will remain anonymous and the email will only be used to send you the link to the survey and include you into the prize draw.

End of Block: Block 7

Start of Block: Block 8

End Text

Thank you for participating, you have now reached the end of the first part of this study!

We will email you in a week from now with the link to the second and final part of this study.

End of Block: Block 8

Appendix B: Follow-up survey

Paradoxical Thinking Follow-up

Start of Block: Block 1

Text Welcome to the second part of the "Attitudes towards Immigrants" study. Please, read the information below before you participate in our research.

If you would like to change the language of the survey, please click on the button above and choose your preferred language.

Information for Participants

Project Title: Attitudes towards Immigrants

Research team: Andrea De Palma and Omar van Tol

Supervisor: Dr. Madelijn Strick

What is the aim of the study?

This study aims at investigating people's attitudes towards immigration, in particular immigrants coming from non-EU countries to Europe.

What will I have to do if I take part?

If you are interested in participating to this study, you will be asked to answer a few questions concerning your personal opinions regarding this topic. The task will take approximately 5 minutes to complete.

Do I have to take part?

No. It is up to you to decide whether or not to take part. You can stop taking part in the study at any time, without giving a reason.

What are the possible disadvantages and risks of taking part?

There are no known disadvantages and/or risks the authors are aware of.

What are the possible benefits of taking part?

Taking part in the study will help with the understanding of individuals' political attitude. Moreover, if you participate to our follow-up study, you have the chance of winning a 20€/£ Amazon voucher.

What will happen to the information that you give?

The information collected will be analyzed and reported in a final year Master thesis. The responses that you provide will be anonymised and treated in confidence.

What happens next?

If you decide to participate in the study after reading this information sheet, you will be directly redirected to the study's questionnaire.

Further information and contact details

If you would like more information about the study or share any concern you may have about your participation, you can contact the research team, Andrea De Palma (a.depalma2@students.uu.nl), Omar van Tol (o.vantol@students.uu.nl), or supervisor Dr. Madelijn Strick (m.strick@uu.nl).

End of Block: Block 1

Start of Block: Block 2

Initials First, we would like you to create an anonymous ID so that we can safely save your responses without associating them to any personal information. Hence, write in the box below your initials (for instance, my name is Andrea De Palma so my initials are "ADP").

Day of Birth Now, please select from the list below the day you were born (for instance, I was born on the first so I would choose : "1").

▼ 1 (1) ... 31 (38)

End of Block: Block 2

Start of Block: Block 3

Text

This part of the study will consist of a series of questions regarding non-EU immigrants. You already answered these questions last week. We would like you to carefully read the questions again and answer giving your most honest opinion. There is no right or wrong answer and all the answers are

completely anonymous.

When giving your answers, please consider that these scenarios concern immigration during NORMAL political and societal situation, i.e: NON-CORONAVIRUS times.

For the purpose of this study, non-EU immigrants are defined as immigrants coming from a country outside Europe.

Q1

Why do you think non-EU immigrants will make the pricing of houses rise so high that most of us will have to live on the streets?

Q2 Why do you think non-EU immigrants will make our cities more dangerous?

Q3 Why do you think non-EU immigrants coming to Europe will cause religious turmoil in our countries?

End of Block: Block 3

Start of Block: Block 4

Text

This part of the study will consist of a series of questions regarding non-EU immigrants. You already answered these questions last week. We would like you to carefully read the questions again and answer giving your most honest opinion. There is no right or wrong answer and all the answers are completely anonymous.

When giving your answers, please consider that these scenarios concern immigration during NORMAL political and societal situation, i.e: NON-CORONAVIRUS times.

For the purpose of this study, non-EU immigrants are defined as immigrants coming from a country outside Europe.

Q4 Why do you think non-EU immigrants coming to Europe will not have an extreme effect on the pricing of houses?

Q5 Why do you think non-EU immigrants will not make our cities more dangerous?

