

Interreligious contact and attitudes in Togo and Sierra Leone: The role of ingroup norms and individual preferences

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Interreligious contact and attitudes in Togo and Sierra Leone:**The role of ingroup norms and individual preferences****Abstract**

Rising religious violence makes it imperative to develop strategies to foster and preserve interreligious peace. We examine the role of descriptive and injunctive pro-mixing ingroup norms in explaining interreligious contact and, indirectly, more favorable interreligious attitudes. Ingroup norms have been argued to affect intergroup contact independently of individual preferences through mechanisms of social control, and indirectly via internalization of the norms in one's own preferences. However, the relation between ingroup norms and individual preferences is rarely investigated, and it is unknown whether these two mechanisms matter differently for positive and negative contact. We conducted two studies ($N_1 = 678$, $N_2 = 1,831$) in Togo and Sierra Leone to determine whether ingroup norms predict positive and negative interreligious contact directly, indirectly via individual preferences, or via both mechanisms, and how this then translates to intergroup attitudes. We also explored whether the processes were comparable between countries and for religious majority and minority members. We found that descriptive and injunctive norms both mattered for interreligious contact. While for descriptive pro-mixing norms direct mechanisms of social control were more pronounced, injunctive norms were related to interreligious contact and attitudes via preferences for similar others through internalization processes.

Keywords: ingroup norms, intergroup contact, interreligious peace, individual preferences, West Africa

Public Impact Statement

What factors facilitated positive relations between Muslims and Christians in Togo and Sierra Leone? We found that participants who observed members of their own religious group to have more friends adhering to another religion also engaged more with members of other religions and had more favorable attitudes towards other religions. Our results suggest that the absence of social sanctions and changes in individual preferences explain these relationships.

Interreligious contact and attitudes in Togo and Sierra Leone:**The role of ingroup norms and individual preferences**

Religion can be an important dimension in conflicts. Violent conflicts over religious issues have increased worldwide from about 3 percent of cases in 1975 to about 55 percent in 2015 (Svensson & Nilsson, 2018). This rising religious violence makes it imperative to develop strategies to foster interreligious peace. Previous research has mainly focused on obstacles to interreligious peace in divided societies. We pursued a different approach by studying Togo and Sierra Leone – two African countries where interreligious relations are relatively peaceful – with the aim to understand the sources of sustained interreligious peace. Peace can take on many meanings (Davenport et al., 2018). Here we consider positive contact between religious groups and the ensuing positive intergroup attitudes as two aspects of peaceful interreligious relations.

One driving factor for peaceful interreligious relations are norms embodied by relevant third parties, such as family or friends, but also the wider community. Ingroup norms have been argued to determine how likely people are to engage in positive intergroup contact (Kalmijn, 1998), which in turn influences intergroup attitudes (Paluck et al., 2019; Pettigrew & Tropp, 2006; Schäfer et al., 2021). For example, adolescents were more likely to positively engage with outgroup members if their parents approved (Edmonds & Killen, 2009). While previous literature on ingroup norms suggests pro-mixing norms contribute to peaceful intergroup relations by increasing positive intergroup contact (Mazziotta et al., 2015; Tropp et al., 2014), it remains understudied whether ingroup norms affect intergroup contact, and ultimately intergroup attitudes (1) directly through mechanisms of social control; or (2) indirectly via internalization of the norms in one's own preferences (Kalmijn, 1998). We aimed to empirically disentangle the two mechanisms through which ingroup norms might affect interreligious contact and, by extension, favorable interreligious attitudes. We also

explored whether the processes are comparable in Togo and Sierra Leone and for religious majority and minority members.

The Role of Ingroup Norms for Intergroup Relations

The literature on social norms suggests that individuals' behavior is influenced by their fellow ingroup members. Ingroup norms, group-based standards of behavior (Cialdini & Trost, 1998), are informed by what ingroup members do (descriptive norms) or what they think ought to be done (injunctive norms, Cialdini et al., 1991). Individuals are assumed to rely on ingroup members' behavior and attitudes as a guide for their own behavior to secure acceptance by relevant ingroup members (Klein et al., 2007).

Pro-mixing ingroup norms, i.e. signals that positive intergroup contact is acceptable behavior for ingroup members, have been found to be associated with positive intergroup contact. A perception that fellow ingroup members consider intergroup contact a desirable behavior (injunctive pro-mixing norms) was positively associated with more positive intergroup contact (Edmonds & Killen, 2009; Tropp et al., 2014). For example, US American children who perceived pro-mixing peer norms were more willing to engage in interethnic friendships (Tropp et al., 2014) and British participants who perceived ingroup norms to favor mixing recorded more positive intergroup encounters in a diary study (Prati et al., 2022).

Descriptive pro-mixing norms, usually referred to as indirect contact, have been found to increase positive intergroup contact. Indirect contact describes intergroup contact situations that individuals are not personally involved in but know that other ingroup members are engaged in (Wright et al., 1997). Mazziotta and colleagues (2015) found that Germans who knew that their ingroup friends had positive contact with Turkish people reported more positive intergroup contact experiences, and longitudinal (Wölfer et al., 2019) and experimental studies (Meleady, 2021) provided causal evidence for this relationship.

Two mechanisms linking ingroup norms and intergroup contact have been theorized (Kalmijn, 1998; Kauff et al., 2021). First, ingroup norms may influence intergroup contact through mechanisms of social control (Kalmijn, 1998). Noncompliance with norms can be sanctioned by ingroup members in various ways, like publicly condemning or ostracizing the non-complying group member (Posner & Rasmusen, 1999), or by evaluating them more negatively (Abrams et al., 2000; Marques et al., 1998). In the case of *anti-mixing* ingroup norms, ingroup members who diverge from the norm by associating with outgroup members may be sanctioned by other ingroup members. Conversely, pro-mixing ingroup norms may have a licensing effect that encourages positive intergroup contact (Kauff et al., 2021).

Second, ingroup norms may indirectly affect intergroup contact via individual preferences due to processes of internalization (Kalmijn, 1998). Self-categorization theory posits that people tend to subscribe to the norms of the group they belong to (Turner et al., 1987), and stronger ingroup identification tends to be associated with both the intentions of norm abidance and actual norm abidance (Goldstein et al., 2008; Livingstone et al., 2011; Terry et al., 1999). Hence, established pro-mixing ingroup norms may become internalized so that individuals voice more pro-mixing preferences and, consequently, have more positive intergroup contact.

Individual preferences regarding intergroup mixing, i.e. a person's personal stance towards interactions with outgroup members, are mostly discussed in terms of preferences for similar others (Kalmijn, 1998; McPherson et al., 2001; Plant & Butz, 2006). Culturally-close others are likely to hold similar opinions and values and therefore offer understanding and show interest in the same activities (Kalmijn, 1998). Empirical studies consistently show that preferences to interact with similar others were related to less positive intergroup contact (Al Ramiah et al., 2015; Damen et al., 2021).

Pro-mixing ingroup norms might thus be directly related to more positive intergroup contact and/or indirectly through internalized preferences for similar others. While both direct

and indirect mechanisms linking ingroup norms and intergroup contact have been considered in the aforementioned research, an empirical comparison of these mechanisms is missing.

