

## Self-Affirmation and Prejudice Against Religious Groups: The Role of Ideological Malleability

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### Contributor Roles Taxonomy

Role	Yara Alnajjar	Constantina Badea	Béatrice Sternberg
Conceptualization	x	x	x
Pre-registration	x		
Data curation			x
Formal analysis			x
Funding acquisition		x	
Investigation	x		
Pre-registration peer review / verification	x	x	
Data analysis peer review / verification			x
Methodology	x	x	x
Project administration	x		
Resources		x	
Software	x		x
Supervision		x	
Validation			
Visualization	x		x
Writing-original draft	x	x	x
Writing-review and editing	x		x

### Abstract

Self-affirmation has shown mixed findings when used as a prejudice reduction technique, sometimes diminishing prejudice while sometimes increasing it or having no significant effect. In a Registered Report experiment with a French representative sample ( $N = 602$ ), we tested whether ideological malleability (participants' representation of secularism) influences the effectiveness of the self-affirmation procedure in reducing prejudice against religious groups. After reporting their representation of secularism, participants were either asked to self-affirm on a threat-related value (secularism), or to self-affirm on a threat-unrelated value (humor), or were assigned to a control condition. Finally, affective and behavioral prejudice against religious groups (Muslims and Christians) were measured.

Results show that participants who reported a “new” representation of secularism exhibited more prejudice towards religious groups than those who endorsed a “historical” representation of secularism. This difference was higher concerning prejudice towards Muslims as compared to Christians. We failed to find empirical evidence showing that the effect of self-affirmation on prejudice depends on ideological malleability, for either affective or behavioral dimensions. Contrary to our hypothesis, self-affirmation on secularism decreased affective prejudice compared to the other conditions. We discuss this result based on an exploratory content analysis of participants' writings in the self-affirmation task.

This study adds to the literature by clearly demonstrating that new vs. historical representations of secularism are associated with different levels of prejudice against religious groups, particularly Muslims. Future research should develop better interventions based on self-affirmation theory. All materials, data, and code are available on: [OSF](#).

*Keywords:* self-affirmation, ideological malleability, prejudice, religious groups

**PCIRR-Study Design Table**

Question	Hypothesis	Supported/Not supported Effect size + CIs	Sampling plan	Analysis plan (see results section)	Rationale	Interpretation given different outcomes	Theory impact
Does self-affirmation on a threat-unrelated value decrease prejudice against religious groups?	<p><u>Main effect of self-affirmation</u> Participants who self-affirm on a threat-unrelated value will show lower prejudice towards religious groups compared to those in the other two conditions (H1)</p>	<p>Not supported</p> <p>- Affective prejudice: <math>f = .090</math>, 95% CI [.07, .11]</p> <p>- Behavioral prejudice: <math>f = .055</math>, 95% CI [.04, .07]</p>	<p>We aim to recruit a representative sample of 600 French participants</p>	<p>Mixed ANOVA 2 (secularism representation: historical vs. new) by 3 (self-affirmation: threat-related value vs. threat-unrelated value vs. control) by 2 (religious group: Muslims, Christians) will be run to test the main effect of self-affirmation.</p> <p><u>Specific test:</u> Main effect of self-affirmation</p>	<p>Based on the bottom limit of the 80% CI on the effect obtained by Lehmler et al. (2010), we consider <math>f = .14</math> as the SESOI (Smallest Effect Size Of Interest). This corresponds to a mean difference of 6 points on prejudice (0 to 100 scale) and 0.4 points on distributive matrices (1 to 7 scale) between self-affirmation on threat-unrelated value and each of the other conditions. Power to test the SESOI (<math>f = .14</math>) with 600 participants is 88%, thus corresponding to current standards.</p>	<p>We will conclude that the effect of self-affirmation on prejudice reduction depends on the type of the affirmed value and how related it is to the perceived threat, if H1 is confirmed.</p>	<p>Self-affirmation is more effective in reducing prejudice when the affirmed value is unrelated to the threatened domain, thus attention should be paid to the values used in the manipulation and their relation to the threatened domain.</p>
Does prejudice towards religious groups vary according to individuals' representation of secularism?	<p><u>Main effect of secularism representation:</u> Participants who have a "historical" representation of secularism will exhibit less prejudice towards religious groups than those who have a "new" representation of secularism (H2)</p>	<p>Supported</p> <p>-Affective prejudice: <math>d = .383</math>, 95% CI [.34, .42]</p> <p>-Behavioral prejudice: <math>d = .361</math>, 95% CI [.32, .40]</p>		<p>The same mixed ANOVA will be run to examine the main effect of the secularism representation.</p> <p><u>Specific test:</u> t-test for independent samples comparing prejudice among participants with new vs. historical representations of secularism.</p>	<p>Given the lack of previous data concerning this effect, the SESOI was determined on the basis of Cohen's (1988) benchmark values. We consider <math>d = .25</math>, corresponding to a small effect, as the SESOI. This corresponds to a mean difference of 6 points on prejudice (0 to 100 scale) and 0.4 points on distributive matrices (1 to 7 scale) between "historical" and "new" secularism</p>	<p>We will conclude that prejudice towards religious groups depends on individuals' representation of secularism if H2 is confirmed.</p>	<p>Individuals' representation of malleable ideologies should be taken into consideration when studying their prejudice against groups concerned by these ideologies (religious groups in the case of secularism ideology)</p>

					conditions. Power to test the smallest effect size of interest (SESOI), for independent samples t-test, $d = .25$ with 600 participants is 85%, thus corresponding to current standards.		
Does prejudice towards religious groups vary according to the religious group considered?	<u>Main effect of the type of religious group</u> : There will be more prejudice towards Muslims than towards Christians (H3)	Supported  -Affective prejudice: $d = .601$ , 95% CI [.56, .64]  -Behavioral prejudice: $d = .409$ , 95% CI [.37, .45]		The above mixed ANOVA analysis will be conducted to test the main effect of the type of religious group evaluated.  <u>Specific test</u> : paired-sample t-test comparing the levels of prejudice against Muslims vs. Christians	Based on the bottom limit of the 80% CI on the effect obtained in an unpublished study (Nugier et al., 2023), we consider $d = .13$ as the SESOI. This corresponds to a mean difference of 3 points on prejudice (0 to 100 scale), and 0.2 points on distributive matrices (1 to 7 scale) between Muslims and Christians. Power to test the smallest effect size of interest (SESOI), for paired sample t-test, $d = .13$ with 600 participants is 89%, thus corresponding to current standards.	We will conclude that prejudice towards religious groups differs according to the type of religious group if H3 is confirmed.	Certain subgroups are subject to higher levels of prejudice than others in a specific context (Muslims in France are subject to higher prejudice compared to Christians)
Does the effect of the representation of secularism on prejudice depend on the type of religious group?	<u>Interaction effect between secularism representation and type of religious group</u> : Participants who have a “new” representation of secularism will exhibit more prejudice towards religious groups than those who have a “historical” representation of secularism, and this difference will be higher concerning prejudice towards Muslims as compared to Christians (H4)	Supported  -Affective prejudice: $f = .212$ , 95% CI [.18, .24]  -Behavioral prejudice: $f = .135$ , 95% CI [.11, .16]		Mixed ANOVA 2 (secularism representation: historical vs. new) by 3 (self-affirmation: threat-related value, threat-unrelated value vs. control) by 2 (religious group: Muslims, Christians)  <u>Specific test</u> : interaction between secularism and type of religious group	Given the lack of previous data concerning this effect, the SESOI was determined on the basis of Cohen’s (1988) benchmark values. We consider $f = .10$ , corresponding to a small effect, as the SESOI. This corresponds to a mean difference of 6 points on prejudice (0 to 100 scale), and 0.4 points on distributive matrices (1 to 7 scale) between Muslims and Christians in the “new secularism” condition.	We will conclude that there is a differential effect of the representation of secularism on prejudice, depending on the type of religious group if H4 is confirmed.	Malleable ideologies influence prejudice against certain target groups, but not all groups concerned (In the case of secularism, Muslims are particularly affected, but not all religious groups)

					<p>Power to test the smallest effect size of interest (SESOI), <math>f = .10</math> with 600 participants is 99%, thus corresponding to current standards.</p>		
<p>Does the effect of self-affirmation on prejudice towards religious groups differ depending on participants' representation of secularism?</p>	<p><u>Interaction effect between self-affirmation and secularism representation:</u> self-affirmation on secularism (the threat-related value) will decrease affective and behavioral prejudice towards religious groups, among participants who have a "historical" representation of secularism, compared to control. The reverse pattern is expected (self-affirmation on secularism increasing prejudice against religious groups) among participants who have a "new" representation of secularism. We expected self-affirmation on humor (the threat-unrelated value) to decrease affective and behavioral prejudice compared to control, regardless of the chosen secularism representation (H5)</p>	<p>Not supported</p> <p>-Affective prejudice: <math>f = .063</math>, 95% CI [.04, .08]</p> <p>-Behavioral prejudice: <math>f = .071</math>, 95% CI [.05, .09]</p>		<p>Mixed ANOVA 2 (secularism representation: historical vs. new) by 3 (self-affirmation: threat-related value vs. threat-unrelated value vs. control) by 2 (religious group: Muslims, Christians).</p> <p><u>Specific test:</u> interaction between secularism representation and self-affirmation</p>	<p>Given the lack of previous data concerning this effect, the SESOI was determined on the basis of Cohen's (1988) benchmark values. We consider <math>f = .10</math>, corresponding to a small effect, as the SESOI. This corresponds to a mean difference of 6 points (0 to 100 scale), and 0.4 points on distributive matrices (1 to 7 scale) between "historical" and "new" secularism in the self-affirmation on threat-related value condition.</p> <p>We conducted an a-priori power analysis to estimate the required sample size for a mixed ANOVA, <math>\alpha = .05</math>, and power = .95. The resulting sample size was <math>N = 504</math>. We aim for <math>N = 600</math> to account for potential exclusions (Perugini et al., 2018).</p> <p>This sample of 600 participants was used to compute the power to detect each SESOI above.</p>	<p>We will conclude that the effect of self-affirmation on prejudice depends on ideological malleability if H5 is confirmed.</p>	<p>Ideological malleability moderates the effect of self-affirmation on prejudice reduction. When applying self-affirmation, ideological malleability of the affirmed value should be taken into consideration to understand the technique's effect on prejudice reduction.</p>

## **Self-Affirmation and Prejudice Against Religious Groups: The Role of Ideological Malleability**

Self-affirmation has been tested as a tool for reducing prejudice against minority groups (e.g., Badea et al., 2018; Lehmiller et al., 2010; Lesick & Zell, 2021; Persson & Hostler, 2021). The basic tenet of self-affirmation theory (Cohen & Sherman, 2014; Steele, 1988) is that individuals try to maintain self-integrity, a global positive image of the self. Minority groups can be perceived as a threat to social identity, to who “we are” as the majority group in a society (e.g., Stephan et al., 2005). To the extent that the social identity is connected to the individual’s self, when social identity is threatened, individuals can respond defensively by exhibiting prejudice and discrimination (Sherman et al., 2017). Self-affirmation can reduce the perception of threat (Critcher & Dunning, 2015) and decrease negative attitudes towards minority groups (Fein & Spencer, 1997).

However, although self-affirmation has shown success in attenuating negative attitudes in past studies (Badea et al., 2018; Čehajić-Clancy et al., 2011; Lehmiller et al., 2010), more recent research has failed to find any impact (Lesick & Zell, 2021) or has even found a deleterious effect, accentuating negative intergroup attitudes (Badea et al., 2020). For example, a study conducted in Serbia found that self-affirmation was successful in increasing recognition of the genocide committed by Serbs against Bosnian Muslims (Čehajić-Clancy et al., 2011). Other research showed that self-affirmation reduced support for discriminatory measures undertaken by the French government against North African immigrants in the aftermath of terrorist attacks in November 2015 (Badea et al., 2018). In contrast, a recent study showed that self-affirmation failed to increase European Americans’ perception of racism (Lesick & Zell, 2021). Moreover, in a study conducted in France, participants in the self-affirmation condition, who indicated their religion to be Christian, perceived more threat



from Muslim immigrants and expressed higher prejudice against them (Badea et al., 2020). Therefore, it seems important to understand when self-affirmation can be effective in reducing prejudice, by investigating the potential moderators of its effects (Badea & Sherman, 2019).

One possible reason for the mixed findings with self-affirmation procedures is that this technique increases the salience of personal beliefs related to minority groups, such as individuals' representation of sociopolitical ideologies governing intergroup relations. Indeed, numerous studies show that adherence to specific intergroup ideologies (e.g., colorblindness) can have a differentiated impact on prejudice (e.g., Levin et al., 2012). Moreover, the same ideology can be used in a flexible way (i.e., ideological malleability), sometimes to reduce prejudice against minority groups, sometimes to maintain and justify it. The aim of this research is to test the ideological malleability, i.e., participants' representation of a given ideology, as a potential moderator of the effectiveness of the self-affirmation procedure in reducing prejudice against religious groups. We first define "ideological malleability" and its impact on intergroup attitudes by focusing on "secularism". We then argue that ideological malleability can influence the efficacy of self-affirmation in reducing prejudice. Finally, we introduce the present research and the case of affective and behavioral prejudice towards religious groups in France.