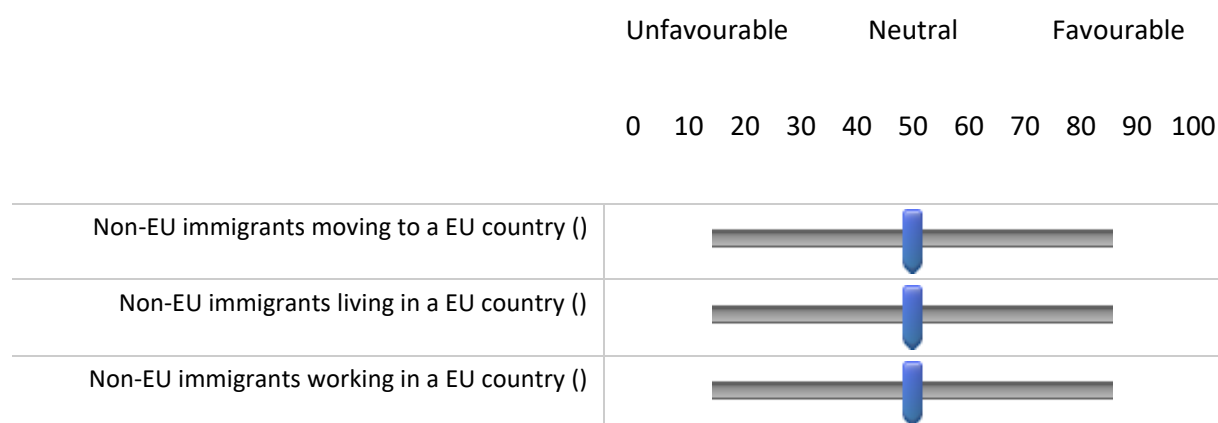
Q6 Why do you think non-EU immigrants coming to Europe will not cause religious turmoil in our countries?

End of Block: Block 4

Start of Block: Block 5

Attitude_1Week_Post Using the slider, state how unfavorable (0) or favorable (100) you are on a scale from 0 to 100 to the following scenarios.

When giving your answers, please consider that these scenarios concern immigration during NORMAL political and societal situation, i.e: NON-CORONAVIRUS times.



End of Block: Block 5

Start of Block: Block 6

Judgement_EXP Please, rate to what extent you felt each question was judging your personal beliefs.

	1 (6)	2 (7)	3 (16)	4 (8)	5 (9)
Why do you think non-EU immigrants will make the pricing of houses rise so high that most of us will have to live on the streets? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do you think non-EU immigrants will make our cities more dangerous? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do you think non-EU immigrants coming to Europe will cause religious turmoil in our countries? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Surprise_EXP Please, rate to what extent you were surprised by each question.

	1 (6)	2 (7)	3 (8)	4 (9)	5 (10)
Why do you think non-EU immigrants will make the pricing of houses rise so high that most of us will have to live on the streets? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do you think non-EU immigrants will make our cities more dangerous? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do you think non-EU immigrants coming to Europe will cause religious turmoil in our countries? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Level Acceptance_EXP Please, rate to what extent you think that each question falls within your level of acceptance (i.e. agrees with your personal beliefs)?

	1 (6)	2 (7)	3 (8)	4 (9)	5 (10)
Why do you think non-EU immigrants will make the pricing of houses rise so high that most of us will have to live on the streets? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do you think non-EU immigrants will make our cities more dangerous? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do you think non-EU immigrants coming to Europe will cause religious turmoil in our countries? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Social Identity_EXP Please, rate to what extent each question threatens your social identity.

	1 (6)	2 (7)	3 (8)	4 (9)	5 (10)
Why do you think non-EU immigrants will make the pricing of houses rise so high that most of us will have to live on the streets? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do you think non-EU immigrants will make our cities more dangerous? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do you think non-EU immigrants coming to Europe will cause religious turmoil in our countries? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Block 6

Start of Block: Block 7

Judgement_CON Please, rate to what extent you felt each question was judging your personal beliefs.

	1 (6)	2 (7)	3 (8)	4 (9)	5 (10)
Why do you think non-EU immigrants coming to Europe will not have an extreme effect on the pricing of houses? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do you think non-EU immigrants will not make our cities more dangerous? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do you think non-EU immigrants coming to Europe will not cause religious turmoil in our countries? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Surprise_CON Please, rate to what extent you were surprised by each question.

	1 (6)	2 (7)	3 (8)	4 (9)	5 (10)
Why do you think non-EU immigrants coming to Europe will not have an extreme effect on the pricing of houses? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do you think non-EU immigrants will not make our cities more dangerous? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do you think non-EU immigrants coming to Europe will not cause religious turmoil in our countries? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Level Acceptance_CON Please, rate to what extent you think that each question falls within your level of acceptance (i.e. agrees with your personal beliefs)?

