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An EU Paradoxical Thinking Intervention to Affect Non-EU Immigration Attitudes

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Abstract

Due to exacerbated war conflicts and poor living conditions in developing countries, the European Union has seen a growing number of incoming immigrants, which have increased opposition towards non-EU immigration. While traditional persuasion techniques may not be particularly effective in changing these intergroup attitudes as they may generate resistance, self-persuasion methodologies are better suited to reduce this resistance. This research tested the hypothesis that anti-immigrant attitudes can be reduced by exposing participants to a paradoxical thinking intervention, a newly developed self-persuasion technique which refers to an amplified and exaggerated anti-immigrant message. A total of 286 participants were exposed to open-ended questions and divided into two condition groups: a control condition where the questions showed support towards non-EU immigration and a paradoxical thinking condition where the questions were leading in an anti-immigrant direction. Their attitude towards immigrants were measured before, immediately after and a week after the first exposure to the intervention. Results did not show the paradoxical thinking interventions to be more effective compared to traditional methodologies. Despite these results undermine the recent, positive findings on paradoxical thinking, no strong conclusion can be drawn from this study given the low percentage of individuals who were strongly against immigration in our sample. Future research needs to obtain a more representative sample to corroborate previous results shown by paradoxical thinking manipulations. This is highly relevant as support towards immigration could have beneficial effects on the economic, cultural, and societal development of the European Union.

Keywords: paradoxical thinking, immigration, intergroup attitude change

During the past years, Europe has seen an increasing number of incoming immigrants, due to exacerbated war conflicts and poor living conditions in developing countries. During 2018, it has been recorded that circa 2.4 million people moved to the European Union from non-member State countries and 21.8 million people born outside of the EU were living in the EU-27, representing 4.9 % of the European population (Ec.europa.eu, 2020). Since this is becoming a very relevant political issue as highlighted by the overwhelming attention by the media and political discussions, general public attitudes have been negatively shaped. As shown by a European survey research conducted by Czaika & Di Lillo (2018), opposition to incoming immigrants from non-European poorer countries has moderately but continuously increased: the percentage of Europeans who agree that immigrants should not be allowed in their countries has increased from 48% in 2002 to 52% in 2014. As a result, radical right-wing parties who strongly support anti-immigration policies have substantially benefited from this, as observed from their recent electoral results. For instance, the “Dansk Folkeparti” in Denmark won 21.1% of the vote in 2015, which doubled the amount of support they received in the previous election in 2011. The Swiss party “Schweizerische Volkspartei” obtained a record of 29.4% votes in the last general election (Czaika & Di Lillo, 2018). Moreover, violent responses to immigrants have also appeared in recent years, such as the aggressive protests carried in Germany by right-wing demonstrators (Neuman, 2018) or the anti-immigration rallies in Brussels (Forrest, 2018). In this research, we will test the effectiveness of a novel attitude change intervention to modify negative attitudes towards non-EU immigration in a European sample.

Immigration: its underpinnings and value. Many different studies have tried to explain the rise of anti-immigration attitudes and multiple explanatory variables have been presented in the literature, ranging from individual to national-level variables (Gorodzeisky & Semyonov, 2016). A multi-level analysis conducted by Rustenbach (2010) examined all the possible explanations at the same time, identifying the variables that seem to possess the strongest and weakest effects on anti-immigrant attitudes. She showed that this growing political phenomenon can be at least partly

motivated by the perception that an increased presence of immigrants in a community will cause higher competition over social and economic resource (economic competition theory), especially for individuals who belong to socioeconomical vulnerable groups. This is exacerbated by the feeling that one's national culture and values will be threatened by the outgroup of immigrants, especially for those who hold conservative ideologies (societal integration theory). Finally, neighbourhood safety explanations also seem to support this rise in anti-immigration attitudes as individuals who do not feel safe in their neighbourhoods tend to live in areas with higher number of immigrants and blame criminal or violent behaviours on them (Rustenbach, 2010).

Despite these negative perceptions toward immigration, immigrants can have important positive consequences for a society. For instance, a recent study looked at the economic effects of the European immigration to the United States during the Age of Mass Migration (1850-1920). The study showed that regions with an historical higher rate of immigration seem to be more economical prosperous today, with higher incomes, less poverty, less unemployment, higher rates of urbanization, and greater educational attainment. This can be explained by the fact that a higher level of immigration has long-run effects on a country such as greater industrialization, increased agricultural productivity and more innovation (Sequeira et al., 2019). This is also supported by other recent research who found long-term benefits of historical immigration outside of the U.S., for example, in Brazil (Rocha et al., 2017), Argentina (Droller, 2017), and Prussia (Hornung, 2014). Moreover, higher rates of immigration seem to have other important effects, such as a more diverse culture (Ottaviano & Peri, 2006), increased genetic diversity (Ager & Bruckner, 2017), and increased levels of education (Bandiera et al., 2016), which are all ultimately linked to greater economic growth. Finally, it is important to look beyond simple economic prosperity and focus on the individual wellbeing. Indeed, prejudice and discrimination towards a societal group can have significant, negative consequences on the prejudiced individuals such as higher levels of educational drop out, less productive attitudes, and poorer mental and physical health compared to more included individuals (Murrar & Brauer, 2019). Therefore, the promotion of inclusion and

positive attitudes toward immigrants is both crucial for the economic and cultural development of our society and an ethical responsibility.

The difficulty of intergroup attitude change. Nonetheless, despite the importance of the issue, there is still no concordance in research on how to produce lasting changes in people's intergroup attitudes, that is, attitudes toward members of other social groups (Murrar & Brauer, 2019). Intergroup attitudes tend to be highly resistant to change for two important reasons. Firstly, intergroup attitudes are closely tied to our social identity, the part of our perceived identity that grounds our self-concept to the social groups of which we are members. In order to strengthen our social identity and feel good about ourselves, we tend to associate positive traits to groups we identify with (in-groups) and attribute negative characters to groups that we are not part of (out-groups; Tajfel & Turner, 1979). This implicit tendency leads to the creation of negative attitudes and prejudice towards the outgroup. Secondly, we strengthen these negative attitudes in a self-fulfilling prophecy mechanism as we create expectations for how outgroup members should behave according to our prejudice. Therefore, we often look for behaviours that will confirm our expectations and interpret ambiguous behaviours according to these negatively stigmatizing schemas, creating a confirmatory bias loop that will only strengthen our prejudices (Murrar & Brauer, 2019).

It is, thus, clear how difficult it can be to break these strongly held attitudes, especially using traditional methods of attitude change. As of now, these traditional techniques focus on direct persuasion, which is when a message is intentionally delivered by a persuader, resulting in a voluntary change in the listener's attitudes (Perloff, 2010). The messages usually contain evidence-based information which is contradictory to individuals' held beliefs to induce cognitive inconsistency and cause change in the person's attitude (Bliuc et al., 2015). An example is a recent campaign named "Holding On" that used pictures of objects owned by internally displaced individuals to increase awareness of the physical and psychological struggles that these individuals suffer from ("Holding on", 2020). However, using this type of interventions indirectly

communicates to people who are against that particular attitude object that there is something wrong with them and their opinions and that they should change, creating reactance and obtaining the opposite results (Hornsey & Fielding, 2017). Moreover, when exposed to these methods, individuals understand that they are the target of a persuasive attempt which tends to lead them to adopt biased cognitions and be even more resistant to change (Petty & Cacioppo, 1986). For instance, when they become aware of the fact their beliefs are being challenged, they may adopt a series of defence mechanisms to resist such change, such as “freezing” their opinions (Kruglanski, 2013) or engaging only with one-sided information (Halperin et al., 2010). Finally, even in the case people did not increase their resistance to change and they tried to keep an open-mind, these traditional interventions rely on a thoughtful and attentive consideration of the arguments that are presented and require high motivation to address and change one’s own biases towards the issue - two conditions that are rarely satisfied in our fast-pacing real-world (Monteith & Mark, 2005).