### **Ideological Malleability and Intergroup Attitudes**

"A given ideology can mean different things to different people (...) individuals exploit the malleability of sociopolitical ideologies by actively endorsing them in forms that promote their intergroup goals" (Knowles et al., 2009, p. 857). Ideological malleability implies a motivational component. If individuals are motivated to protect the status quo, they may interpret an available ideology in a way that reinforces intergroup hierarchy, even if that

ideology at its core is constructed to challenge social inequality (Knowles et al., 2009). This can be accomplished through two complementary ways: (a) the change in the intensity of adherence to the ideology and (b) the modification of the ideology's content. Individuals can show a greater adherence to the ideology in certain specific domains. However, this is possible because they modify the content of the ideology, its cognitive representation, to make it more consistent with the maintenance of social hierarchy.

Taking the example of the colorblindness ideology, Knowles and collaborators (Knowles et al., 2009) have shown how this principle that individuals should not be judged by the color of their skin, can be variably used to reduce versus to maintain the status quo of racial inequality in the United States. Specifically, Knowles and colleagues (2009) identified two meanings of the colorblindness ideology: a distributive-justice versus a procedural-justice dictate. Distributive justice refers to the equal treatment of people in resource allocation, regardless of the color of their skin. People with an egalitarian view of intergroup relations agree more with this principle of distributive justice than people with an anti-egalitarian, hierarchical view of social groups. However, to achieve equal treatment of Black people and White people, Martin Luther King's dream, it might sometimes be necessary to consider people's skin color through positive actions that help to equalize opportunities and reduce social hierarchy. Anti-egalitarian people can, in these circumstances, claim to be attached to the application of the colorblindness principle in procedures such as employment or university admission. Thus, individuals motivated by the protection of racial hierarchy interpret the ideology of colorblindness as a procedural justice dictate. Studies by Knowles and colleagues (2009) showed that, when faced with an intergroup threat, anti-egalitarian participants' support for the ideology of colorblindness increased compared to a non-threat condition. However, this is explained by the fact that anti-egalitarian participants

shifted their representation of colorblindness from an ideology of distributive justice to one of procedural justice.

Drawing on this work, other researchers have shown that secularism (i.e., “*laïcité*”) is a malleable ideology that can be adopted by individuals with contrasting attitudes towards immigrants in France, as is the case with colorblindness in the United States (Roebroeck & Guimond, 2018). More specifically, Roebroeck and Guimond (2018) showed that anti-egalitarian participants endorsed more the secularism ideology, when an outgroup was presented as a symbolic threat compared to the condition where the same outgroup was presented as a realistic threat or to the control condition. Egalitarian participants did not endorse secularism differently as a function of the condition.

Participants with a hierarchical view of intergroup relations may have a different representation of secularism than those less attached to social dominance (Roebroeck & Guimond, 2016). Indeed, in French society, two representations of secularism coexist: the “new” secularism according to which citizens are not allowed to practice their religion in public institutions, and the “historical” secularism, conforming to which citizens are free to practice their religion, without any restriction in public spaces. Unlike “historical” secularism, which is based on the 1905 law guaranteeing the neutrality of the State regarding religious practice, the “new” secularism stems from more recent laws enacted in 2004 and 2010, the first one prohibiting the wearing of religious symbols in public schools and the second banning face coverage in institutions and in the public space. More recently, as of September 2023, it is prohibited by law to wear an Abaya (a long loose dress worn by Muslim women) in public schools. Studies have shown that **adhesion to the “new” representation of secularism is associated with** a higher level of prejudice against immigrants (Roebroeck & Guimond, 2016). **In addition, experimental evidence showed that the salience**

of a “new” secularism norm played a role in increasing prejudice and discrimination (Anier et al., 2019; Nugier et al., 2016).

In this research, we examine whether ideological malleability influences the effectiveness of the self-affirmation procedure in reducing prejudice towards religious groups. We take the example of affective and behavioral prejudice towards Muslims in France, and of the secularism ideology. We argue that self-affirmation on the value of secularism will increase its importance for participants, and their own support for it. Thus, based on evidence showing the differential associations between each secularism representation and prejudice against Muslims (Roebroeck & Guimond, 2016), the effect of the self-affirmation manipulation should differ depending on the specific representation of secularism affirmed. Consequently, we argue that self-affirmation decreases prejudice towards Muslims among participants with a “historical” representation of secularism and increases prejudice among participants with a “new” representation of secularism.

### **Impact of Ideological Malleability on the Self-Affirmation Procedure**

Previous research has shown that the effect of self-affirmation on intergroup attitudes can be moderated by values that are central to the individual (e.g., individualism). For example, in the study conducted in the aftermath of terrorist attacks in France, participants who scored higher on individualism were more responsive to the self-affirmation procedure and diminished their support for the government’s discriminative policy against immigrants, compared to those who scored low on this value (Badea et al., 2018). Indeed, the basic principle of self-affirmation is that the procedure taps into the values that are important to the individual (Cohen & Sherman, 2014). Ideologies governing intergroup relations and their representation in participants’ minds are part of these values that can be used in self-affirmation procedures designed to reduce prejudice. We argue that if the ideology’s

representation is compatible with the principle of social equality, self-affirmation can reduce prejudice against minority groups, by increasing the importance of the ideology and support for it. Conversely, if the ideology's representation enhances social hierarchy, self-affirmation can increase prejudice.

One difficulty in testing the effect of secularism representation on the self-affirmation outcome is linked to methodological aspects of the self-affirmation manipulation. Indeed, in many self-affirmation procedures, participants are presented with a list of values (e.g., love, loyalty) that they must rank from the most to the least important to them personally (e.g., Badea et al., 2021; Cascio et al., 2016). In most cases, the list of values has no direct connection with a specific ideology (that can be the main interest of a study). Thus, it is not sure that a given representation of an ideology is cognitively salient when individuals undertake this kind of self-affirmation task. In this research, we propose to affirm participants on secularism and to examine the effect of self-affirmation on prejudice towards a minority religious group (e.g., Muslims).

Previous research suggests that manipulating the content of the list of values used in the self-affirmation procedure can have an impact on attitudes towards immigrants. For example, affirming values congruent with one's political orientation increased positive attitudes towards Syrian refugees (Badea et al., 2017). In a different study, Lehmiller and collaborators (Lehmiller et al., 2010) showed that participants who were affirmed by valuing relationships with family and friends were significantly more prejudiced against sexual minorities than participants who were affirmed by valuing other self-relevant aspects. These findings demonstrate that the type of value affirmed is an important consideration to take in the design of self-affirmation procedures. Specifically, in Lehmiller and al.'s (2010) study, familial-based affirmations undermined the reduction of prejudice towards minority sexual

groups because they reminded individuals of values that are seen as conflicting with expressing tolerant attitudes towards these groups.

In our case, the efficacy of affirming participants on the secularism value would depend on participants' representation of this ideology. The representation of "historical" secularism in terms of freedom of religious practice is more compatible with positive attitudes towards minority religious groups. On the other hand, the representation of "new" secularism is more restrictive regarding religious practices and may, on the contrary, increase participants' prejudice towards religious groups. Since new secularism places limits on religious practices and the display of religious affiliation, affirming this value could seem to conflict with expressing tolerant attitudes towards people that are concerned, religious groups. Being reminded of this value should lead to the perception of minority groups that display their religious affiliation as incompatible with French values, thus perceiving these individuals as a threat to French society, and expressing prejudice against them. Muslims in particular can be targeted under this norm, as wearing visible religious symbols (e.g., headscarf) is common.

### **The Present Research**

In this study, we began by identifying French participants' representation of secularism ("historical" vs. "new"). They were then randomly assigned to either a self-affirmation experimental condition or to a control condition. In one of the two self-affirmation conditions, participants explained why secularism was an important value for them and provided examples from their daily lives where this principle has guided their behavior. However, secularism can be considered as a threat-related value. The attachment to the principle of secularism is linked to different attitudes towards religious groups (e.g., Roebroek & Guimond, 2016). These minority groups may represent a threat to national

identity and therefore to individuals who may identify strongly with their country (e.g., Badea et al., 2020). Thus, we also included a self-affirmation task focused on a threat-unrelated value (humor; see also Lehmiller et al., 2010). Finally, in the control condition, participants were asked to write about an important value (physical endurance) for someone else. All participants completed a measure of prejudice against Muslims.

Nevertheless, members of the majority society may express this view either because they are prejudiced against this community in particular, or because they are committed to the principle of “new” secularism that prohibits religious practices for all religious groups. Indeed, in a recent survey, Dangubić et al. (2020) examined attitudes towards religious practices in many European countries. The authors simultaneously examined attitudes towards Muslims and Christians. They distinguished between participants who rejected Muslim but not Christian religious practices, and those who rejected practices regardless of the religious group. The authors argue that much of the previous research on anti-Muslim prejudice has only considered Muslim practices, potentially misidentifying some participants as prejudiced against Muslims. In our study, we also assessed participants’ attitudes towards the majority religious group (Christians), in order to specifically examine the impact of self-affirmation on attitudes towards Muslims.

We measured the affective dimension of prejudice towards religious groups using a feeling thermometer and the behavioral component of prejudice using distributive matrices (Anier et al., 2018; Rubin et al., 2014). The feeling thermometer measure allowed us to add several other groups, as a distraction to the target groups. Moreover, we analyzed relative negative feelings, comparing the target group (Muslims or Christians) to the mainstream ingroup (French people), instead of the simple feeling towards each group. This allowed us to use a measure less sensitive to social desirability concerns (see Hugenberg & Bodenhausen,

2003). For the behavioral component of prejudice, we asked participants to imagine that they were responsible for allocating subsidies at Paris City Hall, and that they had to decide how to divide a sum of money between a Muslim/Christian association vs. a French association with no religious affiliation. Participants had to indicate their intention to distribute the money between the two associations. Again, the relative behavioral prejudice against each religious group compared to the French association, was assessed.

We did not include the cognitive measure of prejudice (i.e. stereotyping) because it seems difficult to compare stereotypes about Christians (e.g., lower scientific competence, Rios et al., 2015) with stereotypes about Muslims (e.g. terrorist, Saleem & Anderson, 2013), see also Erentzen et al. (2022). In contrast, examining affective and behavioral prejudice allowed us to use the same measures for both groups.

According to previous work, we hypothesized a main effect of secularism representation, a main effect of the type of religious group and a main effect of self-affirmation such that (1) participants with a “historical” representation of secularism were expected to exhibit less prejudice towards religious groups than those with a “new” representation of secularism, (2) higher prejudice was expected towards Muslims than towards Christians, and (3) participants who self-affirmed on the threat-unrelated value were predicted to show lower prejudice towards religious groups compared to those in the other two conditions. Following this reasoning, we also expected an interaction effect between secularism representation and the type of religious group such that participants with a “new” representation of secularism would exhibit more prejudice (as compared to “historical” representation), and that this difference would be higher regarding prejudice towards Muslims as compared to Christians.



We also tested the key hypothesis concerning the interaction between secularism representation and self-affirmation on prejudice. Specifically, we predicted that participants who self-affirmed on a threat-unrelated value would express lower prejudice compared to control, regardless of their secularism representation, as self-affirmation would buffer the psychological threat causing the expression of prejudice. On the other hand, we expected different results when self-affirming on secularism, as the affirmed threat-related value would moderate the buffering effect of self-affirmation. In this case, the content of the affirmed value is fundamental to the effect (unlike the affirmation of a threat-unrelated value, where the content of the value is irrelevant), and could increase the perceived threat when the value is intolerant or decrease it when it is tolerant. Therefore, we expected participants with a “historical” representation of secularism to exhibit lower prejudice in the condition of self-affirmation on the secularism value as compared to control. Conversely, we expected participants with a “new” representation of secularism to exhibit higher prejudice in the condition of self-affirmation on secularism compared to control. We examined whether these effects were particularly observed concerning prejudice towards Muslims.

### **Pre-registration and Open-science**

We provided all materials, data, and code on: <https://osf.io/63rnq/>. This project received Peer Community in Registered Report Stage 1 in-principle acceptance (<https://osf.io/hxpnr/>) and was pre-registered (<https://osf.io/f4wm6/>), then we proceeded to data collection. All measures, manipulations, exclusions conducted for this investigation are reported, and data collection was completed before analyses.

