Beyond Borders and Stereotypes: Exploring the Prejudice Reducing Effects of Intergroup Contact in Non-Western Environments
Malčić, Ivana

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Beyond Borders and Stereotypes:

Exploring the Prejudice Reducing Effects of Intergroup Contact in Non-Western Environments

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Ivana Malčić

Student number: 2865254

i.malcic@vuw.leidenuniv.nl

First reader: Dr. J. A. Robison

Second reader: Dr. M.F. Meffert

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Introduction

In a world increasingly shaped by globalization, good cross-group relations are becoming an increasingly salient topic. Such diverse environment has the potential to exacerbate intergroup differences leading to prejudice and increasing the likelihood of conflict (Thomsen & Rafiqi, 2017). Namely, the question of how to reconciliate different groups by fostering a peaceful environment becomes more pervasive. One popular factor that is hypothesized to have the potential to mediate cross-group relations by reducing prejudice is intergroup contact.

Years of research in intergroup contact theory have yielded fruitful findings when it comes to mediating cross-groups relations and generating social policy recommendations (Paolini et al., 2021). From positive results to more ambiguous ones, it is generally accepted that interaction leads to more acceptance, and less negative emotions (Pettigrew & Tropp, 2006). Drawing on to the arguments derived from social dominance theory, hierarchies powered by socially constructed myths are seen as the main enablers of outgroup prejudice and exclusion (Sidanius & Pratto, 1999; Tropp & Mallett, 2011). In this context, intergroup contact is thought to act as a mediator between dominant and subordinate groups, helping them coexist in harmony. Yet, it can be observed that the composition of hierarchies varies greatly depending on the country; while in North America the dominant group are Caucasian Christians, in Iraq it would be Arab Muslims. Therefore, cross-group contact does not only vary among groups, but also on the space which they occupy, making the empirical findings highly dependent on regions and their respective hierarchies.

Although previous studies have extensively investigated the effects of intergroup contact on prejudice reduction, little attention has been paid to whether these effects hold

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across different contexts. Subsequently, several criticisms of the theory were formed to address this issue. The lack of generalizability of findings, as identified by Pettigrew (1998), is an especially prominent one. The field of social psychology has been long criticized for being dominated by Western perspectives. This Western-centric approach to research often leads to the interpretation of phenomena through the lens of Western cultures, potentially overlooking the cultural specificities and diversity of human behaviour globally. Following this trend, research in minority-majority group relations has been done in multicultural settings of North America and Western Europe. On the flip side of the coin, only modest efforts were invested in trying to replicate these findings in Eastern Europe, Africa, and Asia. Aligning with these limitations, a question arises: *Do the findings still hold when applied to the context of non-Western countries?* The answer aims to contribute to the broader understanding of prejudice dynamics and the effectiveness of intergroup contact as a tool for prejudice reduction in a non-Western context that remains relatively unexplored in popular literature. Consequently, it hold that the generalizability and replicability of such effects across different cultural settings should be scrutinized.

This paper hypothesizes that intergroup contact with outgroup members generally leads to lower prejudice levels among the dominant group in non-Western countries. This complex relationship is explored by focusing on the interactions between Muslims and Christians in 22 countries of the "Global East". To examine the hypothesis, a Cumulative Link Mixed Model is employed to analyse the data from the "World Muslims" survey. The hypothesis was operationalized through interfaith meeting attendance as an indicator of intergroup contact, and social distancing levels as indicators of prejudice. The results found that contact is linked with significant negative effects on prejudice levels, supporting the central hypothesis. Moreover, the threshold coefficients showed that higher prejudice levels are generally more robust to the effects of contact than lower prejudice levels.

Theoretical framework

Intergroup Prejudice

In his 1954 book, "The Nature of Prejudice", Allport provided a seminal definition of prejudice as an "Antipathy based upon a faulty and inflexible generalization." (p. 10). Several crucial components of prejudice are captured here: first, "antipathy" signifies a strong dislike or a negative emotion toward a group or its members. Secondly, the idea of "faulty and inflexible generalization" underscores prejudice as based on overly simplistic beliefs about others, while being resistant to change. Finally, Allport added prejudice "…may be directed toward a group as a whole, or toward an individual because he is a member of that group." (1954, p. 10), thus capturing the indiscriminate nature of prejudice, where negative attitudes can be applied broadly to all group members irrespective of their individual characteristics or actions.

Since then, Allport´s definition remained central to the study of prejudice-reduction as pioneers of the field have expanded and refined the concept further. For instance, Pettigrew and Meertens (1995b, p. 58) refined the conceptualization of prejudice by differentiating between blatant and subtle forms. They contend that blatant prejudice is thought to involve feelings of heightened threat and opposition to intimate contact leading to rejection of the outgroup. On the other hand, subtle prejudice is revealed by three socially accepted dynamics: defence of traditional values, exaggeration of intergroup differences, and denial of positive emotions (Pettigrew & Meertens, 1995b). It was found that the two types also lead to different effects; blatant prejudice fosters more direct discrimination, social exclusion, and

larger systemic inequalities. Subtle prejudice, being the more covert form, leads to reinforcement of stereotypes, internalized bias, and undermining of equality efforts.

