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# Differences and Similarities in Psychological Characteristics between Cultural Groups Circum Mediterranean

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#### Abstract

We examined differences and similarities between groups sampled from the Mediterranean region in social orientation, cognitive style, self-construal, and honor, face, dignity values and concerns using a large battery of tasks and measures. We did this by conducting secondary data set analyses focusing on comparisons between nine pairs of samples recruited from the Mediterranean region (Spain, Italy, Greece, Turkey, Cyprus [Greek and Turkish Cypriot communities], Lebanon [Muslim Lebanese and Christian Lebanese], Egypt) that have overlapping and divergent features in terms of religious, ethnic, national, and linguistic factors as well as various physical and socio-ecological characteristics. Across 38 different psychological characteristics, comparisons between Turkish and Turkish Cypriot samples and between Christian and Muslim samples from Lebanon revealed that they were most similar to each other. In contrast, Greek and Turkish samples were the least similar. Our analyses of intercorrelations between variables, variability and size of differences provide additional insights into the within-region variation in social orientation, cognitive style, self-construal indicators, as well as honor, face, and dignity values and concerns. Our research contributes to the growing literature on regional variation of psychological processes while raising important pointers for the role of background and socio-ecological characteristics in cultural group similarities and differences.

Keywords: the Mediterranean region, socio-ecology, religious and ethnic identity, cultural similarities and differences

Word count: 223

#### **Statement of Limitations**

Despite presenting novel insights into regional variation across a large battery of variables between groups circum Mediterranean that are matched on different background and socioecological factors, our analysis does not allow us to capture all possible similarities between the groups studied in the current research or describe an exhaustive list of all possible factors that may account for the observed similarities between these groups. It also does not permit us to tap into which exact features of these shared socio-ecologies might drive the observed similarities (e.g., exposure to similar educational *or* political systems). Moreover, using student samples (who are especially likely to engage in contact with other cultures) might have obscured some differences. Finally, our study relies on groups from one world region (i.e., the Mediterranean) with groups varying from each other or being similar to each other on a certain set of characteristics; similar comparative research is needed to explore patterns of cultural differences and similarities within other world regions.

Word count: 159

## Differences and Similarities in Psychological Characteristics between Cultural Groups Circum Mediterranean

Evidence accumulated over the last three decades has clearly demonstrated that cultural groups in different world regions show substantial variation in a wide range of psychological processes such as preferences, values, motivations, and self-definitions (for a review see Cohen & Kitayama, 2018). This variation has traditionally been documented based on findings comparing groups recruited in cultural regions very different from each other in many respects (e.g., North America vs. East Asia). Increasingly, however, researchers have been investigating within-region or within-country variation to isolate factors that may play a role in previously reported cultural differences in psychological processes. This growing literature has, for example, revealed that different ethnic groups within a country (e.g., Eastvs. South-Asians in the U.S., Lu et al., 2020) or communities within a region that base their livelihood on different forms of economic subsistence (e.g., farming vs. herding, Nisbett & Cohen, 1996; Uskul et al., 2008; wheat vs. rice farming, Talhelm et al., 2014), matched on a variety of background characteristics such as language and nationality, can differ from each other in how they feel, think or behave in theoretically meaningful ways.

In the current research, we focused on the Mediterranean region to examine withinregion variation in a large set of psychological characteristics. The Mediterranean region is host to 22 countries that surround the Mediterranean Sea with around 14 million people living across three continents (Asia, Europe, Africa) and belonging to cultural groups that vary in political, economic, and historical background factors, making this region a heterogenous unit. Yet, subsets of these cultural groups can be matched on several socio-ecological and background characteristics, rendering them meaningful to compare with regard to their psychological characteristics. To do exactly this, we capitalized on a design feature of an existing dataset which combines samples recruited from the Mediterranean region (Uskul et al., 2023; Vignoles et al., 2024). Using this unique dataset, we conducted nine pairwise comparisons, matching samples on a set of background and socio-ecological indicators previously considered important in shaping psychological differences and similarities of cultural groups to examine several research questions outlined below.

#### **Current Study**

We compared nine pairs of cultural groups (see Table 1 for an overview of the groups that were compared and Table S1 for the overlapping and diverging features in each comparison) on a diverse set of psychological characteristics (including different indicators of social orientation, self-construal, cognitive style, as well as honor, dignity, and face values and concerns), totaling 38 distinct variables (see Table S2). Data on these variables were acquired from a large-scale study conducted within the Mediterranean region and other world regions (see Uskul et al., 2023; Vignoles et al., 2024). Social orientation, self-construal, and cognitive style indicators have frequently been used in studies adopting a comparative approach to the study of cultural differences and similarities in psychological processes, whereas large-scale comparative studies of honor, face, and dignity values and concerns are relatively scarce. The coverage of a large set of variables in this dataset enabled us to test the following novel research questions rooted in existing theoretical and empirical work in cultural and socio-ecological psychology.

### Independent and Interdependent Orientations of Subcultural Groups circum Mediterranean

First, Mediterranean societies have been assumed to share a collectivistic ethos comparable to East Asian societies with individuals in this region likely to relate to others, process information, and define themselves in interdependent terms. This assumption was largely based on the expectation that evidence from East Asian samples would generalize to other non-Western regions (Markus & Kitayama, 1991) as well as on the assumed prevalence of honor, ingroup solidarity and welfare, and kinship spirit in this region (e.g., Gregg, 2005; San Martin et al., 2018). Recent research conducted with several groups from this region has,

however, pointed to a distinctive combination of independent and interdependent social orientation, self-construal, and cognitive style when compared with the more commonly studied groups in East Asian and Anglo-Western regions, with a relatively strong emphasis on independence in most aspects of their social orientation, self-construal, and to a slightly lesser extent their cognitive style (Uskul et al., 2023)<sup>1</sup>. This research has also shown that in a three-way comparison within the Mediterranean region based on a categorization of countries in terms of their ethnic/racial, religious, and linguistic background, their geographic proximity, and colonial heritage (Mensah & Chen, 2013), samples from the Latin European, Southeast European, and the Middle Eastern subregions were relatively more similar to each other in their independent and interdependent orientations than they were to samples from East Asian and Anglo-Western regions (see Uskul et al., 2023 for more details). In the current study, going beyond this broad subregional categorization, we asked how pairs of subcultural groups around the Mediterranean that are matched on various background and socio-ecological indicators compare in their independent and interdependent orientations to reveal more targeted evidence for within-region cultural patterns.