## Method

### Power Analysis

We calculated the required sample size using G\*Power 3.1. We set the SESOI to  $f = .10$  for an ANOVA repeated measures within-between interactions. We concluded that the minimum required sample size for 6 experimental groups, 2 repeated measures, a power of 0.95 and alpha of 0.05 is 504 participants (G\*Power screenshot is presented in the Supplementary). To minimize the risk of overestimating the true population effect size (Perugini et al., 2018), as well as to account for potential exclusion of participants, we planned to recruit 600 participants.

### Participants

Based on these aforementioned calculations, we recruited a final sample of 602 native French speakers, born, raised and based in France, regardless of their religious identification, through a survey institution (Bilendi) to ensure high quality data collection and to have a representative sample of the French population in terms of regions, socio-economic status, age, and gender. Exclusion criteria were automatically applied during data collection, thus all participants that completed the study to the end were included in the final sample.

Participants who composed the final sample were aged between 18 and 90 years old ( $M_{age} = 47.3$ ,  $SD = 16.3$ ,  $Mdn = 47$ ). The sample included 299 females, 301 males and 2 who did not disclose their gender. Concerning religious identification, Christians composed the majority of the sample (53.8%) followed by atheists (23.4%). Participants were compensated with points that can be collected and used to buy gifts.

## Design and Procedure

We summarize the experimental design in Table 1. The design is as follows: 2 (secularism representation: historical and new; between-subjects) by 3 (self-affirmation: threat-related value, threat-unrelated value and control; between-subjects) by 2 (religious group: Muslims and Christians; within-subjects). Display of the within-subjects factor (type of religious group) was counterbalanced. All translated materials are presented in the Supplementary.

[For review: The Qualtrics survey .QSF file and an exported DOCX file are provided on the OSF folder. The translated Qualtrics survey can be found in the Supplementary. A preview link of the Qualtrics survey is provided on: [https://parisouestpsy.eu.qualtrics.com/jfe/form/SV\\_07BJ9ppKM7hWCGy](https://parisouestpsy.eu.qualtrics.com/jfe/form/SV_07BJ9ppKM7hWCGy)]

**Table 1**

### Experimental Design

IV1: Secularism representation (2 between) IV2: Self-affirmation (3 between) IV3: Type of religious group (2 within)	IV1: <b>“Historical” representation</b> Participants reporting having a “historical” representation of secularism	IV1: <b>“New” representation</b> Participants reporting having a “new” representation of secularism		
	<b>IV3: Muslims</b> Completing the prejudice measures against Muslims	<b>IV3: Christians</b> Completing the prejudice measures against Christians	<b>IV3: Muslims</b> Completing the prejudice measures against Muslims	<b>IV3: Christians</b> Completing the prejudice measures against Christians
IV2: <b>Self-affirmation on threat-related value condition</b> Writing about the importance of the chosen representation of secularism to oneself	<b>Manipulation checks:</b> <ul style="list-style-type: none"> <li>• Secularism representation: one continuous measure of secularism representation</li> <li>• Self-affirmation: one item measuring participants’ perceived importance of the used value in each procedure (secularism or humor or physical endurance)</li> </ul> <b>Dependent variables:</b> <ul style="list-style-type: none"> <li>• Affective prejudice towards religious groups: Using a feeling thermometer, we measure relative negative feelings by comparing reported feelings towards the target group (Muslims or Christians) and towards the ingroup (French people).</li> <li>• Behavioral prejudice towards religious groups: Using distributive matrices, we measure relative de-favoritism by comparing sums of money attributed to the target group (Muslims or Christians) and to the ingroup (French people).</li> </ul>			
IV2: <b>Self-affirmation on threat-unrelated value condition</b> Writing about the importance of the value of “humor” to oneself				
IV2: <b>Control condition</b> Writing about the importance of the value of “physical endurance” to another person				

The online survey was built using Qualtrics. Participants indicated their consent, with four questions confirming their eligibility, understanding, and agreement with study terms, which they must answer with a “yes” in order to proceed to the study. Participants then provided their demographic information. Next, after indicating their personal representation of secularism, they were randomly assigned to one of the three experimental conditions (self-affirmation on secularism, self-affirmation on humor or control condition). Finally, they completed the measurements of prejudice against Muslims and Christians. At the end of the experiment, they answered a few funneling questions.

## **Predictors**

### ***Secularism Representation***

Participants were first told that secularism is an important value in France and that two visions of it coexist. Vision 1 (corresponding to “historical” secularism) stated: *“Individuals are free to practice their religion in private and in public. Citizens have the right to show their religious affiliation in the public sphere. The State must remain completely neutral regarding these religious practices”*. Vision 2 (corresponding to “new” secularism) stated: *“Individuals are free to practice their religion in private, but not in public. Citizens do not have the right to show their religious affiliation in the public sphere. The State must regulate these religious practices”*. These visions of secularism were constructed on the basis of items used by Roebroeck and Guimond (2016) and De la Sablonnière et al. (2020). Participants were then asked to indicate which of the two visions best reflected their personal convictions.

As a manipulation check, participants then reported on a 7-point scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), how much they agreed with the following statement “Religious practices and symbols should not be allowed in public institutions”, representing the main difference between the two visions. Participants with a “new” secularism vision were expected to score higher on this question than participants with a “historical” secularism vision.

### ***Self-Affirmation Manipulation***

Following, participants were randomly assigned into one of the three conditions: self-affirmation on the threat-related value (i.e., secularism), self-affirmation on the threat-unrelated value (i.e., humor) or control condition. In many self-affirmation activities, participants are asked to rank a list of values in order of importance for them personally, and to answer questions about the importance of the top ranked value (e.g., Badea et al., 2018). In this study, we have adapted the procedure to ask them to self-affirm on the threat-related value (secularism), or a threat-unrelated value (humor, see also, Lehmler et al., 2010, for a similar procedure). Participants in both self-affirmation conditions were asked to affirm themselves on the corresponding value (their representation of the secularism value or the humor value) by answering two questions. The first asked them to explain why this value (i.e., secularism or humor) would be important for them personally, and the second required giving examples of how this value guides their behavior in daily life (for example, in their interactions with others). In the control condition, participants explained why physical endurance would be an important value for another person and gave examples on how this value could guide this person’s behavior. In order to keep constant the salience of participants’ secularism representation across all conditions, all participants were reminded of

their choice of secularism representation before they start the self-affirmation or the control activity.

Immediately after the manipulation, participants were required to indicate the importance of the affirmed value in each condition (secularism, humor and physical endurance accordingly) to them personally on a 7-point scale from 1 “*not at all important*” to 7 “*very important*”.

## **Dependent Measures**

### ***Affective Prejudice***

Affective prejudice against the two targeted religious groups (Muslims and Christians) was measured using a feeling thermometer. Participants were asked to indicate their feelings towards 10 groups including Muslims, Christians, and French people on a scale from 0 “*Very negative feelings*” to 100 “*Very positive feelings*”. Then, a relative affective prejudice score was computed (see also Hugenberg & Bodenhausen, 2003) by calculating the difference between feelings towards the ingroup (French people) and the target group (Muslims or Christians). A higher score indicated higher relative affective prejudice (see supplementary for more details on the score calculation). The presentation order of the ten evaluated groups was randomized.

### ***Behavioral Prejudice***

Two distributive matrices were used to measure behavioral prejudice against each target group. Participants were asked to imagine that they are responsible for allocating subsidies at Paris City Hall, and that they have to indicate their intention to divide a sum of money between two high impact associations that need support. Four fictitious student associations were used. One matrix included a Muslim vs. a French association, while the other one included a Christian vs. another French association. Participants were given 7

options representing different ways of attributing money to the French association on the one hand, and to the Muslim or Christian association on the other. They had to choose between 1 and 7, with a higher score representing more money allocated to the French association and less money allocated to the Muslim or Christian association. A higher score indicated higher relative behavioral prejudice towards the religious group in question (see supplementary for more details). These matrices allowed us to measure the relative de-favoritism of Muslims and that of Christians in comparison with French people. Relative prejudice was used to minimize the sensitivity of our measures to social desirability bias.

### ***Religiosity***

Participants were asked to indicate on a 7-point scale “To what extent would you say you practice a religion?” from 1 “*Not at all*” to 7 “*Absolutely*”.

### **Attention Check**

One attention check item was included in the feeling thermometer to detect careless responding: “Please put the cursor on ten”.

### **Data Analysis Strategy**

Firstly, we expected a significant main effect of both the secularism representation and the type of religious group on prejudice, as well as an interaction between the two variables. It was hypothesized that (1) affective and behavioral prejudice will be higher among participants who have a “new” representation of secularism (vs. “historical”) and that (2) there will be more affective and behavioral prejudice towards Muslims than towards Christians. We expected secularism representation to interact with the type of religious group in that participants who have a “new” representation of secularism will exhibit more affective and behavioral prejudice (as compared to “historical” representation), and that this difference will be higher regarding prejudice towards Muslims as compared to Christians. Secondly, we

expected a main effect of self-affirmation, such that participants who self-affirm on the threat-unrelated value will show lower prejudice towards religious groups compared to those in the other two conditions. Central to this work, we aimed to test the interaction hypothesis between self-affirmation and secularism representation on prejudice towards religious groups. We hypothesized that self-affirmation on secularism (the threat-related value) will decrease affective and behavioral prejudice towards religious groups, among participants who have a “historical” representation of secularism compared to control. The reverse pattern is expected (self-affirmation on secularism increasing prejudice against religious groups) among participants who have a “new” representation of secularism. We expected self-affirmation on humor (the threat-unrelated value) to decrease affective and behavioral prejudice against religious groups compared to control, regardless of the chosen secularism representation. Finally, we examine whether the interaction between self-affirmation and secularism representation is more strongly observed when considering prejudice towards Muslims than prejudice towards Christians.

To test these hypotheses, we ran a three-way mixed ANOVA : 2 (secularism representation: historical vs. new) x 3 (self-affirmation: threat-related value vs. threat-unrelated value vs. control) x 2 (religious group: Christians vs. Muslims). For all analysis, significance threshold  $\alpha$  was set at .05.

### ***Outliers and exclusions***

Participants who failed the attention check item (i.e., selecting another response than 10 to this question) and participants who reported less than 4 out of 5 on the question asking them to what extent they completed the study seriously were automatically excluded from the study and could not complete the study to the end. We did not classify outliers.



## Results

### Manipulation Checks

Firstly, we checked if our identification of participants' representation of secularism successfully distinguished different beliefs about secularism. We conducted an independent t-test and found a significant difference between participants endorsing a "new" vision of secularism ( $M = 5.89$ ,  $SD = 1.53$ ) and those endorsing a "historical" vision of secularism ( $M = 3.72$ ,  $SD = 2.02$ ) in their opposition to public religious display,  $t(600) = 13.60$ ,  $p < .001$ ,  $d = 1.31$ . This indicates that participants who chose "new" secularism displayed significantly distinctive beliefs concerning secularism from those who chose "historical" secularism.

Secondly, to verify that the affirmed values were considered important to participants, we ran an ANOVA 3 (Value: Secularism vs. Humor vs. Physical endurance) between-subjects with the importance of the value as the dependent variable. Results indicated a significant difference in value-importance between conditions,  $F(2, 599) = 44.10$ ,  $p < .001$ ,  $\eta_p^2 = .128$ . The secularism value ( $M = 5.75$ ,  $SD = 1.46$ ) was perceived as significantly more important than the physical endurance value ( $M = 4.87$ ,  $SD = 1.52$ ),  $p < .001$ ,  $d = .645$ . The humor value ( $M = 6.14$ ,  $SD = 1.09$ ) was significantly more important to participants than the physical endurance value,  $p < .001$ ,  $d = .930$ . Finally, the difference between the importance of the secularism value and that of the humor value was significant,  $p = .010$ ,  $d = .286$ . Overall, these results suggest that participants rated the affirmed values (secularism and humor) as more important than the control value (physical endurance).

### Descriptive Statistics

Descriptive statistics are presented in Table 2.