To better understand the complex roots of prejudice, researchers have explored various theoretical frameworks. In their more recent work, Sidanius et al. (2004, p. 846) reason that, while most theories focus on structural or individual factors behind prejudice-formation, the social dominance theory helps connect the two. This theory posits that intergroup dynamics tend to arise from relative positions of groups in group-based social hierarchies which are a key feature of every human society (Sidanius & Pratto, 1999). The central concept of the theory - group-based hierarchy - can be understood as levels of social influence, status, and benefits that an individual holds due to their inherent association with certain social groups which can be formed based on race, religion, language, ethnicity and other factors (Sidanius & Pratto, 1999, p. 32). Therefore, it holds that dominant groups possess a disproportionately large share of positive social value, while subordinate groups possess a disproportionately large share of negative social value.

Subsequently, social dominance theory highlights the idea that all societies share two key features: "…(a) some groups are more privileged than others, and (b) the privilege is based on socially constructed legitimizing myths or ideologies, rather than actual merit" (Sidanius & Pratto, 1999). Tropp and Mallett (2011) put a particular emphasis on the role of legitimizing myths or ideologies as widely accepted and mostly untrue beliefs that serve as mechanisms for supporting hierarchies (p. 22-24). In this context, prejudice arises as a tool used by dominant groups to rationalize these ideologies and maintain their superior position.

There has been much support for this theory in literature on prejudice formation. For instance, Quist and Resendez (2002) demonstrated that intergroup threat, conceptualized as threat to the dominant group's superior status, leads to stronger beliefs in legitimizing myths (p. 291). In particular, they found that, on the macrolevel, prejudice legitimizes the existing

hierarchy, and on the individual level prejudicial attitudes support anti-egalitarian attitudes (Quist & Resendez, 2002, p. 291). In short, their findings suggest that dominant groups often employ prejudicial attitudes as a means to uphold their supremacy over subordinate groups.

Social Groups and Exclusion

Studies on intergroup relations focus on social groups as fundamental units through which individuals identify and interact within the broader society. By investigating group dynamics and the underlying social identities, researchers gain insights into the factors that contribute to prejudice creation, mediation, and ultimately reduction. Social identity can be defined as the individual's knowledge of belonging to certain social groups paired with emotional value tied to the group membership, where a social group is conceptualized as two or more individuals who see themselves as members of the same category (Abrams & Hogg, 1988, p. 13). Therefore, one can imagine them as building blocks of intergroup relations, where each group exists and interacts withing the framework of the society it inhibits.

According to the social identity theory, as presented by Abrams and Hogg (1988), power and status relations play a central role in shaping interactions across social categories (p. 13). This framework refers to social categorization as a division of people into social groups on the basis of some common features, with 'power and status relations' emphasizing the notion that some categories in society enjoy greater power and prestige. It holds that those belonging to dominant categories may experience privileges and advantages, while individuals in lower social categories may face disadvantages and marginalization. In summary, this approach highlights the unequal distribution of power in society and underscores how these disparities in return influence social interactions.

Expanding on the social identity theory, Tropp and Mallett (2011) posit that the inherently hierarchical nature of societies evident through power-status relations stems from the human

need for *assimilation* with others based on a perceived similarity, and the need for *distinctiveness* based on the desire to be perceived as unique and special (p. 22-35). To satisfy both needs, the individual cannot look for distinctiveness in their own group due to conflicting interests with the pursuit of perceived similarity among ingroup members. Considering that uniqueness exists only in contrast to something or someone else, the two needs require us to seek validation from the ingroup, while focusing on the perceived differences with the outgroup (Tropp & Mallet, 2011, p. 22). These comparisons typically call for distinguishing between the *self* as the ingroup member, and the arbitrary *other*, as the outgroup member, thus maximizing intergroup contrast and contributing towards greater exclusion (Abrams & Hogg, 1988, p. 19).

Intergroup Contact Theory

Intergroup contact has long been considered a key factor in improvement of cross-group relations (Čehajić et al., 2008, 353). In his 1954 work titled "The Nature of Prejudice", Allport first hypothesized that mediated intergroup interactions lead to less prejudice towards outgroup members. These interactions, he suggests, can be particularly effective when they occur in the context of equal status between groups, common goals, cooperation, and social sanctions for unwanted behaviour (Allport, 1954, p. 261). Since then, several meta-analyses of the theory (Pettigrew, 1998; Pettigrew & Tropp, 2006; Pettigrew et al. 2011; Davies et al., 2011) provided consistent and robust findings in favour of the prejudice-reducing effects of intergroup contact, even in absence of `ideal´ conditions proposed by Allport.

However, to say that every contact situation harbours the same effects would be false. In their meta-analytic review, Davies et al. (2011) found that the positive effects of contact on prejudice reduction are largest in situations where individuals establish high-quality repeated contact, as opposed to its more superficial forms. Likewise, Pettigrew (1997) argues that friendship plays an especially important role as it involves contact over time which extends to

many different situations through which groups can obtain deeper, more long-lasting ties (p. 173). Subsequently, in their large-scale meta-analysis of intergroup contact, Pettigrew and Tropp (2006) showed that contact in the form of cross-group friendships generally leads to larger effects than other, more superficial, forms of contact. However, the practical implications of these studies remain unclear; namely, the causality issue remains – in longitudinal studies it was observed that cross-group friendships help predict reductions in prejudice, but higher levels of prejudice can also predict less cross-group friendship (Binder et al., 2009).