#### Divergence and Convergence of Cultural Patterns Within and Between Groups

Second, we inspected within-culture correlations across the tasks and measures used to assess views of self, social orientation and cognitive style, in order to test the replicability of past findings which demonstrated negligible correlations between tasks designed to assess these constructs (e.g., Kitayama et al., 2009; Na et al., 2010, 2020). Relatedly, we also

<sup>&</sup>lt;sup>1</sup> For example, when compared on eight distinct dimensions of self-construal, members of Mediterranean societies (vs. members of East Asian and Anglo-western societies) on average reported construing themselves in more independent ways (i.e., as more different from others [vs. similar to others], self-directed [vs. receptive to influence], self-reliant [vs. dependent on others], consistent across contexts [vs. variable], and self-expressive [vs. harmonious]), as well as in more interdependent ways (i.e., more connected to others [vs. self-contained] and higher in commitment to others [vs. self-interest]<sup>1</sup>). Furthermore, several forms of interdependence (i.e., dependence on others [vs. self-reliance], connection with others [vs. self-containment], in-group closeness bias) and one form of independence (i.e., consistency) predicted greater social well-being across all three world regions. In the Mediterranean region only, however, additional forms of independence (i.e., symbolic self-inflation, self-direction, self-expression, first-person perspective taking in memory) also predicted social well-being, suggesting the important role played by independent (in addition to interdependent) indicators in relational psychological needs among members of this region.

examined whether there is convergence in observed differences across different tasks and measures in the comparisons that we conducted between pairs of subcultural groups (despite lack of significant convergence at the individual level, if this is replicated). Past research focusing on comparisons between groups from the Mediterranean region suggests that cultural differences in this region may be more nuanced, possibly revealing a divergent cultural pattern (i.e., some task and measures pointing to greater independence whereas others pointing to greater interdependence). For example, findings from San Martin et al. (2018) have shown that Arab participants exhibited an interdependent social orientation and holistic cognition comparable to Japanese participants and stronger than Western participants; at the same time, they were as self-assertive as Western participants and significantly more so than were Japanese. In a different line of research, Akaliyski et al. (2021) suggested that subgroups sampled from within a nation may show greater similarity to each other, as nations provide a common ground in which socialization takes place through institutionalized channels; this leads to a prediction that subgroups that share political institutions may be more similar to each other than individuals that originate from different national contexts. The current dataset allowed us to test the divergence or convergence of cultural patterns by selecting different pairs of groups that vary from each other in different background and socio-political features.

#### Subregional Variation in Honor, Face, Dignity Values and Concerns

Third, existing studies that involved samples from the Mediterranean region (e.g., Spain: Rodriguez Mosquera et al., 2002; Turkey: Uskul & Cross, 2019) have demonstrated that honor is a stronger driver of social behavior in these contexts compared to contexts in Northwestern Europe (e.g., the Netherlands) or North America (e.g., northern US). Recent work has further shown that honor is endorsed more strongly in samples from the Mediterranean region compared to East Asian and Anglo-Western regions and explained some (but not all) differences in measures of social orientation and cognitive style between Mediterranean versus Anglo-Western, and East-Asian societies (Vignoles et al., 2024). The same work has also pointed to within-region variation, revealing that honor is more strongly endorsed farther east and south in the Mediterranean region than in Latin Europe (Spain, Italy) or Southeastern Europe (Greece, Cyprus: Greek Cypriot community), with samples from the Middle Eastern and North African (MENA) subregion showing the highest perceived normative and personal endorsement of most honor-related measures. Despite the growing evidence emerging from this region on the prevalence and importance of honor, finegrained insights into how individual Mediterranean cultural contexts might compare to each other are yet to be reported. In the current study we aimed to fill this gap by asking how groups within subregions of the broader Mediterranean area (e.g., Latin Europe [Spain vs. Italy] or the MENA region [e.g., Lebanese Muslims vs. Egyptian Muslims]) compare by using a diverse set of honor, face, and dignity indicators covering both how strongly individuals personally endorse and perceive most members of their societies to endorse honor, face, and dignity values and concerns.

#### Where do Greater Cultural Similarities or Differences Emerge?

Finally, comparing groups on a large set of variables allowed us to ask which cultural construct(s) capture more similarity between the samples and within the region and which ones show greater variability. For example, we investigated whether samples compared with each other showed greater similarities in honor values and concerns compared with their similarities in social orientation, self-construal, or cognitive style.

#### **Comparative Approach**

When pairing the groups, we were inspired by the 'just minimal difference' approach, typically adopted to study groups that are similar to each other in various characteristics yet differ in a characteristic that is of interest to researchers. We combined this approach with a 'just minimal similarity' approach that allowed us to examine whether sharing one overlapping characteristic, yet differing on several others, may be sufficient for members of two groups to show similarities in psychological processes. For example, if sharing a religious denomination is a critical feature in shaping psychological processes, then belonging to the same religious group (despite differing in other characteristics such as ethnicity, language, ecology) may be sufficient to make members of two cultural groups more similar than different. Converging evidence for the critical role of religious denomination would be revealed if a 'just minimal difference' approach showed that members of two cultural groups who were similar in various characteristics yet differed in their religious group membership showed important differences in psychological processes. Although the pairs of groups included in the current pairwise comparisons (see Table 1 for the list) were matched on a variety of characteristics, lacking information on similarities and differences on all possible characteristics across the pairs of compared groups renders a cautionary note against drawing firm conclusions about the role of specific characteristics that the groups share or differ on in accounting for their similarities and differences across the range of psychological variables studied here.

#### Method

We analyzed data originating from a comparative study designed to examine patterns of social orientation, self-construal, and cognitive style as well as honor, face, and dignity values and concerns across different world regions (Uskul et al., 2023; Vignoles et al., 2024). In the current study, we focused on a subset of this dataset consisting of samples recruited from the Mediterranean region only.

#### **Participants**

The data included 2,228 participants (see Table 2 for descriptive statistics) recruited through collaborating institutions in eight different sites across the Mediterranean region (Spain, Italy, Greece, Turkey, Cyprus [Greek and Turkish Cypriot communities], Lebanon, Egypt). Given that we used an existing dataset, we were limited to the sample sizes already available, which prevented us from determining sample sizes in advance using a power analysis. Yet, a simulated sensitivity analysis revealed that even a meta-analytically derived effect size of Hedges' g = 0.10 across 38 variables could be detected with a power of .989 ( $\alpha$  = .05) for the smallest pairwise comparison (Lebanese Christians vs. Lebanese Muslims with ns = 80 and 138, respectively; see R-code online for the simulated power analysis). All other groups had at least 150 participants each.

#### **Comparison Groups**

Our decision about which pairs of cultural groups to compare was based on their overlapping and differing background characteristics and whether they were exposed to a shared physical and/or socio-political environment or not (see Table S1 for how these characteristics were defined in each comparison pair). For background factors, we considered being a member of a major religion (i.e., Islam, Christianity) or a particular denomination within a major religion (i.e., Greek Orthodox, Catholic), belonging to a group defined by a nationally dominant language (e.g., Spanish, Turkish), and being part of a particular national or ethnic group (e.g., Greek, Arab) as constituting religious, linguistic, and national or ethnic background, respectively. We categorized groups as sharing (or not) these background characteristics based on both self-reported characteristics (e.g., participants self-identifying as Muslim) and on majority characteristics of the included countries (e.g., majority of the Egyptian population consisting of Muslims based on census data).