Self-persuasion and the new method of paradoxical thinking. A different persuasion approach that seems to be effective in dealing with resistance and obtaining effective results in attitude change interventions with individuals who hold radical, strong attitudes is self-persuasion. Self-persuasion is an indirect, persuasion technique that introduces people to situations where they feel motivated to persuade themselves to change their attitudes. Thus, instead of explicitly exposing the person to the message and asking them to reflect and change opinions accordingly, the message is internally generated in the form of thoughts and causes attitude change (Aronson, 1999). An example of self-persuasion techniques can be seen in early experiments on ways to increase condom use among students. Here, instead of convincing sexually active students of the importance of condoms, participants were asked to generate a speech about the dangers of AIDS and the importance of condom use, showing more effective results than traditional persuasion techniques (Stone et al., 1994). Therefore, it is the individuals themselves who generate the thoughts that will lead them to rethink their attitudes (Petty & Wegener, 1998).

Self-persuasion has shown to be a more powerful and resilient method of attitude change than direct persuasion in controlling and effectively changing individuals' attitude. Successful self-persuasion has been achieved in various, diverse ways in the recent research literature such as by asking the participant to produce counterattitudinal speeches (King & Janis, 1956) or arguments (Nguyen & Masthoff, 2008), to behave in a counterattitudinal manner (Higgins & Rholes, 1978) or to even exaggerate their proattitudinal behaviour (Jones et al., 1981). Its effectiveness has been attributed to various variables such as the inherent credibility of the source (Pratkanis & Aronson, 2001), the biased scanning of evidence (Olson & Stone, 2005), and the tendency to process self-generated arguments more deeply than others' messages (Tam & Ho, 2005).

Within the array of self-persuasion techniques that have been created and tested, a new methodological approach has been recently proposed, named paradoxical thinking intervention. This consists of exposing participants with messages that are consistent with their views, but in an amplified and exaggerated manner (Hameiri et al., 2019). Once the listener is exposed to a message of this type, they realize that, despite the message is aligned with their views, there is something unacceptable and nonsensical in that belief, thus threatening their personal identity. At this point, coherently with self-persuasion methods, the recipients of a paradoxical thinking message are left to draw their own conclusion and to reconsider their views, avoiding the arousal of defence mechanisms and the immediate rejection of the message (Perloff, 2010). An intervention of this type will be especially effective among individuals who hold the strongest attitudes and, thus, would normally resist the most in an attitude change intervention. This is because, while moderate individuals will find the paradoxical thinking message way out of their level of acceptance (i.e. area of thoughts that they would generally approve according to their attitudes), the more extreme individuals will consider the message as it is consistent with their general attitude and, thus, use it to reframe their current attitude (Hameiri et al., 2019). Moreover, despite there is not much research comparing the effect of a paradoxical thinking intervention and traditional techniques, given the resistance that a persuasion technique may generate compared to self-persuasion attempts, a

paradoxical thinking methodology should be found to be more effective than traditional techniques in intergroup attitude change interventions.

Hameiri and colleagues developed and tested the paradoxical thinking manipulation in real-life complex scenarios, such as in the Palestinian-Israeli conflict. When applied to participants who held strong negative attitudes concerning this issue, the intervention led individuals to significantly decrease their conflict-supporting views over time compared to a control group subjected to a traditional intervention. Moreover, it also had an impact on their behaviour as the intervention even influenced participants' actual voting patterns in the 2013 Israeli general elections (Hameiri et al., 2014). However, it is important to note that, in order to work, a paradoxical thinking intervention needs to meet certain criteria in order to be effective. The intervention needs to tailor the messages in a way that they appear non-judgmental, consistent with the held, extreme attitudes, surprising or absurd and, finally, should lead to a sense of identity threat in the individual. If these conditions are met, the intervention should be found effective. Furthermore, as suggested by Hameiri et al. (2019), a paradoxical thinking intervention is not likely to show an immediate effect and requires multiple exposure. Indeed, reviewed research (Hameiri et al., 2018; Hameiri et al., 2014) showed that a single exposure is not sufficient in order for participants to perceive the absurdity of the message.

Rationale and Hypotheses. Given its novel introduction and application, more research is needed to support its positive effect and evaluate the impact of said intervention and confirm its effectiveness in different applied contexts. Indeed, published research on paradoxical thinking has only been applied so far to the Palestinian-Israeli conflict, thus the validity of said intervention has not been extended to any other context or cultural setting yet. Thus, focusing on a European setting and on a different political conflict will enable the examination of the generalizability of this approach and contribute to its support and improvement. Hence, this research will focus on testing this intervention on individuals who hold extreme negative attitudes toward immigration in European countries. The hypotheses are that:

1. The paradoxical thinking intervention will be more effective in changing attitudes towards immigrants compared to traditional intervention. Participants will show a reduction in negative attitudes toward immigration after being exposed to the paradoxical thinking intervention.
2. The paradoxical thinking intervention will show a stronger effect on the attitudes of individuals (relative to the traditional intervention) to the extent they hold extreme negative opinions toward immigration.
3. The paradoxical thinking intervention will not show an immediate effect on participants who hold extreme attitudes towards immigration; it will only be effective after multiple exposures.

Finally, the experiment was pre-registered on the online platform AsPredicted.org on the 28th of January 2020, to ensure high research and ethical standards. A public link to the pre-registration pdf is available at <https://aspredicted.org/2we83.pdf>.

Method

Design. The study used a between-subject design. There were two independent variables: one categorical variable which was the condition to which participants were assigned, paradoxical thinking or control (i.e. traditional) condition, and one continuous variable which indicated the initial attitudes towards immigrants and immigration. The dependent variable was the participant's attitude towards immigrants and immigration after being exposed to the intervention. This was measured twice: a post-attitude measurement, immediately after being exposed to the intervention, and a follow-up attitude measurement, a week after the first exposure to the intervention. Given the two-time measurements and to reduce any confusion, we will use the terms "T1-Survey" to refer to the first survey that participants were exposed to and "T2-Survey" to refer to the second, follow-up survey, sent a week later to participants.

Participants. Participants were recruited using a convenience sampling method, through an already existing network and on specific political groups on social media. Participants were

recruited across Europe (mainly from Italy, the Netherlands and the UK due to reasons of convenience sampling).

