# The role of apology beliefs for apology tendencies across cultures with varying honor norms

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## ABSTRACT

Apologies serve as crucial tools for relationship repair, promoting reconciliation, and demonstrating account-ability. However, beliefs about the morality, effectiveness, and responsibility-signaling nature of apologies may vary across cultures, particularly in contexts shaped by honor norms where apologies fit central cultural concerns for morality and strength in ambiguous ways. This study investigates the relation between apology beliefs and cultural honor norms across 14 Mediterranean, East Asian, and Anglo-Western samples ($N = 5296$). We assessed personal and normative beliefs about apologies and their alignment with apology tendencies (willingness to apologize and past offered apologies) as well as intersubjectively rated honor norms. Results revealed that stronger beliefs in the morality and effectiveness of apologies, as well as perceptions of apologies as admissions of responsibility, consistently predicted greater willingness to apologize across regions and past apologies offered. Against our expectations, honor norms moderated only a few of these relations, with significant interactions suggesting weaker links between apology beliefs and apology tendencies at stronger honor norms. Comple-mentary analyses comparing regional categorizations (Anglo-West, East Asia, and MENA) further supported a picture of relative cultural similarities but also highlighted a wider array of relevant apology beliefs in the MENA region as well as a greater focus on personal morality beliefs in Anglo Western societies and personal effec-tiveness beliefs in East Asian societies. Our findings underscore the universal significance of apology beliefs in

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fostering reconciliation while also revealing some cultural variability in how personal beliefs and cultural norms may interact in shaping apology-related behaviors across diverse societies.

## The role of apology beliefs for apology tendencies across cultures with varying honor norms

Apologies are fundamental to social interactions, functioning as a vital mechanism for acknowledging harm, mending relationships, and reinforcing moral norms (Lazare, 2005). By expressing remorse and accepting responsibility for wrongdoing, apologies can help restore trust, softening negative attitudes due to the transgression, and pave the way for forgiveness and reconciliation (Darby and Schlenker, 1982; Ohbuchi et al., 1989). However, the likelihood that a transgressor offers an apology often depends on their beliefs about apologies. For instance, individuals who believe apologies are an effective tool for relationship repair exhibit less defensiveness about their wrongdoing (Woodyatt and Wenzel, 2013) and are more inclined to apologize (Exline et al., 2007; Leunissen et al., 2012). These beliefs may also shape the transmission of apology behavior across generations — parents with permissive parenting styles, who place less importance on apologies following transgressions, are less likely to prompt their children to apologize compared to those with authoritative or authoritarian styles (Smith et al., 2017). Thus, understanding the factors that shape beliefs about apologies is critical for identifying the conditions under which individuals are more (or less) likely to offer an apology following a wrongdoing.

Yet, despite the centrality of apologies in social interactions, the contextual factors—particularly culturally-shaped ones—that form these beliefs about apologies and their outcomes remain underexplored. Herein, we contend that cultural logics play a critical role in shaping apology-related beliefs because they have evolved to address fundamental challenges of cooperation and social order (Leung and Cohen, 2011). These logics often provide distinct ideas about relationships and the cognitions, emotions, and behaviors valued to maintain them (Markus and Kitayama, 1994). Notably, much of the existing research on apologies is rooted in Western cultural contexts, where dignity-based norms emphasize personal morality and autonomy (Leung and Cohen, 2011; Lin et al., 2022). In these societies, apologies may be perceived as both moral and effective, aligning with internal ethical principles, demonstrating accountability, and restoring personal credibility and morality (but see Leunissen et al., 2014, for a discussion on forecasting errors related to apologies in dignity cultures). In contrast, East Asian cultures prioritize harmony and face, framing apologies differently—as expressions of remorse, sympathy, and a commitment to relational harmony (Maddux et al., 2011; Sugimoto, 1998)—rather than as acts that primarily address moral accountability. This divergence underscores the importance of understanding how cultural contexts influence beliefs about apologies and, consequently, the tendencies to apologize, as the act of offering apologies appears to fit these cultural ideas in different ways.

Although prior empirical work has provided valuable insights into how beliefs about apologies shape their effects, much of this research has been limited to the U.S. – East Asia cultural binary. Less is known about how apology-related beliefs function in other cultural contexts, such as in regions where *honor* is a driving force of social behavior. Cultures of honor—prevalent in Mediterranean, Middle Eastern, and Latin American societies—emphasize upholding one's honor as a central value for social life, involving a delicate balance between personal (e.g., strength, morality) and interpersonal considerations (e.g., reputation, harmonious relationships; for reviews see Uskul et al., 2019; Uskul, Cross, et al., 2023). As a consequence, apologies may be perceived less unequivocally positive in cultures of honor: By ceding power to the other party, apologies may undermine the maintenance of social dominance and control (Kazarovytska and Imhoff, 2023; Shnabel and Nadler, 2008)

- both key aspects of reputation management in honor cultures – and may thus potentially clash with central honor concerns for strength and toughness (Kirchner-Häusler et al., 2024; Lin et al., 2022). However, honor also includes and emphasizes facets of morality, honesty, and being upstanding, particularly in the eyes of others (Rodriguez Mosquera et al., 2002), which are aspects of social relationships that could be supported by apologies (see e.g., Lin et al., 2022), fostering more positive beliefs. As such, beliefs about apologies—and their manifestations and outcomes—are likely to differ in societies where honor norms are more pronounced. Stemming from this proposition, the current research investigated cultural differences in apology beliefs and apology tendencies, specifically examining willingness to apologize and past offered apologies in contexts with varying degrees of honor norms.

### *What is honor?*

Honor is a cultural value that shapes social behavior across numerous regions, including the Mediterranean, the Middle East, Latin America, South Asia, and the Southern United States (Cross and Uskul, 2022; Nisbett and Cohen, 1996; Uskul et al., 2019; Vignoles et al., 2024). It is defined as "the value of a person in his own eyes, but also in the eyes of society" (Pitt-Rivers, 1965, p. 21). Unlike dignity cultures, where self-worth is internal and relatively stable, or face cultures, where self-worth is tied to the adherence to social roles and maintaining harmony, honor cultures regard social value as contingent upon an individual's ability to uphold communal standards of morality, strength, and competitive success (Cross et al., 2014; Uskul et al., 2015). Honor is an inherently competitive and fragile resource, which is hard to earn, easy to lose, and challenging to regain once lost (Uskul and Cross, 2020).

The dynamics of honor are fundamentally relational: threats to or affirmations of honor directly influence not only the individual but also close others or social groups associated with them (Korteweg and Yurdakul, 2009; Rodriguez Mosquera et al., 2008; Uskul et al., 2012). Maintaining honor requires balancing personal autonomy and virtue with vigilance over social reputation and adherence to prescribed norms and expectations, such as defending oneself against insults and projecting strength (Uskul and Cross, 2020). Deviations from the honor code can provoke strong sanctions from others, reflecting the collective stakes involved in dishonorable behavior (Bowman, 2007; Brown, 2016; Nisbett and Cohen, 1996; Uskul et al., 2019).

Although much research has focused on the more negative dynamics of honor, such as its role in interpersonal aggression, risk-taking, intimate partner violence, and delayed healthcare-seeking behaviors (Baldry et al., 2013; Barnes et al., 2012; Foster et al., 2022), honor also has positive dimensions. It contributes to politeness, moral behavior, and reciprocity, emphasizing the importance of maintaining integrity, harmonious relationships, and social cohesion (Cohen et al., 1999; Cross et al., 2014; Leung and Cohen, 2011). These dual aspects highlight the complex and multifaceted nature of honor as a cultural value.

### *The interplay of honor and apologies*

Early anthropological studies (in Greece by Campbell, 1964) suggested that apologies are relatively rare in honor cultures, but empirical research on the topic has only emerged more recently, largely focusing on explaining the reluctance to apologize due to self-image concerns. For example, Lin and colleagues (2022) found that Turkish participants, representing members of an honor culture, were more reluctant to apologize for hypothetical transgressions than eastern US participants. This reluctance was mediated by concerns about maintaining a strong and tough reputation (e.g., "I will look weak to other people in this

society if I apologize"). Notably, however, when honor was reframed to emphasize moral integrity rather than toughness, participants reported reduced reluctance to apologize. Kirchner-Häusler and colleagues (2024) extended these findings in a cross-cultural study of 14 societies, showing that higher societal honor levels were associated with lower prevalence of apologies offered. This relation was explained, in part, by heightened self-image and reputation concerns. However, at the individual level a more complex picture again emerged: facets of honor focused on toughness and reputation were linked to reduced apology willingness and less offered apologies, while facets emphasizing family interdependence and moral obligations were associated with greater apology willingness and less offered apologies. Although these findings provide an initial glimpse into the interplay between apologies and honor cultures, less is known about how apologies are broadly perceived in these contexts and beyond.