Still, to generate successful social policy recommendations based on the prejudice-reducing effects of contact, it is important to ask: why would individuals engage in interaction with the outgroup in the first place? Kauff et al. (2021) supplement the literature on intergroup contact by identifying three levels of factors that may drive interaction: micro, meso, and macro. On the micro-level, they identify rational self-expansion as a motivated search for personal growth and development through intergroup relationships, where contact offers novel opportunities for self-improvement (2021, p. 43). At the meso-level, intragroup processes are prominently recognized as an important facilitator of contact (p. 46-47). Their argument ties on to the work of Čehajić et al. (2008) where it was stipulated that belonging to a "superordinate" identity common to both the majority and minority group may drive and reinforce contact (p. 355). Lastly, at the macro-level, they reflect on societal norms that shift group behaviour via social sanctions as potential tools for increasing the frequency of contact (p. 49).

In some cases, other factors are hypothesized to prevent contact from occurring. Stephan and Stephan (1985) and Turner et al. (2007) attributed this to a phenomenon called intergroup anxiety; a negative emotion arising from expectations of rejection or discrimination during interactions with outgroup members. Intergroup anxiety is thought to exist when either

negative experiences are linked to prior contact, or little to no contact with the outgroup ever occurred. However, literature has shown that once contact does occur and positive experiences are linked to it, intergroup anxiety can be lowered or even diminished completely (Turner et al., 2007).

The exact ways through which the attitude change occurs, however, stay relatively unknown. Pettigrew (1998) sheds some light on this by highlighting four interrelated processes: first, learning about the outgroup through interaction is thought to have a potential in shifting negative beliefs that supported discrimination (p.70). The second process - behaviour change - occurs when these interactions heighten ones´ comfort level and create new social norms, leading to more positive behaviours and less negative ones . Subsequently, contact has the potential to reduce intergroup anxiety levels and lead to more positive experiences which, in return, generate affective ties with the outgroup (p.71-72). Lastly, getting to know members of other groups can also lead to questioning of the dominant ingroup narrative, also called "ingroup reappraisal" (Pettigrew, 1998, p. 72).

While intergroup contact theory has garnered considerable empirical support, it is not without its challenges in practical application. Three critiques can thus be observed. Most prominently, Dixon et al. (2005) caution that contact may reinforce existing hierarchies if not well managed - particularly in situations where group status is asymmetric. Subsequently, it was observed that members of subordinate groups usually benefit less from intergroup contact than those belonging to the dominant group (Tropp & Pettigrew, 2005). A popular explanation for this phenomenon, offered by Pettigrew and Tropp (2005, p. 952), is that contact with the dominant group accentuates intergroup differences and serves as a reminder of subordinate group's devalued status. To address this disproportionality, a variety of facilitating factors thought to increase the efficiency of intergroup contact have been added to the theory.

This brings us to the second critique which pertains to an overburdening of hypotheses with often unnecessary, restrictive conditions (Pettigrew, 1998, p. 69). Dixon et al. (2005) linger on this by concluding that, although some interesting results may come out, they are not applicable to most real-world scenarios in which such "ideal" conditions do not hold. The usefulness of such excessive conditioning remains ambiguous as most studies confirm the theory even when facilitative conditions are not met (see Pettigrew & Tropp, 2006).

Finally, the third critique concerns the lack of generalization of effects across different societal contexts which Pettigrew (1998) highlights as central for a broader validation of the theory and its usefulness (p. 70). Since intergroup dynamics are thought to be highly context-dependent, they cannot be derived from faulty generalizations. In their "Meta-Analytic Test of Intergroup Contact Theory", Pettigrew and Tropp (2006) compile a total of 515 studies; 71% out of which were conducted in the United States alone. Although they find general support for the theory, the cross-regional disproportionality of their samples calls for further research in the less represented parts. On the brighter side, an increase in literature on intergroup contact when applied to non-Western countries can be observed in recent times (see Scacco & Warren, 2018; Condra & Linardi, 2019; Mousa, 2020). However, most of these studies are on country-levels and their conclusions cannot be generalized beyond that context. Thus, the cross-cultural applicability of such findings remains unclear and requires more focused efforts.

Accordingly, it is the goal of this paper to address these pressing issues. The effects that will be discussed in the scope of this research will pertain exclusively to the dominant group of non-Western countries. In line with empirical evidence (see Tropp & Pettigrew, 2005; Tropp & Pettigrew, 2011; Cocco et al., 2023), no generalization of effects to the subordinate group will be made. Moreover, no facilitative conditions have been observed in

the interactions. It should be noted, however, that a potential amplified effect would be expected in a scenario where such conditions were met (see Pettigrew et al., 2011). Lastly and most importantly, to address the lack of generalizability and applicability to different contexts the model examines 22 countries which are traditionally not well represented in the literature. The large sample ensures partial generalizability across regions, and the nature of these non-Western countries provides a novel perspective on the effects of intergroup contact.

Intergroup Contact Effects in Religious Settings

Thomsen and Rafiqi (2017) identified religiosity as an important driver of hostility toward outgroup members due to its facilitative role in shaping collective identities. They predicate religion as "…a social and cultural phenomenon intimately related to distinct groups, such as Muslims, Protestants, Catholics, or Jews." (p. 1574). Likewise, Allport lingered on this idea in his 1966 work *The Religious Context of Prejudice* where he posits that religious individuals harbour more prejudice to outgroup members than those who do not identify with any religion (p. 447). Such constatations have brought attention to the need for finding appropriate interventions that can facilitate better intergroup relations among proponents of different religions, and potentially lead to better policy recommendations.