The Valence of Ingroup Norms and Intergroup Relations

In the real world, ingroup norms are not always pro-mixing but can also prescribe avoidance and even negative engagement with the outgroup. Islamophobic norms, for example, suggest discrimination against Muslims to be a common or even prescribed behavior (Taras, 2012; Wiedlitzka et al., 2023). Like ingroup norms, intergroup contact can be positive and negative. Positive intergroup contact concerns interactions between ingroup and outgroup members that are experienced as pleasant, such as intergroup friendships or intergroup helping, whereas negative intergroup contact encompasses intergroup encounters that are negatively experienced, like verbal insults or harassment (Keil & Koschate, 2020). Just as positive contact is associated with more positive attitudes (Paluck et al., 2019; Pettigrew & Tropp, 2006), negative intergroup contact is associated with more negative intergroup attitudes (Barlow et al., 2012; Schäfer et al., 2021).

Theoretically, pro-mixing norms could relate to negative intergroup contact through the same direct and indirect mechanisms as for positive intergroup contact. Pro-mixing ingroup norms could sanction negative intergroup contact as it is a deviation from the prescribed positive intergroup engagement. This logic is supported by the aversive racism literature which suggests that expressions of racist views are declining because of anti-racist norms proscribing such behavior (Crandall et al., 2002; Dovidio & Gaertner, 2004). However, the few existing studies investigating the association between pro-mixing norms and *negative* intergroup contact did not find a significant direct association (Bagci & Gungor, 2019; Prati et al., 2022). Additionally, pro-mixing norms could be internalized, thereby weakening individual preferences to interact with similar others. These preferences, in turn, have been found to increase the likelihood of negative intergroup contact. Plant and Butz (2006) found

that students who had outgroup contact, despite a strong preference to avoid it, rated their experience as less pleasant than students with a weak preference to avoid contact. Overall, pro-mixing norms may be negatively associated with negative intergroup contact via decreased preferences for interacting with similar others. Ultimately, we expected pro-mixing norms to translate into more positive intergroup *attitudes* (directly or indirectly via internalized preferences) by increasing positive interreligious contact and reducing negative interreligious contact.

The Present Research

As preregistered¹, we expected pro-mixing ingroup norms to be related to more positive (H1a) and less negative contact experiences (H1b). We also hypothesized that pro-mixing ingroup norms would be related to lower individual preferences to interact with religiously similar others (H2) and that the more individuals preferred to interact with religiously similar others, the less positive interreligious contact (H3a) and the more negative interreligious contact they would experience (H3b). Hypotheses 2 and 3 imply that pro-mixing ingroup norms would have an indirect effect on interreligious contact via weaker individual preferences to interact with similar others. We did not pre-register different hypotheses for descriptive and injunctive norms. We further expected to replicate the established findings about positive and negative interreligious contact being related with, respectively, more and less favorable interreligious attitudes². We additionally explored whether the hypothesized processes were similar in two West African countries and for religious minority and majority group members.

We present results from two studies conducted among Muslims and Christians in Togo and Sierra Leone³. Most participants lived in the capitals of Togo and Sierra Leone. Lomé and

¹ See <https://osf.io/6gzth>. Note that the numbering of hypotheses diverges from the pre-registration.

² These expectations were not preregistered and therefore not numbered as hypotheses.

³ Replication materials available at: <https://doi.org/10.7802/2607>.

Freetown are by far the largest urban centers, with about 1.5 million people living in each agglomeration area (25% of the total Togolese and 21% of the Sierra Leonean population). Christians are estimated to be the largest religious group in Togo (48%), with African traditional religions (33%) and Muslims (18%) being large minorities (US Department of State, 2022b). In Sierra Leone, the picture is reversed, with Muslims being the biggest group (77%) and Christians a large minority (22%) (Statistics Sierra Leone & ICF, 2020). In both countries, relations between Christians and Muslims are peaceful. For example, 88.4% of Togolese and 90.7% of Sierra Leonean inhabitants indicated that they liked having neighbors of a different religion (Afrobarometer Data, 2021) and interreligious contact was reported to be common (US Department of State, 2022a, 2022b).

Study 1 used data from a non-probability sample collected in an online survey. Analyses for Study 1 were preregistered. We investigated two types of pro-mixing ingroup norms (regarding interreligious friendships and interreligious marriages) conveyed by religious ingroup friends. In Study 2 we tested the exact same hypotheses using survey data from a probability sample collected by means of computer-assisted personal interviewing (CAPI). Study 2 focused on one type of pro-mixing ingroup norms (about interreligious friendships), but considered a broader set of third parties (religious leaders, fellow congregation members, family members, and religious ingroup friends).

Study 1

Data and Participants

The data⁴ were collected through online surveys by Kai Analytics and Survey Research in 2022. The survey targeted Sierra Leonean and Togolese adults living in Freetown or Lomé. Participation links were spread by enumerators who used their social (media)

⁴ This study was approved by the Ethics Review Board of the Faculty of Social and Behavioral Sciences at Utrecht University under the number 22-0547.

networks to reach potential participants. Participants could participate in a raffle (prizes: 2x \$100 and 8x \$50). Upon giving informed consent, Sierra Leonean participants completed the survey in English and Togolese participants in French.

The survey was accessed by 1,205 participants. Ineligible participants (no consent, not Sierra Leonean or Togolese resident, younger than 18, and/or adherent of other religion, $N=272$), potentially duplicate respondents ($N = 135$)⁵, and those with missing values on all variables of interest ($N = 120$) were excluded. The total number of Muslim and Christian participants retained was 678. This included 392 Togolese comprising 299 (76%) Christians and 93 (24%) Muslims and 286 Sierra Leoneans comprising 182 (64%) Christians and 104 (36%) Muslims. See Table 1 for the demographics of the sample.

Measures

Pro-mixing Ingroup Norms. We measured descriptive and injunctive ingroup norms about interreligious friendships and marriages. For descriptive norms on interreligious friendships, we asked, “how many close [outgroup: Muslim/Christian] friends do you think your close [ingroup: Christian/Muslim] friends generally have?” Answers were given on a 5-point scale ranging from ‘(Almost) all Christian’ to ‘(Almost) all Muslim’, with the middle category standing for equally many Muslim and Christian friends. We recoded the variable for Muslims so that for both groups higher scores mean more outgroup friends. For descriptive norms on interreligious marriages, we asked about the number of ingroup friends that are married to a member of the respective outgroup (1 = none, 5 = very many). For injunctive norms, we assessed whether participants thought their ingroup friends would (dis-)agree with the following two statements: “It is a good thing to have friends from other religious groups”; “Marriages between Muslims and Christians are a good thing” (1 = strongly disagree, 5 = strongly agree).

⁵ Identifying information (i.e., IP addresses) and socio-demographics were used to identify likely duplicates.

Preferences for Similar Others. We captured participants' (dis-)agreement with two statements (1 = strongly disagree, 5 = strongly agree): "It is important to me that my friends live according to the same religious values that I endorse" and "I prefer to interact with people who follow the same religious teachings as I do" (cf. Damen et al., 2021).