### Table 2

*Descriptive Statistics for all Conditions*

	IV1: “Historical” representation	IV1: “New” representation	Overall (Self-affirmation)
IV2: Threat-related value	Muslims <sub>AP</sub> : 7.23 (26.90) Muslims <sub>BP</sub> : 4.81 (1.28) Christians <sub>AP</sub> : 1.87 (22.93) Christians <sub>BP</sub> : 4.40 (1.21) <i>n</i> = 52	Muslims <sub>AP</sub> : 29.62 (29.78) Muslims <sub>BP</sub> : 5.54 (1.52) Christians <sub>AP</sub> : 7.27 (26.49) Christians <sub>BP</sub> : 4.83 (1.49) <i>n</i> = 155	Muslims <sub>AP</sub> : 24.00 (30.61) Muslims <sub>BP</sub> : 5.36 (1.49) Christians <sub>AP</sub> : 5.91 (25.69) Christians <sub>BP</sub> : 4.73 (1.43) <i>n</i> = 207
IV2: Threat-unrelated value	Muslims <sub>AP</sub> : 17.04 (28.46) Muslims <sub>BP</sub> : 5.04 (1.50) Christians <sub>AP</sub> : 11.53 (25.30) Christians <sub>BP</sub> : 4.96 (1.55) <i>n</i> = 47	Muslims <sub>AP</sub> : 31.20 (33.89) Muslims <sub>BP</sub> : 5.49 (1.61) Christians <sub>AP</sub> : 9.28 (27.19) Christians <sub>BP</sub> : 4.87 (1.63) <i>n</i> = 163	Muslims <sub>AP</sub> : 28.03 (33.22) Muslims <sub>BP</sub> : 5.39 (1.60) Christians <sub>AP</sub> : 9.79 (26.74) Christians <sub>BP</sub> : 4.89 (1.61) <i>n</i> = 210
IV2: Control	Muslims <sub>AP</sub> : 17.22 (33.15) Muslims <sub>BP</sub> : 4.76 (1.61) Christians <sub>AP</sub> : 7.00 (27.37) Christians <sub>BP</sub> : 4.51 (1.33) <i>n</i> = 41	Muslims <sub>AP</sub> : 31.22 (32.39) Muslims <sub>BP</sub> : 5.74 (1.42) Christians <sub>AP</sub> : 8.36 (26.72) Christians <sub>BP</sub> : 4.95 (1.70) <i>n</i> = 144	Muslims <sub>AP</sub> : 28.12 (33.00) Muslims <sub>BP</sub> : 5.52 (1.52) Christians <sub>AP</sub> : 8.06 (26.80) Christians <sub>BP</sub> : 4.85 (1.63) <i>n</i> = 185
Overall (Secularism representation)	Muslims <sub>AP</sub> : 13.45 (29.55) Muslims <sub>BP</sub> : 4.87 (1.45) Christians <sub>AP</sub> : 6.61 (25.24) Christians <sub>BP</sub> : 4.62 (1.38) <i>n</i> = 140	Muslims <sub>AP</sub> : 30.68 (32.03) Muslims <sub>BP</sub> : 5.58 (1.52) Christians <sub>AP</sub> : 8.32 (26.76) Christians <sub>BP</sub> : 4.88 (1.60) <i>n</i> = 462	Muslims <sub>AP</sub> : 26.67 (32.28) Muslims <sub>BP</sub> : 5.42 (1.54) Christians <sub>AP</sub> : 7.92 (26.41) Christians <sub>BP</sub> : 4.82 (1.55) <i>n</i> = 602

*Note.* AP = Affective prejudice; BP = Behavioral prejudice

**Test of the Hypotheses**

In order to test each hypothesis, we ran a 2 (secularism representation: historical vs. new) by 3 (self-affirmation: threat-related value vs. threat-unrelated value vs. control) by 2 (religious group: Muslims vs. Christians) mixed ANOVA for each of the prejudice measures (affective measure and behavioral measure).

***Secularism Representation and Prejudice***

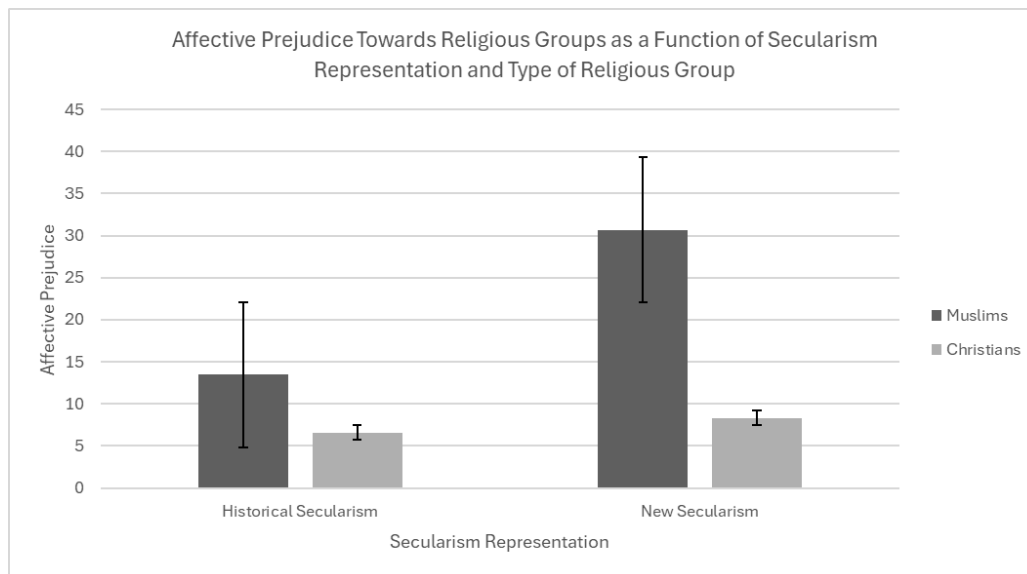
We expected a significant main effect of both the secularism representation and the type of religious group on prejudice, as well as an interaction between secularism representation and type of religious group.

**Affective Prejudice.** We found a significant main effect of secularism representation,  $F(1, 596) = 14.69, p < .001, \eta_p^2 = .024$ , and main effect of religious groups,  $F(1, 596) = 98.59, p < .001, \eta_p^2 = .142$ . Participants reported significantly more prejudice towards religious groups when they displayed a “new” vision ( $M = 19.50, SD = 25.12$ ) of secularism as compared to a “historical” vision ( $M = 10.03, SD = 23.40$ ),  $d = .383$ . Affective prejudice scores were significantly higher towards Muslims ( $M = 26.7, SD = 32.3$ ) than towards Christians ( $M = 7.92, SD = 26.4$ ),  $d = .601$ .

Finally, we found support for the two-way interaction between secularism representation and religious group,  $F(1, 596) = 26.84, p < .001, \eta_p^2 = .043$ , see Figure 1. Pairwise comparisons indicated that participants displaying a “new” representation of secularism exhibited significantly higher affective prejudice against Muslims ( $M = 30.68, SD = 32.03$ ) than towards Christians ( $M = 8.32, SD = 26.76$ ),  $t(596) = 15.71, p < .001, d = .722$ . Participants displaying a “historical” representation of secularism exhibited significantly higher affective prejudice against Muslims ( $M = 13.45, SD = 29.55$ ) than against Christians but the effect was smaller, ( $M = 6.61, SD = 25.24$ ),  $t(596) = 2.71, p = .035, d = .237$ .

## Figure 1

*Affective Prejudice Towards Religious Groups as a Function of Secularism Representation and Type of Religious Group*

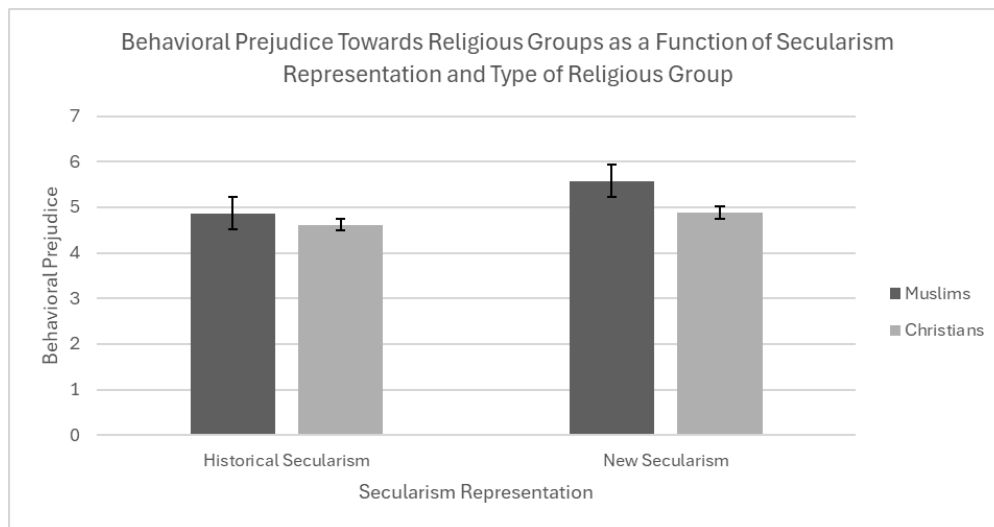


**Behavioral Prejudice.** As for affective prejudice, there was a significant main effect of secularism representation,  $F(1, 596) = 14.12, p < .001, \eta_p^2 = .023$ , and a main effect of the religious group,  $F(1, 596) = 45.76, p < .001, \eta_p^2 = .071$ , on behavioral prejudice. Participants having a “new” representation of secularism ( $M = 5.23, SD = 1.37$ ) exhibited significantly more behavioral prejudice against religious groups than those reporting a “historical” vision ( $M = 4.75, SD = 1.29$ ),  $d = .361$ . Behavioral prejudice scores were significantly higher towards Muslims ( $M = 5.42, SD = 1.54$ ) as compared to Christians ( $M = 4.82, SD = 1.55$ ),  $d = .409$ .

The two-way interaction between secularism representation and religious group was significant,  $F(1, 596) = 10.77, p = .001, \eta_p^2 = .018$ , see Figure 2. Participants with a “new” representation ( $M = 5.58, SD = 1.52$ ) exhibited significantly more prejudice towards Muslims than towards Christians ( $M = 4.88, SD = 1.60$ ),  $p < .001, d = .461$ . Among participants with a “historical” representation of secularism, behavioral prejudice against Muslims ( $M = 4.87, SD = 1.45$ ) was not significantly higher than that towards Christians ( $M = 4.62, SD = 1.38$ ),  $p = .194, d = .214$ .

**Figure 2**

*Behavioral Prejudice Towards Religious Groups as a Function of Secularism Representation and Type of Religious Group*



***Self-Affirmation and Secularism Representation***

To begin, we tested whether participants who self-affirmed on the threat-unrelated value showed lower prejudice towards religious groups compared to those in the other two conditions. Then, we tested the key interaction hypothesis between self-affirmation and secularism representation on prejudice towards religious groups. We expected self-affirmation on humor (the threat-unrelated value) to decrease affective and behavioral prejudice against religious groups compared to control, regardless of the chosen secularism representation, since the process of self-affirmation should protect from any perceived threat leading to the expression of prejudice. On the other hand, we expected self-affirming on the threat-related value to be affected by the content of the value. In other terms, affirming one's representation of secularism should moderate the protecting effect of the mere self-affirmation process. We hypothesized that self-affirmation on secularism (the

threat-related value) will decrease affective and behavioral prejudice towards religious groups, among participants who have a “historical” representation of secularism compared to control. The reverse pattern is expected (self-affirmation on secularism increasing prejudice against religious groups) among participants who have a “new” representation of secularism.

We also examined the interaction between the three factors (self-affirmation, secularism representation and religious group). We expected self-affirmation and secularism representation to interact with the type of religious group, such that the key interaction effect between self-affirmation and secularism representation would be observed particularly for prejudice against Muslims compared to prejudice against Christians.

For each prejudice score (affective and behavioral), we begin by presenting the results concerning the main effect of self-affirmation on prejudice. We then test the interaction between self-affirmation and secularism representation on prejudice (general score). Finally, we test whether this interaction depends on the religious group (Christians and Muslims), reporting the results concerning the three-way interaction between self-affirmation, secularism representation and religious groups.

**Affective Prejudice.** We found no significant main effect of self-affirmation on affective prejudice,  $F(2, 596) = 2.26, p = .106, \eta_p^2 = .008$ . Participants did not significantly report more prejudice towards religious groups in the threat-unrelated condition ( $M = 18.91, SD = 25.61$ ) as compared to the threat-related condition ( $M = 14.95, SD = 23.64$ ), and the control condition ( $M = 18.09, SD = 25.81$ ), respectively,  $t(596) = 2.03, p = .107, d = .158$ , and  $t(596) = 0.44, p = .900, d = .033$ . The difference between the threat-related condition and the control condition was not significant,  $t(596) = 1.51, p = .287, d = .125$ .

We then tested the interaction hypothesis regarding self-affirmation and secularism representation on affective prejudice towards religious groups. The interaction between

self-affirmation and secularism representation was not significant,  $F(2, 596) = 1.08, p = .342, \eta_p^2 = .004$ .

In order to test whether the interaction between self-affirmation and secularism representation on prejudice is moderated by the religious group (Muslims or Christians), we examined the three-way interaction between these variables. The three-way interaction was not significant,  $F(2, 596) = 0.202, p = .818, \eta_p^2 = .001$ .

**Behavioral Prejudice.** We ran the same analysis on behavioral prejudice. We found no significant main effect of self-affirmation on behavioral prejudice,  $F(2, 596) = 0.780, p = .459, \eta_p^2 = .003$ . Participants did not significantly report more prejudice towards religious groups in the threat-unrelated condition ( $M = 5.14, SD = 1.43$ ) as compared to the threat-related condition ( $M = 5.04, SD = 1.29$ ), and the control condition ( $M = 5.19, SD = 1.37$ ), respectively,  $t(596) = 1.25, p = .425, d = .073$ , and  $t(596) = 0.62, p = .808, d = .034$ . The difference between the threat-related condition and the control condition was not significant,  $t(596) = 0.58, p = .834, d = .107$ .

