From virility to virtue: the psychology of apology in honor cultures

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In honor cultures, relatively minor disputes can escalate, making numerous forms of aggression widespread. We find evidence that honor cultures' focus on virility impedes a key conflict de-escalation strategy—apology—that can be successfully promoted through a shift in mindset. Across five studies using mixed methods (text analysis of congressional speeches, a cross-cultural comparison, surveys, and experiments), people from honor societies (e.g., Turkey and US honor states), people who endorse honor values, and people who imagine living in a society with strong honor norms are less willing to apologize for their transgressions (studies 1–4). This apology reluctance is driven by concerns about reputation in honor cultures. Notably, honor is achieved not only by upholding strength and reputation (virility) but also through moral integrity (virtue). The dual focus of honor suggests a potential mechanism for promoting apologies: shifting the focus of honor from reputation to moral integrity. Indeed, we find that such a shift led people in honor cultures to perceive apologizing more positively and apologize more (study 5). By identifying a barrier to apologizing in honor cultures and illustrating ways to overcome it, our research provides insights for deploying culturally intelligent conflict-management strategies in such contexts.

culture | honor | apology | conflict management

"Honor has caused more deaths than the plague." (Peristiany & Pitt-Rivers, 1992)

In almost all human contexts, conflicts are inevitable and can escalate if unaddressed. In cultures where honor is a central value, conflicts can be particularly common (1, 2). Honor killings and honor-related crimes have been documented by anthropologists for over a century across regions of the Middle East, Europe, and the Americas (3, 4, 5). Within the US Southern culture of honor, aggressive acts dating back to the 1800s often have been deemed appropriate and even necessary (2, 6). Indeed, the culture of honor has been shown to be a major driver of many forms of aggression, from the antebellum Southern duels (7) to domestic violence (8), school shootings (9), gang violence (10), and suicide bombings (11) in the modern era. While research across disciplines has documented a tendency to escalate conflicts in honor cultures (4, 7, 11–13), discussions of how to manage conflicts and promote forgiveness in honor cultures is scarce. Are certain elements of honor cultures at odds with conflict de-escalation?

We address this question by examining a critical feature of conflict de-escalation: making an apology. Following conflicts, an apology—the admission of wrongs and regrets—is a widely used remedial device to mitigate conflicts and restore relationships (14–18). Even nonhuman primates demonstrate conciliatory gestures to reduce aggression (19, 20). A large body of evidence suggests that, during conflicts, an offenders' apology plays a key role in generating forgiveness, repairing relationships, and allowing people to restore trust after transgressions (15, 16, 21–23). Indeed, apologies are critical not only for de-escalating interpersonal conflicts but also professional and even international ones. For example, apologies from companies diffuse customer complaints (24), apologies issued by chief executive officers restore trust toward organizations (25), and apologies from physicians reduce the risk of medical malpractice lawsuits (26). Likewise, political apologies often serve to mitigate international disputes and mark the beginning of collective reconciliation, redress, and reparation processes (27, 28). Yet much of the work on apology takes place in Western contexts, and little is known about apology dynamics in honor cultures. We address this gap by asking whether the culture of honor hinders or facilitates making an apology, a behavior that can deescalate conflicts effectively.

To answer this question, we turn to existing theories that define honor as both virility and virtue (29–31). Researchers have shown that the culture of honor tends to evolve in tough environments with weak institutions that cannot be relied on to protect one's assets (6, 32). In such environments, a reputation of toughness and a willingness

Significance

Conflict is widespread and can easily escalate in regions where honor is a central value. We find evidence that honor cultures' focus on virility impedes a key conflict deescalation strategy—apology—that can be successfully promoted through a shift in mindset. Building on the conceptualization of honor as both virility and virtue, we show that virility concerns of maintaining one's reputation underlie the reluctance to apologize. Conversely, shifting the focus of honor to virtue concerns promotes apologizing. Our findings suggest that honor is a double-edged sword with the potential to both escalate and de-escalate conflicts.

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to retaliate against others at all costs are viewed as fundamental for survival. Hence, projecting an image of virility is central to claiming honor and reputation needs to be vigorously defended in honor cultures.

On the other hand, in honor cultures, virility concerns are often bundled with virtue concerns—behaving morally, being honest and trustworthy, and adhering to well-defined principles and obligations. Such moral integrity norms enable people to structure relationships and avoid conflicts in contexts where institutions are weak (29, 33). Being virtuous allows one to gain social respect, an asset in tough environments (29). The two-edged sword of honor leads us to theorize that virility concerns in honor cultures will crowd out apologizing. However, shifting one's perspective to virtue concerns may help promote apologizing in honor cultures. We present our reasoning below.

The Honor–Apology Link. Because honor is the value of self in the eyes of others, it does not exist without others' recognition. To prevent the loss of honor, it is important to keep one's reputation untarnished and display an image of strength so as not to appear vulnerable (6, 34). The logic of honor can interfere with apologizing for one's transgressions, as apologizing often signifies an admission of fault and an acknowledgment of responsibility (28). By making an apology and admitting wrongdoings, one can potentially damage one's reputation and lose social standing. Put simply, the act of apologizing can cause one to lose honor. Therefore, we predict that reputation concerns in honor cultures will crowd out apologizing.

People in honor cultures may also be less willing to apologize because they perceive apology to be ineffective. Drawing on expectancy theories (35), people are motivated to apologize if they perceive an apology to be effective in achieving the goals of attaining forgiveness, mending relationships, and setting things right (16). However, the logic of honor prescribes that one must stand up for oneself by being willing to retaliate or fight back when wronged by others, lest they be the target of aggression (32, 36). In this view, apologizing can be perceived as risky and ineffective. Indeed, research has shown that, during conflicts, people from honor cultures express more anger, are less willing to forgive the offender, and use more aggressive and defensive conflict-management strategies, as compared to those from nonhonor cultures (37–39). Accordingly, people from honor cultures may come to perceive apologies as less effective in achieving desired outcomes, which in turn reduces their willingness to apologize.