Positive and Negative Casual Interreligious Contact. To measure positive casual contact, participants were asked, "During the last week, how often did you have a pleasant informal conversation with a [outgroup: Muslim/Christian] stranger, for instance, in the street, in public transport or in a shop?" For negative casual contact, we asked about an "unpleasant encounter (an argument or disagreement)". We used two versions⁶ of 7-point answer scales to which respondents were randomly assigned: 53.7% of the participants received the answer options: 'Not at all', 'Rarely', 'Occasionally', 'Sometimes', 'Frequently', 'Often' or 'Very often' while 46.3% of the participants received: 'Never', 'Once', 'Twice', 'Every other day', 'Nearly every day', 'Once every day' and 'Several times a day'.

Close Contact. Two items measured close contact. Participants were asked how many of their acquaintances and how many of their friends were Christian or Muslim. We used the same scale and coding rules as for descriptive norms about interreligious friendships.

Interreligious Attitudes. Participants were asked how cold or warm they felt toward the outgroup (Muslims or Christians) on a scale from 0 to 100.

Control Variables. Control variables include gender, age in years, and level of education (Damen et al., 2021). Education was measured on a 9-point scale. There were very few participants with a low level of education, so we recoded education in three categories: low-level (secondary school not completed), intermediate level (completed secondary school), and high-level (university degree).

⁶The means for the two groups do not differ significantly (positive casual contact: $M(\text{version1}) = 3.25$, and $M(\text{version2}) = 3.51$, $t(655) = -1.74$, $p = .083$; negative casual contact: $M(\text{version1}) = 1.55$ and $M(\text{version2}) = 1.50$, $t(653) = 0.55$, $p = .585$).

Results

Measurement Models

We conducted a multigroup confirmatory factor analysis using the lavaan package in R (Rosseel, 2012) to evaluate if pro-mixing norms, individual preferences, and positive contact were empirically distinct latent constructs across four groups: Togolese Muslims, Togolese Christians, Sierra Leonean Muslims, and Sierra Leonean Christians. We pre-registered a measurement model in which a latent pro-mixing norms factor would be inferred by four (descriptive and injunctive) pro-mixing norms indicators, a latent preferences measure by two indicators, and a latent positive contact factor by three indicators (positive casual contact and two close contact items). The pre-registered model had a sub-optimal fit ($\chi^2(100) = 227.521, p < .001, CFI = .827, TLI = 0.750, RMSEA = .087, 90\% CI [.072, .102]$). A model that differentiated between injunctive and descriptive norms (Cialdini et al., 1991) and positive casual and close contact (Keil & Koschate, 2020) had an acceptable fit for Togolese Christians and for Sierra Leonean Muslims and Christians ($\chi^2(62) = 93.015, p = .007, CFI = .952, TLI = 0.936, RMSEA = .051, 90\% CI [.028, .072]$). Thus, next to a latent factor for preferences, our final measurement model consisted of two latent factors for norms and one latent factor for close contact. Positive casual contact was a separate single-item measure. This model showed partial scalar invariance across the three groups (for details, see online supplement Part A), meaning that we can quantitatively compare regression coefficients across these groups. The items within each factor were moderately positively correlated across groups (Tables A1-A3 in the supplement). For Togolese Muslims, we could not identify any meaningful factor structure regarding the four norm indicators and therefore we excluded them from further analyses.

Descriptive Findings

Descriptive statistics of the main variables are presented in Table 2 (for all observed variables per group see Tables A1-4 in the online supplement). Both injunctive and descriptive norms were supportive of intergroup mixing, people had no pronounced preference to interact with similar others and, while negative casual contact was rarely reported, positive interreligious encounters are widespread. Intergroup attitudes were also generally positive. Correlations were in line with our expectations, except that descriptive norms surprisingly correlated positively with negative casual contact, injunctive norms and positive casual contact were unrelated, and intergroup attitudes did not correlate with any of the contact measures.

Pro-Mixing Ingroup Norms and Intergroup Relations

We estimated multiple group sequential mediation models with descriptive and injunctive norms as independent variables, preferences as a first-order mediator, the three types of contact (close contact and both positive and negative casual contact) as second-order mediators, and intergroup attitudes as the dependent variable. We used mean scores for all the factors because a model with latent factors consisting of two items each did not converge. We differentiated between Togolese Christians, Sierra Leonean Muslims, and Sierra Leonean Christians. Total, direct, and indirect effects for all reported models were estimated using the lavaan package in R (Rosseel, 2012), with maximum likelihood estimation with robust standard errors (MLR) to account for non-normally distributed variables, as well as Full Information Maximum Likelihood (FIML) to deal with missing data in endogenous variables (Enders & Bandalos, 2001). We deleted 46 cases due to missing values in exogenous variables (N=539).

Our main model was structurally invariant across the three groups. Constraining all regression coefficients to be equal across groups had a comparable fit to a model in which all

coefficients were freely estimated ($\Delta\text{SB}\chi^2(40) = 54.818, p = .059$; $\chi^2(46) = 57.907, p = .112$, CFI = .934, TLI = 0.892, RMSEA = .038, 90% CI [.000, .066]).

Table 3 reports total and indirect effects while direct effects are shown in Figure 1. In line with H1a, we found a positive total effect of descriptive pro-mixing norms on positive casual and close contact. Yet, in contrast to H1b, we also found a positive total effect of descriptive pro-mixing norms on negative casual contact. Conversely, for injunctive norms, the results contradicted H1a but were in line with H1b: injunctive pro-mixing norms had not significant total effects on close contact and were even negatively related to positive casual contact, but as expected they were negatively related with negative casual contact.

Further, H2 was supported regarding descriptive but not injunctive norms: descriptive norms were associated with less preference for similar others but injunctive norms were unrelated to preferences. In line with H3a, preferences for similar others were negatively related to both positive casual and close contact, but were, in contrast to H3b, unrelated to negative casual contact.

For descriptive pro-mixing ingroup norms, direct associations mostly accounted for the positive total effects on all three types of contact. Only for positive casual contact the indirect association via preferences was positive and significant. Injunctive pro-mixing ingroup norms were only directly and negatively associated with negative and positive casual contact with all indirect associations being non-significant.

Finally, the total effects of pro-mixing norms on interreligious attitudes were non-significant, because the three types of contact and interreligious attitudes were unrelated, even though the coefficients pointed in the expected direction. Preferences for similar others had a total negative effect on interreligious attitudes and this was due to a negative direct (but no indirect) association. Descriptive pro-mixing norms were, via preferences, indirectly associated with more favorable interreligious attitudes, but all indirect associations via contact measures remained non-significant.

We replicated all findings in a model in which we controlled for gender, age, and education in relation to preferences, contact measures, and intergroup attitudes (Part B in the online supplement). Moreover, we estimated total and indirect effects with Monte Carlo confidence intervals using the `monteCarloCI` function in `semTools` (Jorgensen et al., 2022, Table B2 in the supplement). The only noteworthy difference was that the positive indirect association between descriptive norms and close contact via preferences reached significance in both alternatives. We also checked whether the findings for norms differed when considering in separate models friendship and marriage norms. We found an overall similar pattern, although estimates for marriage norms were generally somewhat weaker than those for friendships (online supplement, Part C).