Results did not indicate a significant two-way interaction between self-affirmation and secularism representation,  $F(2, 596) = 1.47, p = .231, \eta_p^2 = .005$ . The three-way interaction between self-affirmation, secularism representation and religious group was not significant,  $F(2, 596) = 0.32, p = .728, \eta_p^2 = .001$ .

### ***Analysis Including Participants' Religiosity***

As religion may be related to prejudice towards religious groups, it could be argued that the differences in participants' religiosity may have accounted for our findings. We therefore examined whether participants' religiosity had an impact on the effects of self-affirmation and of secularism representation on affective prejudice and behavioral prejudice. To test this possibility, we ran a multiple-regression analysis on prejudice towards religious groups, including participants' religiosity (i.e., the extent to which they report

practicing a religion; centered), two orthogonal contrasts corresponding to self-affirmation conditions (C1: self-affirmation on secularism = 2, self-affirmation on humor = -1, control = -1; C2: self-affirmation on secularism = 0, self-affirmation on humor = -1, control = 1), secularism representation (“New” secularism = -0.5; “Historical” secularism = 0.5), the interactions between religiosity and self-affirmation’s contrasts, and the interaction between religiosity and secularism representation.

**Affective Prejudice.** There was no significant interaction between C1 and religiosity,  $b = 0.02$ , 95% CI [-0.78, 0.82],  $t(594) = 0.05$ ,  $p = .962$ ,  $\eta_p^2 = .000$ , nor between C2 and religiosity,  $b = -0.57$ , 95% CI [-2.01, 0.88],  $t(594) = 0.77$ ,  $p = .441$ ,  $\eta_p^2 = .001$ . The interaction between religiosity and secularism representation was not significant,  $b = .82$ , 95% CI [-0.40, 2.03],  $t(594) = 1.32$ ,  $p = .186$ ,  $\eta_p^2 = .001$ .

**Behavioral Prejudice.** The interactions between C1 and religiosity and C2 and religiosity were not significant, respectively,  $b = 0.01$ , 95% CI [-0.04, 0.05],  $t(594) = 0.32$ ,  $p = .752$ ,  $\eta_p^2 = .000$ , and  $b = -0.05$ , 95% CI [-0.13, 0.03],  $t(594) = 1.21$ ,  $p = .227$ ,  $\eta_p^2 = .002$ . There was no significant interaction between religiosity and secularism representation,  $b = 0.04$ , 95% CI [-0.03, 0.11],  $t(594) = 1.24$ ,  $p = .217$ ,  $\eta_p^2 = .003$ .

### ***Exploratory Contrast Analysis***

While no significant main effect of the self-affirmation condition was observed, the mean patterns suggest that affective prejudice was lower in the threat-related condition as compared to the other two self-affirmation conditions. In order to test whether participants expressed lower prejudice in the self-affirmation on secularism condition as compared to the other two conditions together, we ran a supplementary analysis including C1 (self-affirmation on secularism = 2, self-affirmation on humor = -1, control = -1), C2 (self-affirmation on



secularism = 0, self-affirmation on humor = -1, control = 1), secularism representation (“New” secularism = -0.5; “Historical” secularism = 0.5) and their interactions, on both affective and behavioral prejudice.

**Affective Prejudice.** The contrast opposing self-affirmation on secularism against the two other conditions was significant,  $b = -1.70$ , 95% CI [-3.33, -0.08],  $t(596) = 2.06$ ,  $p = .040$ ,  $\eta_p^2 = .007$ . Participants were less prejudiced against religious groups in the self-affirmation on secularism condition ( $M = 14.95$ ,  $SD = 23.64$ ) as compared to the other two conditions combined ( $M = 18.52$ ,  $SD = 25.68$ ). The contrast opposing self-affirmation on humor ( $M = 18.91$ ,  $SD = 25.61$ ) and the control condition ( $M = 18.09$ ,  $SD = 25.81$ ) was not significant,  $b = -0.66$ , 95% CI [-3.60, 2.29],  $t(596) = 0.44$ ,  $p = .661$ ,  $\eta_p^2 = .000$ . The interactions between C1 and secularism representation, and C2 and secularism representation were not significant, respectively,  $b = 2.36$ , 95% CI [-0.89, 5.61],  $t(596) = 1.43$ ,  $p = .155$ ,  $\eta_p^2 = .003$  and  $b = 0.87$ , 95% CI [-5.02, 6.75],  $t(596) = 0.29$ ,  $p = .773$ ,  $\eta_p^2 = .000$ .

**Behavioral Prejudice.** We did not find a significant effect of C1,  $b = -0.05$ , 95% CI [-0.14, 0.04],  $t(596) = 1.06$ ,  $p = .291$ ,  $\eta_p^2 = .002$ , nor of C2,  $b = -0.05$ , 95% CI [-0.21, 0.11],  $t(596) = 0.62$ ,  $p = .535$ ,  $\eta_p^2 = .001$  on behavioral prejudice. There were no significant interactions between C1 and secularism representation, nor between C2 and secularism representation,  $b = 0.05$ , 95% CI [-0.13, 0.22],  $t(596) = 0.50$ ,  $p = .616$ ,  $\eta_p^2 = .000$  and  $b = 0.26$ , 95% CI [-0.06, 0.59],  $t(596) = 1.62$ ,  $p = .106$ ,  $\eta_p^2 = .004$ .

### ***Exploratory Content analysis***

The contrast analysis showed that participants who self-affirmed on secularism were less prejudiced against religious groups as compared to those in the other two conditions combined. This contradicts our hypothesis (H1), as we expected self-affirmation on the

threat-unrelated value (i.e., humor) to reduce prejudice against religious groups compared to the other two conditions. Although the effect size  $\eta_p^2 = .007$  which corresponds to  $f = 0.084$  is lower than the SESOI we defined ( $f = .14$ ), we wanted to understand this pattern, and we decided to conduct an exploratory content analysis (Stemler, 2000) of the open-ended responses in the affirmation task. We analyzed the responses of the 602 participants in the three experimental conditions. First, two coders looked at the data to get an idea of the emerging codes and establish an initial version of the codebook. Then, two authors coded a subset of the responses. The codebook was developed iteratively, after several discussions, and the final version was established. Intercoder reliability was evaluated (following the guidelines of O'Connor and Joffe, 2020) and Cohen's kappa was computed for each code individually and across all codes (De Vries et al., 2008). Cohen's pooled kappa indicated an almost perfect agreement,  $k_{pooled} = .97$  (Stemler, 2000). All data were then recoded using the final version of the codebook (for a detailed description of the codes see the codebook at <https://osf.io/63rnq/>) and frequencies of the codes were calculated (see Table 3 in the Supplementary).

Afterward, we looked for emerging categories in the codes. We noticed that the participants explained the importance of each affirmed value on different levels; they mentioned reasons that demonstrate why the value was important sometimes for them as individuals, sometimes for the value's role in social interactions and other times for its relation to national values and identity. We therefore identified three main categories, inspired by (Doise, 1982), that distinguish the reasons given for the importance of each affirmed value according to the level concerned: individual, social and national. In the individual level, we included codes such as coping, wellbeing, and health. In the social level, we included respecting others, facilitating social interactions and avoiding conflict. Finally, the national

level consisted of topics like freedom, equality and French identity. Next, we computed the observed frequencies of each level in the three self-affirmation conditions (Table 4 in the Supplementary). To test the differences in level frequencies in each condition, we used the  $X^2$  test and found a significant difference in level frequencies  $X^2(4, N = 717) = 495, p < .001, V = .59$  (Table 5 in the Supplementary). We found that participants in the secularism condition have mostly explained the importance of this value at the national level (138 times compared to 88 social, and 6 individual), whereas those in the humor (166 individual, 88 social, and 8 national) and in the physical endurance (209 individual, 14 social, and 0 national) conditions mostly mentioned reasons at the individual levels.

One possible interpretation is that self-affirmation on secularism may have played a protective role for national identity, whereas this would not be the case in the other two conditions. Indeed, if we look more closely at the codes identified in the secularism condition, we can find French national values (e.g., liberty and equality), national norms carried by laws, (e.g., neutrality in the public sphere and limiting personal convictions to the private domain), and codes that can refer to the third value of the French motto, fraternity (e.g., avoiding conflicts and facilitating social interactions). For example, some participants explained that secularism is an important value because it is a part of the French identity : *“The values of our parents and great-grandparents and our identity”*, others said that it guarantees equality between citizens : *“to maintain equality for all in the public sphere”*. Freedom was particularly emphasized by participants with a historical representation : *“Individuals have the right to live and express their beliefs”*. Moreover, some respondents stated that secularism can help avoid conflicts, mostly in intergroup relations : *“There would be less conflict if everyone practiced their religion in the private sphere without exposing themselves in the public arena”*.

However, this interpretation may imply attributing to the participants an intention to protect their national identity in the self-affirmation on secularism, compared to the two other conditions. An alternative interpretation would be that the values used in the self-affirmation task may inherently encourage thinking in either national or individual terms, secularism being a collective value while humor and physical endurance are more personal ones. We develop this aspect in the discussion section.

### Discussion

The purpose of this study was to examine whether the ideological malleability of the principle of secularism influences the effectiveness of the self-affirmation procedure in reducing affective and behavioral prejudice towards religious groups (Muslims vs. Christians) in France. First, the results provide some evidence that the malleability of the understanding of secularism as an ideology is associated with attitudes towards religious groups in France, particularly attitudes towards Muslims. In a representative sample of the French population, we find that participants who report a “historical” representation of secularism exhibit less affective and behavioral prejudice towards religious groups than those who have a “new” representation of secularism, and that prejudice is higher towards Muslims than towards Christians. More specifically, participants with a “new” representation show significantly higher affective and behavioral prejudice towards Muslims than towards Christians, whereas those with a “historical” representation show a slightly higher affective, but not behavioral, prejudice towards Muslims than towards Christians. It is worth noting that participants’ religiosity had no impact on these effects.

These results are consistent with previous work that show similar relationships between adherence to “new” secularism norms and prejudice and discrimination against immigrants (Anier et al., 2019; Nugier et al., 2016; Roebroek & Guimond, 2016). However,

previous research assessed participants' adherence to the principle of new secularism without considering the historical representation of secularism and examined how this adherence was associated with prejudice against North African immigrants, without specifying their religious affiliation. To our knowledge, this study is the first to clearly distinguish between participants with new and historical personal representations of secularism, and to demonstrate how these contrasting representations are related to prejudice against different religious groups. Participants in our study predominantly reported a personal “new” representation of secularism, which is considered to be a new and more restrictive interpretation of French secularism, driven by policies and laws banning religious symbols in the public sphere (Baubérot, 2012). This highlights the important role played by policies in shaping attitudes towards minority groups. In line with these findings, recent work by Kende et al. (2024) shows how integration policies impact majority perceptions of minority groups and their threat reactions in different contexts in Europe and the United States.

This study was a first attempt to test the interaction between secularism representations and self-affirmation interventions on prejudice. Contrary to our first hypothesis, self-affirmation had no significant effect on either affective or behavioral prejudice towards religious groups. Similarly, no significant interaction effect was found between self-affirmation and either of the other two variables (i.e., secularism representation and religious group). Our exploratory contrast analysis shows that participants in the condition of self-affirmation on secularism report lower affective (but not behavioral) prejudice towards religious groups as compared to the other two conditions combined (i.e., humor and physical endurance). This pattern is contrary to our prediction, based on previous research (e.g., Lehmiller et al., 2010), that self-affirmation on the threat-unrelated value

should reduce prejudice against religious groups relative to the other two conditions, but the effect size is lower than the defined SESOI.

Exploratory content analysis of the open-ended answers in the self-affirmation task reveals that when asked to reflect on reasons that make secularism an important value, participants mostly reflected on national-level values, norms and on intergroup relations, all of which make the collective aspect of the self salient, whereas, participants in the remaining two conditions mostly reflected on individual-level benefits. More specifically, while reflecting on “historical” and “new” secularism, participants were reminded of French values such as liberty, equality, and fraternity by indicating that secularism promotes positive interpersonal and intergroup relations. This primarily leads us to think that self-affirmation on secularism may have played a protective role for national identity, which may have led to decreased prejudice in this experimental condition. However, we should be cautious regarding this interpretation, as the individual vs. collective aspects evoked here can be inherent to the values themselves. In addition, the failure of self-affirmation on humor in reducing prejudice could be attributed to participants placing insufficient importance on humor as a value, thus it being incapable of protecting self-integrity from perceived threats coming from religious groups.