In cultures of dignity (such as North American or Western-European contexts), which emphasize inherent and internal self-worth, personal morality, and autonomy, an apology is often valued as a tool to demonstrate accountability and restore personal credibility and morality (Benoit and Drew, 1997). However, in face cultures (e.g., East-Asian), which emphasize fulfilling social roles and maintaining harmony, an apology is typically believed to be a means to preserve social cohesion and order (Maddux et al., 2011). Despite these differences, these results suggest that apologies should be perceived as positive and functional processes in both cultural contexts. Supporting these nuances in apology beliefs, Takaku (2000) found that both Japanese and U.S. participants generally rated apologies as appropriate responses following a broken promise (4 to 5 on a 0–6 scale), but also that Japanese rated apologies as more appropriate than U.S. participants, who in contrast rated self-justifications are more appropriate alternatives (representing an alternative pathway to restoring moral credibility).

In honor cultures, where social value is a competitive resource to be claimed and maintained, apologies may hold more ambiguous connotations. On the one hand, apologies may conflict with the honor code's emphasis on strength and toughness because offering an apology can be perceived as "giving in" or conceding status in a competitive environment (Leung and Cohen, 2011). Apologies may also be perceived to be an ineffective tool for reconciliation because they risk signaling weakness, which could invite further demands or threats to one's honor. Indeed, refusing to apologize may potentially be a more desirable strategy in honor cultures as it has been shown to enhance feelings of power and self-esteem (Okimoto et al., 2013). On the other hand, honor cultures also emphasize personal morality and the maintenance of good relationships with relevant others (Rodriguez Mosquera, 2016). An apology can facilitate both goals, particularly given that transgressions in honor contexts have a potential to escalate quickly without reconciliation (Lin et al., 2022). Although rare, apologies in honor cultures may thus still be perceived as moral and effective acts that can prevent further retaliation by signaling submission to the other party and that may support the maintenance of respectful and harmonious interpersonal relationships (Nisbett and Cohen, 1996; Uskul, Cross, et al., 2023). Providing some support for this dual perspective, Kirchner-Häusler and colleagues (2024) found that different facets of honor were linked to opposing attitudes toward apologies: relational components of honor predicted lower reluctance to apologize, while individual promotion components predicted greater reluctance to apologize. In a similar vein, Lin and colleagues (2022) showed that reframing honor as morality-focused rather than strength-focused similarly reduced reluctance to apologize. Given the dual emphasis in honor cultures on strength and personal enhancement as well as relationship maintenance and morality, overall evaluations of apologies are thus not easily inferred in these cultures.

Further complexity may also arise from cultural differences in how the translation of personal beliefs about apologies into behavior may be constrained by prevailing cultural norms. In dignity cultures, for example, individual behavior is typically guided by personal decisions,

goals, and morality (e.g., "Do I believe it is the right thing to apologize?"), whereas in face cultures it is typically guided by role obligations (e.g., "Is it considered appropriate for someone in my position to apologize?"; Leung and Cohen, 2011). In honor cultures, where both individual and interpersonal orientations are emphasized, both personal convictions and cultural norms likely play a role. For instance, individuals may personally believe an apology is moral yet be concerned that apologizing in contexts where apologies are framed as weak would harm their own reputation or that of their close others. More insights into the interplay of personal and normative influences on apology tendencies across cultures are therefore also needed.

### The current study

Drawing upon general population samples from the Mediterranean region (comprised of Latin Europe, Southeastern Europe, and Middle Eastern and North African [MENA] societies), as well as from East Asian and Anglo-Western regions, the current study set out to explore the interplay between honor and perceptions of apologies. Following recent research supporting the relative importance of honor in Mediterranean cultures and the usefulness of intersubjective assessments of honor in explaining individual behavior (Vignoles et al., 2024), we assessed intersubjective norms of honor in one's society as an indicator of a cultural logic of honor. As honor can be highly gender-specific (Rodriguez Mosquera, 2016), we defined cultural groups based on the intersection of gender and country (e.g., "Spanish Women", "Japanese Men").

Our goal in the current study was not to exhaustively model all possible components of apologies but to primarily focus on core cognitive appraisals most theoretically relevant to cross-cultural variation in honor contexts. As such, we focused on beliefs about morality, effectiveness, and responsibility-signaling because these appraisals most directly relate to cultural tensions central to honor—balancing moral integrity with reputational toughness—and are more theoretically upstream than behavioral components (such as e.g., compensation or empathy; see Fehr and Gelfand, 2010). We thus approached our current paper with two research questions[1] tested in our *main analyses*: First, we tested whether stronger beliefs in apologies as both effective and moral, and as signaling admissions of responsibility for transgressions—considering both personal beliefs and perceived normative beliefs—would be associated with better apology tendencies, including greater willingness to apologize and higher likelihood of offered apologies in past situations. Second, we explored whether the presence of stronger honor norms in one's environment would systematically moderate these relations. Finally, in order to respect the fact that honor as a dimension may be only one part of a cultural system (such as honor, face, dignity cultures), we also exploratorily conducted a series of *complementary analyses* in which we tested the link between apology beliefs and apology tendencies across three different regions (as cases-in-point differing in honor norm prevalence: Anglo-Western, MENA, and East Asian societies).

### Material and methods

#### Participants

We recruited 6577 participants from 14 data collection sites located in Anglo-Western (the U.S., the U.K., Canada), East Asian (South Korea,

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[1] Given the complex interplay of honor with apology beliefs we intentionally approached this study as an exploratory investigation into how apology beliefs relate to apology tendencies across varying levels of honor norms and geographical regions. Although we pre-registered our analyses, this was done to enhance transparency and reduce uncertainty about the inferential procedure used (Peikert et al., 2023), not to conduct confirmatory hypothesis testing.

Japan), and Mediterranean regions (Cyprus [Greek Cypriot and Turkish Cypriot communities], Egypt, Greece, Italy, Lebanon, Spain, Tunisia, Türkiye). Participants were recruited via local or international survey companies using their proprietary online panels. Recruitment followed nationally representative quotas for gender and age, based on internal company data. Eligible participants (identified based on our inclusion criteria below) were invited via email to complete the survey and were compensated in line with national norms and each company's compensation guidelines. Survey companies conducted quality checks at multiple states of the project to screen for issues such as rapid completion, straight lining, and excessive item skipping.

To participate, participants had to be a) at least 18 years old, b) born in the country of data collection, and c) living in the respective country at the time of participation.[2] To allow for sufficiently sized societal gender groups as the cultural units of analysis, we excluded participants who did not self-identify as female or male. These inclusion criteria left $N = 5471$ participants, with all data collection sites approaching our target of 200 men and 200 women except for the Greek Cypriot Community (147 men and 132 women). The sample showed an almost equal balance regarding gender (50.3 % women), comprised a wide age range ($M_{age} = 42.61$, $SD = 15.12$, Min = 18, Max = 89), and reported an average socio-economic status slightly above the scale midpoint ($M = 5.59$, $SD = 1.94$, from 0 = *Bottom* to 10 = *Top*). Please refer to the Supplementary Materials SM.1 for a full overview of the sample demographics by data collection site.

*Procedure*

Participants in each country were recruited by a survey company to complete an online questionnaire. After providing informed consent, they completed a series of measures assessing beliefs about morality and effectiveness of apologies, beliefs about whether apologies reflect admissions of responsibility for wrongdoing, and perceptions about normative honor endorsement in their society. Next, they were asked to recall a recent instance in which they did something that harmed another person and to report whether they had offered an apology. Finally, they provided demographic information and were debriefed.

*Measures*

Initially, materials were generated in English and then translated into the respective official language (Arabic, Greek, Italian, Japanese, Korean, Spanish, and Turkish) using a team translation approach (Survey Research Center, 2022): Native speakers of each language, either members of the research team or professional translators, completed the first round of translations. These were subsequently reviewed and verified by other team members for accuracy and adherence to local language conventions.