Discussion

Study 1 showed that descriptive pro-mixing norms were positively related to all three types of contact, including more *negative* casual contact. Descriptive pro-mixing norms seem to have licensed interreligious engagement irrespective of the valence of the contact. Injunctive pro-mixing norms were, however, related to less negative casual contact, but unexpectedly also less positive casual contact, and they were unrelated to close contact. The counterintuitive negative relation between injunctive pro-mixing norms and positive casual contact could be the result of differing norms regarding close and casual contact. Our measure of injunctive norms that captured norms favoring close interreligious contact might have also tapped into norms cautioning against contact with strangers.

Additionally, descriptive pro-mixing ingroup norms, but not injunctive norms, were negatively related with preferences for similar others, suggesting that ingroup members' behavior, but not their (perceived) attitudes, matter for individual preferences. Preferences for similar others were negatively associated with positive casual and close contact with religious outgroup members. Further, the associations between pro-mixing ingroup norms and interreligious contact were mainly direct and not indirect, suggesting the licensing mechanism

is more pronounced than internalization. We only found evidence for an indirect association via preferences between descriptive pro-mixing norms and positive casual and close contact. Finally, we found no evidence for an association of pro-mixing ingroup norms with interreligious attitudes via any type of interreligious contact, but we found an indirect association via preferences only.

Study 1 had three main limitations. First, the data were collected online among a non-probability sample and our findings might not be generalizable. Second, we could not compare data on Togolese Muslims, possibly due to convenience sampling. Third, the study considered pro-mixing ingroup norms conveyed only by ingroup friends. However, ingroup norms may be established by a broader social environment (Gómez et al., 2018). Study 2 addressed these limitations using data from a probability sample of residents of Lomé and Freetown and by capturing pro-mixing ingroup norms conveyed by four types of ingroup representatives: religious leaders, typical congregation members, friends, and family members.

Table 1 Demographic information, Study 1 ($N= 678$) and Study 2 ($N= 1,831$)

Variable	Study 1		Study 2	
	<i>Valid N</i>	<i>M (SD)/ %</i>	<i>Valid N</i>	<i>M (SD)/ %</i>
Resident of Capital	678	92%	1,831	100%
Christian (ref. Muslim)	678	71%	1,831	55%
Female (ref. male)	678	40%	1,831	56%
Age	677	30.8 (7.8)	1,831	33.6 (12.3)
Education (original 9-point scale)	674	7.8 (1.3)	1,831	5.2 (2.1)
Low education (secondary not completed)	678	5%	1,831	55%
Medium education (secondary completed, no university degree)	678	54%	1,831	38%
High education (university degree)	678	40%	1,831	7%
Religious Service Attendance	-	-	1,830	3.8 (1.3)

Note. In Study 1, an outlier case of age = 95 was coded as missing so that in the current data, the oldest person is 68. Original 9-point scale for education: 1 = no schooling, 2 = Informal schooling only (including Koranic schooling), 3 = Some primary schooling, 4 = Primary school completed, 5 = Intermediate school or some secondary school/high school, 6 = Secondary school/high school completed, 7 = Post-secondary qualifications other than university, e.g. diploma or degree from polytechnic or college, 8 = Some university, 9 = University completed

Table 2 Descriptive Results and Correlations, Study 1 (N= 585) and Study 2 (N= 1,831)

Variable	Valid N	Range	M	SD	Correlations					
					1	2	3	4	5	6
Study 1:										
1. Favorable interreligious attitudes	427	0-100	66.2	30.8						
2. Negative casual contact	568	1-7	1.5	1.1	-.07					
3. Positive casual contact	570	1-7	3.4	1.9	.07	.20***				
4. Close contact	556	1-5	2.9	0.7	.08	-.00	.13**			
5. Preferences for similar others	547	1-5	2.8	1.1	-.18***	.13**	-.12**	-.14**		
6. Descriptive pro-mixing ingroup norms	550	1-5	2.6	0.8	.03	.12**	.16***	.37***	-.10*	
7. Injunctive pro-mixing ingroup norms	554	1-5	4.0	0.8	.09	-.04	-.06	.12**	-.09*	.21***
Study 2:										
1. Favorable interreligious attitudes	1,825	0-100	72.1	26.6						
2. Negative casual contact	1,826	1-7	1.7	1.4	-.05*					
3. Positive casual contact	1,822	1-7	4.0	2.1	.19***	.22***				
4. Close contact	1,819	1-7	3.3	1.4	.23***	.07**	.27***			
5. Preferences for similar others	1,831	1-5	3.2	1.3	-.19***	-.04	-.13***	-.25***		
6. Descriptive pro-mixing ingroup norms	1,823	1-7	2.8	0.9	.23***	-.06**	.21***	.44***	-.18***	
7. Injunctive pro-mixing ingroup norms	1,827	1-5	3.9	0.9	.19***	-.01	.07**	.15***	-.16***	.18***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