	1 (6)	2 (7)	3 (8)	4 (9)	5 (10)
Why do you think non-EU immigrants coming to Europe will not have an extreme effect on the pricing of houses? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do you think non-EU immigrants will not make our cities more dangerous? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do you think non-EU immigrants coming to Europe will not cause religious turmoil in our countries? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Social identity_CON Please, rate to what extent each question threatens your social identity.

	1 (6)	2 (7)	3 (8)	4 (9)	5 (10)
Why do you think non-EU immigrants coming to Europe will not have an extreme effect on the pricing of houses? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do you think non-EU immigrants will not make our cities more dangerous? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Why do you think non-EU immigrants coming to Europe will not cause religious turmoil in our countries? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Block 7

Start of Block: Block 8

Text

Debriefing information

Thank you for participating in this study. The aim of the study was to investigate how a method called "paradoxical thinking" affects people's attitudes towards certain topics. You were randomly exposed to either a "paradoxical thinking" condition where you were asked extreme questions regarding the immigration issue or to the control condition where participants were asked non-extreme questions regarding the immigration issue. This study aims to understand how people change their beliefs. Thus, that is why your participation is vital and your contribution is extremely valuable to our research.

If you would like to be entered into our prize draw, please insert your email in the box below.

Email Write in the text box below your email address if you would like to be inserted into our prize draw.

Q27

Finally, if you would like more information about the study or share any concern you may have about your participation, you can contact the research team, Andrea De Palma (a.depalma2@students.uu.nl), Omar van Tol (o.vantol@students.uu.nl), or supervisor Dr. Madelijn Strick (m.strick@uu.nl).

Thank you again for participating in this study.

End of Block: Block 8

Appendix C: Pilot survey

Paradoxical Thinking Pilot Study

Start of Block: Block 1

Q6 Welcome to the Paradoxical Thinking study. Please, read the information below before you participate in our research.

Information for Participants

Project Title: Paradoxical Thinking

Research team: Andrea De Palma and Omar van Tol

Supervisor: Dr. Madelijn Strick

What is the aim of the study?

This study was developed as a pilot research in order to test the validity of a series of questions that will be later used for an attitude change intervention study focused on immigration attitudes.

What will I have to do if I take part?

If you are interested in participating to this study, you will first answer a few general demographical questions and then you will be asked to rate a series of questions based on certain criterias. The task will take approximately 10 minutes to complete.

Do I have to take part?

No. It is up to you to decide whether or not to take part. You can stop taking part in the study at any time, without giving a reason.

What are the possible disadvantages and risks of taking part?

There are no known disadvantages and/or risks the authors are aware of.

What are the possible benefits of taking part?

Taking part in the study will benefit the development of a new experimental attitude change intervention. There is no monetary reward for taking part in the study.

What will happen to the information that you give?

The information collected will be analysed and used for the development of the final research. The responses that you provide will be anonymised and treated in confidence and will not be shared outside of the research team.

What happens next?

If you decide to participate in the study after reading this information sheet, you will be redirected to a consent form. Your participation will imply direct understanding and agreement with all the statements contained in the consent form. Your participation in this pilot study will imply you will not be allowed to participate in the final research.

Further information and contact details

If you would like more information about the study or share any concern you may have about your participation, you can contact the research team, Andrea De Palma (a.depalma2@students.uu.nl), Omar van Tol (o.vantol@students.uu.nl), or supervisor Dr. Madelijn Strick (m.strick@uu.nl).

End of Block: Block 1

Start of Block: Block 3

Q9 Consent form I confirm that I have read and understood the Participant Information Sheet

I confirm that the research has been explained to me and that I understand the explanation, and what my participation involves I understand that my participation is voluntary and that I am free to withdraw at any time without any penalty or needing any justification I understand that all personal information will remain confidential and that all efforts will be made to ensure I cannot be identified I understand that data gathered in this study will be stored anonymously and securely I agree to participate in this study

If you agree and understand all of the above, please select the option below.
Otherwise, you can leave the study now. No data from you will be kept or used.