However, as noted previously, honor concerns not only virility but also virtue. Accordingly, how people think of honor may have different implications for the willingness to apologize. While apologizing can pose a threat to honor by bringing reputational concerns to mind, apologizing may be seen as a vehicle to gaining honor when norms of virtue—i.e., being honest and trustworthy and having high moral integrity—are salient. Therefore, we hypothesize that shifting people's perspective of honor from reputation and strength to moral virtue will facilitate apologizing behavior in honor cultures.

Current Research. We propose that people in honor cultures are less willing than people in nonhonor cultures to apologize for their transgressions and that concerns about reputation and the perceived ineffectiveness of apology explain this reluctance to apologize. However, honor may be a double-edged sword when it comes to making an apology. We expect that shifting the concern of honor to moral virtue will promote apologizing behavior.

We test our hypotheses across five studies both within and across cultures. First, using a newly developed apology dictionary, we examined more than 2.5 million speeches made by US political elites to explore how their expressions of apology varied as a function of the prominence of honor in their home state (study 1). We also conceptually replicated this finding by showing that Google searches for how to apologize are less frequent in states with stronger honor cultures. Next, we examined cross-country differences in tendencies to apologize for offenses by comparing an honor (i.e., Turkey) and a nonhonor (i.e., the United States) culture (study 2). We then examined the mediating processes that predict reluctance to apologize, namely reputation concerns and the perceived effectiveness of apologies, among those who valued honor (study 3). In the last two experiments, we documented the causal impact of honor norms on apologizing behavior (study 4) and asked whether shifting the perspective of honor to moral virtue would motivate apologizing behavior (study 5). Taken together, this research broadens the scientific study of apology by focusing on honor cultures and highlights practical implications for de-escalating conflicts in such settings. All data and codes can be found at https://osf.io/8m7jg/.
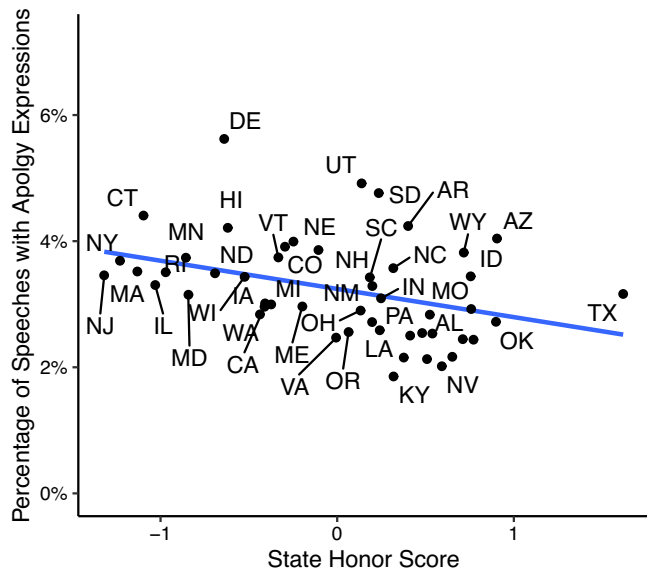
Study 1

Study 1 tests the link between honor and reluctance to apologize among Congress members in the United States—a population whose actions have a substantial impact on national and international affairs. We built on a large body of research showing that regions across the United States vary in their prominence of honor cultures (6, 8, 40). We predicted that US political elites from states with a more-prominent honor culture would be less likely to apologize.

We tested our hypotheses by analyzing the complete set of congressional records from the 97th to 114th Congresses (1981–2016) in the United States (43), which contains more than 2.5 million speeches ($k = 2,585,807$) made by Congress members on the floor of the House of Representatives and Senate.

Measuring Honor. We operationalized honor as the prominence of honor culture in the state that the congressional member was from. To do so, we constructed an honor score for each state. First, we collected state-level indicator items that have been empirically shown to reflect the culture of honor in previous research (6, 44). These include 1) the strength of gun laws (reversed coded) 2), gun ownership per capita 3), the presence of a stand-your-ground law 4), military enlistment rates 5), the legality of the death penalty 6), execution rates, and 7) yearly argument-related homicide rates (*SI Appendix* details the empirical basis and the source of each indicator item). These indicator items were internally consistent ($\alpha = 0.79$). We standardized each item and averaged across them to construct an honor score for each state. In line with previous research (6), Southern states were higher in honor scores than non-Southern states ($t(48) = 2.70$, $P = 0.009$) (see *SI Appendix*, Table S1 for state honor rankings).

Measuring Apologizing Behavior. We used the presence of apology words and phrases in congressional speeches as a measure of apologizing behavior. To identify apology words, we developed an apology dictionary using word embeddings that map out words with semantic similarity in a high-dimensional space based on their co-occurrence in each corpus. We used word2vec's word-embedding model pretrained on Google News

Fig. 1. Study 1: Congress members from states higher in honor were less likely to apologize (1981–2016).

(46) as well as a GloVe's word-embedding model pretrained on Wikipedia articles (47) and extracted the top 100 words that shared the greatest semantic similarity to our apology seed words (sorry, apology, and apologize) from each model. Thereafter, three researchers independently coded each word as apology related (e.g., atone and admit) or non-apology related (e.g., asking and thank) and discussed disagreement until consensus was reached for all words.

This process gave rise to a final list of 44 apology words and phrases that formed the apology dictionary. Some example words were sorry, apologize, apology, confess, regret, atone, and admit (see *SI Appendix* for the full dictionary). This apology dictionary was then applied to congressional speeches: if a speech contained one or more words from the apology dictionary, the speech was coded as 1 (apology present). Otherwise, the speech was coded as 0 (apology absent).

Political Elites from Honor States Apologize Less. We tested whether the Congress member's state honor score predicted their apologizing behavior in each speech, using a multilevel logistic regression that nested speeches within individual Congress members. As shown in Fig. 1, Congress members from states with more-prominent honor cultures were less likely to apologize (odds ratio [OR] = 0.89, 95% CI = [0.86, 0.93], $P < 0.001$). A 1 unit increase in state honor score was associated with an 11% decrease in apology expressions. This difference was robust to controlling for members' gender, year of speech, and state collectivism (*SI Appendix,* Table S3). In line with prior research on the Southern culture of honor (6), Congress members from Southern states were 14% less likely to apologize than members from non-Southern states ($OR = 0.86$, 95% CI = [0.81, 0.92], $P < 0.001$).