It is possible that participants in our study associated historical and new secularism with tolerant values that promote positive intergroup relations. However, our results in addition to a growing body of evidence suggest that new secularism is related to negative attitudes towards ethnic and religious minority groups. Even if hiding one’s religious beliefs or affiliations in public could have the potential to help people live more harmoniously, the fact that it is mandatory by law (in public institutions), and has become the social norm in public or even a personal belief, can turn people who do not comply to this norm into

deviants, and can lead to their perception negatively, which defies the purpose. In a study conducted by Nugier et al. (2016), highly prejudiced individuals evaluated more negatively and exerted more normative pressure on a North African target who had attitudes that did not conform to the “new” secularism norm. In their second study, highly prejudiced individuals reported more negative evaluations and practiced more pressure against a Muslim target compared to a Catholic target who did not adhere to the “new” secularism norm. In line with Dangubić et al. (2020) work, adhesion to secularism principle may hide negative attitudes towards Muslims in particular rather than a rejection of religious practices regardless of the religious group.

### **Implications, limitations, and directions for future research**

A first limitation that can be highlighted is that our self-affirmation procedure imposed the value to be affirmed, which is different from many self-affirmation procedures where participants are asked to rank a list of values, then reflect on the highest ranked one. However, this procedure was inspired by Lehmiller et al. (2010), who still found more consistent results with the self-affirmation theory. Although, our value importance check showed that humor received the highest rating of importance to the self, and that physical endurance received the lowest, as intended, our manipulation does not guarantee that humor is sufficiently important to participants to offset the threat to self-integrity. Despite this limitation, our results raise questions about the efficacy of self-affirmation as a prejudice reduction intervention, and its ability to protect self-image in a way that would reduce perceived threat and defensiveness, especially in an increasingly tense national and global context.

A second limitation pertains to the behavioral prejudice measure and its sensitivity to the self-affirmation manipulation. Distributive matrices, being cognitively complex and

demanding, may not be sufficiently sensitive to the subtle and brief self-affirmation activities. This may explain why some effects were not replicated on both affective and behavioral prejudice measures. Future research may benefit from using more sensitive measures of behavioral prejudice.

Finally, another limitation can be that we did not allow participants to choose neither of the two secularism representations. Nonetheless, our check item revealed that the dichotomous options successfully identified distinctive beliefs about secularism. Furthermore, the fact that the vast majority of participants in our study have a “new” representation of secularism could be seen as a limitation, but this seems to be representative of the French population as shown by survey data. IFOP (2023b) found that 81% of French people approved of the 2023 law banning the Abaya and the Qamis in schools, demonstrating an even higher support than that of the 2004 law banning religious symbols (73%). Our study confirms that high adherence to “new” secularism is related to negative attitudes against religious minorities. The idea that people should hide their religious identity in order to be accepted in society and to reduce conflicts reveals rejection of diversity and inclusion. We argue that this reasoning goes against what French historical secularism stands for, which is freedom and equality for all citizens, regardless of their beliefs or non-belief. It is worth noting that 78% of Muslims in France believe that secularism, in its currently applied form by the authorities, discriminates against them as Muslims (IFOP, 2023a). Indeed, pushing and promoting similar laws and norms could have the potential to exacerbate intergroup tensions and conflicts.

To extend the current findings, future research could examine the effect of such policies and ideologies on religious and ethnic minority groups’ attitudes towards the majority group and the State. Several outcomes, such as perceived injustice and perceived



threat, would be interesting to study as they can be crucial for understanding and predicting intergroup relations (e.g., Doosje et al., 2013). Furthermore, Muslims and North Africans have been the main focus of studies on secularism in France. While this is legitimate given the existing data, it would be interesting to explore these effects in other ethnic and religious minority groups. Finally, self-affirmation, in its usual or more recent adapted procedures (e.g., Tavitian-Elmadjian et al., 2019), could also be studied in minority groups as a potential intervention to face adversity and increase wellbeing, in the context of less tolerant norms and policies.

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**Self-Affirmation and Negative Attitudes Towards Minority Groups: The Role of  
Ideological Malleability**

**Registered Report [Stage 2]**

**Supplementary**

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## Open Science Disclosure

### *Data and Code*

Data and code are available at: <https://osf.io/63rnq/>

### *Data Collection*

Data collection was completed before analyzing the data.

### *Conditions Reporting*

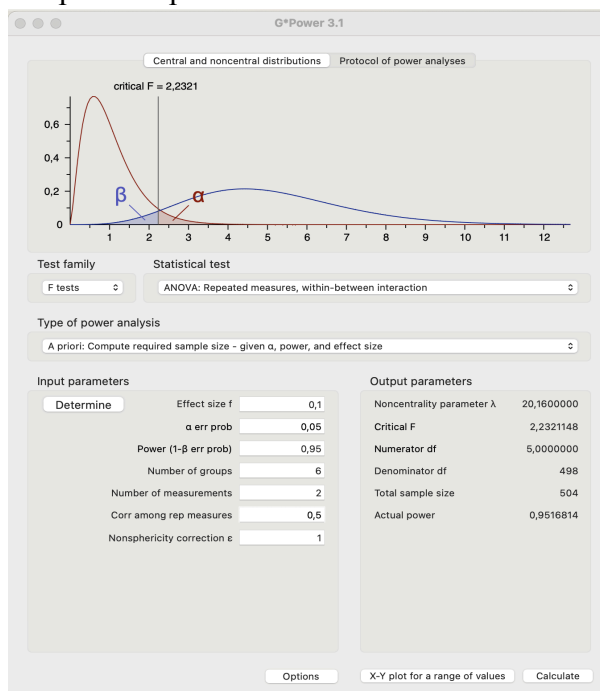
All collected conditions are reported.

### *Variables Reporting*

All variables collected for this study are reported and included in the provided data.

## Power Analysis

First, we defined the smallest effect size of interest for the analysis that tests our main hypothesis, that is the interaction effect between self-affirmation and secularism representation. Due to the absence of empirical data concerning our interaction effect, we were unable to identify clear criteria to set our SESOI. We thus decided to set this effect according to Cohen's criteria, corresponding to a small effect size of  $f = .10$ . Then we conducted an a-priori power analysis using G\*Power 3.1. to estimate the required sample size for a mixed ANOVA with 6 groups,  $\alpha = .05$ , and power = .95. The required sample to detect an effect size of  $f = .10$  was  $N = 504$ . We decided to expand our sample to  $N = 600$  to minimize the risk of overestimating the true population effect size and to account for potential exclusions (Perugini et al., 2018). Afterward, we specified a SESOI for each test in the PCIRR-study design table (page 5). Finally, the sample of 600 participants was used to compute the power to detect each SESOI in the table.



## Materials and Scales

We first present the material in its original form (in French) as the research was conducted in French. We also provide a translation in English below. Qualtrics exported files that included all the original materials and stimuli are available at: <https://osf.io/63rnq/>.

### *Original Version (French)*

#### **CONSENTEMENT**

Cette étude est menée par plusieurs chercheurs du département de psychologie à l'Université Paris Nanterre.

#### Objectif de l'étude

Cette étude a pour objectif d'examiner les relations entre les différents groupes qui vivent ensemble dans notre société.

#### Déroulement de l'étude

Dans cette étude, il vous sera demandé de répondre à un ensemble de questions. Afin d'obtenir une diversité de réponses, nous vous demandons de répondre selon votre propre opinion. La durée de cette étude a été indiquée sur la tâche que vous avez acceptée. Vous aurez un débriefing à la fin du questionnaire.

#### Risques potentiels

Cette étude ne présente pas de risques connus et a été validée par le Comité d'Éthique de la Recherche de l'université de Nanterre (Numéro éthique : 2022-06-03).

#### Bénéfices potentiels

Cette étude vise à apporter de nouvelles connaissances dans le domaine de la psychologie sociale. Nous espérons également qu'il s'agira d'une expérience enrichissante pour vous, en vous permettant éventuellement d'en apprendre davantage sur vous-même, vos croyances, vos préférences, votre personnalité, etc.

#### Compensation

La compensation est offerte via la plateforme en ligne. Le niveau de rémunération a été indiqué sur la tâche que vous avez acceptée.

#### Participation et retrait

Votre participation est volontaire. Cela signifie que vous pouvez choisir d'arrêter à tout moment sans conséquences négatives. Si à tout moment, vous souhaitez interrompre votre participation, veuillez simplement indiquer huit zéros comme code d'achèvement, et vous recevrez une compensation quand même.

#### Confidentialité

Vos réponses au questionnaire sont anonymes et strictement confidentielles. Aucun identifiant personnel n'est conservé. Les informations obtenues ne seront utilisées que comme agrégats à des fins de recherche. Une version anonymisée des données, sans informations confidentielles, sera partagée publiquement pour permettre la reproduction et la reproductibilité de nos recherches.

#### Notice d'information

L'Université Paris Nanterre traite les données recueillies pour le programme de recherche AFFIRMATIF, financé par l'Agence Nationale de la Recherche. Les informations recueillies dans

le questionnaire sont enregistrées dans un fichier informatisé. L'Université Paris Nanterre (200 avenue de la République, 92001 Nanterre), représentée par son président, M. Philippe Gervais-Lambony, est responsable de son traitement. La base légale du traitement est l'exécution d'une mission de service public d'enseignement supérieur prévue à l'article L. 123-3 du code de l'éducation. Les données collectées seront communiquées aux seuls destinataires suivants : enseignant.e.s et chercheur.e.s. impliqués dans le programme AFFIRMATIF. Elles sont conservées en France pendant cinq ans. Vous êtes libre de vous retirer ou de cesser votre participation à ce projet à tout moment. Ce retrait n'aura aucune conséquence. Consultez le site [cnil.fr](http://cnil.fr) pour plus d'informations sur vos droits. Pour exercer ces droits ou pour toute question sur le traitement de vos données dans ce dispositif, vous pouvez contacter, notre délégué à la protection : [dpo@liste.parisnanterre.fr](mailto:dpo@liste.parisnanterre.fr) Si vous estimez, après nous avoir contactés, que vos droits « Informatique et Libertés » ne sont pas respectés, vous pouvez adresser une réclamation à la CNIL.

#### Formulaire de consentement

Ce formulaire est destiné à recueillir votre consentement pour la collecte des données vous concernant, dans le cadre du projet AFFIRMATIF piloté par Constantina Badea, professeure de psychologie sociale à l'Université Paris Nanterre. En signant le formulaire de consentement, vous certifiez :

- Que vous avez 18 ans ou plus et que vous avez lu et compris les renseignements communiqués.
- Qu'on vous a informé que vous étiez libre de retirer votre consentement ou d'arrêter de participer à cette recherche en tout temps, sans préjudice.

J'ai lu et compris les renseignements fournis dans la notice d'informations et j'accepte de plein gré de participer à cette recherche. Je m'engage également à ne pas divulguer les détails de l'étude à d'autres parties.

J'accepte que mes réponses aux questions posées soient exploitées par l'équipe du projet.

Lorsque vous êtes prêt.e à commencer, veuillez cliquer sur la flèche pour passer à l'étude.

#### CHECKS

Cette enquête s'intéresse à votre opinion personnelle. Il vous sera demandé d'indiquer vos pensées et vos sentiments. Vous répondrez tout simplement à des questions pour lesquelles il n'y a pas de bonnes ou de mauvaises réponses. Veuillez répondre le plus spontanément et le plus sincèrement possible.

- D'abord, il vous sera demandé de répondre à des questions socio-démographiques.
- La deuxième partie s'intéresse à la notion de laïcité.
- La troisième partie concerne les valeurs personnelles.
- La dernière partie s'intéresse à vos opinions concernant différents groupes.

Êtes-vous dans un environnement vous permettant de répondre attentivement aux questions qui suivent ?

- Oui
- Non

Pas sûr.e, probablement pas

AVERTISSEMENT : l'étude comprend des contrôles d'attention et de compréhension.

Avez-vous compris le déroulement de l'étude et êtes-vous d'accord pour participer à une enquête avec des contrôles d'attention et de compréhension ?

Oui

Non

Pas sûr.e, probablement pas

Cette enquête s'adresse uniquement aux francophones né.e.s et élevé.e.s en France. Êtes-vous de langue maternelle française, né.e, élevé.e et vivant actuellement en France ?

Oui

Non

Pas sûr.e, probablement pas

Veuillez préciser quelques informations vous concernant :

Genre: Femme/Homme/Autre/Je ne souhaite pas répondre

Quel est votre âge ?

18-24 (veuillez préciser) \_\_\_\_\_

25-34 (veuillez préciser) \_\_\_\_\_

35-49 (veuillez préciser) \_\_\_\_\_

50-64 (veuillez préciser) \_\_\_\_\_

65-74 (veuillez préciser) \_\_\_\_\_

75-90 (veuillez préciser) \_\_\_\_\_

Dans quelle région habitez-vous ?

Région parisienne

Nord-Ouest

Nord-Est

Sud-Ouest

Sud-Est

Quelle est la profession de la personne ayant le plus haut revenu au sein de votre foyer ? Si celle-ci est actuellement au chômage, veuillez indiquer son ancienne activité.