Prior to our analyses, we conducted a series of multigroup and multilevel measurement models for all multi-item scales (personal beliefs of effectiveness of apologies, perceived normative beliefs of apology effectiveness, perceived normative honor endorsement, willingness to apologize), to identify the best-fitting factor structures across five regional clusters, following Mensah and Chen, 2013 distinction (Anglo-Western, East Asian, Latin European, Southeast European, and MENA). All scales showed metric invariance of individual-level dimensions across world regions (i.e., equivalence of factor loadings). A complete overview of the models and steps can be found in Supplementary Materials section SM.3. (Tables SM.2 to SM.7).

**Morality of Apologies.** We measured personal beliefs about morality of apologies with a single item ("*After committing a wrong, how*

morally right or wrong do you think it is to apologize?*") and the corresponding perceptions of normative beliefs with a single item ("*After committing a wrong, how morally right or wrong do most people in [the United States] think it is to apologize?*"). Both items were rated on a scale from 0 (*morally very wrong*) to 10 (*morally very right*).

**Effectiveness of Apologies.** We measured personal beliefs regarding the effectiveness of apologies ("*How effective do you think an apology is at…*") as the aggregate across five items: two items ("*…promoting forgiveness?*", "*…repairing the damaged trust between individuals after wrongdoing?*") were adjusted from Leunissen and colleagues (2012), while we added the remaining three items *("…restoring a damaged relationship?*", "*…repairing the damaged reputation of the wrongdoer?*", "*…restoring one's personal sense of integrity?*") to reflect potential cultural differences in apology functions between face, honor, and dignity cultures (i.e., apologies as tools for social harmony, reputation management, and moral restoration, respectively). We measured corresponding perceptions of normative beliefs regarding the effectiveness of apologies using the same items with adjusted instructions ("*How effective do most people in [Tunisia] think an apology is at …*"). Both sets of items were rated on a scale from 0 (*not at all effective*) to 10 (*extremely effective*), and showed excellent reliability ($\alpha_{personal} = 0.90$, $\alpha_{society} = 0.90$).

**Admission of Responsibility**. We measured personal beliefs about whether apologies reflect an admission of responsibility for a wrongdoing using a single item ("*To what extent do you think an apology reflects an admission of responsibility for wrongdoing?*") with the intent of approximating previous work examining similar research questions across cultures (Maddux et al., 2011; Shafa et al., 2017). We measured the corresponding perceptions of normative beliefs with a single item ("*To what extent do most people in [the United States] think an apology reflects an admission of responsibility for wrongdoing?*"). Both items were rated on a scale from 0 (*no admission of responsibility*) to 10 (*admission of full responsibility*).

**Perceived-Normative Endorsement of Honor Values.** We measured perceived normative endorsement of honor values using eight items: four items borrowed from Yao and colleagues (2017; e.g., "People should not allow others to insult their family."), and four items borrowed from Smith and colleagues (2017; e.g. "People always need to show off their power in front of their competitors."). The latter items were rephrased to read as "*People should…*" (instead of "*People are…*" or "*People do…*") to better capture endorsement of cultural values and beliefs (rather than descriptive states or behaviors). The final set of items was derived from extensive multigroup and multilevel measurement models conducted on a larger item pool reported elsewhere (Vignoles et al., 2024); for the sake of consistency with these previous established models we included the final set of honor items from Vignoles and colleagues (2024). Participants rated these items in terms of their perception of how much most people in their society would agree or disagree ("*How much would most people in your society agree or disagree with the following statements?*", from 1 = *most people would strongly disagree* to 7 = *most people would strongly agree*). Our measurement models suggested a two-factor structure at the individual level (*defense of family reputation,* and *self-promotion and retaliation*) and a one-factor structure at the group level (i.e., *honor*). From the final models, we extracted the factor scores at the level of country-gender-groups for our analyses, reflecting variation in the perceived endorsement of honor values between these cultural groups. Reliability for the scale (as assessed by using Coefficient H, please see Hancock and Mueller, 2001) was found to be excellent ($H = 0.976$).

**Willingness to Apologize.** We measured participants' willingness to apologize with four items, which were based on the reluctance to apologize scale used by Hornsey and colleagues (2017). To assess a more general willingness to apologize, we simplified the original items by removing the particular motivations and processes mentioned in the original scale (e.g., taking out the first part of "*If I think no one will know what I have done, I am likely not to apologize*") and creating two positive and two negatively worded items, assessing the likelihood and

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[2] Following feedback from local collaborators, we used nationality as a proxy for participants' birthplace in Lebanon and the Greek Cypriot community samples.

frequency of apologies in the context of a general transgression ("*I am unlikely to apologize if I have done something wrong.*", "*I rarely apologize to other people.*", "*In general, I apologize after having done something wrong.*", and "*After I have done something wrong, I usually apologize.*"; last two items reverse coded, rated from 1 = *strongly disagree* to 7 = *strongly agree*). The items showed a one factor structure with adequate reliability ($\alpha = 0.62$)[3]; prior to our main analyses we reversed the scores from these models (i.e., greater scores represent a greater "willingness to apologize").

**Offered Apologies.** Participants were asked to recall a past transgression incident and report the main **theme of the transgression** (emotional harm, physical harm, material / financial harm, or other) as well as whether they eventually **offered an apology (or not)** to the other party ("*Following that situation, did you apologize to this person?*"; coded as 0 = *No*, 1 = *Yes*).

**Demographic Information.** Among others, we asked participants to report their gender, age, country of birth, parents' country of birth, parents' highest education, residence country, and perceived (self) social status in the country of residence (MacArthur Scale of Subjective Social Status; Adler et al., 2000).

*Analytical strategy*

The main research questions were assessed using a multilevel regression approach, nesting individuals within cultural groups defined by the intersection of gender and society ($N = 28$). We conducted parallel series of multilevel regression models (modeling random intercepts and fixed slopes)[4] for our two dependent apology outcome variables (i. e., multiple regressions for reluctance to apologize, and logistic regressions for offered apologies) as well as for two sets of predictor variables: first, a set of regressions as described below with our predictors of effectiveness and morality, and second a set of separate regressions with our predictor of admission of responsibility (a total of $N = 4$ sets of multilevel regressions). We opted for this approach as we believed that beliefs about the admission of responsibility could be somewhat confounded with, and theoretically at a different level than, the other two predictors (i.e., morality and effectiveness concerning the value and function of apologies, and admission of responsibility concerning a more antecedent aspect about what apologies reflect at their core, so apologies could potentially be perceived as moral and effective due to the admission of responsibility).[5] Prior to our analyses, we group-mean centered all individual-level predictors within each cultural group (i. e., morality, effectiveness, and admission of responsibility). We structured each set of regressions aimed at answering our main research questions in four blocks:

**Block 1:** In the first block, we entered the three individual-level variables for personal apology beliefs (morality and effectiveness in one model, admission of responsibility in a separate model) into the model.

**Block 2:** In the second block, we entered the three individual-level variables for perceived normative apology beliefs (morality and effectiveness in one model, admission of responsibility in a separate model) into the model.

**Block 3:** In the third block, we then entered sample-level (gender groups per society) perceived normative honor endorsement into the respective models.

**Block 4:** In the final block, we added cross-level interactions of perceived normative honor endorsement with all the individual-level predictors of apology beliefs into the respective models.

The models building up to Block 2 allowed us to explore whether apology beliefs predict apology tendencies, and what contributions personal or perceived normative apology beliefs made to our models. Furthermore, the final models leading up to Block 4 allowed us to explore whether the effects of our predictors differed systematically between samples that are perceived to be low or high in honor norm endorsement.[6]

In addition to these models to investigate our main research questions, we also conducted a series of complementary analyses, aimed at examining regional differences in our models. To this end, we conducted regression analyses as described above, but this time replacing honor with a dummy-coded region indicator (i.e., encoding the three regions by including two-dummy coded variables assessing cultural differences to the reference group). We obtained the estimates for each region by subsequently recoding the reference group (Hayes, 2017).