A total of 286 participants decided to participate in the study. Regarding the T1-Survey, a total of 187 participants completed the study, 88 (47%) participants from the paradoxical thinking condition, and 99 (53%) from the control condition. Regarding the T2-Survey, a total of 108 participants participated, however only 91 participants completed the study and two participants were removed due to having completed the study twice. Thus, the final sample of the T2-Survey consisted of 89 participants, 49 (55%) participants from the paradoxical thinking condition, and 40 (45%) from the control condition.

Table 1 and 2 show the demographic distribution of our sample across T1- and T2-Survey and conditions. As it can be noticed, on average, the overall sample seems similar across studies, as it mainly consists of 18-24 years old, female participants, with at least a university degree, with their main nationality being Italian and political affiliation being moderately-left wing. A MANOVA test was conducted and confirmed these observations, as it showed there was not a statistically significant difference in the demographics of the sample across the two studies, $F(5, 179) = 0.407$, $p = .844$; $Wilks's \Lambda = 0.989$, $partial \eta^2 = .11$. Nonetheless, the overall sample presents a limitation as there was a low level of participants with moderately right-wing (24, 13%), right-wing (5, 3%) and extremely right-wing (3, 2%) political affiliation. Thus, the sample would not be representative of the ideal population that would be needed for the paradoxical thinking condition to be effective.

Materials.

Experimental manipulation. The open-ended questions used for the paradoxical thinking and control manipulation were developed based on previous research investigating the sources of anti-immigrants' attitudes in European countries. As highlighted earlier in our introduction, the main sources of negative attitudes towards non-EU immigrants seem to be the perceived fear of competition, the threat to one's national culture, tradition and values and the feelings of unsafety in their own neighbourhood (Gorodzeisky & Semyonov, 2016; Rustenbach, 2010). Therefore, we

developed a total of eight questions which investigated these issues. The questions were developed using a format in accordance to a previous study which also investigated a paradoxical thinking intervention in the refugee context (Knab & Steffens, 2019). The paradoxical thinking questions were extreme, anti-immigration leading questions while the control questions were developed using a counter attitudinal method, with them being more moderate, pro-immigration leading questions. An example of paradoxical thinking question that was selected in this study is: “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?”. An example of control question is: “Why do you think non-EU immigrants coming to Europe will not have an extreme effect on the pricing of houses?”.

Pilot study. The questions were pre-tested in a pilot study where individuals rated to what extent the questions belonged to typical right- or left-wing propaganda. This was to ensure that the questions were clearly associated to either the paradoxical thinking or the control manipulation and that there was a significant difference between the two conditions. Participants who took part in our pilot study were excluded from participating in the main experiment. Twenty-two participants took part in our pilot study. Fourteen of them were female and most of them (17) were between 18 and 25 years old and had at least obtained an undergraduate degree (17). Thus, the sample drawn for this pilot study seems to be demographically similar to the sample used in the main study. Participants were asked to rate to what extent each question represented typical left-wing or right-wing political attitudes.

Pilot study results. We calculated the mean score of each question item across participants, with a score of five meaning the question was considered to be part of extremely right-wing opinions, while a score of one meant the question was associated with extremely left-wing attitudes. The total mean scores for the control and paradoxical thinking condition’s questions were, respectively, 2.30 ($SD = .55$) and 4.36 ($SD = .62$). A one-way repeated-measures ANOVA was conducted to see whether there was a significant difference

between the control and paradoxical thinking conditions. The ANOVA results showed a significant difference between the control and paradoxical thinking questions' mean scores, $F(1) = 84,786, p < .001$. Therefore, we then picked three paradoxical thinking questions to use in the paradoxical thinking manipulation in our main study based on the highest mean response across participants. This is because a higher mean would indicate that that question had, on average, a stronger association with extremely, right-wing attitudes. Their corresponding control question equivalents were selected for the control manipulation. The full list of the questions developed and the three questions chosen for the paradoxical thinking study can be found in the Appendix A.

Attitude measure. The main dependent measure, participants' attitudes towards immigrants and immigration, was measured using a thermometer attitude measurement. An example of a thermometer measurement's question would be: "How favourable or unfavourable do you consider yourself toward non-EU immigrants living in an EU country on a scale from 0 (*completely unfavourable*) to 100 (*completely favourable*)?". Research has demonstrated that the thermometer measure of attitudes is reliable and valid (Haddock et al., 1993; Stangor et al., 1991). The questions for this measurement were based on Haddock et al.'s materials (1993), however, to increase its reliability, we had a total of three attitude questions, rather than just one as in Haddock and colleagues' study (1993). The full list of thermometer attitude questions developed can be found in the Appendix B.

Manipulation check measure. To control that the intervention questions were developed in accordance to Hameiri et al.'s indications (2019), a manipulation check measure was included in the T2-Survey. This manipulation check consisted of four questions that asked participants to rate each open-ended paradoxical thinking and control question, on a scale from 1 (*Not at all*) to 5 (*Extremely*) depending on the extent they felt the questions were judging their beliefs, they disagreed with the questions, were surprised by the questions and they felt their social identity was threatened.

Procedure. Figure 1 shows a schematic summary of the setup of this research. Participants were invited through an anonymous link to a survey hosted on Qualtrics. After reading the information sheet, participants were asked to give their explicit consent to participate in both parts of the study. If they gave their consent, they were asked to create an anonymous ID based on their initials and day of birth. The day of birth was used to randomly assign individuals. Odd number participants were assigned to a paradoxical thinking condition while even number participants were shown a control condition. Before they took part in the intervention, participants were asked to fill in a series of demographic questions and to complete the initial immigrants' attitude measurement. Then, at this point, they were presented with either three paradoxical thinking or three control open-ended questions and asked to give an honest answer to the question asked, with a reminder that all answers would be kept anonymous.

Once all the paradoxical thinking or control questions were answered, they were asked to complete the immigrants' attitude measure again (i.e. post-attitude measurement) and to leave their email address. An automatic email was then sent a week after each participant completed the survey to ask them to complete T2-Survey. Here, participants were asked to answer the same three questions again and then completed the immigrants' attitude measure for the third and last time (i.e. follow-up measure). Finally, they completed the manipulation check measurement. Then, at the end of the experiment, participants were debriefed about the real purpose of the research. Both T1- and T2-Survey took about ten minutes each to be completed and participants who completed both studies were put into a draw for a £20/€20 Amazon Voucher.

Results

In this study, we hypothesised that the paradoxical thinking intervention would be more effective in changing attitudes towards immigrants compared to traditional intervention. Moreover, we expected that the paradoxical thinking intervention would show a stronger effect on the attitudes of individuals who hold more extreme, negative opinions toward immigration. Finally, we also predicted that the paradoxical thinking intervention would show its effects after repeated exposure.

Thus, no immediate effect is expected on participants who hold more extreme attitudes towards immigration.

Mean attitude score distribution across participants. A descriptive analysis was run to have an initial understanding of the samples' attitudes towards immigrants. At the beginning of T1-Survey, the first measurement of the participants' attitudes showed, on average, high positive attitude levels towards participants, both in the control ($M = 81.39$, $SD = 2.39$) and paradoxical thinking condition ($M = 83.25$, $SD = 2.01$). This would suggest that the obtained sample, as mentioned earlier, is not representative of the population needed for a paradoxical thinking condition, given the fact that most participants seem to possess already highly positive attitudes towards immigrants while a paradoxical thinking intervention, in this case, would work best on individuals with extreme, negative opinions towards immigration.