Agriculteurs

Artisans, commerçants, chefs d'entreprise

Cadres, professions libérales et professions intellectuelles supérieures

Professions intermédiaires, techniciens, contremaîtres, agents de maîtrise

Employés

Ouvriers

Retraités

Autres inactifs (étudiants, demandeurs d'emploi, etc.)

Dans quelle mesure estimez-vous pratiquer une religion ? (de 1 = Pas du tout à 7 = Tout à fait)

Parmi ces religions ou confessions, quelle est celle dont vous vous sentez le plus proche ?

Agnostique

Athée

- Bouddhiste
- Chrétienne
- Hindouiste
- Juive
- Musulmane
- Autre: \_\_\_\_\_
- Je ne souhaite pas répondre

En ce qui concerne la politique en général, vous considérez-vous comme étant plutôt de gauche, du centre ou de droite ?

1 = Très à gauche

2

3

4

5

6

7 = Très à droite

Je ne souhaite pas répondre

### **REPRÉSENTATION\_LAICITE**

Nous allons maintenant commencer la première partie de cette étude.

La laïcité est une valeur centrale en France. Nous allons vous présenter deux visions de la laïcité. Parmi ces deux visions, quelle est celle qui correspond le plus à vos convictions personnelles ? Autrement dit, si vous deviez choisir l'une des deux, laquelle choisiriez-vous ?

Les individus sont libres de pratiquer leur religion en privé et en public. Les citoyens ont le droit de montrer leur appartenance religieuse dans la sphère publique. L'État doit rester totalement neutre vis-à-vis de ces pratiques religieuses.

Les individus sont libres de pratiquer leur religion en privé, mais pas en public. Les citoyens n'ont pas le droit de montrer leur appartenance religieuse dans la sphère publique. L'État doit réguler ces pratiques religieuses.

Dans quelle mesure êtes-vous d'accord avec l'affirmation suivante. Veuillez indiquer votre opinion personnelle sur une échelle de 1 à 7 (1 = pas du tout d'accord, 7 = tout à fait d'accord)

- Les pratiques et les symboles religieux ne devraient pas être autorisés dans les institutions publiques.

### **SELF\_AFFIRMATION**

*Les participants sont aléatoirement assignés à l'une des trois conditions suivantes (Affirmation de soi sur la valeur liée à la menace vs. Affirmation de soi sur la valeur non liée à la menace vs. contrôle)*

#### **Condition 1: Affirmation de soi sur la valeur liée à la menace**

Vous avez choisi la vision suivante de la laïcité comme étant la plus proche de vos convictions personnelles : [La vision qui correspond au choix des participants est affichée ci-dessous]

-----  
Veuillez expliquer pourquoi cette vision de la laïcité serait une valeur importante pour vous personnellement.

-----  
Donnez un exemple où cette valeur a guidé votre comportement (par exemple, dans votre vie quotidienne, dans vos interactions avec autrui...).

-----  
Avant de passer à la partie suivante du questionnaire, nous aimerions savoir quelle est l'importance de la laïcité pour vous personnellement.

Veuillez indiquer l'importance de la laïcité pour vous sur une échelle de 1 à 7 (1 = pas du tout importante, 7 = très importante).

#### **Condition 2: Affirmation de soi sur la valeur non liée à la menace**

Vous avez choisi la vision suivante de la laïcité comme étant la plus proche de vos convictions personnelles : [La vision qui correspond au choix des participants est affichée ci-dessous]

-----  
Nous aimerions maintenant nous concentrer sur un autre aspect lié aux relations sociales dans notre société, à savoir l'humour.

Veuillez expliquer pourquoi l'humour serait une valeur importante pour vous personnellement.

-----  
Donnez un exemple où cette valeur a guidé votre comportement (par exemple, dans votre vie quotidienne, dans vos interactions avec autrui...).

-----  
Avant de passer à la partie suivante du questionnaire, nous aimerions savoir quelle est l'importance de l'humour pour vous personnellement.

Veuillez indiquer l'importance de l'humour pour vous sur une échelle de 1 à 7 (1 = pas du tout important, 7 = très importante).

#### **Condition 3: Contrôle**

Vous avez choisi la vision suivante de la laïcité comme étant la plus proche de vos convictions personnelles : [La vision qui correspond au choix des participants est affichée ci-dessous]

-----  
Nous aimerions maintenant nous concentrer sur un autre aspect de la vie, cette fois-ci corporel, à savoir l'endurance physique.

Veillez expliquer pourquoi l'endurance physique serait une valeur importante pour une autre personne (PAS pour vous personnellement)

Donnez un exemple où cette valeur pourrait guider le comportement de cette personne (par exemple, dans sa vie quotidienne, dans ses interactions avec autrui...).

Avant de passer à la partie suivante du questionnaire, nous aimerions savoir quelle est l'importance de l'endurance physique pour vous personnellement.

Veillez indiquer l'importance de l'endurance physique pour vous sur une échelle de 1 à 7 (1 = pas du tout importante, 7 = très importante).

#### **MESURE\_PREJUGE\_AFFECTIF**

Vous allez maintenant compléter la deuxième partie de cette étude.  
Nous aimerions connaître vos sentiments à l'égard de plusieurs groupes dans notre société.  
Merci d'évaluer chaque groupe en positionnant le curseur selon vos propres sentiments envers ces groupes de 0 (sentiments très négatifs) à 100 (sentiments très positifs).

*[L'ordre de présentation des groupes est aléatoire]*

- Les Musulmans
- Les Chrétiens
- Les Français
- Les Supporters de football
- Les politiciens
- Les végétariens
- Les dentistes
- Les Hindous
- Les athées
- Les psychologues
- Veuillez placer le curseur sur dix

#### **MESURE\_PREJUGE\_COMPORTEMENTAL**

Maintenant, nous vous demandons d'imaginer le scénario suivant et de décider comment vous choisiriez d'agir si vous aviez le dernier mot :

Imaginez que vous êtes responsable de l'allocation des subventions à la Mairie de Paris. Pour votre prochaine mission, vous devrez décider comment répartir 500 000 euros entre deux associations d'étudiants à fort impact, présentes dans différentes universités françaises, et qui ont besoin de soutien. Nous allons vous présenter 2 tableaux de répartitions possibles avec 4 associations différentes.

*[L'ordre de présentation des matrices est contrebalancé]*

-----  
Veuillez indiquer comment vous auriez l'intention de répartir la somme de 500 K euros entre les deux associations suivantes. Cliquez sur le choix correspondant à la répartition qui vous convient le plus.

Attention : lorsque vous sélectionnez un choix, cela implique que vous êtes d'accord avec la somme accordée AUX DEUX associations, car chaque choix possible implique deux sommes.

Somme à allouer : 500 K euros							
Distributions possibles des ressources							
	Choix 1	Choix 2	Choix 3	Choix 4	Choix 5	Choix 6	Choix 7
Étudiants de France	50 K	100 K	200 K	250 K	300 K	400 K	450 K
L'association des étudiants musulmans	450 K	400 K	300 K	250 K	200 K	100 K	50 K

Quel est votre choix ?

- Choix 1
- Choix 2
- Choix 3
- Choix 4
- Choix 5
- Choix 6
- Choix 7

-----  
Veuillez indiquer comment vous auriez l'intention de répartir la somme de 500 K euros entre les deux associations suivantes. Cliquez sur le choix correspondant à la répartition qui vous convient le plus.

Attention : lorsque vous sélectionnez un choix, cela implique que vous êtes d'accord avec la somme accordée AUX DEUX associations, car chaque choix possible implique deux sommes.

Somme à allouer : 500 K euros							
Distributions possibles des ressources							
	Choix 1	Choix 2	Choix 3	Choix 4	Choix 5	Choix 6	Choix 7



Les étudiants français unis	50 K	100 K	200 K	250 K	300 K	400 K	450 K
L'association des étudiants chrétiens	450 K	400 K	300 K	250 K	200 K	100 K	50 K

Quel est votre choix ?

- Choix 1
- Choix 2
- Choix 3
- Choix 4
- Choix 5
- Choix 6
- Choix 7

### **FUNNELING ET DEBRIEFING**

Il vous reste quelques questions rapides sur cette page.

Dans quelle mesure avez-vous complété ce questionnaire sérieusement ? (de 1 = *Pas du tout* to 5 = *Tout à fait*)

Selon vous, quel était l'objectif de l'étude ? (une phrase)

---

Aidez-nous à nous améliorer pour les prochaines études !

Avez-vous relevé des erreurs ? Quelque chose qui manque ou qui ne va pas ? Quelque chose auquel nous devrions prêter attention ? (brièvement)

---

Nous vous remercions d'avoir participé à notre recherche. Cette recherche est menée dans le cadre d'un projet de recherche « AFFIRMATIF » financé par l'Agence Nationale de la recherche.

Encore une fois, nous vous assurons que les données recueillies sont strictement confidentielles. Elles seront traitées uniquement dans le cadre de recherches universitaires.

L'objectif de la recherche est d'identifier le rôle joué par les croyances populaires concernant la laïcité française dans l'expression des préjugés et des comportements discriminatoires à l'encontre des minorités religieuses. Nous testons aussi l'effet d'une technique basée sur l'auto-affirmation visant à la diminution des préjugés. Les techniques d'auto-affirmation aident les individus à réfléchir aux valeurs qu'ils considèrent importantes dans leur vie. Des études montrent que cette

activité simple peut aider à se sentir mieux envers soi-même et à avoir une estime de soi plus élevée, ce qui amène à manifester moins d'attitudes négatives à l'égard d'autrui.

Nous tenons par ailleurs à vous assurer que les données recueillies au cours de cette expérimentation ne serviront en aucun cas à tenir des propos stigmatisants ou discriminants.

Si vous souhaitez de plus amples informations sur les résultats de cette étude, vous pouvez vous adresser à : [affirmatif.parisnanterre@hotmail.com](mailto:affirmatif.parisnanterre@hotmail.com)

Vous pouvez également consulter le site du gouvernement dédié à la laïcité afin d'avoir une définition officielle de la laïcité: <https://www.gouvernement.fr/laicitegouvfr>

Nous vous demandons de ne pas partager les détails de cette étude avec d'autres personnes, car celles-ci pourraient être des participants potentiels et connaître le but de l'étude à l'avance peut influencer les résultats.

### ***Translated Materials and Scales***

#### **CONSENT**

This study is conducted by researchers in the psychology department at the University of Paris Nanterre.

#### Purpose of the study

The aim of this study is to examine the relationships between different groups living together in our society.

#### Procedure

In this study, you will be asked to answer a series of questions. In order to obtain a diversity of answers, we ask you to respond according to your own opinion. The duration of this study has been indicated on the task you have accepted. You will be debriefed at the end of the questionnaire.

#### Potential risks

This study presents no known risks and has been validated by the Research Ethics Committee of Paris Nanterre University (Ethical Number: 2022-06-03).

#### Potential benefits

This study aims to contribute new knowledge to the field of social psychology. We also hope that it will be an enriching experience for you, enabling you to learn more about yourself, your beliefs, your preferences, your personality and so on.

#### Compensation

Compensation is offered via the online platform. The level of compensation has been indicated on the task you have accepted.

#### Participation and withdrawal

Your participation is voluntary. This means you can choose to stop at any time without any negative consequences. If at any time you wish to discontinue your participation, simply enter eight zeros as the completion code, and you will receive compensation anyway.

#### Confidentiality

Your answers to the questionnaire are anonymous and strictly confidential. No personal identifiers are stored. The information obtained will only be used as aggregates for research purposes. An anonymized version of the data, with no confidential information, will be shared publicly to enable reproduction and reproducibility of our research.

#### Information note

The University of Paris Nanterre processes the data collected for the AFFIRMATIF research program, funded by the National Agency of Research. The information collected using the questionnaire are saved in a computerized file. The University of Paris Nanterre (200 avenue de la République, 92001 Nanterre), represented by its President, Mr. Philippe Gervais-Lambony, is responsible for data processing. The legal basis for the processing is the performance of a public service mission in higher education, as provided for in article L. 123-3 of the French Education Code. The data collected will be communicated only to the following recipients: teachers and researchers involved in the AFFIRMATIF program. It will be kept in France for five years. You are free to withdraw or cease your participation in this project at any time. Such withdrawal will have no consequences. Visit [cnil.fr](http://cnil.fr) for more information on your rights. To exercise these rights, or if you have any questions about the processing of your data under this scheme, please contact our Data Protection Officer: [dpo@liste.parisnanterre.fr](mailto:dpo@liste.parisnanterre.fr). If, after contacting us, you feel that your “Informatique et Libertés” rights have not been respected, you may submit a complaint to the CNIL.

#### Consent form

This form is intended to obtain your consent for the collection of data concerning you, as part of the AFFIRMATIF project led by Constantina Badea, Professor of Social Psychology at the University of Paris Nanterre. By signing the consent form, you certify :

- That you are 18 years of age or older and that you have read and understood the information provided.