Robustness Check: States Vary in Internet Searches of Apology. We conceptually replicated US regional variation in apologizing behavior in a separate large-scale dataset: Google search data. We chose Google search data because people commonly use the Google search engine to ask questions and seek information (~87% of internet searches happened on Google during the timeframe of investigation). Google Trends provides the relative popularity of a search query in Google by region

over time. It has been widely used by researchers to gauge the prevalence of social events (48, 49) and health-related phenomena (50). For example, health-care research uses search trends of "how to kill yourself" to track suicide risk across time and regions. Building on this work, we used the search term "how to apologize", which specifically captured interest in apologizing.

We downloaded the search popularity of "how to apologize" by each US state in each year from 2017 to 2021, where a higher value indicates a higher proportion of that search relative to all searches conducted within that state, as compared to other US states in that year.* The state annual popularity scores were then weighted by the search volume of "how to apologize" in that year relative to other years during that 5-y period so that state popularity scores were comparable across years. Thus, this state popularity index represents the relative popularity of "how to apologize" searches in that state across 5 y.

Google search data supported the state-level variation that we observed in congressional speeches. US states higher in honor had fewer apology searches (Fig. 2) ($B = -2.22$, $t = -2.05$, $P = 0.047$). This result was robust to controlling for state-level collectivism (*SI Appendix,* Table S4). This finding suggests that the regional association between honor and reluctance to apologize was not limited to political elites but rather a general phenomenon that can be seen across the United States.

Study 2

Study 2 tested cultural differences in behavioral tendencies to apologize by comparing people from Turkey and the United States. We chose these two countries because honor values and norms are more prominent in Turkey than in the United States (30, 51). If honor culture hinders apologizing behavior, we would expect people from Turkey to be less likely to apologize for transgressions than people from the United States when faced with identical scenarios.
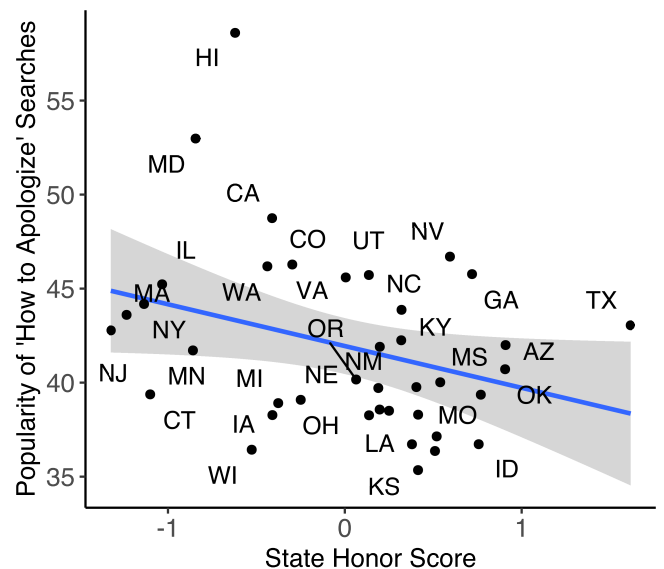
Fig. 2. Study 1: Fewer Google searches of "how to apologize" in US states higher in honor.

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*Google search data were missing from 11 states where there were not enough data for the search term. Therefore, our analyses were performed based on the 39 states where there were more apology searches. The 11 states (M [Mean] = −0.03, SD = 0.58) with insufficient apology searches had similar honor scores to those of 39 states that had sufficient apology searches (M = 0.01, SD = 0.68), t = −0.57, P = 0.57.

To test this hypothesis, we recruited 246 Turkish undergraduates (50% female, M age $= 19.94$, $SD = 1.72$) from a university in Izmir, Turkey and 174 American undergraduates (67% female, M age $= 22.69$, $SD = 6.34$) from a public university on the east coast of the United States. The majority of American participants (69%) were from Maryland, a state ranked low on honor culture (*SI Appendix*, Table S1).

All participants read four hypothetical offense scenarios from previous research (52) in a randomized order. Each scenario described a hypothetical offense that they caused to a friend (e.g., damaging a friend's property or gossiping about them). After reading each scenario, participants were asked to write down what they would say to their friend and rate how much they would want to offer an apology to their friend.[†]

Open-ended Turkish responses were translated into English. A Turkish and an American coder independently coded each sentence in each response for four types of apologetic concessions using a predetermined coding scheme based on previous research (52). These were 1) explicit expression of apology (e.g., sorry), 2) acknowledgment of responsibility: fully or partially acknowledging own responsibility or guilt, 3) acknowledgment of transgression: giving (or the determination to give) a truthful account of the transgression or the damage, and 4) acknowledgment of intent: acknowledging intent to sabotage (see *SI Appendix* for the detailed coding scheme). There was adequate interrater reliability for each sentence (Cohen's $\kappa = 0.61$), and all discrepancies were resolved through discussion. The Nos. of times each type of apologetic concessions appeared were then summed across the four responses to generate an apology score for each participant.

Cultural Differences in Apologizing. We compared Turkish and American participants' tendencies to make apologetic concessions in the responses they wrote using Poisson regressions. Overall, Turkish participants ($M = 2.34$, $SD = 2.28$) were less likely to make apologetic concessions than American participants ($M = 5.39$, $SD = 3.08$) (B [Unstandardized regression coefficient] $= -0.83$, $SE = 0.05$, $P < 0.001$, $d = 1.13$, power > 0.99). The difference remained unchanged when controlling for intentionality and severity of the scenarios, the total No. of sentences that they wrote in each response, and participants' gender ($B = -0.83$, $SE = 0.05$, $P < 0.001$; *SI Appendix*, Table S6). Turkish participants scored lower across different types of apologetic concessions (*SI Appendix*, Table S7 presents apology differences by type). Results of open-ended responses were supported by participants' own ratings: Turkish participants ($M = 3.87$, $SD = 1.16$) rated lower intention to apologize than American participants ($M = 4.26$, $SD = 0.88$) ($t(415.74) = 3.89$, $P < 0.001$, $d = 0.38$, power $= 0.97$).