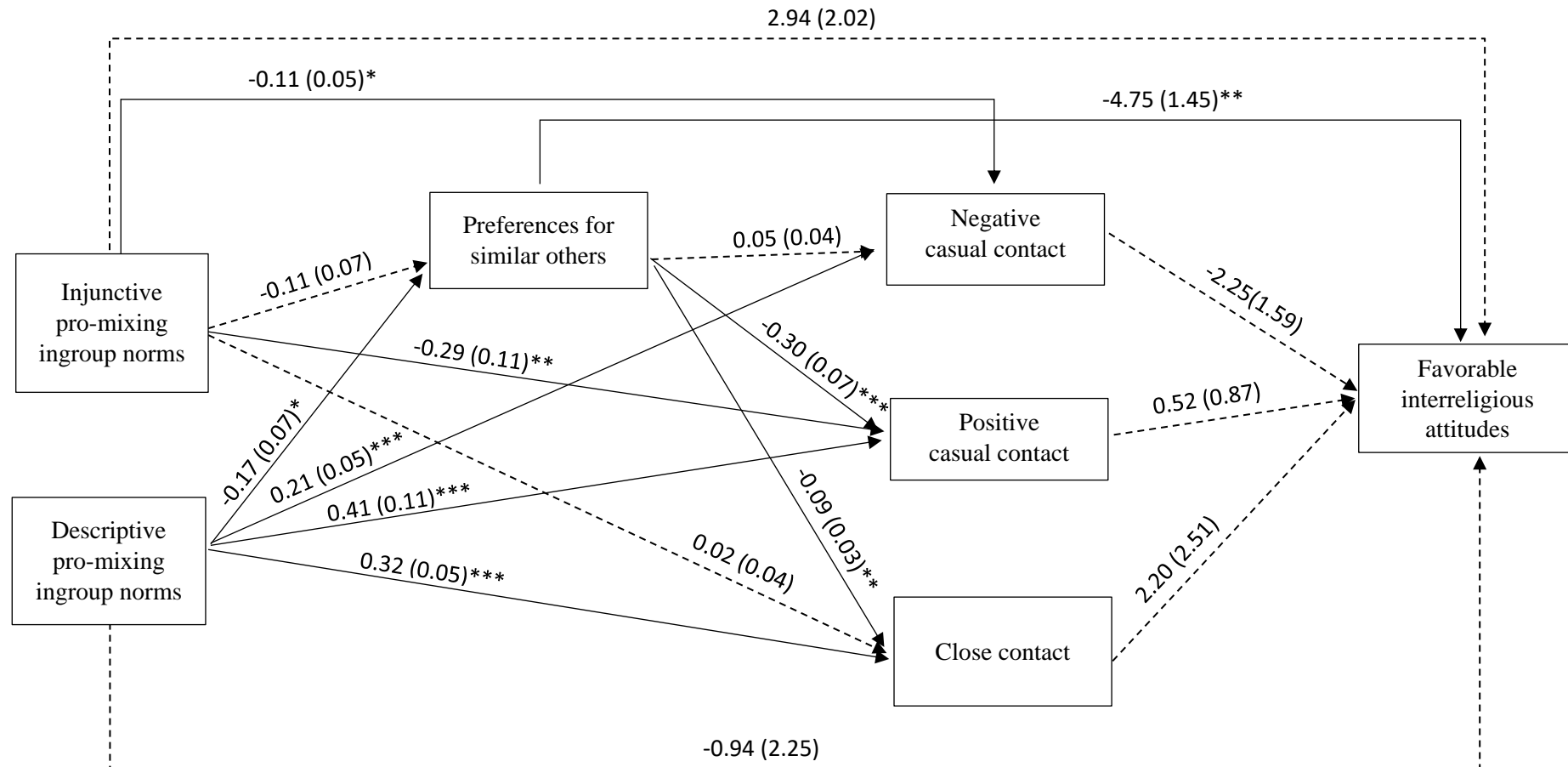


Figure 1. Multi-group sequential mediation model estimated for Togolese Christians, Sierra Leonean Christians and Sierra Leonean Muslims, Study1.

Note. $N = 539$, thereof 274 Togolese Christians, 97 Sierra Leonean Muslims and 168 Sierra Leonean Christians. Unstandardized coefficients, with standard errors presented within parentheses. Dashed arrows represent non-significant associations. Positive and negative contact were free to covary with each other and with close contact. A dummy indicating the version of the answer scale for the two casual contact measures was controlled for in relation to three outcome measures: positive and negative casual contact and interreligious attitudes. Its coefficients were non-significant (smallest $p = .051$). For total and indirect effects, see Table 3.

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 3 Total and indirect effects of the main multigroup sequential mediation models for Study 1 and Study 2

	Study 1 (N = 539)	Study 2 (N = 1,830)			
	All groups	Togolese Muslims	Togolese Christians	Sierra Leonean Muslims	Sierra Leonean Christians
	B (S.E)	B (S.E)	B (S.E)	B (S.E)	B (S.E)
Total effects					
Preferences → interreligious attitudes	-5.19 (1.43)***	-3.44 (0.78)***	-2.95 (0.74)***	-3.44 (0.78)***	-2.84 (0.78)***
Descriptive norms → interreligious attitudes	0.36 (2.21)	7.24 (0.86)***	6.09 (0.88)***	7.60 (0.83)***	7.42 (0.83)***
Descriptive norms → negative casual contact	0.20 (0.05)***	0.01 (0.04)	0.01 (0.04)	-0.26 (0.07)***	-0.26 (0.07)***
Descriptive norms → positive casual contact	0.45 (0.11)***	0.49 (0.06)***	0.49 (0.06)***	0.49 (0.06)***	0.40 (0.06)***
Descriptive norms → close contact	0.33 (0.05)***	0.81 (0.06)***	0.81 (0.06)***	0.81 (0.06)***	0.81 (0.06)***
Injunctive norms → interreligious attitudes	3.62 (2.00)	4.11 (0.80)***	4.05 (0.79)***	4.11 (0.80)***	4.00 (0.80)***
Injunctive norms → negative casual contact	-0.11 (0.05)*	0.002 (0.02)	0.002 (0.02)	0.002 (0.02)	0.002 (0.02)
Injunctive norms → positive casual contact	-0.26 (0.11)*	0.07 (0.05)	0.07 (0.05)	0.07 (0.05)	0.01 (0.05)
Injunctive norms → close contact	0.03 (0.04)	0.02 (0.03)	0.02 (0.03)	0.02 (0.03)	0.02 (0.03)
Indirect Effects					
Preferences → interreligious attitudes					
Via negative casual contact	-0.11 (0.12)	0.06 (0.04)	0.06 (0.04)	0.06 (0.04)	0.06 (0.04)
Via positive casual contact	-0.15 (0.26)	-0.42 (0.15)**	0.07 (0.12)	-0.42 (0.15)**	0.18 (0.21)
Via close contact	-0.19 (0.22)	-0.12 (0.12)	-0.12 (0.12)	-0.12 (0.12)	-0.12 (0.12)
Descriptive norms → interreligious attitudes					
Via preferences	0.78 (0.39)*	0.89 (0.25)***	0.89 (0.25)***	0.89 (0.25)***	0.89 (0.25)***
Via negative casual contact	-0.45 (0.33)	-0.01 (0.06)	-0.01 (0.06)	0.36 (0.13)**	0.36 (0.13)**
Via positive casual contact	0.24 (0.40)	0.98 (0.23)***	-0.17 (0.27)	0.98 (0.23)***	0.80 (0.21)***
Via close contact	0.73 (0.85)	0.49 (0.49)	0.49 (0.49)	0.49 (0.49)	0.49 (0.49)
Injunctive norms → interreligious attitudes					

Via preferences	0.50 (0.36)	0.56 (0.19)**	0.56 (0.19)**	0.56 (0.19)**	0.56 (0.19)**
Via negative casual contact	0.25 (0.21)	-0.003 (0.03)	-0.003 (0.03)	-0.003 (0.03)	-0.003 (0.03)
Via positive casual contact	-0.14 (0.23)	0.13 (0.11)	-0.02 (0.04)	0.13 (0.11)	0.02 (0.11)
Via close contact	0.06 (0.12)	0.01 (0.02)	0.01 (0.02)	0.01 (0.02)	0.01 (0.02)
Descriptive norms → negative casual contact					
Via preferences	-0.01 (0.01)	0.01 (0.01)*	0.01 (0.01)*	0.01 (0.01)*	0.01 (0.01)*
Descriptive norms → positive casual contact					
Via preferences	0.05 (0.02)*	0.06 (0.02)***	0.06 (0.02)***	0.06 (0.02)***	-0.03 (0.03)
Descriptive norms → close contact					
Via preferences	0.01 (0.01)	0.06 (0.01)***	0.06 (0.01)***	0.06 (0.01)***	0.06 (0.01)***
Injunctive norms → negative casual contact					
Via preferences	-0.01 (0.01)	0.01 (0.004)*	0.01 (0.004)*	0.01 (0.004)*	0.01 (0.004)*
Injunctive norms → positive casual contact					
Via preferences	0.03 (0.02)	0.04 (0.01)**	0.04 (0.01)**	0.04 (0.01)**	-0.02 (0.02)
Injunctive norms → close contact					
Via preferences	0.01 (0.01)	0.04 (0.01)***	0.04 (0.01)***	0.04 (0.01)***	0.04 (0.01)***
<i>Sequential Indirect Effects</i>					
Descriptive norms → interreligious attitudes					
Via preferences and neg. casual contact	0.02 (0.02)	-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)
Via preferences and pos. casual contact	0.03 (0.04)	0.13 (0.05)**	-0.06 (0.06)	0.13 (0.05)**	-0.02 (0.04)
Via preferences and close contact	0.03 (0.04)	0.04 (0.04)	0.04 (0.04)	0.04 (0.04)	0.04 (0.04)
Injunctive norms → interreligious attitudes					
Via preferences and neg. casual contact	0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
Via preferences and pos. casual contact	0.02 (0.03)	0.08 (0.03)*	-0.03 (0.04)	0.08 (0.03)*	-0.01 (0.02)
Via preferences and close contact	0.02 (0.03)	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)

Note. Unstandardized coefficients, with standard errors presented in parentheses. For Study 2, coefficients that differed significantly between groups are highlighted in bold.