Similar levels were seen at the end of T2-Survey, where the last measurement of the participants' attitudes showed, on average, high positive attitude levels towards participants, both in the control ($M = 86.49$, $SD = 2.56$) and paradoxical thinking condition ($M = 82.78$, $SD = 3.35$). This descriptive analysis seems to indicate a small improvement in immigrants' attitudes in the control condition compared to the paradoxical thinking condition. Given the participants' a priori positive attitude towards immigrants, it should be noted that the sample was not ideal for testing the effectiveness of a paradoxical thinking intervention. We will return to this limitation of the sample in the Discussion.

Assumption checks. A series of tests were conducted to check for the multiple regression analysis' assumptions (Hessen, 2019). Firstly, a normality distribution of the data was assumed as any difference in the distribution can be negligible in larger sample size, as suggested by the Central Limit Theorem (CLT). Homoscedasticity was also visually checked by plotting the unstandardized predicted value and standardized residuals and seemed to be met. Then, a collinearity test was conducted to check whether any factor could be predicted by any other predictor in the model. The collinearity statistics showed that none of the predictors seem to show high level of collinearity, as

indicated by tolerance values higher than .1, meaning that none of our factors were predicted by others. Outliers were also checked in x-,y- and xy- space by examining Mahalanobis' and Cook's distances and standardized residuals (Hessen, 2019). A participant's case was recorded as an outlier when Mahalanobis' distance was greater than a cut-off value based on the number of predictors used (in this case, the cut-off value was 16.26), Cook's distance was greater than one or the standardized residual of a case in absolute value was greater than 3.3. Eight outliers were identified in the sample. Log-transformation was used to make the data more normally distributed, however this did not help in improving the normality of the distribution. Hence, the same regression analysis was performed with and without outliers (see below, Impact of paradoxical thinking condition).

Finally, a reliability analysis was also conducted for each attitude thermometer questions (pre, post and follow-up) comprising of three items. Cronbach's alpha showed the questionnaire to reach high reliability results for each time measurement (Pre, $\alpha = 0.90$; Post, $\alpha = 0.92$, Follow-Up, $\alpha = 0.96$), suggesting the items are consistent in their measurement.

Impact of paradoxical thinking condition. According to our hypotheses, we expected that the paradoxical thinking condition would be more effective in changing attitudes towards immigrants compared to traditional intervention and this effect should be especially observed for those individuals who were more against non-EU immigrants. Moreover, we expected that these effects would not be observed immediately after a single exposure to the intervention (in T1-Survey) but after multiple exposures (in T2-Survey). A multiple linear regression was calculated to predict attitudes towards immigrants at the end of both T1- and T2-Survey based on initial's participants attitudes, the condition to which they were assigned (a control or a paradoxical thinking condition) and their interaction. Initial attitudes measurement was centralized for the regression while the condition was coded 0 = Control and 1 = Paradoxical thinking.

Regarding the T1-Survey, a regression analysis was run to see the immediate effect of the control and paradoxical thinking condition on the participants' attitudes towards immigration. A significant regression equation was found, $F(3,183) = 108.785$, $p < .001$, explaining about 64% of

the total variance of the DV. It seems that only participants initial attitudes were significantly predicting participant's attitudes immediately after the intervention, $B = .801$, $t(183) = 13.096$ and $p < .001$, while condition, $B = -.025$, $t(183) = -.564$ and $p = .574$, and their interaction, $B < 0.001$, $t(183) = .006$, $p = 0.995$ did not have substantial importance in the regression model. Indeed, the mean attitudes measured right after exposure to an attitude change intervention do not differ greatly between the control ($M = 80.17$, $SD = 2.37$) and the paradoxical thinking ($M = 80.62$, $SD = 2.27$) condition. Hence, compared to the initial attitudes both in the control ($M = 81.39$, $SD = 2.39$) and paradoxical thinking groups ($M = 83.25$, $SD = 2.01$), there does not seem to be a change in immigration attitudes, confirming our expectation that a paradoxical thinking intervention would not be immediately effective.

Regarding the effect at the end of T2-Survey, a significant regression equation was found, $F(3,85) = 26.140$, $p < .001$, explaining about 48% of the total variance of the DV. Moreover, participants' initial attitudes were the most substantial predictor in the model, $B = .555$, $t(85) = 4.939$ and $p < .001$, while condition seem to have a less relative importance, $B = -.176$, $t(85) = -2.222$ and $p = .029$. Their interaction did not have a significant importance in the regression model, $B = .176$, $t(85) = 1.559$, $p = .123$. Participants' final attitudes towards immigrants seem to increase by .609 for each initial attitude point on the thermometer scale. Moreover, the paradoxical thinking condition decreases participants' final attitude by -7.212 points, while no significant interaction was found between the initial attitude and the condition.

To better understand the significant effect of condition, the means of participants' final attitudes across the two conditions were calculated and showed a higher mean attitude in the control condition ($M = 86.49$, $SD = 2.56$) compared to the paradoxical thinking condition ($M = 82.77$, $SD = 3.35$). This goes against our first hypothesis as this would suggest that the control condition was more effective in making participants more favourable towards non-EU immigration compared to a paradoxical thinking manipulation. Moreover, the absence of an interaction also disconfirms our

expectations that a paradoxical thinking condition would be more effective on those individuals who state to be more against non-EU immigrants.

Despite the interaction was found not to be significant, an interaction plot was drawn in order to better understand the regression analysis. As it can be seen from Figure 2, a particular trend seems to be present. It seems that the condition does not have a major effect on participants' attitude when they were already highly positive towards immigrants, as expected. However, in the case of participants who are more against non-EU immigrations, there seems to be a difference between the control and experimental condition. Based on the mean attitude levels presented earlier, it could be thought that the control condition seems to be better at changing participants' opinions towards immigration compared to the paradoxical thinking condition, where the attitudes measured at the follow-up remained low. However, the opposite may also be true, meaning that the participants' attitude in the paradoxical thinking condition seem to polarize and become more anti-immigration. No strong conclusion can be drawn given the absence of a neutral condition where participants were not exposed to any intervention. Nonetheless, based on these results, we must reject our hypothesis that the paradoxical thinking condition would have been significantly more effective in changing attitudes towards immigrants compared to a traditional intervention, especially on individuals who hold more extreme, negative opinions toward immigration.

Another multiple regression model was built in order to control for the effect of age, gender, education, nationality and political orientation. However, the second model did not seem to significantly improve the prediction of participants' final attitudes, $F \text{ Change } (5,79) = 1.198$ and $p = .318$, increasing the explanation of the DV only by .037%. Thus, their role as mediating factors in the regression model was not statistically relevant.

Analysis with outliers removed. The same regression analysis was performed without outliers and showed different results compared to the main analysis reported below. Indeed, at the end of T2-Survey, a significant regression equation was also found, $F(3,82) = 39.682$, $p < .001$, explaining about 59% of the total variance of the DV. However, in this case, only participants'

initial attitudes seem to be significantly predicting participant's attitudes at the end of the intervention, $t(82) = 7.166$ and $p < .001$, while condition, $t(82) = -1.683$ and $p = .096$, and their interaction, $t(82) = 1.816$, $p = 0.073$ did not seem to have substantial importance in the regression model. A closer look at the outliers showed a particular trend which identified the outliers as those individuals who, generally, had the most negative attitudes towards immigration. Given the low proportion of this population group in our sample, this could be an indication to why they are categorized as outliers and why the regression model differs when these are excluded from the analysis, since, as we predicted, this group of individuals would behave differently in a paradoxical thinking manipulation. For this reason, the reader must be cautious about any conclusion that may be drawn from the following analyses in this study.