Study 3

In preregistered study 3, we examined the underlying processes that may explain why people who value honor are reluctant to apologize. We recruited American adults ($n = 361$, 72% female, M age $= 32.95$, $SD = 11.79$) from Prolific to participate in this study.

We measured tendencies to apologize in two ways. First, participants read four hypothetical offense scenarios taken from study 2 which were limited to negligent offenses with moderate consequences. For each offense scenario, participants were asked to indicate how likely they would be to engage in each of three behaviors: apologize, justify, and excuse. Second, participants completed the Proclivity to Apologize Measure (PAM, 53), which measured reasoning tendencies that impeded apology (e.g., "I tend to downplay my wrongdoings to the other person, rather than apologize" and "If I think no one will know what I have done, I am likely not to apologize"; $\alpha = 0.88$). We reversed coded responses before averaging across items such that higher scores reflect a greater willingness to apologize.

We also measured two potential mediators of the honor–apology link: reputational concerns and perceived effectiveness of apology. Participants rated the extent to which they thought apologizing could endanger reputation (e.g., "Others will see me as incompetent if I apologize" and "I will look weak to other people in this society if I apologize", $\alpha = 0.89$) and how effective apologies were in achieving forgiveness (e.g., "Apologies will almost always be accepted" and "When someone apologizes, they will usually be forgiven", $\alpha = 0.81$). Lastly, participants completed the Honor–Dignity–Face Scale (36), and we averaged the six honor items (e.g., "People must always be ready to defend their honor"; $\alpha = 0.73$) to form a measure of people's honor values.

Results.

Valuing honor impedes apology. In a multilevel model with willingness to apologize in four transgression scenarios nested within participants, endorsing honor negatively predicted willingness to apologize ($B = -0.20$, $P < 0.001$, power $= 0.99$). It also negatively predicted the general proclivity to apologize ($B = -0.37$, $P < 0.001$, power > 0.99). The more people valued honor, the less likely they were to apologize for their wrongdoings. These relationships were robust to controlling for participants' gender (see *SI Appendix* for these and other gender-related analyses).

Reputation concerns explain the honor–apology link. Mediation analyses showed that reputation concerns partially mediated the relationship between honor values and willingness to apologize in transgression scenarios (ab [indirect effect] $= -0.07$, $SE = 0.02$, 95% CI $= [-0.12, -0.04]$) and general proclivity to apologize ($ab = -0.15$, $SE = 0.04$, 95% CI $= [-0.24, -0.09]$). People higher in honor were more concerned that apologizing would harm their image, which in turn reduced their likelihood to apologize (Fig. 3).

While perceived effectiveness of apology was positively correlated with willingness to apologize for transgressions ($r = 0.15$, $P = 0.004$) and general proclivity to apologize ($r = 0.13$, $P = 0.02$), it was unrelated to endorsing of honor values ($r = 0.01$, $P = 0.81$). Hence, perceived effectiveness of apology did not explain the link between valuing honor and reluctance to apologize.
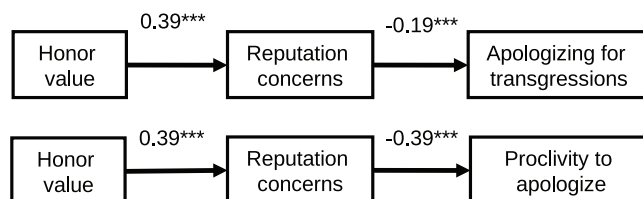
Fig. 3. Study 3 mediation models. ***$P < 0.001$.

[†]We tested boundary conditions by manipulating the intentionality and the consequence severity of the offenses between subjects. Hence, each participant only saw scenarios in which the offenses were accidental, negligent, or intentional and the consequences of the offenses were mild, moderate, or severe. Turkey–US differences in apologizing were robust to controlling for intentionality and severity of the scenarios and were significant at each level of severity and intentionality. Interested readers can find details of these analyses in *SI Appendix*.

Study 4

Studies 1–3 documented an association between honor and reluctance to apologize using various indicators of honor and apologizing behavior. We tested the causality of this association in preregistered study 4.

We recruited American adults ($n = 326$, 60% female, M age = 34.90, $SD = 13.39$) from Prolific and randomly assigned them to one of the two conditions (honor–reputation or control). All participants read a scenario that asked them to imagine being a member of a future society that came into existence 500 y from now. In the honor–reputation condition, participants read that this society emphasizes protecting one's reputation and projecting an image of strength so as not to appear vulnerable (example sentences: "This society emphasizes the importance of protecting your reputation at all costs. In this culture, it's important to make sure others respect you."). In the control condition, participants read that the society emphasizes the importance of entertainment and recreation.

Next, we asked participants to complete a series of questions as if they were members of the society. First, they rated their perception of apologizing in that society on nine dimensions (e.g., bad–good, risky–safe, and dishonorable–honorable; $\alpha = 0.99$). Higher scores reflect more positive views of apologizing behavior. Second, they rated how likely they would be to apologize for a hypothetical transgression in each of eight scenarios (e.g., taking credit for work someone else did) and their likelihood to apologize in general ("Overall, how often do you think you would apologize for your wrongdoings in this society?"; 1 = never, 7 = always). We combined and averaged likelihood-to-apologize ratings across the eight scenarios and in general to form a propensity-to-apologize score ($\alpha = 0.96$). Third, they completed the same measures of potential mediators as in study 3: reputation concerns ($\alpha = 0.96$) and perceived effectiveness of apology ($\alpha = 0.94$).

Results.