* $p < .05$, ** $p < .01$, *** $p < .001$

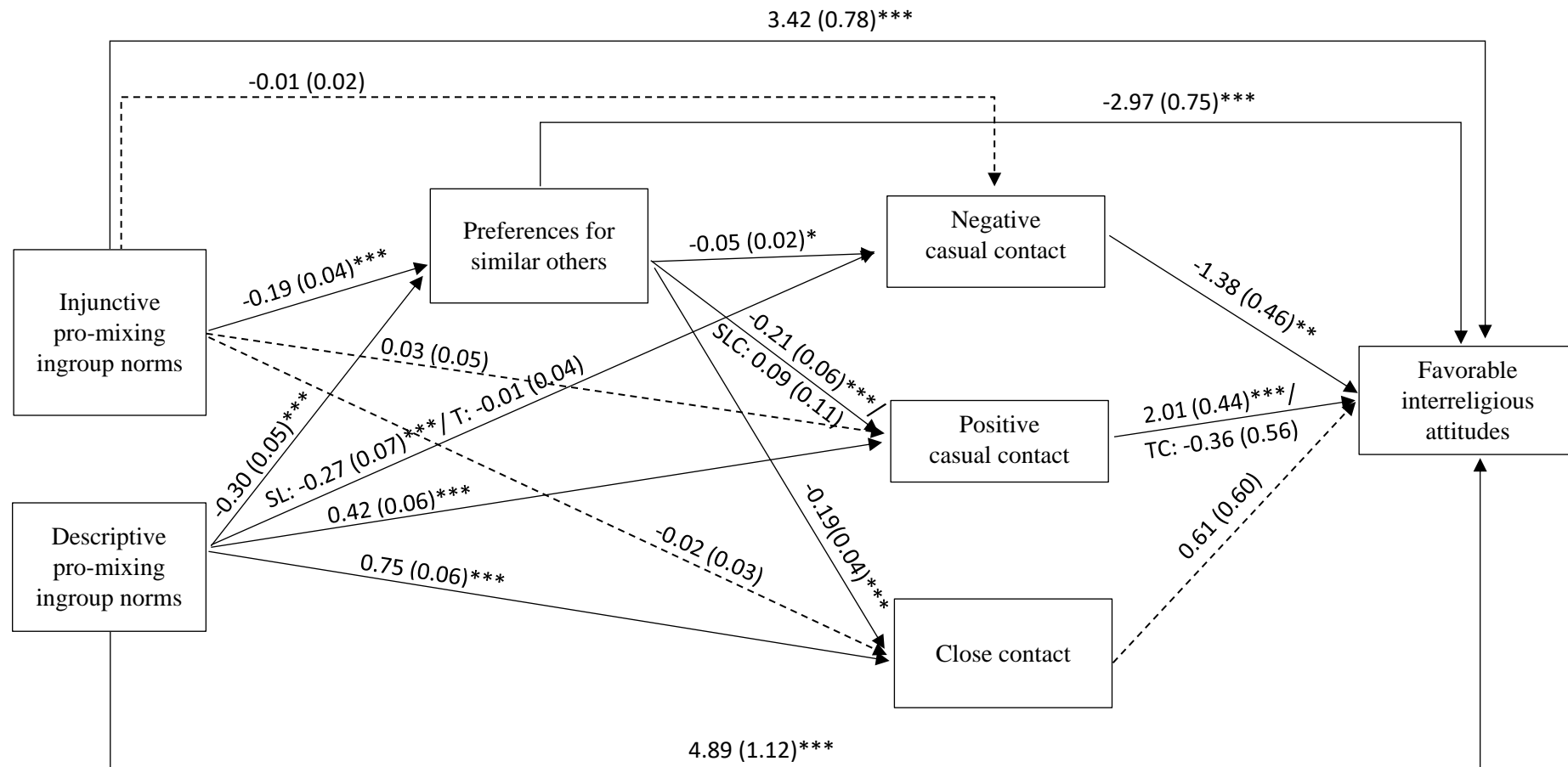


Figure 2. Multi-group sequential mediation model, Study2.

Note. Analyses were grouped by country and religion. $N = 1,830$, thereof 205 Togolese Muslims, 663 Togolese Christians, 616 Sierra Leonean Muslims and 346 Sierra Leonean Christians. Unstandardized coefficients, with standard errors in parentheses. Dashed arrows represent non-significant associations. SL and T indicate coefficients for Sierra Leoneans and Togoese where they differ from each other. SLC and TC indicate coefficients for Sierra Leonean Christians and Togoese Christians where they differ from the other three groups. A control for the version of the questionnaire remained non-significant in all regressions (smallest $p = .077$). Coefficients of a control for religious service attendance are reported in Table B1 in the online supplement. Positive and negative contact were free to covary with each other and with close contact. For total and indirect effects, see Table 3. $*p < .05$, $**p < .01$, $***p < .001$

Study 2

Data and Participants

The data⁷ were collected as part of household surveys conducted in 50 neighborhoods within the capitals of Togo (Lomé) and Sierra Leone (Freetown) in 2022 using CAPI. To reach more religious minority members, nine religiously mixed, eight predominantly Christian, and eight predominantly Muslim neighborhoods per city were chosen. Households were selected using a random-walk procedure with participants being randomly selected from a list of eligible household members (i.e., adult residents of Lomé or Freetown who were physically able to communicate with the enumerators and gave informed consent). Participants completed the survey in English (6%) or Krio (94%) in Sierra Leone and French (46%) or Ewe (54%) in Togo. They were remunerated (4.50 USD-equivalent).

A total of 2003 people were interviewed. We excluded 172 participants because they adhered to other religions. In Lomé, 663 (76%) Christians and 205 (24%) Muslims participated (total N = 868), and in Freetown, 346 (36%) Christians and 617 (64%) Muslims (total N = 963). See Table 1 for the demographics, which differ considerably from Study 1.

Measures

Interreligious attitudes and preferences for similar others were measured as in Study 1.