Manipulation check. Finally, 4 regressions models were created to test whether the paradoxical thinking questions we had created were developed in accordance to Hameiri et al. (2019)'s indications (i.e. were non-judgmental, fell within participant's level of acceptance, elicited surprise and were not threatening their social identity). According to their previous research, it is expected that the questions should be non-judgmental in both conditions. However, the paradoxical thinking questions should elicit more surprise than the control questions and they should fall more within one's level of acceptance and threaten participants' social identity in the cases of individuals with more extreme, negative attitudes towards immigration.

Participants rated each question on a scale from 1 (*Not at all*) to 5 (*Extremely*), thus a low score would mean, for instance, that the question was non-judgmental while a high score would mean that the question was highly judgmental of the participants' opinion. The mean across items for each factor was calculated and used as the dependent variable in the regression model, while the centralized initial attitudes measurement, the condition (coded 0 = Control and 1 = Paradoxical thinking) and interaction term were used as predictors. Significance level was adjusted using Bonferroni correction.

As expected, the questions did not seem to judge participants' opinions as there was no significant difference between the two condition, as shown by the non-significant coefficient result, $B = -.085$, $t(85) = -.806$, $p = 0.422$, and the low mean scores in both the control ($M = 2.58$, $SD = .22$) and paradoxical thinking condition ($M = 2.46$, $SD = .21$), indicating their opinions were generally not judged by the questions.

On the other hand, contrary to expectations, the regression model for the surprise scores did not seem significantly different across conditions, $B = .181$, $t(85) = 1.730$, $p = 0.087$, despite the paradoxical thinking questions should have elicited more surprise to participants. Nonetheless, mean scores seem to show a particular pattern between the control ($M = 2.77$, $SD = .22$) and the paradoxical thinking condition ($M = 3.31$, $SD = .17$), as the paradoxical thinking condition has a higher mean level of surprise in participants assigned to this condition. Moreover, against our expectations, the paradoxical thinking questions did not seem to cause a higher feeling of threat in participant's social identity compared to the control condition, as shown by the non-significant regression results, $B = -.004$, $t(85) = -0.034$, $p = .973$, and the low mean scores in both the control ($M = 1.79$, $SD = .20$) and paradoxical thinking condition ($M = 1.77$, $SD = .15$), indicating both groups did not feel their identity was threatened by the questions. Importantly, no interaction was found between condition and initial attitudes, $B = -.211$, $t(85) = -1.368$, $p = .175$, despite we predicted a higher threat would have been perceived by individuals who were more anti-immigration. This is probably due to the high presence of individuals with positive attitudes towards immigration in our sample population for which the questions would not be threatening to their social identity, given that negative opinions towards immigration would not be part of their identity.

Finally, it seemed that condition was significantly predicting the level of acceptance scores, $B = -.653$, $t(85) = -8.279$, $p < .001$, indicating that the participants in the paradoxical thinking condition disagreed more significantly with the questions' opinions ($M = 1.42$, $SD = .10$) compared to the control condition ($M = 3.37$, $SD = .22$). This was predicted, however an interaction was also

expected, since anti-immigration participants should have felt more that those questions were within their level of acceptance compared to the other participants assigned to the paradoxical thinking condition. Despite this expectation, no significant interaction was found, $B = -.015$, $t(85) = -1.240$, $p = .219$. An interaction plot was drawn in order to better understand the regression analysis. Figure 3 shows a trend in the expected direction. Indeed, it seems people with more positive attitudes towards immigrants disagree more with the paradoxical thinking questions compared to participants with more anti-immigration attitudes. The insignificance is, again, probably due to the low presence of individuals with strong, negative attitudes towards immigration in our sample population.

Discussion

In this study, we hypothesized that the paradoxical thinking intervention would be more effective in changing attitudes towards immigrants compared to a traditional intervention. Thus, we expected participants to show a reduction in negative attitudes toward immigration after being exposed to the paradoxical thinking intervention. Moreover, we also predicted that the paradoxical thinking manipulation would show a stronger effect on individuals who were more against immigration. Finally, we hypothesized the paradoxical thinking manipulation would show its effects after repeated exposure. Thus, the paradoxical thinking intervention was not expected to show an immediate effect on participants, but it would only be effective after multiple exposures.

In terms of the effectiveness of manipulations, our first hypothesis was rejected. Indeed, while a significant effect of condition was found, descriptive analysis of the data seems to indicate a small increase in positive attitudes towards non-EU immigration after being exposed to the control condition compared to the paradoxical thinking manipulation. This does not support previous research that suggested that traditional methods of attitude change do not seem to be effective given the possible side effects they can have on individuals, such as increased resistance (Petty & Cacioppo, 1986), reactance (Hornsey & Fielding, 2017) and freezing of their opinions once they are exposed to a persuasive attempt as in this case (Kruglanski, 2013). The biased composition of our sample may have confounded the results of the effectiveness of the paradoxical thinking intervention, given

the low percentage of participants who possessed more extreme, negative opinions towards immigrants. This may be further confirmed by the interesting pattern observed in our outliers. Indeed, the participants who were identified as outliers seemed to be the ones who more strongly opposed immigration. Thus, when the same analysis was performed without those participants identified as outliers, there did not seem to be a significant effect of condition on participants' final attitudes towards immigration. This would suggest that the demographic distribution of our sample was very limited, as otherwise, the same results would have been expected without those outliers. Hence, the reader must be cautious in drawing any conclusion regarding the effectiveness of a traditional or paradoxical thinking manipulation.

Moreover, our second hypothesis, according to which the paradoxical thinking manipulation should have shown the strongest effect on those individuals with more negative attitudes towards immigration, was also rejected. Despite our expectations, no significant interaction was found between the condition to which individuals were assigned and their pre-existing attitudes on their final attitudes. At first glance, this would suggest that the effectiveness of a paradoxical thinking message does not depend on the extent to which one believes in a certain attitude. This would go against previous research by Hameiri et al. (2019) who argued that individuals with more extreme attitudes will consider the paradoxical thinking message consistent with their general attitude and, thus, use it to reframe their current opinion. Nonetheless, we would suggest the reader to refrain from making a said conclusion. Indeed, it is possible that the paradoxical thinking manipulation did not work as expected on individuals with extreme, negative attitudes towards immigrants due to their low presence in our sample. This is also confirmed by our manipulation check analysis which showed that the paradoxical thinking questions did not threaten participants' social identity. Indeed, if participants held extreme, negative attitudes towards immigration, their identity should have been threatened as they could not have agreed with such extremity in their opinions. The importance of social identity threat for a paradoxical thinking manipulation was also recognized by Hameiri et al. (2019), who argued that the perception of this threat is essential for the effectiveness of the

intervention. Thus, it is suggested to future studies that aim at investigating paradoxical thinking intervention to conduct it only on attitude objects for which the general public is known to lean towards more extreme sides of the attitude (for instance, gun control in the US; Parker et al., 2017). This would ensure that a more distributed sample could be easily obtained.