Making honor reputation salient reduces apologies. Participants in the honor–reputation condition ($M = 3.27$, $SD = 1.94$) had more negative perceptions of the act of apologizing than participants in the control condition ($M = 5.90$, $SD = 0.92$) ($t(239.41) = -15.81$, $P < 0.001$, $d = 1.73$, power > 0.99). They were also less likely to apologize for transgressions ($M = 3.47$, $SD = 1.91$) than participants in the control condition ($M = 5.53$, $SD = 1.33$) ($t(296.79) = -11.31$, $P < 0.001$, $d = 1.24$, power > 0.99). The effects of condition were robust to controlling for gender (see *SI Appendix* for these and other gender analyses).

Perceived effectiveness of apology and reputation concerns explain differences in apologizing. Participants in the honor–reputation condition ($M = 3.82$, $SD = 1.53$) perceived apology to be less effective than those in the control condition ($M = 5.31$, $SD = 0.99$) ($t(286.24) = -10.51$, $P < 0.001$, $d = 1.15$, power > 0.99). They ($M = 5.00$, $SD = 1.62$) also had more reputation concerns about apologizing than participants in the control condition ($M = 2.59$, $SD = 1.17$) ($t(302.18) = 15.54$, $P < 0.001$, $d = 1.71$, power > 0.99). We conducted mediation analyses to test whether perceived effectiveness of apology and reputation concerns mediated the difference in the likelihood to apologize between honor-reputation and control conditions. Consistent with our prediction, we found significant indirect effects of honor on propensity to apologize both through perceived effectiveness of apology ($ab = -0.53$, 95% CI = $[-0.85, -0.28]$)

and through reputation concerns ($ab = -0.99$, 95% CI = $[-1.42, -0.55]$) in a simultaneous mediation model.

Taken together, our results suggest that salient honor norms induce concerns about one's reputation and reduce people's perception that apologies are effective, which in turn reduces people's willingness to apologize.

Study 5

In preregistered study 5, we replicated the causal process documented in study 4 and extended it to test the possibility that shifting the focus of honor to virtue concerns of moral integrity can promote apologizing behavior. Hence, we added a condition to study 5 in addition to the original two conditions in study 4: the honor-as-moral integrity condition.

We recruited American adults ($n = 519$, 67% female, M age = 33.07, $SD = 12.29$) from Prolific and randomly assigned them to one of the three conditions (control, honor-as-reputation, and honor-as-moral integrity) to read about a future society (*SI Appendix* presents scenarios by condition). The first two conditions contained the same content as study 4. In the honor-as-moral integrity condition, participants read that this society emphasizes behaving morally and virtuously and fulfilling obligations so that one is seen as adhering to moral values (example sentences: "This society emphasizes the importance of behaving morally at all costs. In this culture, it's important to make sure others think you are a person of high moral integrity.").

Next, participants completed the same measures as study 4: perception of apologizing ($\alpha = 0.98$), propensity to apologize for transgressions ($\alpha = 0.95$), reputation concerns ($\alpha = 0.94$), and perceived effectiveness of apology ($\alpha = 0.93$).

Results.

Making honor reputation salient reduces apologies. Replicating study 4, participants in the honor-as-reputation condition ($M = 2.91$, $SD = 1.63$) considered the act of apologizing to be more negative than participants in the control condition ($M = 5.71$, $SD = 1.14$) ($t(257.42) = -17.61$, $P < 0.001$, $d = 2.02$, power > 0.99). They ($M = 3.32$, $SD = 1.59$) were also less likely to apologize for transgressions than participants in the control condition ($M = 5.49$, $SD = 1.32$) ($t(288.38) = -13.26$, $P < 0.001$, $d = 1.50$, power > 0.99).

Reframing honor as moral integrity promotes apologizing. How people think of honor matters (Fig. 4). Participants in the honor-as-moral integrity condition ($M = 5.96$, $SD = 1.13$) perceived
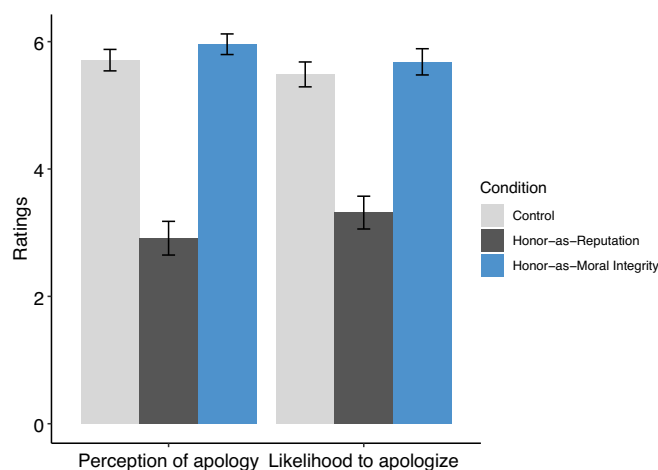
Fig. 4. Study 5: Focusing honor on moral integrity instead of reputation promotes apology.

apologizing more positively relative to participants in the honor-as-reputation condition ($M = 2.91$, $SD = 1.63$) ($t(252.37) = 19.40$, $P < 0.001$, $d = 2.21$, power > 0.99) and relative to participants in the control condition ($M = 5.71$, $SD = 1.14$) ($t(368) = 2.11$, $P = 0.036$, $d = 0.22$, power = 0.56). When asked about their likelihood to apologize, participants in the honor-as-moral integrity condition ($M = 5.68$, $SD = 1.44$) were more likely to apologize for transgressions than participants in honor-as-reputation condition ($M = 3.32$, $SD = 1.59$) ($t(302.11) = 14.18$, $P < 0.001$, $d = 1.57$, power > 0.99) and were similar to participants in the control condition ($M = 5.49$, $SD = 1.32$) ($t(368) = 1.37$, $P = 0.17$, $d = 0.14$). These relationships were robust to controlling for participants' gender (see *SI Appendix* for these and other gender analyses).