Pro-Mixing Ingroup Norms. We measured descriptive and injunctive norms about interreligious friendships conveyed by four ingroup representatives: the religious leader, a typical member of the congregation of the place of worship the participant visits, close ingroup friends, and family members. Only participants who attended religious service (apart from weddings and funerals) at least a few times within the last year (91% of participants)

⁷ Ethics approval for this study was granted by the Ethics Review Board of the Faculty of Social and Behavioral Science at Utrecht University under the number 22-0481.

were asked the questions regarding religious leaders and typical congregation members. For others, these indicators were coded as missing. To determine descriptive norms, participants were asked, for each ingroup representative, whether they thought that the representative's close friends were generally more Christian or Muslim (1 = 'All Christian', 7 = 'All Muslim', with the middle category standing for equally both). We recoded the variable so that for both groups higher scores indicated more outgroup friends. For injunctive norms, participants were asked to what degree they thought each ingroup representative would (dis)agree with the following statement: "It is a good thing to have friends from other religious groups" (1 = strongly disagree, 5 = strongly agree).

Positive and Negative Casual Interreligious Contact. The same questions as in Study 1 were asked, but only one 7-point scale (1 = 'Not at all', 7 = 'Very often') was used.

Close Contact. Participants were only asked how many of their friends were Christian or Muslim. The same 7-point scale and coding rules as for descriptive pro-mixing norms were applied (1 = 'All ingroup', 7 = 'All outgroup').

Control Variables. We controlled for gender, age, level of education, and household assets (Damen et al., 2021). Education was measured on the same 9-point scale as in Study 1. There was enough variation, so we did not collapse categories. Wealth was measured as a latent factor using twelve different items owned by the household, e.g. beds, cars, phones. We also controlled for the frequency of religious service attendance aside from weddings and funerals (1 = Never, 5 = More than once a week). There were two versions of the questionnaire because experiments were conducted as part of the same household survey. In one version, the experiments came before the survey questions, in the other, after, so we controlled for the version.

Results

Measurement Models

We conducted a multigroup factor analysis to evaluate if pro-mixing norms inferred by all eight norms indicators and preferences for similar others inferred by two indicators are empirically distinct constructs across four groups. A model with two factors had a suboptimal fit ($\chi^2(137) = 2053.759, p < .001, CFI = .693, TLI = 0.596, RMSEA = .175 [.168, .182]$). A three-factor model that additionally differentiated between descriptive and injunctive norms had an acceptable fit ($\chi^2(116) = 208.898, p < .001, CFI = .985, TLI = 0.977, RMSEA = .042 [.033, .051]$). In this model, we allowed error covariation between: (1) descriptive pro-mixing norms conveyed by religious leaders and typical members of the congregation, (2) injunctive pro-mixing norms conveyed by religious leaders and typical members of the congregation, and (3) descriptive and injunctive norms conveyed by family members. We established metric invariance and can, hence, quantitatively compare regression coefficients across four groups (including Togolese Muslims). The three constructs were generally reliable across groups (preferences for similar others, 2 items: $r_s = .43 - .57$; descriptive pro-mixing norms, 4 items: $\alpha_s = .71 - .73$; injunctive pro-mixing norms, 4 items: $\alpha_s = .81 - .91$). We conducted a second factor analysis, adding a factor for wealth for a structural model with controls. For details, see online supplement, Part A.

Descriptive Findings

Descriptive statistics were in line with those of Study 1 (Table 2) and pointed at high pro-mixing norms, low preference for similar others, contact being generally positive, and favorable intergroup attitudes. Correlations were largely in line with our expectations and more so than in Study 1, except that preferences for similar others and negative casual contact were now unrelated.

Pro-Mixing Ingroup Norms and Intergroup Relations

We estimated a multigroup sequential mediation model with MLR similar to Study 1. Latent descriptive and injunctive pro-mixing norms factors were the main independent variables, a latent preference factor the first-order mediator, observed indicators of the three types of contact (i.e. close contact and both positive and negative casual contact) second-order mediators, and observed interreligious attitudes the dependent variable. We controlled for the version of the questionnaire as well as the frequency of service attendance as some of the questions on ingroup norms were only posed to those indicating that they visited a religious service at least once during the last year (Table B1 in the online supplement). We used FIML to deal with missing data (Enders & Bandalos, 2001). The total sample size was 1,830. One observation was deleted due to a missing value in an exogenous variable.

The model was partially structurally invariant ($\Delta SB\chi^2(73) = 90.446, p = .081$), and had an acceptable fit ($\chi^2(394) = 655.098, p < .001$, CFI = .965, TLI = 0.957, RMSEA = .038 [.033, .043]). We lifted equality constraints for regression coefficients of positive casual contact predicting intergroup attitudes for Togolese Christians, preferences predicting positive casual contact for Sierra Leonean Christians, and descriptive pro-mixing norms on negative casual contact per country⁸.

Table 3 reports total and indirect effects while direct effects are shown in Figure 2. In line with H1a, total effects of descriptive pro-mixing ingroup norms on positive casual and close contact were positive. For the Sierra Leonean groups, we also found the expected negative total effect of descriptive norms on negative casual contact. For Togolese groups, this association was non-significant. For injunctive pro-mixing norms, the results contradict

⁸ We additionally lifted equality constraints on coefficients of religious service attendance in relation to intergroup attitudes for Togolese Muslims, close contact and preferences for Togolese Christians, and negative and positive casual contact for both Togolese Muslims and Christians.

both H1a and H1b as total effects of injunctive norms on all three types of contact remained non-significant.

In line with H2, both descriptive and injunctive pro-mixing norms were negatively related to preferences for similar others. In line with H3a, preferences for similar others were negatively related to positive casual contact, although not for Sierra Leonean Christians, and close contact for all groups. In contrast to H3b, preferences were also negatively associated with negative casual contact.

Descriptive pro-mixing norms were mainly directly associated with the three types of contact, whereas for injunctive norms only indirect associations mattered. Indirect associations between descriptive norms and all three types of contact were, as expected, positive and significant except for a non-significant indirect association between descriptive norms and positive casual contact for Sierra Leonean Christians. However, these indirect associations were considerably weaker than the direct effects. For injunctive pro-mixing norms, total effects between injunctive norms and all three types of contact were non-significant for all groups. Yet, indirect associations were positive and significant apart from a non-significant indirect association between injunctive norms and positive casual contact for Sierra Leonean Christians.

Finally, we found total positive effects of descriptive and injunctive pro-mixing norms on interreligious attitudes as well as a total negative effect of preferences for similar others, which were mostly accounted for by their direct associations and not by indirect paths. In contrast to Study 1, negative casual contact was significantly negatively related to interreligious attitudes across groups and positive casual contact significantly positively, though not for Togolese Christians. Close contact was again not significantly associated with interreligious attitudes. Some indirect effects added to the direct effects of pro-mixing norms on interreligious attitudes: For both injunctive and descriptive norms, the indirect association with interreligious attitudes via preferences was positive across groups. Additionally, we

found positive indirect associations between descriptive norms and interreligious attitudes via negative casual contact for Sierra Leoneans and via positive casual contact, though not for Togolese Christians. Finally, for Togolese and Sierra Leonean Muslims we found evidence for positive sequential indirect associations of descriptive and injunctive norms via preferences and positive casual contact with interreligious attitudes.

We replicated all findings when additionally controlling for gender, age, education, and wealth in relation to preferences, contact measures, and interreligious attitudes (online supplement, Part B). Total and indirect effects with Monte Carlo confidence intervals also confirm the presented results apart from the indirect effect of descriptive norms via individual preferences on negative contact being negative (Table B2 in the supplement).