☐ I agree to and understand all of the above. (1)

End of Block: Block 3

Start of Block: Block 12

Q46

First, we would like you to answer a series of demographic questions about yourself.

Q45 How old are you?

- ☐ Under 18 (1)
 - ☐ 18 - 24 (2)
 - ☐ 25 - 34 (3)
 - ☐ 35 - 44 (4)
 - ☐ 45 - 54 (5)
 - ☐ 55 - 64 (6)
 - ☐ 65 - 74 (7)
 - ☐ 75 - 84 (8)
 - ☐ 85 or older (9)
 - ☐ Prefer not to say (10)
-

Q47 What is your gender?

- ☐ Male (1)
 - ☐ Female (2)
 - ☐ Prefer not to say (3)
-

Q48 What is the highest degree or level of school you have completed? If you are still currently enrolled, please indicate the highest degree achieved so far.

- ☐ Less than high school (1)
- ☐ High school graduate (2)
- ☐ Some college (3)
- ☐ Undergraduate degree (4)
- ☐ Professional degree (5)
- ☐ Master degree (6)
- ☐ Doctorate (7)
- ☐ Prefer not to say (8)

End of Block: Block 12

Start of Block: Block 13

Q52

This part of the study will, instead, consists of a series of sentences regarding non-EU immigrants. We would like you to rate each sentence according to whether they would typically belong to typical left-wing or right-wing political attitudes (and to what extent).

The definition of non-EU immigrant is an international migrant who changes his or her country of usual residence, irrespective of the reason for migration or legal status. The term includes a number of well-defined legal categories of people, such as migrant workers; persons whose particular types of movements are legally-defined, such as smuggled migrants; as well as those whose status or means of movement are not specifically defined under international law, such as international students.



Q49 Please, rate to what extent each of these sentences represents typical left-wing or right-wing political attitudes.

	Extremely Left-Wing (1)	Left-Wing (2)	Neutral (3)	Right-Wing (4)	Extremely Right-Wing (5)
Non-EU immigrants coming to Europe will lead to the destruction of all of our churches (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-EU immigrants coming to Europe will not cause religious turmoil in our countries (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-EU immigrants will not allow us to celebrate Christmas anymore (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-EU immigrants will have no impact in whether or not we can celebrate christmas (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-EU immigrants will stop us from celebrating our national holidays (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-EU immigrants will not impede us from celebrating our national holidays (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Non-EU immigrants will make the pricing of houses rise so high that most of us will have to live on the streets (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Non-EU
immigrants
coming to
Europe will not
have an
extreme effect
on the pricing
of houses (8)



Non-EU
immigrants will
make the
labour market
so competitive
that we will
soon have to
migrate outside
the EU to find a
job (9)



Non-EU
immigrants will
not make the
labour market
extremely
competitive
(10)



Non-EU
immigrants will
make our
streets so
dangerous that
we won't be
able to leave
our houses
anymore (11)



Non-EU
immigrants will
not impact on
the danger of
our streets
significantly
(12)



Non-EU
immigrants will
make our cities
so dangerous
that there will
be only chaos
and violence in
the streets (13)



Non-EU
immigrants will
not make our
cities more
dangerous (14)



Non-EU
immigrants will
lead to the
spread of lethal
diseases which
will inevitably
lead to the
human
extinction (15)



Non-EU
immigrants will
not bring any
lethal diseases
to our countries
(16)



End of Block: Block 13

Start of Block: Block 13

Q44

Debriefing information

Thank you for participating in this pilot study. The aim of the study was to gather more information about each of those questions and to understand which one of them fits better with the required criteria (surprise, level of acceptance, social identity threat and non-judgemental). The questions used in the final experiment need to meet these criteria for the correct execution of the paradoxical thinking intervention. The intervention aims at developing a new way to tackle individuals with extreme attitudes and unfreeze their strongly-held beliefs, as traditional interventions do not seem to be effective in this particular target group. Thus, that is why your participation is vital and your contribution is extremely valuable.

If you would like more information about the study or share any concern you may have about your participation, you can contact the research team, Andrea De Palma (a.depalma2@students.uu.nl), Omar van Tol (o.vantol@students.uu.nl), or supervisor Dr. Madelijn Strick (m.strick@uu.nl).

End of Block: Block 13