Within the framework of intergroup contact theory, religious identity is often used as means of group categorization. This can be attributed to several factors: aligning with social dominance theory (see Abrams & Hogg, 1988), religion is viewed as a socially constructed myth due to it involving widely accepted, shared beliefs that may not be empirically proven but serve important social functions. Similarly, it is often said to contribute to the establishment of group hierarchies and social structures where religious myths play a role in justifying power-status relations and social inequalities via prejudiced attitudes. Most importantly, religion is a uniquely global phenomenon that gives more opportunities for comparative studies on the effects of intergroup contact on negative attitudes across cultures.

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Several papers alluded to the prevalence of prejudice in religious setting, and the subsequent positive effects of contact in reducing it. Jackson and Hunsberger (1999) argue that religious-based prejudice is common among more religious individuals, regardless of their specific religious orientation. However, even in cases where an individual does not strictly hold to their religious beliefs but sees themselves as loosely belonging to a specific religious identity, prejudice towards the outgroup is prevalent (Jackson and Hunsberger, 1999). Thomsen and Rafiqi (2017) add that the prejudice reducing effect of intergroup contact is, therefore, likely not uniform across all levels of religiosity. Accordingly, their findings indicate that, while intergroup contact in religious settings is negatively related to prejudice, individuals with higher levels of prior prejudice benefit less from contact than those with lower levels.

The implications of such research are broad, as religious divide both within and across hierarchies has played an important role in fuelling conflict - especially among non-Western countries where most large-scale religions originated. Subsequently, the hypothesis of prejudice reduction via intergroup contact, that is central to this paper, will be placed, and tested, in a religious context.

Research design

Case Selection and Inclusion Criteria

In this paper, I will focus on Muslims as followers of the dominant religion of non-Western countries, and their attitudes toward Christians as the `outgroup´ members. Thus, the focus is placed on intergroup relations within the specified hierarchy. To ensure that the cases are representative of the focal group, a typical case selection is chosen. Therefore, it is expected that the selected cases possess characteristics representative of the wider group. To

ensure a high level of validity and some generalizability across regions, 22 out of 26 countries are chosen from the dataset (see Appendix C for the total list of countries included).

Some countries were excluded for the following reasons; firstly, Thailand had to be excluded due to its predominantly Buddhist population and extremely small Muslim and Christian populations (<5%). This decision was based on overwhelming differences between Christianity and Islam as religions, and Buddhism which is considered a philosophy. These differences cannot be accounted for in the analysis, making it highly unsuitable for testing of this papers´ hypothesis. Secondly, Afghanistan and Morrocco will be excluded due to respondents in these countries not being asked survey questions relevant for this study. Primarily, this is because of extremely low Christian population of both countries (<1%) which makes contact both difficult and highly unlikely. Thirdly, Iran is excluded due to local sensitivities which called for a different variation of the survey question used for the independent variable. The rest of the countries that will be included in the analysis can be described as predominantly Muslim, with significantly higher Muslim populations relative to the Christian population.

After cleaning the variables from missing values and filtering out the mentioned countries, a sample size of 22,502 relevant observations remained.

Data

To adequately explore the relationship between intergroup contact and prejudice among minority and majority groups, a dataset based on the "World Muslims" survey (Pew Research Centre, 2012) of religious attitudes among Muslims is employed. The survey´s objective was to gauge respondents' knowledge of and attitudes toward other faiths, as well as inspecting their religious beliefs and practices. It was conducted between October 2011 and November 2012 by the Pew Research Centre and involved a sample of more than 30,000 face-to-face

interviews in 26 predominantly Muslim countries in Africa, Asia, the Middle East and Eastern Europe. The face-to-face interviews were done in 80 different languages native to the respondent which allowed for better communication, transparency and clarifications. Considering the intimate nature of the questions and taking into account local sensitivities, certain questions were phrased differently or supressed in some countries.

This dataset contains responds exclusively from Muslims; however, the survey was based on national samples that did not screen out non-Muslims. The samples in this study were obtained through area probability sampling methods involving systematic procedures to ensure representativeness. Initially, the sampling frame was stratified proportionally based on geographical regions and levels of urbanity. Primary sampling units (PSUs) were then selected in a manner proportional to the population size of each stratum. Subsequently, secondary and tertiary sampling units were chosen randomly within the selected PSUs. To maintain consistency, interview teams were allocated to specific random routes at the block or street level and adhered to predetermined skip patterns when approaching households for participation. Inside the selected households, the adult respondents were chosen at random, typically by either utilizing a Kish grid method (a method of systematic random selection for inclusion in surveys) or selecting the adult with the most recent birthday. This approach ensured the robustness and representativeness of the sample data.

The survey's reliability in each country was evaluated by comparing the findings related to key demographic variables with trustworthy population statistics at the national level. Additionally, the dataset has been subjected to weighting procedures to address any variations in the likelihood of selection. In certain instances, the data underwent iterative weighting process which aimed to bring the sample distributions closer to official population statistics pertaining to attributes like gender, age, educational background, and ethnicity.

It is important to note that some practical difficulties were encountered relating to gender imbalances and national education statistics. Specifically, it appears that in Afghanistan and Niger, the survey respondents are disproportionately male due to strict cultural norms which discourage females from participating. In Thailand, the respondents are disproportionately female due security concerns which limited interviews conducted in later hours of the day, leading to fewer interviews with men, who tend to stay out during the day and come home later. Azerbaijan and Uzbekistan have the same trend, partially due to large-scale labour migration which may have contributed to fewer interviews with male respondents.

Moreover, in many countries it was hard to obtain accurate census statistics on education. The lack of these statistics limits the extent to which survey samples can be assessed for representativeness on this measure. This was particularly relevant for Albania, the Palestinian territories, Niger, and Tajikistan, all of which have educational statistics that are either unavailable, dated or disputed by experts.