Perceived effectiveness of apology and reputation concerns explain differences in apologizing. Relative to participants in the control condition, participants in the honor-as-reputation condition perceived apology to be less effective ($t(256.86) = -12.11$, $P < 0.001$, $d = 1.39$, power > 0.99) and had more reputation concerns about apologizing ($t(326) = 18.89$, $P < 0.001$, $d = 2.09$, power > 0.99). Replicating study 4, perceived effectiveness of apology ($ab = -0.75$, 95% CI = $[-1.01, -0.52]$) and reputation concerns ($ab = -0.57$, 95% CI = $[-0.92, -0.14]$) mediated the difference in the likelihood to apologize between honor-as-reputation and control conditions in a simultaneous mediation model.

Furthermore, focusing honor on moral integrity also affected how effective participants perceived apology and how concerned they were about reputation. Participants in the honor-as-moral integrity condition perceived apology to be more effective than participants in the honor-as-reputation condition ($t(260.72) = 12.70$, $P < 0.001$, $d = 1.44$, power > 0.99). They also had lower reputation concerns than participants in the honor-as-reputation condition ($t(338) = -17.14$, $P < 0.001$, $d = 1.87$, power > 0.99). Mediation analyses showed that increased perceived effectiveness of apology ($ab = 0.60$, 95% CI = $[0.33, 0.93]$) and reduced reputation concerns ($ab = 0.60$, 95% CI = $[0.21, 0.98]$) simultaneously explained the higher likelihood to apologize in the honor-as-moral integrity condition, relative to the honor-as-reputation condition.

A replication in US honor states. A limitation of study 5 is that our sample was recruited from across the United States, raising the question of whether the effects hold in contexts where honor is a prominent value. To address this, we replicated study 5 in a preregistered study with 402 participants recruited from Southern states in the United States, a region with a strong cultural focus on honor (2, 8). Data from southern honor states replicated study 5 results (see *SI Appendix* for full results), indicating that shifting the focus of honor from reputation to moral integrity can effectively promote apology among members of honor cultures.

Taken together, results from the two experiments suggest that highlighting honor reduces people's willingness to apologize. However, reframing honor as acting with moral integrity leads people to consider apology more positively and to become more willing to apologize, which may offer a remedy to reduce conflicts when honor is at stake.

Discussion

In honor cultures, relatively minor disputes can escalate (3, 6, 36), making certain forms of aggression widespread (2, 36). Yet, there is surprisingly little research on how to manage conflicts and disputes in these settings. In the present research, we examine the role of honor culture in apology, an act that is critical to conflict de-escalation and reconciliation (21, 28). Across five studies, we show that the culture of honor impedes apology. People from honor societies (e.g., Turkey and US honor states) and people who endorse honor values are less willing to apologize for their transgressions. Our final experiment provides insight into ways to promote apologizing when honor is at stake. When the focus of honor concerns is on moral integrity, people see apologizing more positively and apologize more.

Our results suggest that people are unwilling to apologize in part because they are concerned that apologizing undermines a core focal concern in these cultures, namely reputation, which may lower their social standing. In addition, we found some evidence that people are less willing to apologize because they consider apologies to be less effective at resolving conflict and repairing relationships. The unwillingness to apologize and the inclination to retaliate after being wronged (36) may create a vicious cycle that further fuels conflicts in honor cultures.

Our findings contribute to the literature on conflict management. Conflict resolution and reconciliation are achieved in part through recognition of wrongdoings and acknowledgment of responsibility (28). Without apologies, conflicts often escalate and persist. Our studies highlight a cultural barrier to apologizing and help clarify why people from certain cultures may be reluctant to apologize.

The results hold practical implications for managing conflicts in intercultural contexts. In particular, different beliefs people hold about apologizing may lead to deeper misunderstandings and failed reconciliation attempts in intercultural contexts. For example, people socialized in cultures with strong honor norms may be much less likely to acknowledge or apologize for wrongdoing, particularly in public settings where there is a great potential for honor loss (30, 38). An understanding of the psychology of honor and apology can help mediators create contexts for intercultural dialogue where concerns for reputation and potential honor loss are attenuated (e.g., private meetings).

Our results also contribute to the literature on the culture of honor. Within the same psychological mindset of honor, virility and virtue concerns are often intertwined (29). Both concerns play an important role in living in tough, lawless environments that give rise to honor cultures. However, the two concerns appear to have opposing influences on the likelihood of making an apology: while virility concerns reduce apologizing behavior, virtue concerns may promote it. Indeed, study 5 suggests that highlighting norms of moral virtue in a society makes apologizing seem even more appealing compared with the baseline.

We note that when no frame was provided in studies 1 or 2, we observed an overall reduction in apologizing behavior in honor cultures relative to nonhonor cultures, suggesting that concerns for reputation and strength may loom larger in these contexts. In other words, virility concerns may generally crowd out virtue concerns in conflicts. We speculate this may be due to the centrality of strength in the logic of honor, given that projecting an image of strength and being willing to defend one's reputation is evolutionarily important to ensure survival in tough environments with weak institutions (32). Therefore, while virility and virtue concerns often go hand in hand, virility may be weighted as particularly important during conflicts in honor cultures.

By focusing on both sides of honor, our results provide guidance for reducing the barrier to apologizing when honor is at stake. Specifically, we show that shifting the perspective of honor from concerns about virility to concerns about virtue can effectively reduce people's concerns about their reputation and increase their willingness to apologize. This perspective-shifting

strategy may be particularly effective in promoting apologizing behavior in cultures that prioritize honor, as it does not undermine the importance of honor but simply redirects attention to a different feature of honor.

Given that we focused on honor and the willingness to apologize, an open question is whether apologies are objectively less effective in honor cultures or if this perception of ineffectiveness is unfounded. Some evidence points out that, although forgiveness is harder to obtain in honor cultures than in nonhonor cultures, receiving an apology helps (37), suggesting that there may be misperceptions about the utility of apology. Another possibility is pluralistic ignorance: Members of honor cultures may personally want to apologize but (inaccurately) believe that others would reject the apology or perceive apologizers as weak and incompetent, when in fact others would see them as having high moral integrity. It would be valuable to examine the role of honor in apologizing, forgiveness, and retaliation, and the interaction of these processes during conflicts that unfold over time.