We defined exposure to a shared physical environment as residing in locations that have similar physical characteristics (e.g., on the same island, within the same geographic boundaries), and exposure to a shared socio-political environment as being governed by similar conventions and regulations in major domains of life (e.g., education, finance, justice, voting systems). Although similarity in socio-political environments is more commonly observed within national boundaries (e.g., citizens of Egypt being governed by the same government and laws) and likely to differ between countries (e.g., citizens of Spain and Italy being governed by different governments and laws), Turkey and the Turkish Republic of Northern Cyprus are an exception as they have considerable overlap in their socio-political environment for historical and political reasons (see Tables 1 and S1).

#### **Procedure and Materials**

Participants completed a large battery of measures and tasks (see Table S2 for an overview and references) including four tasks tapping into six indicators of social orientation (intensity of engaging vs. disengaging emotions, predictors of happiness, ingroup vs. outgroup closeness bias, symbolic self-inflation, nepotism in rewarding friends and punishing strangers), an eight-dimensional self-construal scale with each dimension consisting of an interdependent and an independent pole (similarity vs. difference; connection to others vs. self-containment; receptiveness to influence vs. self-direction; dependence on others vs. self-reliance; harmony vs. self-expression; commitment to others vs. self-interest; variability vs. consistency; contextualized vs. de-contextualized self), and four tasks assessing cognitive style (causal situational vs. dispositional attribution, thematic vs. taxonomic categorization, inclusion vs. exclusion of contextual information, third-person vs. first-person perspective-taking).<sup>2</sup>

Participants also answered items assessing honor, face, and dignity cultural logics as *values* (agreement with beliefs and norms) and *concerns* (reactions to potentially goal-obstructing or reputation threatening situations), which they rated once for themselves (*personal endorsement*) and once for their perception of most people in their society (*perceived-societal endorsement*). Multilevel measurement models conducted with these items (for details on these models see Vignoles et al., 2024) yielded four individual-level factors for values (dignity values, face values, honor values with two factors: family defense, and self-promotion and retaliation) and six individual-level factors for concerns (dignity concerns, face concerns, honor concerns with four factors: family reputation, family authority,

<sup>&</sup>lt;sup>2</sup> The Inclusion of Contextual Information task was not presented to Egyptian participants due to the potentially offensive nature of some of its items (given their reference to sexual relationships), which left 37 variables analyzed in comparisons that involved this sample.

sexual propriety, integrity). The same conceptual factors emerged for both personal and perceived-societal item sets, respectively, totaling 20 measures across values and concerns.

Finally, participants also reported various demographic background characteristics, including gender, age, subjective social status (SSS, Adler et al., 2000), religious background, and ethnicity, some of which we used to identify subgroups within each sample to conduct the comparisons reported below.

#### **Open Practices Statement and Ethics**

The dataset and analysis code used in this paper is openly available in the Open Science Framework at

<u>https://osf.io/a5zh6/?view\_only=b356c2b825144a16aa51bae2dde05012</u>. We did not preregister any predictions as we opted for an inductive approach and tested exploratory questions. The original study was approved by the ethics committee of the first author's institution and the ethics committees of the collaborating institutions where data collection took place. All participants provided consent prior to starting the study.

#### Results

#### **Analysis Plan**

Before presenting findings from pairwise comparisons, we first provide an overview of the full dataset on a) within-culture correlations across the tasks and measures used to assess views of self, social orientation and cognitive style, b) variability across measures within groups and within measures across groups, and c) average effect sizes. To examine within-culture correlations, we calculated mean and median r (using absolute values) across all social orientation, cognitive style, and self-construal tasks and measures, as well as within each category of tasks and measures. To inspect variability, we attended to standard deviations in all tasks within each group to identify largest and smallest variance and generated heatmaps to identify any patterns that might emerge at within- and between-group levels. Additionally, we computed the intra-class correlation (ICC[1], Bliese, 2000) across

countries to assess the proportion of variance in each variable attributable to between-country differences.

To tap into both differences and similarities between the groups, we applied several statistical methods. First, we conducted a series of multivariate ANCOVAs to inspect mean group differences within each pair after controlling for age and subjective social status (Uskul et al., 2023). Second, for each pair of groups, we ran a random effects meta-analysis to get an estimate of the average effect size for differences between the two groups across all 38 psychological characteristics. Finally, we reported similarities between each of the pairwise comparisons since emphasizing similarities allows to quantify by *how much* two groups differ (Maney, 2016). We describe these steps in detail below.

We first analyzed all tasks and measures used to assess social orientation, selfconstrual, and cognitive style using analyses of covariance. In these analyses, we controlled for subjective social status and age, as the analyses reported in Uskul and colleagues (2023) showed significant groups differences in age and SSS.<sup>3</sup> We analyzed honor, face, and dignity values and concerns using multivariate analysis of variance where we treated the four personally endorsed values, four societally perceived values, six personally endorsed concerns and six societally perceived concerns in separate analyses, again controlling for age and SSS. Keeping with the original analyses adopted by Uskul and colleagues (2023), we used Sidak adjustment for multiple comparisons.

Next, to estimate the size of cultural differences between each pair of groups across all variables, we first computed Hedges' g, which is an unbiased version of Cohen's d (Borenstein et al., 2009), as an effect size separately for each variable. Since our main interest lies in the absolute size of group differences, not their direction, we used the absolute value of each Hedges' g. Hedges' g is expressed in standard deviations. For example, a g of 1 indicates

<sup>&</sup>lt;sup>3</sup> Conducting the analyses without the covariates did not change the pattern of results.

that the two compared groups differ by 1 standard deviation. We subsequently computed the overall average across all 38 variables for each pair of groups, employing a random-effects meta-analysis using the R-package *metafor* (version 3.8-1; Viechtbauer, 2010). We used this overall mean effect size as an indicator of how different the two groups in each pair are (Table 3). Additionally, addressing calls to focus also on similarities between groups (Hanel et al., 2019; Maney, 2016), we reported the *Percentage of Common Responses* (PCR; Inman & Bradley, 1989) as an effect size which expresses the amount of overlap between two groups and ranges from 0 (no overlap) to 100% (perfect overlap). The PCR is a non-linear transformation of Cohen's *d*. This analytical approach allowed us to report on mean differences between groups as well as to calculate and display similarities between them using a novel approach (Hanel et al., 2019).