Prior to our analyses, to be able to compare model fit across steps, we excluded any participants with missing data on any of the study variables that were included in the analyses on willingness to apologize ($n = 175$) and offered apologies ($n = 571$), separately. Furthermore, we screened the apology situation descriptions for potentially invalid responses by checking the open-ended answers related to the reported topic of the situation and excluded participants who were unable to recall a fitting situation (e.g., "I haven't caused any harm", "I don't remember doing anything"), recalled a situation in which they were not the transgressor (e.g., "I was deceived", "The harm was to me"), or showed careless and unintelligible responding (e.g., "Nnn"). This process resulted in the exclusion of 64 additional participants from analyses that included the offered apology behavior as a dependent variable. After the application of all exclusion criteria, a sample of $N = 5296$ participants were entered into analyses that involved willingness to apologize, and $N = 4836$ participants were entered into analyses that involved offered apologies. All analyses were preregistered on the Open Science Framework (https://osf.io/k8sca/?view_only=96e1d93e31074 25293d54944f2bd22c5) (Table 1).

**Results**

*Main analyses: Do apology beliefs and honor endorsement predict willingness to apologize and apologies offered in the past?*

**Morality & Effectiveness.** Tables 2 and 3 show the results of the

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[3] Reliability analyses indicated that excluding any item from the scale would not further increase internal reliability (resulting α ranging from .54 to .57).

[4] We modeled participants as nested within society-by-gender clusters as consistent with prior work from this project (see e.g., Vignoles et al., 2024) and acknowledging that men and women may inhabit meaningfully distinct cultural environments, particularly in honor-relevant contexts. While in the current paper we do not explicitly delve into the gender differences related to apologies, we do believe that models which consider the underlying gender differences represent the best statistical and theoretical approach. This approach also increased our between-level sample size, supporting more robust estimation. Although random slopes are often recommended for cross-level interactions (e. g., Aguinis et al., 2013), our choice of fixed slopes followed prior guidance for small higher-level samples (e.g., Kreft & de Leeuw, 1998; McNeish & Stapleton, 2016). Supplementary models including random slopes either failed to converge or yielded substantively similar results, supporting the use of more parsimonious random-intercept models in the main analyses.

[5] To explore the impact of this choice, we conducted a series of complementary models for our main analyses in which we included morality, effectiveness, and admission of responsibility simultaneously. We found that there were only minimal differences in the results, with the overall pattern of results persisting. The only notable difference was that, across the different models for both willingness to apologize and offered apologies, the effects for perceived normative beliefs about admission of responsibility were now non-significant (vs. a positive significant effect before). For a full overview of these complementary models please refer to the Supplementary Materials SM.5.

[6] While we did not opt to include control variables to keep the complexity of our models manageable, a set of complementary analyses showed that including severity of the remembered transgression as well as the topic of the transgression did not substantially change the pattern of our analyses for offered apologies.

**Table 1**
Variable descriptives and correlations.

| | N | M | SD | Min | Max | SE | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Morality (Personal) | 5297 | 6.32 | 1.17 | 1 | 7 | .02 | — | .42* | .69** | .47* | .22 | .08 | .50** | .34 | .43* | -.58** | .18 |
| 2. Morality (Normative) | 5297 | 5.71 | 1.36 | 1 | 7 | .02 | .44*** | — | .32 | .09 | .25 | .54** | -.05 | -.35 | .41* | -.43* | -.18 |
| 3. Responsibility (Personal) | 5297 | 7.65 | 2.19 | 0 | 10 | .03 | .27*** | .21*** | — | .80** | .58** | .38* | .23 | .36 | .45* | -.68** | .17 |
| 4. Responsibility (Normative) | 5297 | 7.35 | 2.21 | 0 | 10 | .03 | .25*** | .27*** | .55*** | — | .54** | .33 | .24 | .40* | .24 | -.39* | .26 |
| 5. Effectiveness (Personal) | 5297 | 7.05 | 2.05 | 0 | 10 | .03 | .35*** | .26*** | .32*** | .28*** | — | .86** | .21 | .26 | .00 | -.31 | .02 |
| 6. Effectiveness (Normative) | 5296 | 6.66 | 2.08 | 0 | 10 | .03 | .29*** | .33*** | .27*** | .29*** | .75*** | — | .05 | .05 | -.05 | -.22 | -.03 |
| 7. Willingness to Apologize | 5297 | 5.58 | 1.18 | 1 | 7 | .02 | .05*** | .06*** | .03* | .05*** | .07*** | .08*** | — | .38* | .24 | .13 | .19 |
| 8. Past Offered Apologies | 4900 | .73 | .45 | 0 | 1 | .01 | .12*** | .07*** | .10*** | .08*** | .11*** | .09*** | .15** | — | -.17 | -.09 | -.44* |
| 9. Perceived Honor Norms | 28 | -0.01 | .35 | -0.58 | .64 | .00 | - | - | - | - | - | - | - | - | — | -.79** | -.17 |
| 10. Age | 5297 | 42.75 | 15.12 | 18 | 89 | .21 | .08** | .01 | -.01 | .03 | .08** | .06** | .18** | .02 | -.17 | — | .13 |
| 11. SES | 5215 | 5.6 | 1.94 | 0 | 10 | .03 | .00 | .04** | .07** | .08** | .08** | .11** | -.02 | -.07** | -.05** | -.01 | — |

*Note.* Descriptives are presented for a joint sample between any participants included in the analyses for willingness to apologize or offered apologies. Correlations below the diagonal represent individual-level analyses ($N_{max} = 5297$), correlations above the diagonal represent culture-level analyses ($N = 28$ country-gender groups). Scores for perceived honor norms reflect factor scores extracted from measurement models at the culture-level (described in Vignoles et al., 2024) and thus are included in culture-level correlations only. * indicates $p < .05$. ** indicates $p < .01$. *** indicates $p < .001$.

first set of main regression analyses predicting willingness to apologize and offered apologies, respectively.

In the regression analyses predicting **willingness to apologize**, we found similar patterns of results across all model steps, with the model in Step 4 showing the best fit to data. Across all models, both personal and perceived normative morality beliefs emerged as significant positive predictors of willingness to apologize. Similarly, personal beliefs of apology effectiveness emerged as a significant positive predictor of willingness to apologize, whereas perceived normative beliefs of apology effectiveness predicted willingness to apologize significantly negatively. Finally, perceived normative honor endorsement was marginally negatively predictive of willingness to apologize.

These effects were qualified by three significant interactions with honor, involving all apology belief variables except perceived normative morality beliefs. Personal beliefs of morality and effectiveness interacted positively with honor, while perceived normative effectiveness beliefs interacted negatively with honor. Simple slopes analyses (see Fig. 1) revealed that personal morality and personal effectiveness beliefs were positively associated with willingness to apologize at low ($-1$ SD; morality: $B = 0.36$, $SE = 0.02$, $t(5284) = 16.36$, $p < .001$; effectiveness: $B = 0.13$, $SE = 0.02$, $t(5284) = 7.68$, $p < .001$), average (morality: $B = 0.29$, $SE = 0.01$, $t(5284) = 19.35$, $p < .001$; effectiveness: $B = 0.10$, $SE = 0.01$, $t(5284) = 9.04$, $p < .001$), and high ($+1$ SD; morality: $B = 0.21$, $SE = 0.02$, $t(5284) = 10.41$, $p < .001$; effectiveness: $B = 0.07$, $SE = 0.01$, $t(5284) = 4.95$, $p < .001$) levels of perceived normative honor endorsement. However, these effects were less strongly positive at higher levels of perceived normative honor endorsement. Beliefs about perceived normative effectiveness showed a similar pattern of weaker associations at higher levels of honor: perceived normative effectiveness beliefs predicted willingness to apologize negatively only at low ($-1$ SD; $B = -0.06$, $SE = 0.02$, $t(5284) = -3.41$, $p < .001$) and average ($B = -0.03$, $SE = 0.01$, $t(5284) = -2.47$, $p = .01$) levels of perceived normative honor endorsement, but the relationship was absent at high ($+1$ SD; $B = 0.00$, $SE = 0.01$, $t(5284) = 0.25$, $p = .80$) levels of perceived normative honor endorsement.

In the regression analyses predicting **offered apologies**, we once again found a similar pattern of results across all model steps; however, model fit did not increase after including perceived normative perceptions in Step 2. Once again, both personal and perceived normative morality beliefs consistently and significantly predicted a greater likelihood of past offered apologies, as did personal beliefs of apology effectiveness. However, perceived normative beliefs of apology effectiveness as well as perceived normative honor endorsement did not significantly predict offered apologies. None of the interaction effects in Step 4 were found to be significant.