Variables

Dependent Variable: Prejudice

The dependent variable – prejudice toward the outgroup member - was measured by four ordered categories of comfort, or lack thereof, with intergroup marriage. Pettigrew & Meertens (1995b, p. 58-62) highlight the willingness or reluctance to accept inter-faith marriage as a proxy for the level of blatant prejudice towards the outgroup. More broadly, this measure can be understood as an indicator for levels of social distancing from the outgroup which is commonly used in research on intergroup relations (Altmann et al., 1974).

The question had different iterations to account for local differences, however only one iteration captured the same 22 countries as our independent variable. The relevant question was asked in all countries, except for Afghanistan, Iran, and Thailand. Morrocco

will be additionally excluded due to its missingness in the independent variable. The responses were captured on a four-level scale with 1 signifying no prejudice, and 4 signifying substantive prejudice.

Finally, the observed categories are ordinal in nature as they represent sequentially ordered levels of comfort from low to high. Moreover, the distances between each individual category do not represent the same quantitative change, instead they are understood in terms of shifts in order or rank. This makes the variable suitable for an ordinal regression which will test this papers´ hypothesis of prejudice reduction via intergroup contact.

Independent Variable: Contact

As intergroup contact theory posits, the predictor variable in this study reflects social contact established by participants with the members of the outgroup. Specifically, the respondents were asked whether they attended interfaith meetings, groups, or classes with Christians or not. The main advantage of this independent variable is that it provides a rich context as interfaith meetings encourage discussions that go beyond superficial exchanges. Moreover, the relevant outgroup (Christians) was clearly mentioned in the question making it robust to misinterpretations, and therefore highly suitable. The main limitation is that the question does not include frequency of the contact which disables a more nuanced look into whether higher frequency results in less prejudiced attitudes.

Again, the survey question was phrased differently in some countries due to local sensitivities, and left out completely in Morrocco, Iran, and Afghanistan. For this reason, there are two relevant variations of this question in the dataset, both of which have been merged into one singular variable. In total, 22 countries in which this question was asked will be included in the analysis with aforementioned exclusion of Morrocco, Iran, Thailand, and Afghanistan.

Answers to both variations of the survey question have been recoded to fit the model better (see Appendix B). A frequency table was employed to see the distribution of observations across the two categories; it was observed that 8.62% of respondents answered "yes", while 92.39% of respondents answered "no" (see Appendix A, Figure 2). This trend was expected since majority of survey respondents live in overwhelmingly Muslim countries where contact with Christians is rare, and the incentive to attend interfaith meetings is low. However, this does not impact the findings since the focus of this paper is not on the probability of intergroup contact, but rather its efficiency in reducing prejudice in non-Western countries. Additionally, given that the variable has two levels that are mutually exclusive, it can be classified as binary, making it suitable for an ordinal regression.

Model Specification

The independent variable reflecting presence or absence of contact, is hypothesized to have a significant impact on the likelihood of a respondent exhibiting prejudice. Considering the ordinal nature of the dependent variable, the model utilized to test the hypothesis will be ordered logistic regression. The usefulness of this model comes from the fact that it allows for analysing the "ordinality" of the independent variable to discover which categories, if any, are making larger, or smaller, contributions to the change in the outcome variable (Lyons, 1971, p. 169).

As with any statistical model, there are some drawbacks such as interpretational complexity and inflexibility. A central difficulty, as discussed by Williams (2016), is the proportional odds assumption which stipulates that the effect of predictors on the odds of being in a higher category relative to the lower one of the dependent variable is consistent across all thresholds. Although central to ordinal regression, this assumption is frequently violated in many real-world scenarios (Long & Freese, 2014). Williams (2016, p. 16) further reflects on this problem adding that asymmetric relationships, which violate this assumption,

can make good theoretical sense and reveal important insights into the underlying relationships between variables. In other words, when theoretically feasible, the violation of the proportionality of odds does not render the model useless.

More precisely, a variant of ordinal regression called Cumulative Link Mixed Model will be used to automatically account for any variance caused by the cross-regional nature of the data. This model essentially adjusts for the non-independence of observations within each country cluster by allowing the intercept to vary across clusters, providing a better estimate of the fixed effects we are interested in.

One predictor variable and one outcome variable were utilized in the model. Moreover, several potential confounders have been added as controls to ensure internal validity of the model. The more commonly used confounders which were added are gender of the respondent, level of urbanity, and the age of the respondent in years. Additionally, respondents´ self-reported importance of religion was also controlled for. This decision was based on the notion that importance of religion represents one´s strength of group belonging to Islam as a religion which might influence the relationship between contact and prejudice levels.

It should be noted, however, that the education level variable was somewhat problematic in the dataset which led to its exclusion from the model. Primarily, the question wording differed per country which might have caused different interpretations among respondents and led to inconsistencies. Furthermore, the response categories were not the same across all countries and were not available in the codebook, making it impossible to know if they are comparable across different contexts.

To visualize the distribution of the ordinal variable at individual levels of the binary variable, cluster bar chart is provided (see Appendix A, Figure 1). Some customary

assumptions of ordinal regression were tested to assess suitability. Notably, the proportional odds assumption was violated; however, this can be reasonably explained by the non-linear nature of prejudice-reduction and the asymmetric effect of the predictor variable on the outcome. In this context, we can expect that the impact of contact on prejudice is not the same across all levels of prejudice, as mentioned by Thomsen and Rafiqi (2017). For instance, contact might be more effective at reducing moderate levels of prejudice than at shifting extreme views. Furthermore, the presence of potential outliers and influential cases was checked with standardized Pearson residuals which did not indicate any issues.