In our analyses and reporting of the findings, we focused on the average size of similarities and differences between cultural groups across all indicators as well as the content and types of group similarities and differences. We also inspected which of the constructs revealed the largest versus smallest differences with a goal to identify which indicator(s) may be more or less characteristic of the region as a whole (Figures 2 and 3). All indicators used to examine differences and similarities between the groups in addition to descriptive statistics for each sample are reported in Tables S3-S11. The section below lists the comparisons in order of degree of similarity, starting with two groups that were the least similar to each other and ending with two groups that were the most similar to each other on the studied psychological characteristics (i.e., from lowest to highest PCR). Finally, using a radar chart, we provide a visual comparative overview of differences and similarities between the pairs of groups on the seven groups of constructs (i.e., social orientation, cognitive style, self-construal, personally endorsed values, perceived normative values, personally endorsed concerns, and perceived normative concerns) (see Figure 4).

#### General Data Patterns: Correlations, Variability, and Size of Differences

#### Within-Group Correlations

Correlational analyses across all social orientation, cognitive style, and self-construal tasks and measures in the full dataset revealed negligible correlations with a mean of absolute values of r ranging between .077 and .094 (median r ranged between .051 and .083). This pattern still held when we inspected correlations within each category of tasks and measures, (social orientation tasks mean r range: .058 to .096; cognitive style tasks mean r range: .051 to .098; self-construal measures mean r range: .143 to .197), demonstrating little coherence at the individual level and replicating previously reported patterns of negligible correlations for similar set of measures within samples of Japanese and American individuals (e.g., Kitayama et al., 2009; Na et al., 2010, 2020).

#### Variability

The heatmaps generated to inspect variability within the dataset across samples and tasks/measures revealed the following patterns.

*Values.* Overall, samples had comparable variability within each type of value (e.g., *SD*s ranging between .16 and .23 in personally endorsed values of dignity across all samples used in pairwise comparisons), with only a few exceptions to this pattern. Across eight value measures, we observed the highest within-sample variability in personally endorsed defense of family reputation values and the lowest within-sample variability in personally endorsed dignity values. Variability was lower in personally endorsed value measures compared with perceived normative value measures, except for defense of family reputation which had a higher variability when it targeted personal endorsement as opposed to perceived normative values (Table S12a).

*Concerns.* Within each type of concern measure, samples were comparable to each other in variability; no one sample stood out as an outlier. Across the two categories of concern measures, we observed lower within-sample variability in personally endorsed loss of face, loss of dignity, and loss of integrity concerns compared with their perceived normative

counterparts; this pattern was reversed for the remaining three types of honor concerns. Among personally endorsed concerns, as well as perceived normative concerns, concerns around loss of family authority and loss of sexual propriety had the two highest variabilities and concerns around loss of integrity had the lowest variability (Table S12b).

*Self-Construal.* Samples were quite comparable to each other in variability within each dimension (e.g., *SD*s ranging between 1.2 and 1.43 in the self-direction vs. receptiveness to influence dimension across all groups). We observed the highest within-sample variability in consistency versus variability dimension, followed by the dimension of de-contextualized versus contextualized self. The remaining six dimensions were highly similar to each other in variability (Table S12c).

Unlike measures used to tap into values, concerns, or self-construal which used the same response scale across type of measure or dimension, tasks used to assess different indicators of social orientation and cognitive style had different response scales which made comparisons of variability across tasks not meaningful. Hence, below we focused on cross-sample variability within each task.

*Social Orientation.* Generally, samples were comparable to each other in variability within each task, however in some measures a few samples stood out as being higher in variability than other samples (e.g., Greek sample in the self-inflation task, Greek-Cypriot and Turkish-Cypriot samples in the loyalty task). Groups that combined samples drawn from different countries tended to show greater within-sample variability (e.g., Arab Muslim, non-Arab Muslim, Orthodox samples) than those that consisted of samples recruited within a single country (e.g., Italian, Spanish samples; Table S12d).

*Cognitive Style.* Once again, levels of within-sample variability for each task were generally comparable across samples, with only a few samples standing out (e.g., variability in memory perspective was highest in the Egyptian Muslim sample, SD = 2.57 and lowest in the Turkish Cypriot sample, SD = 1.71; variability in relationship-based categorization was

lower in the Egyptian Muslim sample and larger in the Spanish, Orthodox and Greek samples than in the other samples; Table S12e).

The ICC(1)s across all countries for all 38 variables ranged from .01 to .27 (M = .08, SD = .07; Table S13). The largest ICC was found for the honor dimension loss of sexual propriety, the smallest one for predictors of happiness. The magnitude of the ICC(1)s overall is consistent with previous research on other cultural measures (e.g., values: Fischer & Schwartz, 2011; worldviews: Saucier et al., 2015). Also, the finding that the largest between-group variability appeared for sexual propriety aligns with previous research that found the smallest between-country similarity for attitudes towards personal-sexual issues (Hanel et al., 2019).

#### Size of Differences

Across all comparisons, the average effect size of differences was slightly higher for honor, face, dignity values, and concerns (mean  $\eta p2 = .036$ , range 0 to .32, with the highest effect size emerging for the difference in face values between Turkish and Greek samples) compared with the average effect size for social orientation, self-construal, and cognitive style tasks and measures<sup>4</sup> (mean  $\eta p2 = .018$ , range 0 to .47, with the highest effect size emerging for the difference in relational categorization between Muslim Lebanese and Egyptian samples). Furthermore, among social orientation, self-construal, and cognitive style tasks and measures, 45.34% of all comparisons had an effect size of 0, whereas among honor, face, dignity values and concerns, only 36.66% of the comparisons had an effect size of 0. This pattern suggests that the similarities were larger when comparisons were carried out for social orientation, self-construal, and cognitive style tasks and concerns measures.

#### **Greek versus Turkish Samples**

<sup>&</sup>lt;sup>4</sup> The average effect size separately for each group of constructs was as follows: social orientation (mean  $\eta p_2 = 0.07$ ), self construct (mean  $\eta p_2 = 0.07$ ), self construct (mean  $\eta p_2 = 0.07$ ).

<sup>= .007),</sup> self-construal (mean  $\eta p2 = .019$ ), and cognitive style (mean  $\eta p2 = .036$ ).

Across all measures, we observed the greatest degree of difference between the Greek and Turkish samples: The random-effects meta-analysis revealed that the two groups differed on average at g = 0.44, 95%-CI [0.34, 0.54], across all 38 variables. This effect size converts into an average overlap (PCR) of 82.6% in the scores of Greek and Turkish samples across our battery of cultural measures. Further, the Greek and Turkish samples showed statistically significant differences on 32 out of the 38 indicators assessed in the dataset.