**Admission of Responsibility.** Tables 4 and 5 show the results of our second set of regressions, with beliefs about whether apologies signal admissions of responsibility predicting willingness to apologize and offered apologies, respectively.

In the regression analyses predicting **willingness to apologize**, we found that model fit did not increase after Step 3. Both personal and perceived normative beliefs of apologies admitting responsibility significantly predicted greater willingness to apologize across models, whereas perceived normative honor endorsement predicted willingness to apologize marginally and negatively. None of the interaction terms with perceived normative honor endorsement in Step 4 were significant.

In the regression analyses predicting **apologies offered in the past**, we found a similar pattern: model fit did not increase after Step 2, and both personal and perceived normative beliefs about apologies admitting responsibility significantly predicted a greater likelihood of past apologies across models. Perceived normative honor endorsement showed no significant relationship with offered apologies, and none of the interaction terms with perceived normative honor endorsement in Step 4 were significant.

**Table 2**
Model coefficient overview for willingness to apologize predicted by morality and effectiveness.

| Predictors | Block 1 | | | Block 2 | | | Block 3 | | | Block 4 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | b | CI | p | b | CI | p | b | CI | p | b | CI | p |
| **Fixed Effects** | | | | | | | | | | | | |
| (Intercept) | 5.58 | 5.48, 5.68 | <0.001*** | 5.58 | 5.48, 5.68 | <0.001*** | 5.58 | 5.49, 5.68 | <0.001*** | 5.58 | 5.49, 5.68 | <0.001*** |
| Morality (Personal) | .30 | .27, 0.33 | <0.001*** | .28 | .25, 0.31 | <0.001*** | .28 | .25, 0.31 | <0.001*** | .29 | .26, 0.31 | <0.001*** |
| Effectiveness (Personal) | .09 | .07, 0.10 | <0.001*** | .10 | .08, 0.12 | <0.001*** | .10 | .08, 0.12 | <0.001*** | .10 | .08, 0.12 | <0.001*** |
| Morality (Perceived Normative) | | | | .04 | .01, 0.06 | .003** | .04 | .01, 0.06 | .003** | .04 | .01, 0.07 | .002** |
| Effectiveness (Perceived Normative) | | | | −0.02 | −0.04, −0.00 | .042* | −0.02 | −0.04, −0.00 | .041* | −0.03 | −0.05, −0.01 | .015* |
| Honor Norms | | | | | | | −0.26 | −0.54, 0.01 | .061† | −0.26 | −0.54, 0.01 | .060† |
| Morality (Personal) × Honor Norms | | | | | | | | | | −0.21 | −0.29, −0.13 | <0.001*** |
| Effectiveness (Personal) × Honor Norms | | | | | | | | | | −0.09 | −0.15, −0.03 | .005** |
| Morality (Perceived Normative) × Honor Norms | | | | | | | | | | .01 | −0.06, 0.08 | .712 |
| Effectiveness (Perceived Normative) × Honor Norms | | | | | | | | | | .09 | .03, 0.15 | .005** |
| **Random Effects** | | | | | | | | | | | | |
| $\sigma^2$ | 1.14 | | | 1.14 | | | 1.14 | | | 1.13 | | |
| $\tau_{00}$ | .07 Country_Gender | | | .07 Country_Gender | | | .06 Country_Gender | | | .06 Country_Gender | | |
| ICC | .06 | | | .06 | | | .05 | | | .05 | | |
| N | 28 Country_Gender | | | 28 Country_Gender | | | 28 Country_Gender | | | 28 Country_Gender | | |
| Observations | 5296 | | | 5296 | | | 5296 | | | 5296 | | |
| Marginal $R^2$ / Conditional $R^2$ | .134 / 0.183 | | | .135 / 0.185 | | | .141 / 0.186 | | | .148 / 0.192 | | |
| Chi-Square | – | | | 1.92* | | | 3.56† | | | 41.07* | | |

*Note.* $* p < .05$, $** p < .01$, $*** p < .001$, $† p < .065$.

*Complementary analyses: Do the effects of apology beliefs differ between geographical regions?*

In a set of additional analyses, we complemented the main analyses reported above by exploring the relations between apology beliefs and apology tendencies within distinct regional groups. Specifically, we categorized a subsample of 10 societies from the full dataset into three groups (adjusting an existing taxonomy reflecting countries' ethnic, religious, and linguistic background, and their geographic proximity; Mensah and Chen, 2013): the Anglo-West (consisting of Canada, the United States, and the UK), the MENA (Turkey, Lebanon, Egypt, Tunisia, and the Turkish Cypriot Community), and East Asia (Japan, South Korea). This regional grouping was selected to best reflect our interest in comparing cultures high and low in honor norms, and because past findings using a similar set of societies has demonstrated that MENA societies most strongly stood out as endorsing honor (both in terms of personal and normative terms) compared with Anglo Western and East Asian, as well as Latin European and Southeast European regions (Vignoles et al., 2024). We conducted regression analyses similar to the ones reported above, replacing the continuous measure of honor with a dummy-coded region indicator for these three regions, and subsequently obtained the estimates for each region by recoding the respective reference group of the dummy variables (Hayes, 2017). As these complementary models added a series of relevant tests that were not covered in our original research questions (i.e., difference tests for apology belief predictors between the three regions), we adjusted the interaction effects for apology beliefs and the regional dummies using Holm-Bonferroni corrections (Holm, 1979). Please refer to the Supplementary Materials for tables with all model estimates (SM.4).

**Morality and Effectiveness.** Regarding **willingness to apologize**, we found similarities and differences between the three regions. Personal beliefs of morality emerged as a positive predictor of willingness to apologize in all three regions, with samples in the Anglo-Western region showing a significantly stronger prediction than the other two regions. Similarly, perceived normative effectiveness beliefs did not emerge as a significant predictor in any region.

However, differences emerged for the remaining two predictors: personal beliefs of effectiveness positively predicted willingness to apologize positively only in the MENA and East Asian regions but not in the Anglo-Western region, with samples in the East Asian region showing a significantly stronger prediction than the other two regions. Finally, perceived normative morality beliefs only predicted willingness to apologize in the MENA and East Asian regions, but this effect was not significantly different among the three regions.

Regarding **apologies offered in the past**, all three regions showed different patterns: whereas in Anglo-Western samples both personal morality and effectiveness beliefs (but not normative beliefs) predicted a greater likelihood of past apologies, in East Asian samples this was only the case for personal morality beliefs. In contrast, in MENA samples neither type of personal beliefs showed a significant effect, but perceived normative morality beliefs predicted a greater likelihood of past apologies. However, the models did not show any significant interaction effects for region differences, suggesting that these effects may not be significantly different between the regions.

**Admission of Responsibility.** Regarding **willingness to apologize**, no regional differences emerged: Personal as well as perceived normative beliefs about responsibility significantly predicted greater willingness to apologize in all three regions, with no significant interaction effects between regions.

Regarding **apologies offered in the past**, we found the most significant effects in the MENA region, where both personal and perceived normative beliefs about responsibility predicted a greater likelihood of past apologies. In contrast, whereas only perceived normative beliefs about responsibility predicted a greater likelihood of past apologies in