Lastly, we examined the willingness to apologize in our studies, but did not examine other cultural-specific strategies that people may use to diffuse or manage conflicts in honor cultures. For example, politeness norms that are common in honor cultures may serve the important function of pre-empting conflicts and violence (55). In addition, our measures did not capture the potential indirect ways that people express remorse. Instead of apologizing, people in honor cultures may redress wrongs through other channels that do not raise reputation concerns (e.g., giving gifts or doing favors). However, in intercultural contexts where there is an expectation of apology following wrongdoing, reluctance to offer one may nevertheless contribute to further conflicts.

While conflicts are inevitable, apologizing often marks the first step toward resolving them and restoring trust. Our studies reveal that the culture of honor can impede apologizing. However, honor is a double-edged sword: while honor concerns of virility crowd out apologizing behavior, shifting the focus of honor away from virility to virtue provides a means to promote apologies. Our findings add to the understanding of the psychology of honor and illuminate potential ways to foster conflict resolution in honor regions across the world.

Materials and Methods

All studies were approved by the Institutional Review Board of Stanford University and the University of Maryland. All participants provided informed consent.

Study 1

Dataset. We used congressional records from the 97th to 114th Congresses in the United States [compiled by Gentzkow et al. (43)]. The dataset includes a total No. of 2,585,807 speeches given on the floor of the House of Representatives and Senate spanning over more than 2 decades (1981–2016). In addition, the dataset contains speaker information in terms of the state that the speaker represents, gender, and party affiliation. The dataset is available from https://data.stanford.edu/congress_text.

Operationalizing honor. We constructed a state honor index with a method that has been used and validated in prior studies (41, 42). We collected state-level indicator items that have been empirically shown to reflect the culture of honor in previous research (40, 44, 45). These included 1) the strength of gun laws in 2021 (reversed coded), 2) gun ownership per capita in 2022, 3) the presence of a stand-your-ground law in 2022, 4) military enlistment rates per 1,000 civilian adults between 2013 and 2018, 5) the legality of the death penalty in 2022, 6) execution rates from 1976 to May 2022, and 7) yearly argument-related homicide rates per 100,000 white male adults between 2000 and 2020 ($\alpha = 0.79$).

Measuring apologizing behavior. We used the presence of apology words and phrases in a speech as a measure of apologizing behavior. We chose this measure because apologizing is a discrete behavior marked by specific linguistic expressions (e.g., "sorry" and "my apologies"). Identifying these specific linguistic expressions allows for identifying the occurrence of apologizing behavior.

To identify apology words, we developed an apology dictionary using word embeddings that map out words with semantic similarity in a high-dimensional space based on their co-occurrence in each corpus. For that, we used a word2-vec's word-embedding model pretrained on Google News (46) as well as a GloVe's word-embedding model pretrained on Wikipedia articles (47). We extracted the top 100 words that shared the greatest semantic similarity to our apology seed words (sorry, apology, and apologize) from each model. Thereafter, three researchers independently coded each word as apology related (e.g., atone and admit) or non-apology related (e.g., asking and thank) and discussed disagreement until consensus was reached for all words. This process gave rise to a final list of 44 apology words and phrases that formed the apology dictionary (see *SI Appendix* for the full list). The apology dictionary was then applied to congressional speeches: if a speech contained one or more words from the apology dictionary, the speech was coded as 1 (apology present). Otherwise, the speech was coded as 0 (apology absent).

Study 2.

Participants. Our sample included 174 American undergraduates (67% female, M age = 22.69, $SD = 6.34$) recruited from a public university on the East Coast of America and 246 Turkish undergraduates (50% female, M age = 19.94, $SD = 1.72$) recruited from a university in Izmir, Turkey.

Procedures. Participants read four pre-established scenarios taken from Gonzales et al. (52) in a randomized order. Each scenario described a hypothetical offense that they caused to a friend. These included humiliating a friend at work, damaging a friend's property, gossiping about a friend, and failing to deliver a friend's paper. The severity and the intentionality of the offenses were manipulated between subjects, such that participants only saw scenarios in which the consequences of the offenses were mild, moderate, or severe and the offenses were accidental, negligent, or intentional. After reading each scenario, participants were asked to generate an open-ended response to the following question: "Your friend asks you to explain what happened. What do you say to him (her) in this situation?"

Our key dependent variable was the No. of times different types of apologetic concessions appeared across responses to the four scenarios. Independent coders coded each response in terms of four types of apologetic concessions based on a predetermined coding scheme. These were (1) explicit expression of apology (e.g., "I would say, I am sorry"), (2) acknowledgment of responsibility: full or partial acknowledgment of own responsibility or guilt (e.g., "It is completely my fault"), (3) acknowledgment of transgression: giving (or the determination to give) a truthful account of the transgression or the damage (e.g., "I needed to save my assignment, so I got your flash drive. It probably got infected after I inserted it into the computer."), and (4) acknowledgment of intent: acknowledging intent to sabotage (e.g., "I'd say that I was trying to curtail his/her good fortune"). *SI Appendix* provides the detailed coding scheme.

There was adequate interrater reliability for each sentence (Cohen's $\kappa = 0.61$), and all discrepancies were resolved through discussion. The No. of times each type of apologetic concession appeared was then summed across four responses to generate an apology score for each participant. In addition to open-ended responses, participants reported their intention to apologize in each scenario by rating a single item: "How much do you want to offer an apology to your friend?".

For each scenario, participants also responded to manipulation check items for intentionality ("To what extent was your action intentional?") and severity ("How severe are the consequences of the event?") as well as additional items measuring the extent of emotions and concerns they would feel in each scenario (e.g., guilt, shame, and humiliation). In the end, they provided demographic information.

Study 3.

Preregistration. We preregistered the study method, the planned sample size, and analysis plans (https://aspredicted.org/yt6ke.pdf).