As shown in Figures 1-4 and Tables S3-S11, in tasks assessing social orientation, Greek participants exhibited a stronger tendency to experience engaging (vs. disengaging) emotions at a stronger intensity and assigned a greater amount to reward an honest friend (vs. an honest stranger) compared to Turkish participants, whereas Turkish participants exhibited weaker self-inflation, stronger ingroup closeness bias and greater tendency to punish a dishonest stranger (vs. a dishonest friend) compared to Greek participants. In tasks assessing cognitive style, Greek participants showed a stronger situational causal attribution style and third-person perspective taking when remembering past events compared to Turkish participants and Turkish participants categorized objects more thematically (vs. taxonomically) and considered greater number of pieces of contextual information as causally relevant compared to Greek participants. On the self-construal dimensions, Greek participants averaged higher than Turkish participants on receptiveness to influence (vs. self-direction), variability (vs. consistency), harmony (vs. self-expression), and commitment to others (vs. self-interest), whereas Turkish participants averaged higher than Greek participants on connection (vs. containment) and contextualized (vs. decontextualized) self.

Turkish and Greek participants differed on 17 out of 20 indicators of honor, face, and dignity values and concerns; specifically, Greek participants averaged higher than Turkish participants on personal and perceived normative endorsement of dignity values, whereas Turkish participants averaged higher than Greek participants on personal and perceived normative endorsement of face and honor values, and on nearly all measures of dignity, face, and honor concerns (the two samples did not differ in personal concerns for losses of dignity and integrity).

Overall, these findings do not reveal a clear pattern as to which of the two groups showed a stronger interdependent or independent orientation pattern across different selfrelated, social and cognitive indicators. Yet, they do demonstrate that honor is a more central value and concern for Turkish participants than it is for Greek participants even though most of Greek participants were from Crete which has been considered paradigmatic of an honor culture among many ethnographers and anthropologists (see Gallant, 2000). The differences in values and concerns were particularly salient in measures tapping into personal endorsement of values and concerns (g = 0.93, 95%-CI [0.61, 1.25], PCR = 64.2%, and g =0.58, 95%-CI [0.22, 0.95], PCR = 77.2%, respectively) compared with differences in perceived normative endorsements of values and concerns (g = 0.40, 95%-CI [0.23, 0.58], PCR = 84.1%, and g = 0.39, 95%-CI [0.17, 0.62], PCR = 84.5%, respectively), indicating that the two groups differ more in their personal values and concerns than in their perceptions of the normative values and concerns in their respective societies.

#### Arab- and non-Arab Muslim Samples

We observed the second greatest degree of difference between Muslim participants of Arab (Muslim Lebanese and Egyptians) versus non-Arab (Muslim Turkish and Turkish Cypriots) origin: The random-effects meta-analysis revealed that the two groups differed on average at g = 0.35, 95%-CI [0.26, 0.43] across all 38 variables. To put it differently, across all variables Arab-Muslims and non-Arab Muslims were 84.9% similar. Further, the two groups differed significantly on 28 out of the 38 variables.

On social orientation tasks, Arab Muslim participants showed greater self-inflation and weaker ingroup closeness bias and a greater tendency to punish a dishonest stranger (vs. a dishonest friend) compared to non-Arab Muslim participants. On cognitive style tasks, Arab Muslims exhibited stronger situational causal attribution, relational categorization, and thirdperson perspective taking in memory, and considered fewer pieces of contextual information as causally relevant compared to non-Arab Muslim participants. On self-construal dimensions, Arab Muslim participants averaged higher than non-Arab Muslim participants on receptiveness to influence (vs. self-direction), variability (vs. consistency), commitment to others (vs. self-interest vs.), but also on difference (vs. similarity), containment (vs. connection), self-reliance (vs. dependence), self-expression (vs. harmony) and decontextualized (vs. contextualized self). This pattern in the Arab sample is in line with past findings from the region (San Martin et al., 2018) and reveals evidence for a self-assertive form of interdependence among members of Arab societies showing greater self-assertion (e.g., greater self-inflation and stronger independence on the self-reliance vs. dependence dimension of self-construal) combined with various forms of interdependence that serve social relationships (e.g., stronger interdependence on the self-interest vs. commitment to others dimension of self-construal).

Arab Muslim versus non-Arab Muslim participants differed on 14 out of 20 indicators of honor, face, and dignity values and concerns; on half of these indicators non-Arab participants averaged significantly higher than did Arab participants and on the remaining half, this pattern was reversed. Specifically, Arab Muslim participants endorsed stronger personal values of dignity and defense of family reputation, as well as stronger perceived normative values of self-promotion and retaliation and defense of family reputation compared to non-Arab Muslim participants; non-Arab Muslim participants endorsed stronger perceived normative values of dignity and face compared to Arab Muslim participants. On personal concerns measures, non-Arab Muslim participants reported greater concern for loss of dignity loss and family authority than did Arab Muslim participants. On perceived normative concerns measures, non-Arab Muslim participants averaged higher on concerns for loss of dignity, loss of face, and loss of integrity compared to Arab Muslim participants, whereas Arab Muslim participants averaged higher on concerns for loss of family reputation and loss of sexual propriety compared to non-Arab Muslim participants.

Thus, overall, the pattern of findings emerging from the value and concerns measures points to a stronger endorsement of honor-related values and concerns at both personal and perceived normative levels among participants of Arab Muslim background compared with non-Arab Muslim groups. Across all value and concern measures, differences were smaller in personally endorsed values and concerns (g = 0.24, 95%-CI [0.04, 0.43], PCR = 90.4%, and g = 0.23, 95%-CI [0.02, 0.44], PCR = 90.8%, respectively) compared with differences in perceived normative values and concerns (g = 0.40, 95%-CI [0.31, 0.49], PCR = 84.1%, and g = 0.47, 95%-CI [0.25, 0.70], PCR = 81.4%, respectively).

#### **Italian and Spanish Samples**

The random-effects meta-analysis revealed that the Italian sample differed from the Spanish sample on average at g = 0.31, 95%-CI [0.23, 0.40] across all 38 variables. To put it differently, across all variables Italian and Spanish samples were 87.7% similar. Further, the two samples differed from each other on 26 out of the 38 measures and tasks.

The two groups differed on half of the 18 measures used to assess social orientation, self-construal, and cognitive style. On social orientation tasks, happiness was predicted more strongly on average by positive socially engaging (vs. disengaging) emotions among Italian compared to Spanish participants and Spanish participants assigned a greater amount to reward an honest friend compared to an honest stranger (i.e., higher nepotism) compared to Italian participants. On cognitive style tasks, Italian participants showed a stronger tendency to categorize objects in thematic (vs. taxonomic) terms and considered fewer pieces of contextual information as causally relevant than did Spanish participants. On self-construal dimensions, Italian participants averaged higher than Spanish participants on connection (vs. containment) and contextualized (vs. de-contextualized) self, but also on self-reliance (vs. dependence), self-expression (vs. harmony) and self-interest (vs. commitment to others). This

pattern reveals no clear pattern of stronger or weaker interdependence or independence in any of the measures and across the three categories of measures the similarities between the two groups were comparable, with gs varying between .13 and .21 (PCRs = 94.8% - 91.6%).