**Table 3**
Model coefficient overview for offered apologies predicted by morality and effectiveness.

| Predictors | Block 1 | | | Block 2 | | | Block 3 | | | Block 4 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Odds Ratios | CI | P | Odds Ratios | CI | p | Odds Ratios | CI | p | Odds Ratios | CI | p |
| **Fixed Effects** | | | | | | | | | | | | |
| (Intercept) | 2.84 | 2.38, 3.38 | <0.001*** | 2.84 | 2.38, 3.39 | <0.001*** | 2.84 | 2.38, 3.39 | <0.001*** | 2.85 | 2.39, 3.40 | <0.001*** |
| Morality (Personal) | 1.17 | 1.10, 1.23 | <0.001*** | 1.13 | 1.06, 1.20 | <0.001*** | 1.13 | 1.06, 1.20 | <0.001*** | 1.14 | 1.07, 1.21 | <0.001*** |
| Effectiveness (Personal) | 1.10 | 1.06, 1.14 | <0.001*** | 1.07 | 1.02, 1.13 | .005** | 1.07 | 1.02, 1.13 | .005** | 1.07 | 1.02, 1.13 | .005** |
| Morality (Perceived Normative) | | | | 1.07 | 1.01, 1.13 | .014* | 1.07 | 1.01, 1.13 | .014* | 1.06 | 1.01, 1.13 | .032* |
| Effectiveness (Perceived Normative) | | | | 1.02 | .98, 1.08 | .341 | 1.02 | .98, 1.08 | .341 | 1.02 | .97, 1.07 | .450 |
| Honor Norms | | | | | | | 1.01 | .61, 1.67 | .961 | 1.02 | .62, 1.69 | .926 |
| Morality (Personal) × Honor Norms | | | | | | | | | | .86 | .72, 1.03 | .096 |
| Effectiveness (Personal) × Honor Norms | | | | | | | | | | .97 | .84, 1.11 | .647 |
| Morality (Perceived Normative) × Honor Norms | | | | | | | | | | 1.15 | .99, 1.35 | .067 |
| Effectiveness (Perceived Normative) × Honor Norms | | | | | | | | | | 1.09 | .95, 1.25 | .221 |
| **Random Effects** | | | | | | | | | | | | |
| $\sigma^2$ | 3.29 | | | 3.29 | | | 3.29 | | | 3.29 | | |
| $\tau_{00}$ | .19 Country_Gender | | | .19 Country_Gender | | | .19 Country_Gender | | | .19 Country_Gender | | |
| ICC | .06 | | | .06 | | | .06 | | | .06 | | |
| N | 28 Country_Gender | | | 28 Country_Gender | | | 28 Country_Gender | | | 28 Country_Gender | | |
| Observations | 4836 | | | 4836 | | | 4836 | | | 4836 | | |
| Marginal $R^2$ / Conditional $R^2$ | .025 / 0.079 | | | .027 / 0.081 | | | .027 / 0.081 | | | .029 / 0.083 | | |
| Chi-Square | – | | | 8.01* | | | .002 | | | 7.27 | | |

*Note.* * $p < .05$, ** $p < .01$, *** $p < .001$, † $p < .065$.

Anglo-Western samples, no significant effects emerged in the East Asian region. Again, no significant interaction effects with region were found, suggesting that these effects may not be significantly different between the three regions.

## Discussion

The current study explored the interplay between apology beliefs and honor norms across 14 general population samples from the Mediterranean, East Asian, and Anglo-Western regions. Our primary goal in the current study was to conduct an exploratory investigation into apology beliefs in honor cultures, focusing on beliefs about morality, effectiveness, and responsibility-signaling as these core beliefs appeared particularly relevant to cross-cultural variation in honor and to cultural tensions to balance moral integrity with reputational toughness that are central in honor cultures (Lin et al., 2022). We assessed beliefs about apologies as moral, effective, and as admissions of responsibility—considering both personal beliefs and perceived culturally normative beliefs—alongside the intersubjective prevalence of honor norms. These factors were examined as predictors of willingness to apologize and the likelihood of offering an apology for a past transgression. Our primary research questions were whether beliefs in apologies as moral, effective, and responsible acts were associated with apology tendencies, and whether stronger honor norms would systematically moderate these associations. Additionally, we conducted a series of complementary analyses to compare the associations between apology beliefs and tendencies across the three cultural contexts: Anglo West, East Asia, and MENA (two "low-honor" contexts and one "high-honor" context; Vignoles et al., 2024).

*Do personal and normative apology beliefs predict apology tendencies?*

The results of our main analyses revealed more commonalities than differences in the role and importance of apology beliefs across varying honor norms. Believing apologies to be moral and effective, as well as acts that accept responsibility, predicted better apology tendencies across most models for both our dependent variables. This pattern generally held for both personal beliefs about apologies and beliefs of how apologies were perceived by *other people* in one's society. The only exception was perceived normative beliefs about the effectiveness of apologies, which did not predict a higher likelihood of past offered apologies and, on average, even predicted *lower* levels of willingness to apologize—an effect moderated by societal honor. Yet, overall these findings align well with prior research that has found that believing apologies to be virtuous (moral) and helpful (effective) acts promotes the offer of an apology (Benoit and Drew, 1997; Exline et al., 2007; Leunissen et al., 2012; Schumann, 2018). Notably, the pattern of results appeared relatively consistent across both of our separate outcome variables, attitudinal willingness to apologize as well as past offered apologies.

The current research further expands on these findings by highlighting the role of normative beliefs in shaping apology tendencies in particular: Across all of our main analyses, a model that included perceived normative beliefs about the respective apology facets consistently fit the data better than a model which only contained the corresponding personal apology beliefs. Even though more personal than perceived normative beliefs were found to be significant, it thus seems that interpersonal expectations, shared values, and normative scripts matter in shaping apology attitudes and behavior (Fitness, 2006; Hodgins et al., 1996; Leunissen et al., 2012; Okimoto et al., 2015; Takaku, 2000; Wierzbicka, 2010), emphasizing the interactional nature
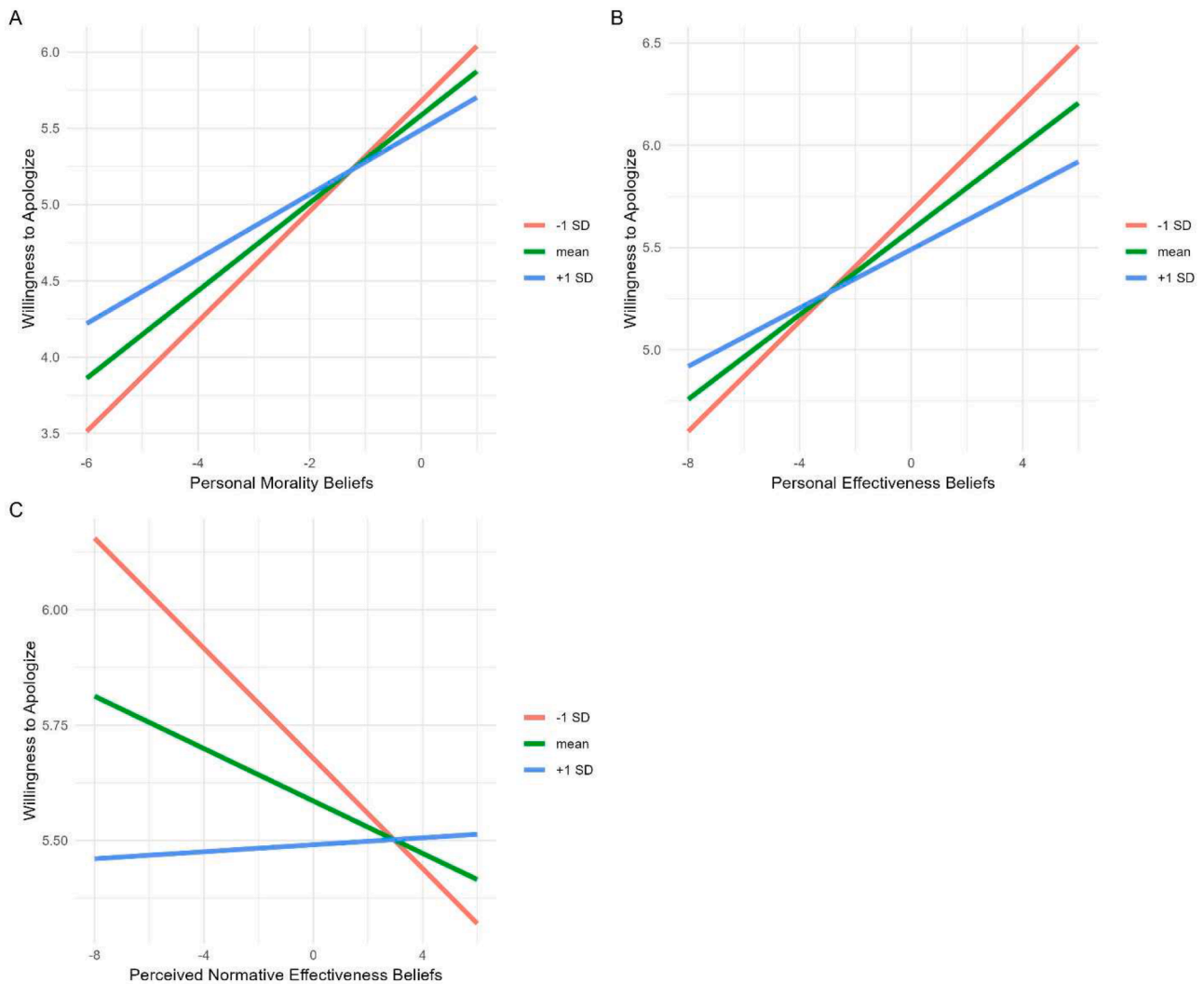
**Fig. 1.** Simple slope analysis of morality and effectiveness predicting willingness to apologize.
*Note.* Different colored lines represent different levels of honor endorsement at average levels of honor endorsement as well as one standard deviation above and below the mean.