Participants. We preregistered to recruit 360 participants based on a small effect size ($r = 0.15$) and power of 0.80. Our sample included 361 American adults (72.3% female, M age = 32.95, $SD = 11.79$) recruited from Prolific. The majority of our sample were European Americans (70.4%), followed by Asian

Americans (12.2%), Hispanic Americans (8.0%), African Americans (5.3%), and other Americans (4.2%).

Procedures. Participants were invited to a survey on behaviors across social situations. They completed the measures below in the order presented. At the end, they completed demographic questions.

Willingness to apologize for transgressions. We used the same four transgression scenarios as in study 2, and this time, the scenarios were limited to negligent offenses with moderate consequences. For each transgression scenario, participants were asked to indicate, on a seven-point scale (1 = very unlikely, 7 = very likely), how likely they would be to engage in each of the three behaviors: apologize, justify, and excuse. We averaged their likelihood to apologize across the four scenarios to form a composite measure of willingness to apologize ($\alpha = 0.63$).

Proclivity to apologize. We measured individual differences in tendencies to apologize using the PAM ($\alpha = 0.88$; 53). The scale contained eight items that alluded to reasoning processes that impeded apology (e.g., "I tend not to apologize because I could get into trouble for confessing"). We reversed coded responses such that higher scores reflect a greater willingness to apologize.

Measures of potential mediators. We measured two potential mediators of the relationship between valuing honor and reluctance to apologize: reputation concerns and perceived effectiveness of apology. Participants rated the extent to which they thought apologizing could endanger reputation (e.g., "I will look weak to other people in this society if I apologize", four items, $\alpha = 0.89$) and how effective apologies were in achieving forgiveness, repairing relationships, and restoring trust (e.g., "when someone apologizes, they will usually be forgiven", six items, $\alpha = 0.81$).

Honor values. Participants completed the 18-item Honor-Dignity-Face Scale (36), which measured how much people valued honor, dignity, and face, respectively. We averaged the six honor items ($\alpha = 0.73$; e.g., people must always be ready to defend their honor) to form a measure of people's honor values.

Study 4.

Preregistration. Prior to data collection, we preregistered our hypotheses, the planned sample size, and analysis plans (https://aspredicted.org/9gb76.pdf).
Participants. Our sample included 326 American participants (59.5% female; *M* age = 34.90, *SD* = 13.39) recruited from Prolific. An additional 24 participants were excluded from analyses for failing the attention check.
Manipulation. At the beginning of the experiment, participants were randomly assigned to one of the two conditions: honor–reputation ($n = 167$) or control ($n = 159$). Participants in both conditions read a scenario that asked them to imagine to be a member of a future society that came into existence 500 y from now. In the honor–reputation condition, participants read that the society emphasizes protecting one's reputation and projecting an image of strength so as not to appear vulnerable. In the control condition, participants read that the society emphasizes the importance of entertainment and recreation. After the manipulation, participants proceeded to complete measures of apology presented below and, in the end, provided demographic information.
Measures. Participants were asked to complete a series of questions as if they were members of the society that they read earlier.

Perception of apologizing. Participants rated apologizing on nine dimensions (e.g., bad–good, risky–safe, and dishonorable–honorable) on a scale from 1 to 7. Higher scores indicate a more-positive perception of apologizing. The scale achieved high reliability ($\alpha = 0.99$); thus, we averaged the ratings across nine dimensions to compute an overall rating that represents the perception of apologizing.

Propensity to apologize. We presented participants with eight different scenarios in which they committed a hypothetical transgression (e.g., accidentally cutting someone in line and taking credit for work someone else did). The eight scenarios varied in intentionality and severity. Participants rated how likely they would be to apologize in each of the scenarios on a scale from 1 (not at all likely) to 7 (extremely likely). In addition, participants answered one question that measured their general likelihood to apologize: "Overall, how often do you think you would apologize for your wrongdoings in this society?" (1 = never, 7 = always). Ratings on this single item were strongly correlated with the average ratings on transgression scenarios ($r(324) = 0.74$, $P < 0.001$). Hence, we combined and averaged likelihoods to apologize across the eight transgression scenarios and the general frequency item to form a propensity-to-apologize score ($\alpha = 0.96$).

Reputation concerns. We measured participants' reputation concerns about apologizing using a five-item scale ($\alpha = 0.96$). Participants rated the extent to which they thought apologizing could endanger reputation or the image of strength (e.g., "I will look weak to other people in this society if I apologize") on a scale from 1 (strongly disagree) to 7 (strongly agree).

Perceived effectiveness of apology. We measured the perceived effectiveness of apology with a six-item scale ($\alpha = 0.94$). Participants rated how effective apologies were in achieving forgiveness, repairing relationships, and restoring trust (e.g., "When someone apologizes, they will usually be forgiven") on a scale from 1 (strongly disagree) to 7 (strongly agree).

Study 5.

Preregistration. Prior to data collection, we preregistered our hypotheses, the planned sample size, and analysis plans (https://aspredicted.org/wn8ai.pdf).
Participants. Our sample included 519 American participants (67.1% female; *M* age = 33.07, *SD* = 12.29) recruited from Prolific. An additional 82 participants were excluded from analyses for failing the attention check.
Manipulation. At the beginning of the experiment, participants were randomly assigned to one of the three conditions: honor-as-reputation ($n = 149$), honor-as-moral integrity ($n = 191$), or control ($n = 179$). Participants in all conditions read a scenario that asked them to imagine to be a member of a future society that came into existence 500 y from now. In the honor-as-reputation and control conditions, participants read the same texts from the honor–reputation and control conditions in study 4. In the honor-as-moral integrity condition, participants read that the society emphasizes behaving morally and virtuously and fulfilling obligations so that one is seen as adhering to moral values. After the manipulation, participants proceeded to complete measures of apology and provided demographic information at the end.
Measures. Participants were asked to complete a series of questions as if they were members of the society that they read earlier. We used the same measures from study 4, including perception of apologizing ($\alpha = 0.98$), propensity to apologize ($\alpha = 0.95$), perceived effectiveness of apology ($\alpha = 0.93$), and reputation concerns ($\alpha = 0.94$).

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