The two groups differed on 18 out of 20 indicators of honor, face, and dignity values and concerns. Spanish participants endorsed stronger personal values of dignity and perceived normative values of self-promotion and retaliation compared to Italian participants, whereas Italian participants endorsed stronger personal values of face, defense of family reputation, and self-promotion and retaliation, as well as perceived normative values of face and defense of family reputation compared to Spanish participants. On personal concerns measures, Spanish participants reported greater concern for loss of dignity, face, and integrity values compared to Italian participants and Italian participants reported greater concern for loss of family reputation and family authority, as well as for loss of sexual propriety compared to Spanish participants. On perceived normative concerns measures, Italian participants averaged higher on concerns for loss of dignity, face, and integrity, whereas Spanish participants averaged higher on concerns for loss of family reputation and family authority. Once again, overall, there was no clear pattern for which of the two groups endorsed honorrelated values and concerns more strongly compared to the other group. Across all value and concern measures, the two groups were most similar in their perceived normative endorsement of values (g = 0.25, 95%-CI [0.09, 0.40], PCR = 90.1%).

#### **Muslim Lebanese and Egyptian Samples**

The random-effects meta-analysis revealed that across all 37 variables the Muslim Lebanese and Egyptian samples differed on average at g = 0.25, 95%-CI [0.06, 0.45]. To put it differently, across all variables Muslim Lebanese and Egyptian Samples were 90.1% similar. Further, the two groups differed from each other on 12 out of the 37 measures and tasks.

The two groups did not differ on any of the social orientation tasks; on cognitive style tasks, Lebanese participants were more likely to categorize objects in thematic (vs. taxonomic) ways than did Egyptian participants, whereas Egyptian participants were more likely to take a third-person perspective when remembering past events than did Lebanese participants. On the self-construal dimensions, Lebanese participants averaged higher than Egyptian participants on dependence (vs. self-reliance), commitment to others (vs. self-interest) and contextualized (vs. decontextualized), whereas Egyptian participants averaged higher than Lebanese participants on connection (vs. containment) only.

The two groups differed on nine out of 20 indicators of honor, face, and dignity values and concerns. On value measures, Egyptian participants personally endorsed face values and honor values of defense of family reputation and self-promotion and retaliation, as well as perceived normative endorsement of dignity values more strongly than did Muslim Lebanese participants. On concerns measures, Muslim Lebanese participants personally endorsed concerns for loss of face and integrity honor more strongly than did Egyptian participants; Egyptian participants endorsed concerns for loss of sexual propriety and family authority more strongly than did Lebanese participants. On perceived normative endorsement of concerns, difference emerged for family authority only, with Lebanese Muslim participants reporting greater perceived normative concerns for loss of family authority than did Egyptian participants. Overall, Egyptian participants' honor related endorsements were stronger at both individual and perceived normative levels than Muslim Lebanese participants' endorsements. Across all value and concern measures, differences were more pronounced in the personally endorsed values (g = 0.64, 95%-CI [0.25, 0.66], PCR = 74.9%) and concerns (g = 0.45, 95%-CI [0.22, 0.68], PCR = 82.2%) than in the perceived normative values (g = 0.10, 95%-CI [-.02, .22], PCR = 96.0%) and concerns (g = 0.16, 95%-CI [0.08, 0.25], PCR = 93.6%).

#### **Greek and Greek Cypriot Samples**

The random-effects meta-analysis revealed that across all 38 variables Greek and Greek Cypriot participants differed on average at g = 0.22, 95%-CI [0.17, 0.28]. To put it differently, across all variables Greeks and Greek Cypriots were 91.2% similar. Further, the two groups differed from each other on 20 out of the 38 variables.

The two groups differed in seven out of 18 indicators used to assess social orientation, self-construal, and cognitive style. Greek participants reported experiencing socially engaging (vs. disengaging) emotions at a greater intensity and considered more pieces of contextual information as causally relevant than did Greek Cypriot participants, whereas Greek Cypriot participants showed a stronger ingroup closeness bias and categorized objects in more thematic rather than taxonomic ways than did Greek participants. On self-construal dimensions, Greek participants averaged higher than Greek-Cypriot participants on variability (vs. consistency), and contextualized (vs. decontextualized) self, but also on containment (vs. connection).

The two groups differed on 13 out of 20 indicators of honor, face, and dignity values and concerns, with Greek Cypriot participants scoring significantly higher than did Greek participants on personally endorsed honor value of family defense and perceived normative face values and honor values of defense of family reputation, as well as personally endorsed concerns for loss of face, family reputation, sexual propriety, and family authority, and perceived normative concerns for loss of dignity, face, sexual propriety, and integrity. Greek participants scored higher than Greek Cypriot participants on personally endorsed concerns for loss of dignity and perceived normative concerns for loss of family reputation only. Thus, overall, Greek Cypriot participants endorsed honor more strongly at both individual and perceived normative levels than did their Greek counterparts. Across all value and concerns measures, differences were more pronounced for personally endorsed values (g = 0.33, 95%-CI [0.05, 0.60], PCR = 86.9%) and concerns (g = 0.41, 95%-CI [0.625, 0.57], PCR = 83.8%) than for perceived normatively endorsed values (g = 0.17, 95%-CI [0.09, 0.25], PCR = 93.2%) and concerns (g = 0.26, 95%-CI [0.16, 0.36], PCR = 89.7%).

#### The Case of Cyprus (Greek Cypriot and Turkish Cypriot Communities)

The meta-analytic comparison between participants of Greek Cypriot and Turkish Cypriot communities in Cyprus showed across all 38 variables the two groups differed on average at g = 0.22, 95%-CI [0.18, 0.26]. To put it differently, across all variables Greek Cypriot and Turkish Cypriot samples were 91.2% similar. Further, the two groups differed from each other on 17 out of the 38 variables.

The two groups differed from each other in significant ways on half of the measures used to assess social orientation, self-construal, and cognitive style. Greek Cypriot participants showed a greater tendency to experience socially engaging (vs. disengaging) emotions at a stronger intensity, exhibited a stronger situational attribution bias, and were more likely to take a third-person perspective when remembering past events compared with Turkish Cypriot participants. Turkish Cypriot participants were more likely to categorize objects in thematic (vs. taxonomic) ways and to consider more piece of contextual information as causally relevant than did Greek Cypriot participants. On self-construal dimensions Greek Cypriot participants averaged higher than Turkish Cypriot participants on variability (vs. consistency), harmony (vs. self-expression), and commitment (vs. selfinterest), but also on decontextualized (vs. contextualized self) self. Thus, overall, differences on these tasks and measures pointed to a stronger interdependent pattern among Greek Cypriot participants than among Turkish Cypriot participants.