Finally, our last hypothesis that the paradoxical thinking manipulation will show its effects only after repeated exposure was partially confirmed. Differently from the results at the end of T2-Survey, no significant difference was found between the control and paradoxical thinking manipulations at the end of the T1-Survey. This would confirm Hameiri et al.'s expectations (2019) according to which a paradoxical thinking intervention does not show any immediate effect. Nonetheless, further studies are needed to confirm such expectations as, given the absence of any effect of the paradoxical thinking intervention at the end of the T2-Survey, it cannot be strongly determined whether the immediate ineffectiveness of the paradoxical thinking intervention is due to our expectations or to the overall ineffectiveness of the intervention.

Overall, these findings support the current debate in intergroup attitude change and the absence of concordance in research. Indeed, the ineffectiveness of our intervention highlights the difficulty of creating a single, universal intervention to change people's intergroup attitudes. Traditional techniques that focus on direct persuasion would have an effect if the attitude that an individual possesses is in line with the direction of the persuasion. This means that an individual tends to be more persuaded by a traditional intervention that is aimed at strengthening their attitude, as observed in our control condition where participants who were already favouring non-EU immigration showed a moderate increase in their attitudes at the end of the T2-Survey. Nonetheless, if the aim of the intervention is to persuade someone who generally does not agree with the attitude that the researchers want them to incorporate, a traditional intervention would likely not be as effective. This is because the intervention could indirectly communicate to people that there is something wrong with their opinions (Hornsey & Fielding, 2017), leading to unwanted outcomes

such as “freezing” their opinions (Kruglanski, 2013) or engaging only with one-sided information (Halperin et al., 2010).

Therefore, in this scenario, self-persuasion shows a greater potential in attitude change. Indeed, a self-persuasion intervention leads the individual to generate their own thoughts, avoiding any negative judgment that could generate from the persuasion attempt and results in them rethinking their attitudes, thus acting as both the listener and the persuader (Petty & Wegener, 1998). The newly theorized paradoxical thinking manipulation follows the concepts of self-persuasion and has shown promising, significant effects when applied in the Palestinian-Israeli conflict (Hameiri, et al., 2014). Our research, despite not confirming these results, does not undermine the effectiveness of this intervention. Indeed, as suggested earlier, the absence of any effect is possibly due to the low number of individuals with extreme, negative attitudes towards immigration. Hence, if confirmed by further studies, this would support the importance of applying the right type of intervention to the right sample. Hameiri et al. (2019) applied the paradoxical thinking manipulation on a sample of individuals who were already strongly attached to the Israeli-Palestinian conflict and rightfully predicted its effectiveness only on these individuals. This expectation is further corroborated by a recent study conducted by Knab and Steffens (2019) who showed that a paradoxical thinking intervention was indeed successful at improving intergroup relations towards refugees, leading participants to seek more information and compromise more on their anti-refugee beliefs.

Therefore, if confirmed by further studies, these results would have practical consequences for policymakers and future research. Indeed, before a paradoxical thinking intervention is applied, it seems important to obtain an overall idea of the general public’s stance on the issue to understand whether a change in the attitude object would be achieved by a paradoxical thinking manipulation. It is also important to make sure that, even if an extensive part of the population does possess an extreme attitude towards a certain object, the researcher or the policymaker is able to get access to that sample. Indeed, despite the recent increase in the percentage of Europeans who oppose to the

incoming of immigrants in Europe (Czaika & Di Lillo, 2018), it was difficult to obtain participants from this population, given that they may not be publicly expressing these opinions and their presence in a university-research environment may be very limited.

It is necessary, however, to point out some limitations that should be taken into consideration to clearly comprehend the validity of this study's results. Firstly, as noted by Hameiri et al. (2019), a single exposure to the paradoxical thinking manipulation would not be sufficient in order to "unfreeze" the opinions of the participants and to increase their openness to external information. Despite this was rightfully predicted in this study, we only exposed the participants to the paradoxical thinking intervention twice in order to reduce high attrition rates. Previous research who found significant results used multiple (five) time measurements (Hameiri et al., 2018). Thus, it is suggested for future research to perform the paradoxical thinking manipulation more than two times to ensure the validity of the results.

Another important limitation to take into consideration is that limited cognitive engagement with the questions may have caused the absence of results in the paradoxical thinking manipulation. High cognitive engagement with an attitude object has been shown to be linked to stronger attitude change compared to participants with lower cognitive engagement (Greenberg et al., 2017). To ensure cognitive engagement in future studies, self-references that apply the topic to the participants' lives may be used. This practice has shown to increase the systematic analysis of the message and subsequent attitude change (Petty et al., 1981). Moreover, another possibility would be to conduct the intervention in person, with an experimenter who stimulates the participation of individuals and ensures their engagement with the questions, as done in previous studies (Hameiri et al., 2018). Despite this may weaken the recruitment and enrolment of participants in the study compared to an online format, it would ensure that limited cognitive engagement could not explain the research results.

Finally, a suggestion to future research would be to investigate implicit attitudes as well as explicit attitudes, as only the latter has been measured so far. Indeed, the same individual may

possess two different attitudes toward an object at the same time – an explicit and an implicit one (Greenwald & Banaji, 1995; Wilson et al., 2000). It is currently unknown whether this type of intervention has any effect on the implicit dimension of an individual's attitude. Nonetheless, this understanding is highly important as research has shown that, when there is a divergence between the two, different behaviours may result depending on which attitude one follows (Frieze et al., 2006).

To conclude, despite the contrasting results compared to previous investigations, this study has shed some more light on the newly developed methodology of intergroup attitude change named “paradoxical thinking”. Moreover, this study was the first of its kind to apply a paradoxical thinking manipulation to the issue of non-EU immigration. Our results support the important difference between traditional persuasion and self-persuasion techniques, especially in regard to the kind of attitude object and population which is under investigation. However, no strong conclusions can be drawn due to the unrepresentativeness of our research sample. We thus suggest conducting further research on the paradoxical thinking manipulation to corroborate previous studies' results and apply the concept to the issue of non-EU immigration. This topic has become more and more relevant in the political domain as it has been increasingly used to obtain further political support by right-wing parties in recent elections and, in some recent cases, even led to riots in some European countries. This type of intervention could offer new tools to policymakers, practitioners and researchers who may benefit from its application on individuals who seem the most negatively resistant towards the issue of immigration. Nonetheless, future research needs to obtain a representative sample to corroborate previous results shown by a paradoxical thinking manipulation. If shown to be successful, the use of a paradoxical thinking manipulation in intergroup attitude change interventions may increase the general public's support towards immigration, which would have beneficial effects on the economic, cultural, and societal development of the European Union.