Analysis

This paper hypothesized that intergroup contact leads to lower prejudice levels among majority group members of non-Western countries. Subsequently, a variant of ordinal regression called Cumulative Link Mixed Model was employed to examine the influence of interfaith meeting attendance among Muslim populations on social distancing levels from Christians. Country weights provided in the dataset were added to account for population size and improve estimate accuracy.

As evident from Table 1, the statistically significant results show support for this hypothesis. The coefficient for the independent variable is negative, indicating that the log odds of being in a higher category of prejudice decrease by 0.433 when the independent variable is at level 2 (contact), relative to the baseline level (no contact). This finding is statistically significant ($p < 0.001$) and in line with theoretical predictions. The independent variable coefficient can also be interpreted in terms of odds ratios which may provide a more intuitive explanation for the underlying trend. The obtained odds ratio of 0.648 suggests that contact, as compared to no contact, is associated with approximately 35% lower odds (1 - 0.648) of being in a higher category of prejudice.

Furthermore, the threshold values delineate the transition points between different levels of prejudice. The first threshold (1|2) provides a value of -3.2259, with a high z-value of -18.232, indicating a strong distinction between categories of 'no prejudice' and 'some prejudice'. This high level of differentiation suggests that moving from a state of no prejudice to a minimal level of prejudice is quite unlikely. The second threshold (2|3) at -1.9473 (z = -11.086) shows a less pervasive but still significant transition from 'some prejudice' to 'moderate prejudice'. Finally, the third threshold (3|4) at -0.8230 (z = -4.698) represents the boundary between 'moderate prejudice' and 'high prejudice', indicating an easier transition relative to the previous thresholds. The statistically significant, but lower, z-value of -4.698 indicates that this observation is less statistically significant in relation to the other threshold values. These findings show that once prejudice begins to form, the escalation to higher levels becomes progressively easier.

In relation to these thresholds, a one-unit increase in the independent variable (from no contact to contact) is expected to push an individual closer to a lower level of prejudice. If an individual is on the verge of crossing the 1|2 threshold, for example, contact would make it less likely for them to cross this threshold, effectively keeping them in the first category. Similarly, for someone close to the higher thresholds (2|3 or 3|4), contact would push them towards the lower end of the scale, reducing the likelihood of escalating to higher prejudice levels. However, the threshold coefficients suggest that this jump from high prejudice to less prejudice is harder as we get to higher levels.

In order to test the `goodness of fit´ between the model with predictor and control variables and a null model, a likelihood ratio test was employed. The output showed a significant improvement in explaining the variation in the outcome variable when the predictor, alongside the controls, was added. The Chi-square test statistic of 128 shows that his variation is highly significant (p < 0.001).

Additionally, a significant variance of random effects (0.6245) with a standard deviation of 0.7903 is observed, suggesting that the baseline odds of the ordinal outcome vary across countries. This finding justifies the use of a mixed-effects model due to a meaningful country-specific effect which the model subsequently accounted for.

Table 1: ordinal regression output table

| | Fixed effects | | | | |
	Estimate	OR	Std. Error	z-value	p-value
Interfaith Meetings Attendance Ref = 1	-0.4330	0.6485	0.04861	-8.907	< 0.001
Importance of Religion	-0.6449	0.5247	0.0226	-28.474	< 0.001
Gender	0.1155	1.1224	0.0271	4.259	<0.001
Age	0.0052	1.0052	0.0009	5.497	<0.001
Urbanity	0.1406	1.1510	0.0294	4.783	<0.001

Random Effects					
Intercept (Country)					
Variance	0.6245				
Std. Deviation	0.7903				

Thresholds: 1|2: -3.226   2|3: -1.947   3|4: -0.823

Discussion

As findings presented in the previous section indicate, the hypothesis of intergroup contact being a significant predictor of prejudice reduction is confirmed and consistent with findings from previous literature. The threshold coefficients provide a more in-depth view of the underlying trend where contact is observed to have more effect on less prejudiced attitudes, and less effect on more prejudiced attitudes.

Interestingly, it was observed that individuals belonging to the highest category (4) of prejudice have more robust attitudes than those belonging to categories 3 and 2 of prejudice. In practical terms, this means that for those who are already at higher levels of prejudice to begin with, the impact of contact with the outgroup might be less pronounced in moving them back to a lower category of prejudice. Essentially, contact is beneficial at all levels, but its preventive effect is more noticeable at some levels than in others. This goes in line with Williams´ (2016, p. 16) explanation of non-linear relationships between the two variables, and previous research on intergroup contact (see Thomsen & Rafiqi, 2017)

Although the general trend confirms the hypothesis, these key insights paint a more nuanced picture in how the effects of contact operate on individual levels of prejudice.

Limitations and Advice for Future Research

Despite of several measures taken to ensure replicability, generalizability and precision of the findings; there are some limitations to be considered. Firstly, while ordinal regression seems like an appropriate model to test the hypothesis, there are some alternatives that may fit the data better. One such alternative is the generalized ordered logit model which Wiliams (2016) argues is more useful when the proportional odds assumption is violated as it selectively relaxes the assumptions of regular ordered models. However, due to its more complex nature, and a strong theoretical justification for violating the proportional odds

assumption in this paper, the model was not employed. Future research may want to investigate this further and examine the effects of different models.