The two groups differed on eight out of 20 indicators of honor, face, and dignity values and concerns, with Turkish Cypriot participants scoring significantly higher on personal endorsement of face values and honor values of self-promotion and retaliation and perceived normative endorsement of face values and honor values of defense of family reputation. On concerns measures, Turkish Cypriot participants averaged higher than Greek

Cypriot participants on personally endorsed concerns for loss of dignity, whereas Greek Cypriot participants averaged higher than Turkish Cypriot participants on personally endorsed concerns for loss of face. The two groups perceived most people in their societies to endorse face, honor, and dignity concerns at similar degrees. Differences were slightly more pronounced in value measures (gs = 0.34 & 0.25, PCRs = 86.5% & 90.1%) than concerns measures (gs = 0.15 & 0.14, PCRs = 94.0% and 94.4%). Given the physical proximity of the two communities, these differences are intriguing and raise the question how the pattern of differences and similarities would look like if the island would not have been divided into two communities in 1974 and they continued to live having regular contact and being exposed to the same socio-political environment.

#### **Catholic and Greek-Orthodox Samples**

The meta-analytic comparison between participants of Catholic background consisting of the Spanish and Italian samples and participants of Greek-Orthodox background consisting of Greek and Greek Cypriot samples revealed that across all 38 variables the two groups differed on average at g = 0.20, 95%-CI [0.16, 0.24]. Put differently, across all variables Catholic and Greek-Orthodox samples were 92.0% similar. Further, the two groups differed from each other on 26 out of the 38 variables.

On the measures and tasks used to assess social orientation and cognitive style, Catholic participants showed weaker self-inflation and greater tendency to categorize objects thematically (vs. taxonomically) than did Orthodox participants, whereas Orthodox participants showed a stronger third-person perspective taking in memory than did Catholic participants. Catholic participants averaged higher than Greek Orthodox participants on similarity (vs. difference) and contextualized (vs. decontextualized) self, but also on selfreliance (vs. dependence), consistency (vs. variability), self-expression (vs. harmony), and self-interest (vs. commitment to others). The two groups differed on 18 out of 20 indicators of honor, face, and dignity values and concerns. On values, Catholic participants scored significantly higher than did Greek Orthodox participants on personally endorsed face values and honor values of family reputation, as well as on perceived normative dignity values and honor values of family reputation, whereas Orthodox participants scored significantly higher on personally endorsed dignity values and perceived normative honor values of self-promotion and retaliation. On concerns, Orthodox (vs. Catholic) participants scored higher on personally endorsed concerns for family reputation, sexual propriety, family authority and perceived normative concerns for loss of sexual propriety, family reputation, family authority, whereas Catholic participants scored higher on personally endorsed concerns for loss of integrity honor, and perceived normative concerns for loss of dignity, face, and integrity. Across all types of measures and tasks, the two groups did not show a distinct pattern in their interdependent orientations and value and concern endorsements.

#### Muslim and Christian Participants in the Lebanese Sample

The meta-analytic comparison between Muslim and Christian participants recruited in Lebanon revealed that the two groups differed on average at g = 0.16, 95%-CI [0.11, 0.20] across all 38 variables. Put differently, across all variables Muslim Lebanese and Christian Lebanese were 93.6% similar. Further, the two groups differed from each other on seven out of the 38 variables.

Analyzing group differences in social orientation, self-construal, and cognitive style across these two groups revealed significant group differences in 4 out of 18 measures; Muslim Lebanese participants' happiness was predicted more strongly by positive socially engaging (vs. disengaging) emotions and they showed a stronger tendency to categorize objects in thematic (vs. taxonomic) terms compared to Christian Lebanese participants; Christian Lebanese participants exhibited a stronger tendency to experience socially engaging (vs. disengaging) emotions and averaged higher on similarity (vs. difference) dimension of the self-construal measure compared to Muslim Lebanese participants.

The two groups differed significantly on only four out of 20 variables assessing dignity, face, and honor values and concerns with Muslim Lebanese participants averaging significantly higher on face values and honor values related to defense of family reputation and self-promotion and retaliation compared to Christian Lebanese participants and Christian Lebanese participants averaging higher on concerns for loss of face compared to Muslim Lebanese participants. The two groups' differences were more pronounced in the personally endorsed values (g = 0.28, 95%-CI [0.15, 0.41], PCR = 88.9%) than in perceived normatively endorsed values (g = 0.07, 95%-CI [-0.06, 0.20], PCR = 97.2%).

#### **Turkish and Turkish Cypriot Samples**

The meta-analytical comparison between Turkish participants recruited in Turkey and Turkish Cypriot participants recruited in Cyprus across all 38 measures revealed an effect of on average g = 0.15, 95%-CI [0.11, 0.19]. Put differently, across all variables Turkish and Turkish Cypriot samples were with 94.0% more similar than any other group comparison. Further, the two groups differed from each other on 10 out of the 38 variables.

Across all measures and tasks assessing different aspects of social orientation, selfconstrual, and cognitive style, the two groups differed significantly on one self-construal dimension only with Turkish participants averaging higher than Turkish Cypriot participants on variability (vs. consistency). The two groups differed significantly on nine out of 20 variables assessing dignity, face, and honor values and concerns. On the values measures, Turkish participants personally endorsed face values and honor values of defense of family reputation and perceived their society to endorse defense of family reputation more strongly than did Turkish Cypriot participants and Turkish Cypriot participants personally endorsed dignity values and perceived their society to also endorse these values more strongly than did Turkish participants. On the concerns measures, Turkish participants scored higher and perceived their society to score higher on concerns for loss of family reputation and sexual propriety than did Turkish Cypriot participants. Thus, overall, Turkish participants endorsed honor-related values and concerns more strongly at both individual and societally endorsed levels than did Turkish Cypriot participants. Across different categories of measures and tasks, similarities were stronger in tasks tapping into self-construal, social orientation and cognitive style than in measures tapping into values and concerns.

#### Discussion

Using a large battery of tasks and measures assessing different aspects of social orientation, cognitive style, self-construal, and honor, face, dignity values and concerns, we investigated differences and similarities between groups sampled from the Mediterranean region that varied on a number of background and socio-ecological characteristic. Our findings showed that the greatest similarities emerged between groups that inhabit a shared ecology governed by similar socio-political configurations (i.e., Turks in Turkey and Turkish Cypriots in Cyprus; Christian and Muslims in Lebanon) and the greatest differences emerged between groups that differed from each other on religious, linguistic, and ethnic background variables and that were exposed to different socio-political ecologies (i.e., Greek vs. Turkish samples).

#### Linking Current Findings to Past Research

Although most pairwise comparisons reported in the current research are novel and hence do not lend themselves to interpretation in light of past comparative findings, some of the results can be meaningfully linked to previous observations. For example, findings involving the two Lebanese groups are mostly in line with findings San Martin and colleagues (2018) observed in their studies with Lebanese participants, in which the Muslim versus non-Muslim samples did not differ significantly on tasks used to assess independence and interdependence in social orientation and cognitive style. Moreover, our finding that Arab Muslims endorse honor-related values and concerns to a greater extent than non-Arab Muslims provides further refinement to Uskul and colleagues' (2023) and Vignoles et al.'s (2024) regional findings, supporting but adding nuance to the assumed prevalence of honor, ingroup solidarity and welfare, and kinship spirit in this region (Gregg, 2005; San Martin et al., 2018).