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Tables

Table 1

Demographic Characteristics of Participants at T1-Survey

T1-Survey demographic characteristic (N = 187)	Control (n = 88)		Paradoxical Thinking (n =99)	
	n	%	n	%
Gender				
Female	60	68.2	20	40
Male	28	31.8	30	60
Age				
18-24	35	39.8	38	76
25-34	21	23.9	1	2
35-44	7	8.0	0	0
45-54	8	9.1	26	52
55-64	13	14.8		
Highest educational level				
High school graduate	20	22.7	25	25.3
University degree	60	68.2	69	69.7
Professional Degree	6	6.8	1	1.0
Nationality				
Italian	42	47.7	40	40.4
English	8	9.1	11	11.1
Scottish	6	6.8	8	8.1
Greek	9	10.2	13	13.1
Political Orientation				
Extremely left-wing	8	9.1	3	3.0
Left-wing	32	36.4	39	39.4
Moderately left-wing	34	38.6	37	37.4
Moderately right-wing	11	12.5	13	13.1
Right-wing	1	1.1	4	4.0
Extremely right-wing	2	2.3	1	1.0

Table 2

Demographic Characteristics of Participants at T2-Survey

T2-Survey demographic characteristic (N = 89)	Control (n = 40)		Paradoxical Thinking (n =49)	
	n	%	n	%
Gender				
Female	28	70.0	32	65.3
Male	12	30.0	16	32.7
Age				
18-24	15	37.5	20	40.8
25-34	10	25.0	17	34.7
35-44	4	10.0	4	8.2
45-54	5	12.5	1	2.0
55-64	4	10.0	4	8.2
Highest educational level				
High school graduate	10	25.0	10	20.4
University degree	27	67.5	39	79.6
Professional Degree	2	5.0	0	0
Nationality				
Italian	16	40.0	24	49.0
English	6	15.0	3	6.1
Scottish	1	2.5	5	10.2
Greek	5	12.5	4	8.2
Political Orientation				
Extremely left-wing	4	10.0	2	4.1
Left-wing	15	37.5	18	36.7
Moderately left-wing	15	37.5	21	42.9
Moderately right-wing	5	12.5	4	8.2
Right-wing	0	0	2	4.1
Extremely right-wing	1	2.5	1	2.0