Secondly, the exact impact of, and reasoning behind, intergroup contact on individuals holding higher levels of prejudice needs to be addressed. Papers on intergroup contact found differing results on this matter; for instance, Hodson (2011) found that the impact of contact on prejudice reduction was stronger among those who were observed as most prejudiced. Contrastingly, Asbrock et al. (2011) established that contact was, in fact, least successful in mediating prejudiced attitudes among those who are higher on the prejudice scale. Reflecting on these findings, Thomsen and Rafiqi (2017) contend that the theory should address those who are most intolerant, as otherwise the practical implications might not be as strong.

Furthermore, the observed variance effect suggests that country-specific factors, which are not directly modelled, significantly contribute to the outcome. In other words, it implies that the generalizability of the findings might be limited as the model may not fully capture unique country-level influences. In return, this could affect the applicability of conclusions across different national contexts. While the Cumulative Link Mixed Model does account for between-country variability, it also highlights the potential for some unobserved country-specific factors that can influence the results. Due to the sheer number of countries included, this effect is not surprising, and calls for a more conservative approach when generalizing across contexts.

The third limitation pertains to the potential bias which might have resulted from exclusion of education as a control variable. This decision was made due to several issues with how the survey question was asked and coded in the codebook. Moreover, the survey report (Wormald, 2022) notes that the absence of educational statistics in some countries made it even more difficult to adjust for country-specific factors and provide a precise measurement.

Lastly, the use of Muslims as the dominant group does not account for large ingroup differences. As one of the world´s largest and most diverse religions, Islam has various denominations- most well-known of which are Shi´a and Sunni Muslims. These denominations have a long history of ingroup conflicts and might foster more or less prejudice towards Christians, depending on the group. A more comprehensive approach, which is highly advised for any future research on the topic, would be to address and subsequently account for these large ingroup differences.

Conclusion

Considering the growing importance of harmonious cross-group relations, the intergroup contact theory is revisited for its beneficial effects in mitigating prejudice. Such effects were observed in over 70 years of research efforts (Paolini et al., 2021). Specifically, the theory has proved to significantly reduce prejudice in a multitude of scenarios, both with and without the so-called `ideal´ conditions (Pettigrew, 1998; Pettigrew & Tropp, 2006; Pettigrew et al. 2011; Davies et al., 2011). Moreover, intergroup friendship and other long-term interactions, as opposed to more superficial ones, have been especially valuable in strengthening the effects of contact (Pettigrew, 1997; Pettigrew & Tropp, 2006; Davis et al., 2011). Another well-supported observation is that, in aggregate, dominant groups benefit more from intergroup contact than subordinate groups (Thomsen & Rafiqi, 2017). Furthermore, religion was singled out as a significant driver of prejudice (Allport, 1966), thus being used as means of social categorization in this paper.

However, meta-analyses of the theory showed a general trend towards conducting research in countries of the global West, while often forgetting about the importance of expanding context beyond these regions when generalizing the findings. Some exceptions can be observed (Čehajić et al., 2008; Scacco & Warren, 2018; Condra & Linardi, 2019; Mousa, 2020), but their focus is mostly on within-country analysis, as opposed to more

comprehensive approaches which allow for a better understanding of whether these findings can be observed on an aggregate-level basis.

To address this inequality of findings, this paper offers an overlooked context in investigating the dynamics of cross-group relations by hypothesizing that intergroup contact generally leads to reduced prejudice levels among the dominant group members in non-Western countries. A representative sample 22,502 of Muslims from 22 predominantly Islamic countries of Eastern Europe, Africa and Asia was used. Contact was operationalized through interfaith meeting attendance with Christians, while prejudice levels were captured by social distancing levels from the outgroup. By conducting a robust analysis using a Cumulative Link Mixed Model, the hypothesis was confirmed with a statistically significant, inverse effect of contact on prejudice levels.

Some broader implications were further derived from the results; notably, contact effects seem to vary in their strength depending on the level of prejudice an individual holds. The highest prejudice level is, therefore, more robust to change than lower levels.

However, the paper is not without its limitations; the potential variation in the impact of intergroup contact across different levels of existing prejudice should be noted and investigated further. Moreover, a significant influence of country-specific factors was uncovered and should be taken into account while interpreting the results. The absence of levels of education as a control variable due to missing educational statistics in some countries also limits the precision of findings. Lastly, the specific nature of this research, which focused on Muslim attitudes towards Christians, requires a careful approach when generalizing these findings beyond the mentioned religious context.

Concludingly, this paper contributes to the discourse on prejudice reduction, particularly in the context of non-Western countries. It does so by underscoring the

importance of contextual expanding while assessing intergroup dynamics. Any future researchers are highly advised to revisit these results and delve deeper into the specificities of varied cultural landscapes, particularly focusing on the most intolerant segments within societies. Nuanced research can inform more effective social policies and interventions aimed at fostering better intergroup relations in increasingly diverse global societies.