- That you have been informed that you are free to withdraw your consent or stop participating in this research at any time, without prejudice.

I have read and understood the information provided in the information note, and I willingly agree to participate in this research. I also agree not to divulge any details of the study to any other party.

I agree that my answers to the questions asked may be used by the project team.

When you're ready to start, click on the arrow to proceed to the study.

#### CHECKS

This survey is about your personal opinion. You will be asked to indicate your thoughts and feelings. You will simply be answering questions for which there are no right or wrong answers.

Please answer as spontaneously and sincerely as possible.

- First, you will be asked to answer some sociodemographic questions.
- The second part deals with the notion of secularism.
- The third part concerns personal values.
- The final part looks at your opinions on different groups.

Are you in a position to answer the following questions carefully?

- Yes
- No
- Not sure, probably not

WARNING: the study includes attention and comprehension checks.

Have you understood how the study works and do you agree to take part in a survey with attention and comprehension checks?

- Yes
- No
- Not sure, probably not

This survey is only intended for native French speakers born and raised in France. Are you a native French speaker, born, raised and currently living in France?

- Yes
- No
- Not sure, probably not

Please give us some information about yourself:

Gender: Woman/Man/Other/ I don't want to answer

How old are you?

- 18-24 (please specify) \_\_\_\_\_
- 25-34 (please specify) \_\_\_\_\_
- 35-49 (please specify) \_\_\_\_\_
- 50-64 (please specify) \_\_\_\_\_
- 65-74 (please specify) \_\_\_\_\_
- 75-90 (please specify) \_\_\_\_\_

In which region do you live ?

- Paris Region
- North-West
- North-East
- South-West
- South-East

What is the occupation of the person with the highest income in your household? If this person is currently unemployed, please indicate his/her former occupation.

- Farmers
- Craftsmen, shopkeepers, company managers
- Office workers, professionals and higher intellectual professions
- Intermediate professions, technicians, foremen, supervisors
- Employees
- Manual workers

- Retirees
- Other inactive (students, jobseekers, etc.)

To what extent would you say you practice a religion? (from 1 = Not at all to 7 = Absolutely)

Which of these religions or beliefs do you feel closest to?

- Agnostic
- Atheist
- Buddhist
- Christian
- Hinduist
- Jewish
- Muslim
- Other: \_\_\_\_\_
- I don't want to answer

When it comes to politics in general, do you consider yourself more left-wing, center-wing or right-wing?

- 1 = Very left-wing
- 2
- 3
- 4
- 5
- 6
- 7 = Very-right wing
- I don't want to answer

## **SECULARISM\_REPRESENTATION**

We will now begin the first part of this study.

Secularism is a central value in France. We will present two visions of secularism.

Which of these two visions best corresponds to your personal convictions? In other words, if you had to choose one of the two, which one would you choose?

Individuals are free to practice their religion in private and in public. Citizens have the right to show their religious affiliation in the public sphere. The State must remain totally neutral with regard to these religious practices.

Individuals are free to practice their religion in private, but not in public. Citizens do not have the right to show their religious affiliation in the public sphere. The State must regulate these religious practices.

To what extent do you agree with the following statement. Please indicate your personal opinion on a scale of 1 to 7 (1 = strongly disagree, 7 = strongly agree).

- Religious practices and symbols should not be allowed in public institutions.

**SELF\_AFFIRMATION**

*Participants are randomly assigned to one of the three following conditions (self-affirmation on threat-related value vs. self-affirmation on threat-unrelated value vs. control)*

**Condition 1: Self-affirmation on threat-related value**

You have chosen the following vision of secularism as being closest to your personal convictions :  
[The vision that corresponds to the participant's choice is displayed below]

-----  
Please explain why this vision of secularism would be an important value for you personally.

-----  
Give an example where this value has guided your behavior (for instance, in your daily life, in your interactions with others...).

-----  
Before we move to the next part of the survey, we would like to know how important secularism is to you personally.

Please indicate the importance of secularism to you on a scale from 1 to 7 (1 = not at all important, 7 = very important).

**Condition 2: Self-affirmation on threat-unrelated value**

You have chosen the following vision of secularism as being closest to your personal convictions :  
[The vision that corresponds to the participant's choice is displayed below]

-----  
Now we would like to focus on another aspect of life, this time social, that is humor.  
Please explain why humor would be an important value for you personally

-----  
Give an example where this value has guided your behavior (for instance, in your daily life, in your interactions with others...).

-----  
Before we move to the next part of the survey, we would like to know how important humor is to you personally.

Please indicate the importance of humor to you on a scale from 1 to 7 (1 = not at all important, 7 = very important).

**Condition 3: Control**

You have chosen the following vision of secularism as being closest to your personal convictions :  
[The vision that corresponds to the participant's choice is displayed below]

-----  
Now we would like to focus on another aspect of life, this time corporal, that is physical endurance.

Please explain why physical endurance would be an important value for another person (NOT for

you personally)

Give an example where this value could guide the behavior of this person (for instance, in their daily life, in their interactions with others...).

Before we move to the next part of the survey, we would like to know how important physical endurance is to you personally.

Please indicate the importance of physical endurance to you on a scale from 1 to 7 (1 = not at all important, 7 = very important).

#### **AFFECTIVE\_PREJUDICE\_MEASURE**

You will now complete the second part of this study.

We'd like to know how you feel about several groups in our society. Please rate each group by positioning the slider according to your own feelings towards these groups, from 0 (very negative feelings) to 100 (very positive feelings).

*[The presentation order of groups is randomized]*

- Muslims
- Christians
- French people
- Football Supporters
- Politicians
- Vegans
- Dentists
- Hindus
- Atheists
- Psychologists
- Please, put the cursor on ten

#### **BEHAVIORAL\_PREJUDICE\_MEASURE**

Now we ask you to imagine the following scenario and to decide how you would choose to act if you had the final word:

Imagine you are in charge of grant allocation at Paris City Hall. For your next assignment, you will have to decide how to divide 500,000 euros between two high-impact student associations at different French universities that need support. We are going to show you 2 possible distribution tables with 4 different associations.

*[The order in which the matrices are presented is counterbalanced.]*

Please indicate how you intend to distribute the sum of 500 K euros between the following two associations. Click on the choice corresponding to the distribution that suits you best.

Please note: when you select a choice, this implies that you agree with the amount granted TO BOTH associations, because each possible choice involves two amounts.

Amount to allocate : 500 K euros							
Possible distributions							
	Choice 1	Choice 2	Choice 3	Choice 4	Choice 5	Choice 6	Choice 7
Students of France	50 K	100 K	200 K	250 K	300 K	400 K	450 K
The Muslim students' association	450 K	400 K	300 K	250 K	200 K	100 K	50 K

What is your choice ?

- Choice 1
- Choice 2
- Choice 3
- Choice 4
- Choice 5
- Choice 6
- Choice 7

-----

Please indicate how you intend to distribute the sum of 500 K euros between the following two associations. Click on the choice corresponding to the distribution that suits you best.

Please note: when you select a choice, this implies that you agree with the amount granted TO BOTH associations, because each possible choice involves two amounts.

Amount to allocate : 500 K euros							
Possible distributions							
	Choice 1	Choice 2	Choice 3	Choice 4	Choice 5	Choice 6	Choice 7
French students united	50 K	100 K	200 K	250 K	300 K	400 K	450 K
The Christian students' association	450 K	400 K	300 K	250 K	200 K	100 K	50 K



What is your choice ?

- Choice 1
- Choice 2
- Choice 3
- Choice 4
- Choice 5
- Choice 6
- Choice 7

### **FUNNELING AND DEBRIEFING**

There are a few quick questions left on this page and some sociodemographic questions on the next page.

How seriously have you answered this questionnaire?(from 1 = *Not at all* to 5 = *Absolutely*)

In your opinion, what was the aim of the study? (one sentence)

---

Help us improve for future studies!

Have you noticed any errors? Anything missing or wrong? Anything we should pay attention to (briefly)?

---

Thank you for taking part in our research. This research is being carried out as part of an "AFFIRMATIF" research project funded by the French National Research Agency.

Once again, we assure you that the data collected is strictly confidential. It will only be used for university research purposes.

The aim of the research is to identify the role played by popular beliefs about French secularism in the expression of prejudice and discriminatory behavior against religious minorities. We are also testing the effect of a self-affirmation technique aimed at reducing prejudice. Self-affirmation techniques help individuals reflect on values they consider significant in their life. Studies show that this simple activity can help people feel better about themselves and have a higher self-esteem, which makes them exhibit fewer negative attitudes towards others.

We would also like to assure you that the data collected during this experiment will in no way be used to make stigmatizing or discriminatory statements.

For further information on the results of this study, please contact:

affirmatif.parisnante@hotmai.com

You can also consult the government website dedicated to secularism for an official definition of secularism: <https://www.gouvernement.fr/laicitegouvfr>

We ask you not to share details of this study with others, as they may be potential participants, and knowing the purpose of the study in advance may influence the results.

### ***Affective Prejudice Score Calculation***

- Affective prejudice against Muslims = feeling towards French - feeling towards Muslims. Higher score means higher relative prejudice towards Muslims
- Affective prejudice against Christians = feeling towards French - feeling towards Christians. Higher score means higher relative prejudice towards Christians

### ***Behavioral Prejudice Score***

- Behavioral prejudice against Muslims = the choice from 1 to 7 representing money attributed to the French association (Students of France) and to the Muslim association (the Muslim students' association). Higher score means higher de-favouritism towards Muslims
- Behavioral prejudice against Christians = the choice from 1 to 7 representing money attributed to the French association (French students united) and to the Christian association (the Christian students' association). Higher score means higher de-favouritism towards Christians

### ***Exclusion Criteria***

We run our analyses on the full sample of all participants who successfully completed the study and answered all questions. Those who dropped out were not included. Exclusion criteria were automatically applied during data collection, as requested by the survey institution, Bilendi, for payment monitoring and quota control. Thus, all participants who completed the study to the end were included in the final sample.

Participants were immediately redirected to the end of the study, and were thus not included in the final sample on the basis of the following criteria: (1) not consenting to take part in the study, (2) indicating that they are not in an environment that allows them to answer the questionnaire seriously (either answering, “no” or “not sure, probably not”), (3) reporting that they did not answer the survey seriously (self-report < 4, on a 1-5 scale) and (4) failing the attention check item (i.e., indicating another response than 10 to the question asking them to select the response 10). Participants who indicated that they were not native French speakers, born, raised and living in France, were immediately redirected to the affective and behavioral prejudice measures and were shown a different debriefing text, as requested by the research institution, which reads : “Thank you for taking part in our research. Once again, we assure you that the data collected is strictly confidential. It will only be used for academic research purposes. The aim of the research is to understand the relationships between

different cultural groups in France. We would also like to assure you that the data collected during this experiment will in no way be used to make stigmatizing or discriminatory statements. If you would like further information on the results of this study, please contact: [affirmatif.parisnante@hotmai.com](mailto:affirmatif.parisnante@hotmai.com). We ask you not to share details of this study with others, as they could be potential participants, and knowing the purpose of the study in advance could influence the results.” The data of these participants were not used.

### ***Handling Outliers***

We conducted analyses on the full sample that completed the survey to the end.

### **Additional Tables**

**Table 3**

*Content Analysis (codes' frequencies)*

Self-affirmation condition	Code Name	Count	Level
Secularism	Private_Domain	51	National level
	Respecting_others	48	Social level
	Religious_freedom	39	National level
	Conflict	36	Social level
	French_identity	17	National level
	Equality	15	National level
	Respecting_law	8	National level
	Neutrality	8	National level
	Against_religion	6	Individual level
	Facilitating_social_interactions	4	Social level

Humor	Coping	90	Individual level
	Well-being	76	Individual level
	Facilitating_social_interactions	30	Social level
	Communication	24	Social level
	Conflict	17	Social level
	Liberation	12	Social level
	Freedom_of_expression	8	Country level
	Social_support	5	Social level
Physical endurance	Health	115	Individual level
	Physical_strength	34	Individual level
	Goal_achievement	14	Individual level
	Mental_endurance	14	Individual level
	Work	11	Individual level
	Sport	10	Individual level
	Self-esteem	9	Individual level
	Protection	8	Social level

Facilitating_social_interactions	6	Social level
Physical_appearance	2	Individual level

**Table 4**

*Content Analysis (levels' frequencies)*

Self-affirmation condition	Level	Count
Secularism	National level	138
	Social level	88
	Individual level	6
Humor	National level	8
	Social level	88
	Individual level	166
Physical endurance	National level	0
	Social level	14
	Individual level	209

**Table 5**

*$\chi^2$  Test*

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	Value	df	p
$\chi^2$	495	4	< .001
N	717		

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Nominal

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	Value
Phi-coefficient	NaN
Cramer's V	0.588

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