Discussion

Study 2 showed that descriptive pro-mixing norms were directly positively related to positive casual and close contact for all groups and for Sierra Leoneans also negatively to negative casual contact indicating mechanisms of licensing and social control. Injunctive norms were not directly associated with any type of interreligious contact and, thus, do not lend support to mechanisms of social control or licensing.

Additionally, both descriptive and injunctive pro-mixing norms were negatively linked with preferences for similar others. Preferences for similar others were generally negatively associated with all three types of interreligious contact, including, unexpectedly, negative casual contact. Those who preferred to interact with similar others avoided having interreligious contact irrespective of its valence. A notable exception were Sierra Leonean Christians, who, as a minority group, may be unable to avoid positive casual interreligious contact even if they prefer to interact with religiously similar others.

For descriptive pro-mixing norms, direct associations with interreligious contact were more important than indirect associations via preferences, while injunctive norms were only

indirectly associated with interreligious contact. In other words, licensing and social control mechanisms were more pronounced for descriptive pro-mixing norms, whereas injunctive norms worked via internalization processes. Finally, Study 2 provided evidence for direct and indirect associations of pro-mixing ingroup norms with interreligious attitudes.

General discussion

This research adds to the literature on determinants of peaceful intergroup relations by studying the mechanisms through which pro-mixing ingroup norms relate to interreligious contact and thereby interreligious attitudes. We found that descriptive and injunctive pro-mixing ingroup norms are separate empirical constructs and that direct and indirect mechanisms matter to a different extent for their associations with positive and negative interreligious contact.

First, we found that pro-mixing ingroup norms were relevant for both positive and negative interreligious contact but that descriptive norms mattered more consistently than injunctive norms. In line with the indirect contact literature (Mazziotta et al., 2015; Wölfer et al., 2019), descriptive pro-mixing norms were directly associated with more positive interreligious contact in both studies, both regarding positive exchanges with strangers and closer ties. For injunctive pro-mixing norms, with the more generalizable and reliable data of Study 2 we did not detect significant total or direct associations of injunctive norms with any type of contact. Hence, it mattered more for (positive) interreligious contact whether ingroup members *had* interreligious contact than whether they *approved* of it.

Additionally, pro-mixing ingroup norms were indirectly associated with interreligious contact via preferences for similar others. Both descriptive and injunctive norms were negatively associated with preferences for similar others in Study 2. In Study 1, this was true for descriptive norms. In line with previous literature (Al Ramiah et al., 2015; Damen et al., 2021), preferences for similar others were generally negatively related to positive

interreligious contact in both studies. In contrast with existing research (Plant & Butz, 2006) we did not find that preferences for similar others coincided with more negative intergroup experiences. Rather, preferences for similar others and negative casual contact were not related in Study 1 and even negatively related in Study 2. Thus, people who preferred to interact with religiously similar others avoided interreligious contact, including negative contact. Importantly, descriptive (in both studies) and injunctive (in Study 2) pro-mixing norms were indirectly positively associated with both positive and negative interreligious contact via weaker preferences for similar others.

Further, direct and indirect mechanisms mattered to a different extent for descriptive and injunctive pro-mixing norms in relation to positive and negative interreligious contact. The association between descriptive norms and positive casual and close contact was mainly direct. In both studies, we found direct and indirect associations, but direct associations were larger and explained more of the total association. Hence, descriptive norms mainly enabled positive interreligious contact by licensing it (Kalmijn, 1998; Kauff et al., 2021).

Alternatively, a social network effect may have been at work. Descriptive pro-mixing norms imply that ingroup members have outgroup friends (and spouses). This creates opportunities for direct contact with the outgroup contacts of these ingroup members (Stark, 2020). Over time, outgroup friends (and spouses) of ingroup members may become direct friends of individuals (Stark, 2015).

For the relation of descriptive norms and negative casual contact, our findings indicated a need for further research. Whereas descriptive norms were directly related to less negative interreligious contact for Sierra Leoneans in Study 2, this relation was non-significant for Togolese. The indirect association via individual preferences, however, was positive across groups. In Study 1, descriptive norms were unexpectedly only directly (not indirectly) related to more negative casual contact across groups. These inconsistent findings are in contradiction with previous studies that did not find significant associations between

pro-mixing ingroup norms and negative contact (Bagci & Gungor, 2019; Prati et al., 2022).

Differences between our studies and between countries in Study 2 call for comparisons of different types of descriptive norms (i.e. regarding positive and negative as well as close and casual contact) and research regarding the role of contextual factors.

For the relation between injunctive pro-mixing ingroup norms and positive and negative contact, *indirect* associations seem more important. While we found only direct negative associations with positive and negative casual contact in Study 1, in Study 2 we found only positive indirect associations with all three types of contact. Findings from Study 2 are more robust and generalizable, as data for Study 2 were collected from a probability sample by means of in-person interviewing and differed considerably from the sample in Study 1 (Table 1). Moreover, Study 2 included Muslims and Christians from Togo and Sierra Leone. Therefore, we conclude that internalization mechanisms underly the association between injunctive pro-mixing norms and both positive and negative interreligious contact.

Finally, we found some evidence for pro-mixing norms being related to interreligious attitudes via less preferences for similar others, more positive casual contact, and less negative casual contact. In Study 2, we found a direct positive relation between descriptive and injunctive pro-mixing norms and interreligious attitudes. Moreover, some positive (sequential) indirect associations via preferences and positive and negative casual contact were significant yet not consistently so across all groups. In Study 1, we only found a positive indirect association between descriptive pro-mixing norms and interreligious attitudes via preferences for similar others. While the absence of the link between contact and attitudes in Study 1 contradicts findings on the contact hypothesis (Paluck et al., 2019), our findings align with a recent experimental study (Scacco & Warren, 2018), which found a lack of interreligious contact to have negative effects rather than engaging in interreligious contact to have positive effects. Since participants in our studies generally had a great share of outgroup

friends and generally held positive outgroup attitudes, contact may have prevented prejudice rather than fostered even more favorable interreligious attitudes.

A limitation of our research is that we analyzed cross-sectional data and, hence, we cannot make any statements about causal effects. As such, we cannot discern whether the direct relation between descriptive pro-mixing norms and close contact was a result of licensing or social network effects. Social network analyses could reveal which mechanism is more important. Further, the association between ingroup norms and negative contact requires additional investigation. Future research should systematically study differences between ingroup norms concerning close vs. casual and positive vs. negative contact. Finally, our measures allowed comparisons of regression coefficients between subgroups, but improved measures would also permit latent mean comparisons.

To conclude, our findings imply that establishing and sustaining pro-mixing ingroup norms is a strategy to foster and maintain peaceful interreligious relations. Specifically, pro-mixing norms were related to more positive casual and close contact as well as more favorable interreligious attitudes, albeit via different mechanisms for descriptive and injunctive norms. Thus, communicating the notion that people commonly engage in and approve of positive interreligious contact, for example through mass-media campaigns, can foster peaceful interreligious relations. Additionally, such strategies can work against individuals' avoidance of religious outgroup members by weakening their preferences to engage with religiously similar others.

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