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Appendix A:

Figure 1: Proportional Cluster Bar Chart
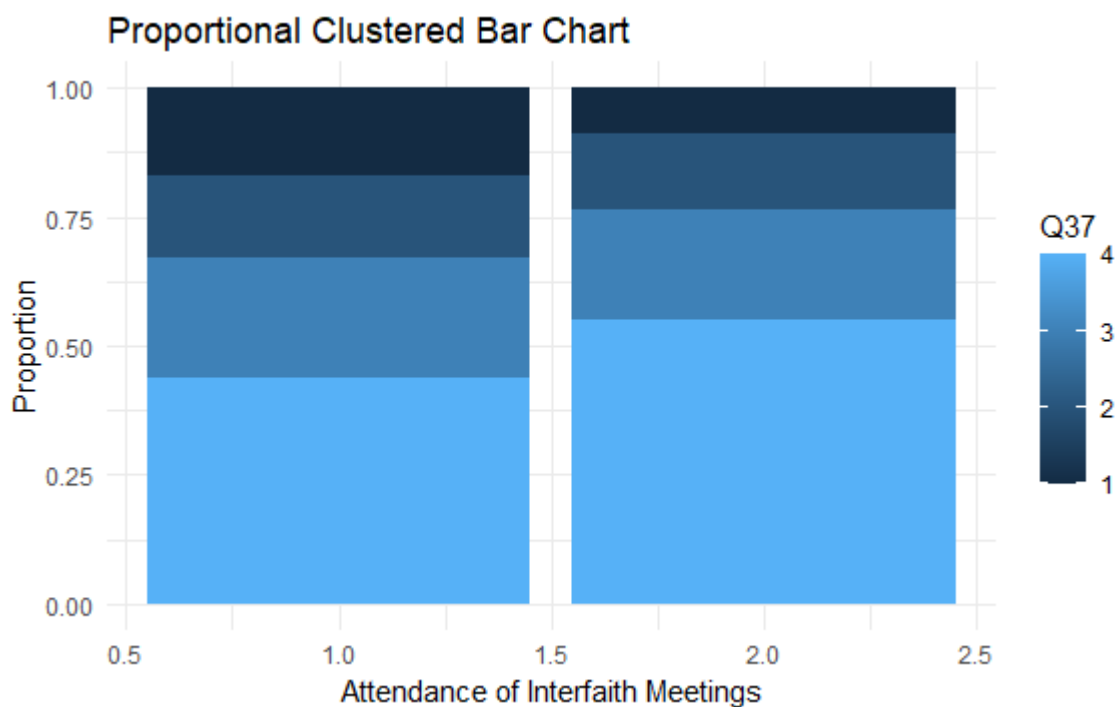
Appendix B

Coding and measurement details for variables used in the regression model

Dependent variable

Q37: "How comfortable would you be if a son of yours someday married a Christian? Would you be very comfortable, somewhat comfortable, not too comfortable or not at all comfortable?" (Asked if not Christian in all countries except Afghanistan, Iran, and Thailand).

1 Very comfortable

2 Somewhat comfortable

3 Not too comfortable

4 Not at all comfortable

5 Depends on situation (filtered out)

8 Don't know (filtered out)

9 Refused (filtered out)

Description: the variable was cleaned before being included in the model.

Independent variable

Q70: Do you ever participate in inter-faith religious groups, classes, or meetings with Christians or not? (asked if not Christian in Albania, Algeria, Azerbaijan, Egypt, Jordan, Kazakhstan, Kyrgyzstan, Lebanon, Palestinian Territory, Russia, and Tajikistan).

1 No (original value indicated "Yes)

2 Yes (original value indicated "No")

8 Don't know (filtered out)

9 Refused (filtered out)

Q70a: Do you ever participate in inter-faith religious groups, classes, or meetings with Christians or not? (Asked if not Christian in Bangladesh, Bosnia and Herzegovina, Indonesia, Iraq, Kosovo, Malaysia, Niger, Pakistan, Tunisia, Turkey and Uzbekistan)

1 No (original value indicated "Yes")

2 Yes (original value indicated "No")

8 Don't know (filtered out)

9 Refused (filtered out)

Description: the two variables were re-coded and merged into a single variable in the dataset, before being included into the model.

Control variables

ASK ALL

Q36: "How important is religion in your life – very important, somewhat important, not too important, or not at all important?"

1 Very important

2 Somewhat important

3 Not too important

4 Not at all important

8 Don't know (filtered out)

9 Refused (filtered out)

Q95: Gender

1 Male

2 Female

Q96: How old were you at your last birthday?

Recorded as age in years

98 Don't know (filtered out)

99 Refused (filtered out)

Description: age was recorded from 18 to 97 (only those who were of age could participate).

Q133: Urbanity

1 Urban

2 Rural

Description: this variable was marked by the interviewer and added to the final dataset.

Appendix C:

Sample size per country and margin of error

Albania: 788 ± 5.3 points

Algeria: 1,181 ± 5.0 points

Azerbaijan: 996 ± 5.6 points

Bangladesh: 1,918 ± 4.4 points

Bosnia-Herzegovina: 1,007 ± 4.2 points

Egypt: 1,798 ± 3.7 points

Indonesia: 1,880 ± 3.4 points

Iraq: 1,416 ± 5.8 points

Jordan: 966 ± 5.9 points

Kazakhstan: 998 ± 4.9 points

Kosovo: 1,266 ± 5.3 points

Kyrgyzstan: 1,292 ± 5.0 points

Lebanon: 551 ± 6.1 points

Malaysia: 1,244 ± 4.4 points

Niger 946: ± 5.6 points

Pakistan: 1,450 ± 5.6 points

Palestinian territories: 994 ± 6.3 points

Russia: 1,050 ± 2.8 points

Tajikistan: 1,453 ± 5.4 points

Tunisia: 1,450 ± 3.3 points

Turkey: 1,485 ± 5.8 points

Uzbekistan: 965 ± 4.7 points