Figures

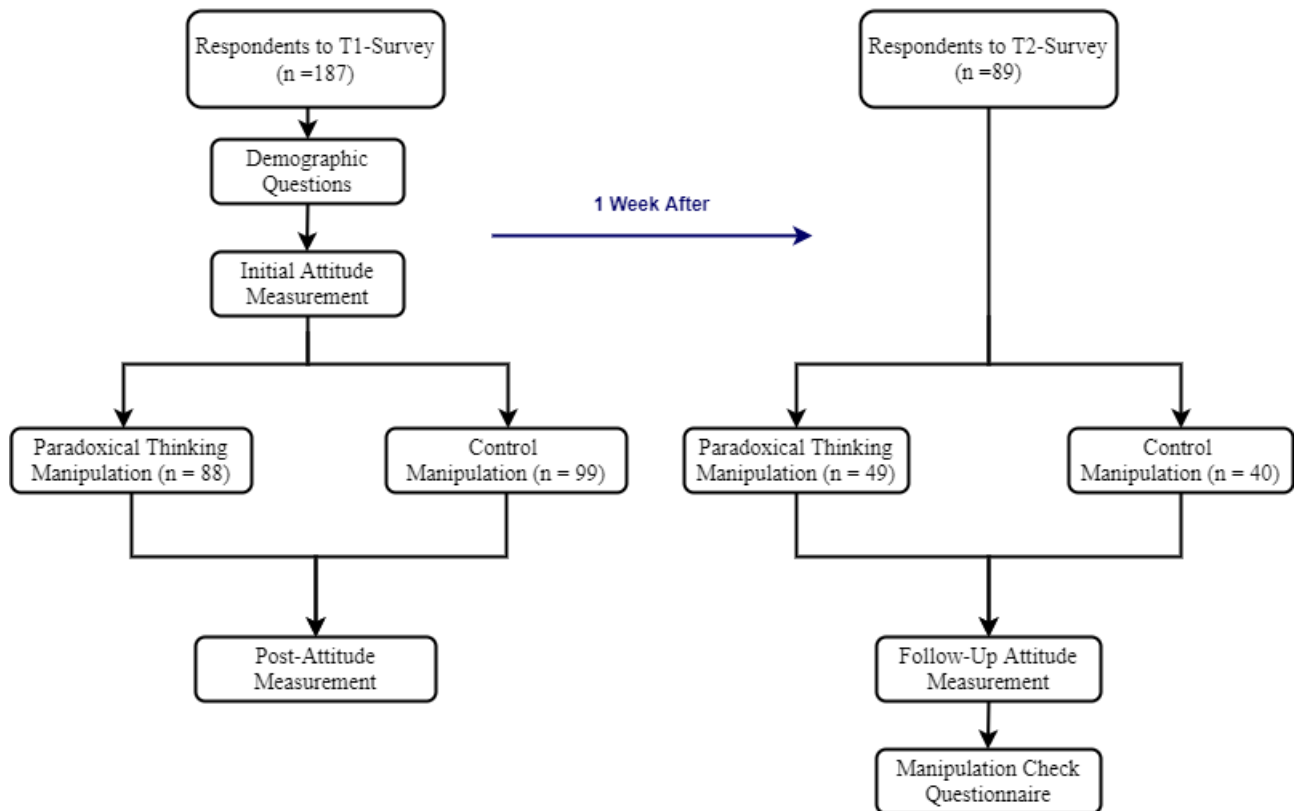


Figure 1. Flowchart showing a schematic summary of this study's setup

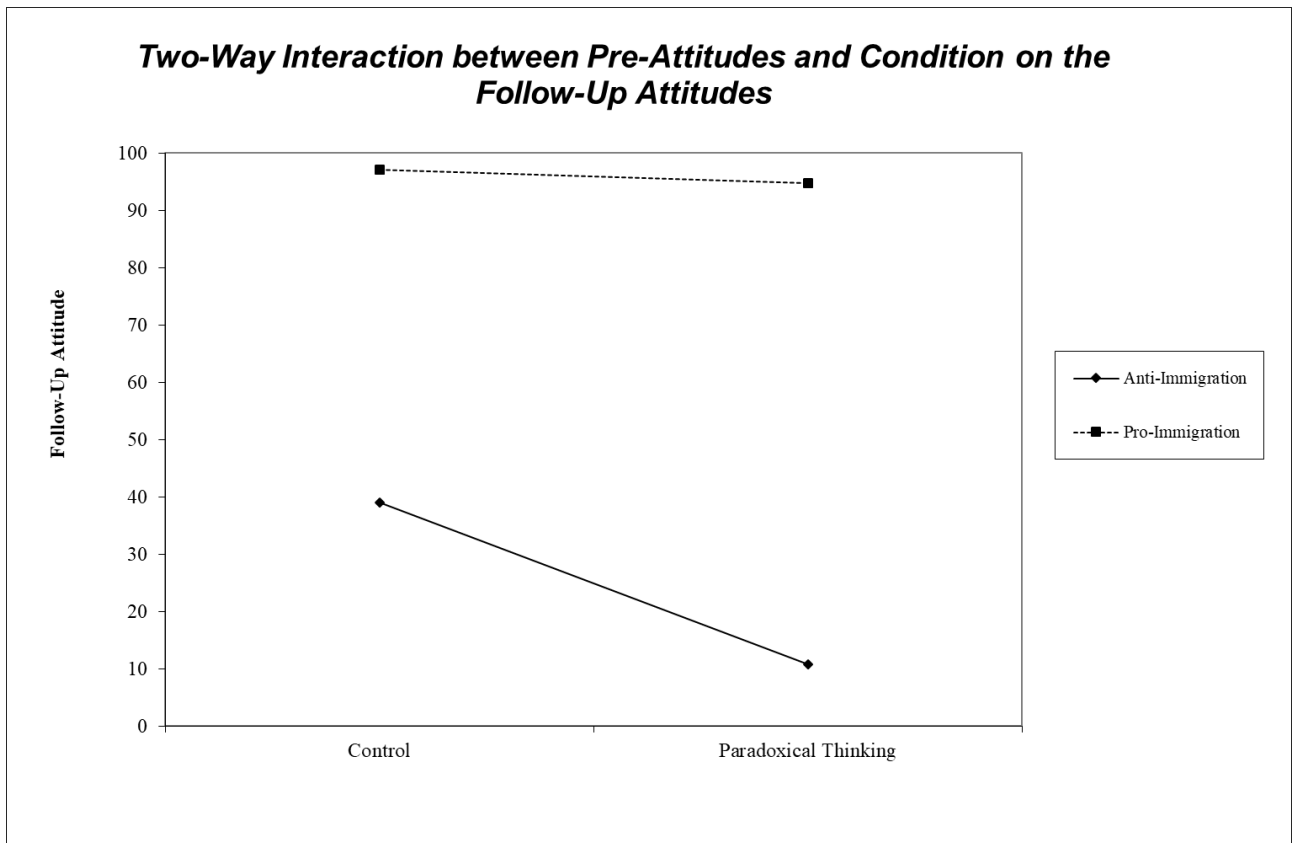


Figure 2. Plot representing the two-way interaction between the standardized pre-attitudes measure and the two conditions on the final, follow-up attitudes towards immigrants.

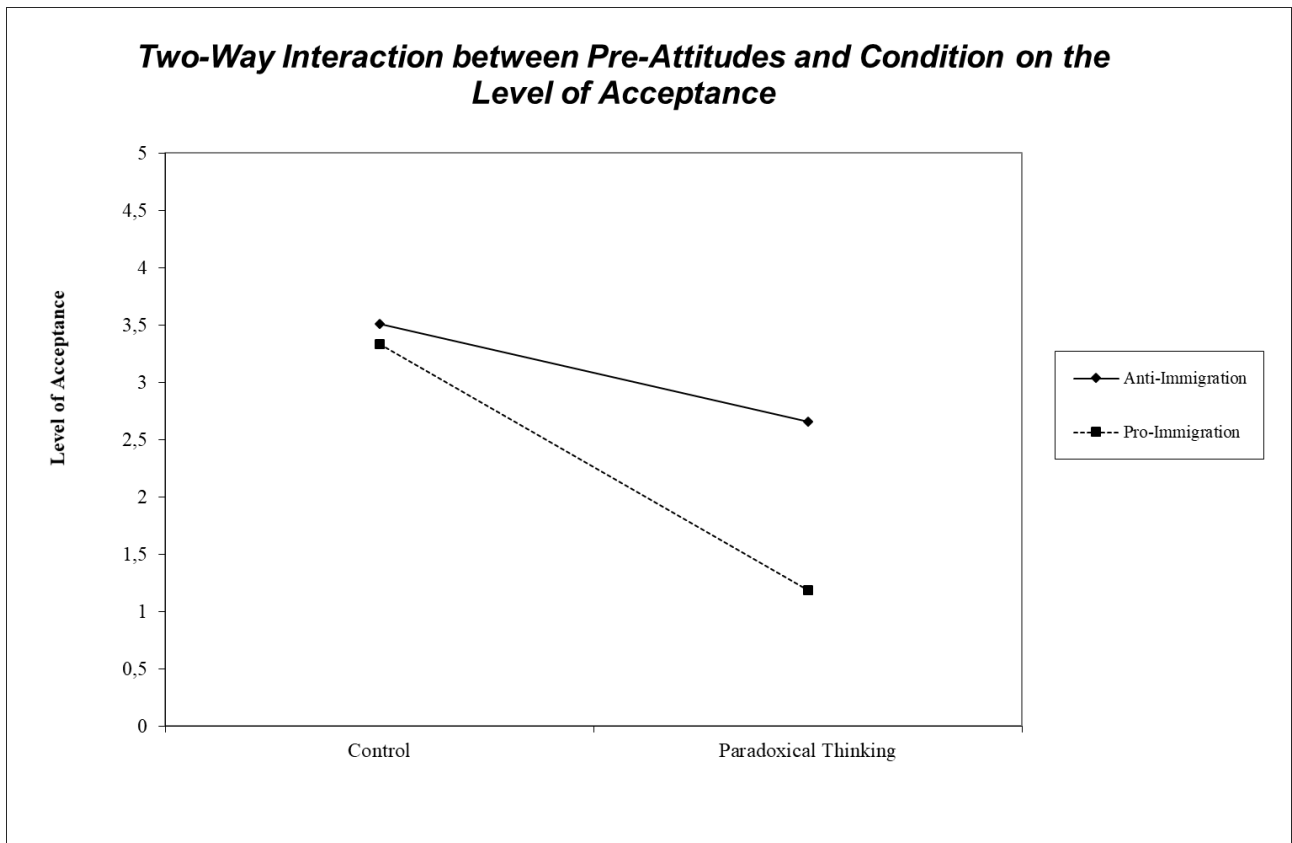


Figure 3. Plot representing the two-way interaction between the standardized pre-attitudes measure and the two conditions on the level of acceptance reported for both control and paradoxical thinking question.

Appendices

Appendix A

Paradoxical Thinking and Control Questions

Questions that were developed and tested in our pilot study. The ones indicated with an asterisk (*) are the ones that have been used in our experimental study.

Paradoxical Thinking Questions

Non-EU immigrants coming to Europe will lead to the destruction of all of our churches. *

Non-EU immigrants will not allow us to celebrate Christmas anymore

Non-EU immigrants will stop us from celebrating our national holidays

Non-EU immigrants will make the pricing of houses rise so high that most of us will have to live on the streets. *

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

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

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

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

Control Questions

Non-EU immigrants coming to Europe will not cause religious turmoil in our countries. *

Non-EU immigrants will have no impact in whether or not we can celebrate Christmas.

Non-EU immigrants will not impede us from celebrating our national holidays.

Non-EU immigrants coming to Europe will not have an extreme effect on the pricing of houses.*

Non-EU immigrants will not make the labour market extremely competitive.

Non-EU immigrants will not impact on the danger of our streets significantly.

Non-EU immigrants will not make our cities more dangerous. *

Non-EU immigrants will not bring any lethal diseases to our countries.

The questions that were selected for the study were then transformed into a question format for the experimental study.

Paradoxical Thinking Questions

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?

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

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

Control Questions

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

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

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

Appendix B

Thermometer Attitude Questions

Instructions and the three questions that were used in order to measure participants' attitudes towards non-EU immigrants and immigration

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.

Non-EU immigrants working in an EU country

Non-EU immigrants moving to an EU country

Non-EU immigrants living in an EU country