of apologies. The result for normative beliefs about effectiveness in particular may be an interesting topic for future research, which, despite positive correlations with apology tendencies by itself, in our combined models with morality showed either no significant or even negative effects. While our data do not immediately allow to disentangle why this may be, the positive correlations between our predictors may have left little variance to be explained, but it is also possible that believing others generally see apologies as effective may elicit a form of social obligation or pressure, undermining willingness to apologize (see e.g., Howell et al., 2011, who found that autonomy correlated positively, and monitoring your behavior to external circumstances correlated negatively, with proclivity to apologize in Canadian students). Future research should further explore whether perceived social expectations around the effectiveness of apologies sometimes backfire.

*Do honor norms and geographical differences play a role in shaping the link between apology beliefs and apology tendencies?*

Contrary to our expectations, societal honor norms had a limited role in moderating the links between apology beliefs and apology tendencies. Of the 12 examined interactions with honor norms across our models, only three significant moderations emerged, all of which were found for models examining the link between beliefs about morality and

effectiveness with our attitudinal measure of willingness to apologize. Specifically, when honor norms were strong the magnitude of the positive links between personal morality and effectiveness beliefs and willingness to apologize decreased, with weaker (but significant) positive associations emerging at higher levels of honor norms. For perceived normative beliefs about effectiveness a similar pattern emerged: the magnitude of the negative link between perceived normative effectiveness beliefs and willingness to apologize was weaker at stronger honor norms, with no significant relationship at high levels of honor norms. Yet, the remaining majority of effects (among all effects including admission of responsibility, and all analyses predicting past offered apologies) showed no significant interactions with honor. Perceived normative honor endorsement itself also did not show any significant links with offered apologies, and only marginally predicted lower willingness to apologize across models (consistent with previous results by Kirchner-Häusler et al., 2024; Lin et al., 2022).

One possible explanation for the overarching pattern of the three found moderation effects is that, in context with stronger honor norms, other factors than apology beliefs may play a comparatively bigger role in shaping apology attitudes and behavior. In other words, while both one's personally held and one's perceptions of other people's beliefs may determine across cultures whether one is willing to apologize to some extent, it may be that external factors outside of these individually

**Table 4**
Model coefficient overview for willingness to apologize predicted by admission of responsibility.

| Predictors | Block 1 B | Block 1 CI | Block 1 p | Block 2 B | Block 2 CI | Block 2 p | Block 3 B | Block 3 CI | Block 3 p | Block 4 B | Block 4 CI | Block 4 p |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fixed Effects** | | | | | | | | | | | | |
| (Intercept) | 5.58 | 5.48, 5.68 | <0.001*** | 5.58 | 5.48, 5.68 | <0.001*** | 5.58 | 5.49, 5.68 | <0.001*** | 5.58 | 5.49, 5.68 | <0.001*** |
| Responsibility (Personal) | .10 | .08, 0.11 | <0.001*** | .07 | .05, 0.09 | <0.001*** | .07 | .05, 0.09 | <0.001*** | .07 | .06, 0.09 | <0.001*** |
| Responsibility (Perceived Normative) | | | | .04 | .03, 0.06 | <0.001*** | .04 | .03, 0.06 | <0.001*** | .05 | .03, 0.06 | <0.001*** |
| Honor Norms | | | | | | | −0.26 | −0.53, 0.01 | .063† | −0.26 | −0.53, 0.01 | .062† |
| Responsibility (Personal) × Honor Norms | | | | | | | | | | −0.03 | −0.07, 0.02 | .268 |
| Responsibility (Perceived Normative) × Honor Norms | | | | | | | | | | −0.02 | −0.06, 0.03 | .441 |
| **Random Effects** | | | | | | | | | | | | |
| $\sigma^2$ | 1.29 | | | 1.28 | | | 1.28 | | | 1.28 | | |
| $\tau_{00}$ | .07 Country_Gender | | | .07 Country_Gender | | | .06 Country_Gender | | | .06 Country_Gender | | |
| ICC | .05 | | | .05 | | | .05 | | | .05 | | |
| N | 28 Country_Gender | | | 28 Country_Gender | | | 28 Country_Gender | | | 28 Country_Gender | | |
| Observations | 5296 | | | 5296 | | | 5296 | | | 5296 | | |
| Marginal $R^2$ / Conditional $R^2$ | .030 / 0.078 | | | .035 / 0.083 | | | .041 / 0.085 | | | .042 / 0.085 | | |
| Chi-Square | – | | | 28.18*** | | | 3.50† | | | 3.895 | | |

*Note.* * $p < .05$, ** $p < .01$, *** $p < .001$, † $p < .065$.

**Table 5**
Model coefficient overview for offered apologies predicted by admission of responsibility.

| Predictors | Block 1 Odds Ratios | Block 1 CI | Block 1 p | Block 2 Odds Ratios | Block 2 CI | Block 2 p | Block 3 Odds Ratios | Block 3 CI | Block 3 p | Block 4 Odds Ratios | Block 4 CI | Block 4 p |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fixed Effects** | | | | | | | | | | | | |
| (Intercept) | 2.81 | 2.36, 3.35 | <0.001*** | 2.81 | 2.36, 3.35 | <0.001*** | 2.81 | 2.36, 3.35 | <0.001*** | 2.81 | 2.36, 3.35 | <0.001*** |
| Responsibility (Personal) | 1.10 | 1.07, 1.13 | <0.001*** | 1.07 | 1.04, 1.11 | <0.001*** | 1.07 | 1.04, 1.11 | <0.001*** | 1.07 | 1.03, 1.11 | <0.001*** |
| Responsibility (Perceived Normative) | | | | 1.04 | 1.01, 1.08 | .024* | 1.04 | 1.01, 1.08 | .024* | 1.04 | 1.01, 1.08 | .024* |
| Honor Norms | | | | | | | 1.02 | .62, 1.67 | .942 | 1.03 | .63, 1.68 | .909 |
| Responsibility (Personal) × Honor Norms | | | | | | | | | | 1.06 | .97, 1.17 | .217 |
| Responsibility (Perceived Normative) × Honor Norms | | | | | | | | | | .99 | .90, 1.09 | .832 |
| **Random Effects** | | | | | | | | | | | | |
| $\sigma^2$ | 3.29 | | | 3.29 | | | 3.29 | | | 3.29 | | |
| $\tau_{00}$ | .19 Country_Gender | | | .19 Country_Gender | | | .19 Country_Gender | | | .19 Country_Gender | | |
| ICC | .05 | | | .05 | | | .05 | | | .05 | | |
| N | 28 Country_Gender | | | 28 Country_Gender | | | 28 Country_Gender | | | 28 Country_Gender | | |
| Observations | 4836 | | | 4836 | | | 4836 | | | 4836 | | |
| Marginal $R^2$ / Conditional $R^2$ | .011 / 0.065 | | | .013 / 0.066 | | | .013 / 0.066 | | | .013 / 0.067 | | |
| Chi-Square | – | | | 5.03* | | | .01 | | | 1.82 | | |

*Note.* * $p < .05$, ** $p < .01$, *** $p < .001$, † $p < .065$.

held beliefs and perceptions may matter relatively more in contexts where honor is more prevalent, such as the implications of an apology for reputation and self-image (Lin et al., 2022), role obligations and expectations (e.g., as head of an interdependent household, Rodriguez Mosquera, 2011), or specific characteristics of the situation (e.g., the presence of an audience, Uskul et al., 2012; facing close vs distant others, Guan et al., 2009). In particular, the intriguing finding that strong honor norms slightly reduced apology tendencies for personal beliefs, but mitigated the otherwise negative effect of normative apology effectiveness beliefs on willingness to apologize, may suggest that social norms and reputational considerations carry particular weight in honor cultures: for example, normative effectiveness perceptions may support the goal of maintaining a respected public image in these cultures,

making apologies more palatable. This idea aligns with previous perspectives on honor cultures combining both a focus on personal characteristics and beliefs as well as relational and situational aspects (e.g., concerns for relational harmony, a positive family reputation, a focus on the well-being of close-knit ingroups) in guiding social behavior (Leung and Cohen, 2011; Uskul et al., 2012). Future research should continue to disentangle the importance of individual-level beliefs against external and situational factors in cultures of honor.

Complementary analyses comparing three geographical regions further supported the sense of relative similarity between cultures. Across all regions, beliefs about apologies were more strongly associated with willingness to apology (13 out of 18 effects) than with the likelihood of offering an apology in the past (7 out of 18 effects), again

suggesting that apology beliefs are more closely associated with apology attitudes than behavior. Within each region different patterns emerged depending on the dependent variable and respective predictors, with members of the MENA region ($n = 8$) showing more significant effects for apology beliefs compared to the Anglo-Western ($n = 6$) and East Asian ($n = 6$) regions, and generally showing a more consistent tendency for both personal and perceived normative apology beliefs to predict apology tendencies, compared to the other two regions. Again, this particular focus on individual and normative influences fits previous work on the socio-cultural uniqueness of Mediterranean honor societies, which emphasize a distinct combination of both independent and interdependent cultural characteristics (Uskul, Kirchner-Häusler, et al., 2023). However, significant cultural differences emerged only in the role of personal morality and effectiveness beliefs for willingness to apologize: Anglo-Western participants showed stronger effects for personal morality compared to the other two regions, whereas East-Asian participants placed greater emphasis on personal effectiveness compared to the other two regions. This particular finding align with previous work highlighting that apologies (and social behavior in general) in dignity cultures (i.e., Anglo-Western societies) may primarily be driven by one's own moral compass, while apologies in face cultures (i. e., East Asian societies) may be more focused on effectively repairing relational disruptions (Leung and Cohen, 2011; Maddux et al., 2011).

Yet, taken together, our main moderation analyses as well as our complementary regional models suggest that the role of honor norms in shaping the link between apology beliefs and apology tendencies is limited, and may extend to attitudinal measures more than actual reports of past apology behavior (in line with Kirchner-Häusler et al., 2024). Of course, in the present study we focused on morality, effectiveness, and responsibility-signaling as apology beliefs that appeared particularly suited to study variation across varying levels of honor norms, but honor may show a different set of results when examined in interaction with other dimensions of apology beliefs. Future research should make sure to add to a comprehensive understanding of cultural factors by increasing the breadth of apology components under study, such as beliefs about compensation or empathy (Fehr and Gelfand, 2010), about implications such as obligation shifting and reparations (Zaiser and Giner-Sorolla, 2013), about the importance of receiving apologies (De Cremer et al., 2011), or the risk of recurrence and trust after an apology (Lewicki and Bunker, 1996).

*Limitations and future directions*

The results of the current study should be considered alongside some limitations. First, our study aimed to study the role of (honor) culture in apology beliefs, but other factors may influence the processes surrounding apology tendencies. For instance, previous work has shown that individuals in highly satisfied relationships are generally more forgiving (Schumann, 2012), that people across cultures generally feel more obligated towards a stranger than a friend (Guan et al., 2009), and that apologies were perceived as more effective when they went against gender stereotypes (Polin et al., 2024). Relatedly, although the current research primarily focused on decontextualized beliefs about apologies as a reference point for cultural differences, research on apologies has shown that their evaluations can vary substantially according to the characteristics of the specific situational context, such as incurred cost (Ohtsubo et al., 2012), severity of the transgression (Schlenker and Darby, 1981), or fear of sanctions (Mu and Bobocel, 2019). Consequently, the current findings represent a starting point for expanding cross-cultural, and particularly intersectional, work on apology beliefs, and future studies should more closely examine the interplay of several social spheres in shaping apology behavior.

Second, although our theoretical framework lends itself to a causal perspective in which apology beliefs shape attitudes and influence behavior, our cross-sectional data does not permit such causal conclusions. Therefore, our findings should primarily be interpreted as patterns

of associations. Given that honor cultures are often characterized by heightened propensity for conflict escalation, such as honor killings (Kulczycki and Windle, 2011) or warfare (Cao et al., 2021), further experimental research exploring how apology beliefs can be leveraged to increase both willingness to apologize and offered apologies may be a particular important. Building on approaches like the honor-as-morality reframing strategy proposed by Lin and colleagues (2022), future work could focus on interventions that manipulate apology beliefs at both the personal and normative levels. For example, providing societal sentiment data about apologies or employing cognitive-behavioral techniques to shift situational appraisals could foster more positive apology tendencies and help reduce the risk of escalation.

Thirdly, touching upon the lack of interaction effects of apology beliefs with honor, our study took a relatively general approach to the dynamics that may surround apologies in honor environments and examined honor as a general factor at the societal level (following the conceptualization of societal honor norms by Vignoles et al., 2024). However, previous work has outlined honor as a multifaceted social construct comprised of various dimensions, such as morality, family honor, masculine honor, and feminine honor (Guerra et al., 2013; Mosquera et al., 2002; Rodriguez Mosquera et al., 2002, 2008), which may align and support beliefs about apologies in different ways (Kirchner-Häusler et al., 2024). Similarly, while our approach focused on honor norms as societal-level cultural characteristics, future research may also benefit from complementary analyses examining individual-level endorsement of honor values, which could provide more comprehensive insights into how honor shapes apology beliefs, similar to how personal beliefs consistently predicted apology tendencies in our data. Finally, even though we included and compared Anglo-Western and East Asian societies as reference groups for dignity and face cultures, respectively (following Vignoles et al., 2024), the current study did not explicitly assess the extent of these cultural values in our samples and did not test whether they may interact with apology beliefs in the expected ways. A simultaneously broader (in terms of the range of cultural values and levels of analysis) and finer (in terms of potentially different sub-facets of honor) approach to the assessment of cultural values may allow future research to provide an even better contextualizing of apology beliefs across different cultural logics.

Finally, our choice of measurement instruments was somewhat constrained by efforts to keep the length of the survey to a minimum, particularly given our use of general population samples which are likely less familiar with participation in academic surveys. Consequently, we attempted to maximize the conceptual variety within the questionnaire by focusing on minimal measurements (i.e., single item assessments) where possible, especially given that we assessed most items both in personal and perceived-normative format. When using single-item measures, we attempted to approximate conceptual approaches and findings from previous work as close as possible in our wording (Maddux et al., 2011; Shafa et al., 2017, for admissions of responsibility) or consulted with domain experts for feedback (e.g., for morality). However, we acknowledge that this reliance on single-item measures is an area for improvement and future work should strive to replicate the current findings using more reliable multi-item scales.

## Conclusion

This study sheds light on the relation between apology beliefs and honor norms, providing insights into the universal and culturally specific factors that shape apology attitudes and behaviors. Across diverse cultural contexts, apologies were generally perceived as moral and effective acts that facilitate reconciliation, with stronger beliefs in their effectiveness and morality predicting greater willingness to apologize and higher likelihood of offering apologies for past transgressions. These findings underscore the centrality of apologies in mending interpersonal relationships and their reliance on both personal convictions and perceived societal norms. The influence of honor norms on apology

tendencies was generally limited: honor norms only moderately shaped the relation between apology beliefs and tendencies, but significant interactions showed a similar pattern suggesting weaker effects of apology beliefs with increasingly strong honor norms. Complementary regional analyses further supported a picture of relative similarities across Anglo-Western, MENA, and East Asian regions, but also highlighted that a wider array of apology beliefs appear to shape apology tendencies in the MENA region; furthermore, Anglo-Western participants showed some signs of prioritizing personal morality beliefs, while East Asian participants showed some signs of prioritizing personal effectiveness beliefs. Ultimately, understanding how cultural norms and beliefs about apologies shape reconciliation offers a critical pathway for fostering harmony and reducing conflict across diverse social and cultural contexts.

## Author note

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## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.cresp.2025.100230.

## Data availability

Data shared on OSF. https://osf.io/k8sca/files/osfstorage?view_only=96e1d93e3107425293d54944f2bd22c5

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