Similarly, our findings align with Akaliyski and colleagues' (2021) take on the nation as a meaningful grouping unit which captures a greater share of cultural variation when it is compared to alternative ways of grouping individuals (e.g., subnational groupings such as religious, linguistic and ethnic/racial identities), as nations provide a common ground through socializing their citizens by way of institutions such as a national educational system. The similarities between Turkish participants from Turkey and Turkish Cypriots from Cyprus may in the first instance appear to go against this argument; however, as explained earlier, the strong political and economic connections between Turkey and the Turkish Republic of Northern Cyprus (which is only recognized officially as a state by Turkey), and the resulting increased contact between members of the two nations, are likely to have produced greater similarity between these two nations.

Our findings also highlight the importance of shared religious background. Since groups that shared a religious denomination (e.g., Catholic Spanish and Catholic Italians) were more similar to each other than groups that shared no background or socio-ecological indicators (i.e., Turkish vs. Greek samples; see Figure 4), religious background is likely to play at least some role in generating similarities across a wide range of psychological characteristics – an idea highlighted by White and colleagues (2021) who showed greater cultural similarity among individuals who shared a religious affiliations than among those with different religious affiliations.

Despite their shared religious background, Arab- versus non-Arab Muslim samples were the two groups that had the second largest differences. This may be somewhat surprising given their centuries long shared history under the rule of the Ottoman Empire and common religious affiliation, which are frequently used by politicians in the region to highlight the groups' religious solidarity, brotherhood, and a shared Ottoman identity. It is interesting to note that differences between members of these groups in *perceived normative* values and concerns (Hedges' g = .40 and .47, corresponding to an average overlap of PCR = 84.1% and 81.4%) were somewhat larger than the group differences in participants' *personal* values and concerns (Hedges' g = .24 and .23, corresponding to an overlap of PCR = 90.4% and 90.8%). Future research might extend our current findings by exploring additionally these groups' perceptions of *each other's* normative values and concerns, and how these might be linked to intergroup attitudes (e.g., Koc & Anderson, 2018; Yitmen & Verkuyten, 2018).

Similarly, despite having shared a long history of intergroup contact under the rule of the Ottoman Empire and a wide range of shared cultural elements (e.g., music, food), Turkish and Greek samples showed the greatest number of significant differences in the indicators examined in the current study. Here, the differences in participants' personal values and concerns (Hedges' g = .93 and .58, corresponding to an average overlap of PCR = 64.2% and 77.2%) were substantially larger than the differences in their perceptions of normative values and concerns (Hedges' g = .40 and .39, corresponding to an average overlap of PCR = 84.1%and 84.5%). We have proposed elsewhere that discrepancies between personal and perceived normative honor values and concerns observed in Southeast European (e.g., Greek and Greek Cypriot) samples might be explained by a recent generational shift away from honor values in these societies (Vignoles et al., 2024). Yet the history of political conflict between Greek and Turkish societies certainly predates such recent shifts. Researchers should examine whether differences between Greek and Turkish samples in the endorsement of honor values and concerns may play a role in intergroup relations (e.g., Akgönül, 2024; Tahiroglu, 2022) and track to what extent future changes in cultural values and concerns among these groups are linked to positive or negative changes in intergroup relations.

#### Where to Look for Psychological Differences and Similarities between Cultural Groups?

Including a diverse set of measures in our analyses enabled us to uncover that differences and similarities between groups were much larger on some psychological characteristics than others. Across most comparisons, group differences were more pronounced in the measures of values and concerns than in measures of social orientation, cognitive style, and self-construal, and in most cases we found larger differences in personal endorsement than in perceived normative endorsement of values and concerns. One exception to the latter pattern emerged between Arab versus non-Arab Muslims, where differences were smaller in the personally endorsed values and concerns than in perceived normative values and concerns, highlighting the importance of not overgeneralizing differences or similarities between groups observed in one domain to other domains – a process that can potentially form and foster intergroup stereotypes and prejudices.

The psychological measures analyzed in the current study did not show 'convergent' patterns of cultural differences (i.e., with responses indicating higher 'interdependence' versus higher 'independence' tending to co-occur in the same samples), unlike some past studies that have used subsets of the current measures across smaller numbers of cultural groups (e.g., Kitayama et al., 2009; Na et al., 2020). Pairwise comparisons showed similarity on some measures, differences on others, and if measures are interpreted as tapping into forms of 'interdependence' versus 'independence', the direction of differences was also not always the same across those measures on which the groups differed significantly. One reason for this inconsistency with previous findings may be that the current study included a larger set of measures than any of the previous studies in this literature where convergent patterns were observed between cultural groups (note, however, that these measures typically show a lack of convergence at the individual level, evidenced in negligible correlations between constructs within each cultural group). Furthermore, measures used in the current study included not just measures of social, self-related, or cognitive indicators of independence and interdependence (as most past research did), but also value and concern measures related to face, dignity, and

honor. Perhaps previously observed patterns of convergence may hold less clearly as the number of measures increases and the type of content covered in the measures becomes more diverse. Moreover, the groups included in this study are more similar to each other than the samples included in much past research (e.g., Japan vs. the U.S., Na et al., 2020) that has used this theoretical framework: they are geographically much closer, and we have shown previously that subregions within the Mediterranean were more similar to each other on many of the current measures than they were to samples from East Asia and the Anglo-West (see Uskul et al., 2023). Thus, the current findings raise open-ended questions as to why previously observed convergent differences between cultural groups might or might not hold under comparisons that are of different nature in terms of compared groups and compared content.

#### Size of Group Differences and Similarities

While we found large effects for some variables, most of our meta-analytically derived effect sizes were small-to-medium in size, which is largely consistent with previous research (e.g., Saucier et al., 2015). Smaller effect sizes are also not surprising as the regions from which we sampled are more similar to each other compared to, for instance, an East Asian region (Uskul et al., 2023), as aforementioned. It suggests that the societies from which we sampled rely on similar psychological characteristics to function effectively. However, in line with other research (e.g., Götz et al., 2022; Prentice & Miller, 1992), we believe that even small effect sizes can be important. For example, they might suggest which cultural factors play a stronger or weaker role in human characteristics. This further contributes to ongoing debates on the definition of culture (e.g., Morris, 2014; Schwartz, 2014), suggesting the need for a more fine-grained approach, recognizing that different types of constructs may be more or less useful for distinguishing different pairs of cultural groups. For example, in the current study (cf. Tables S6 and S8), Greek versus Turkish samples could be distinguished more effectively using measures of personal values (showing only 64% overlap) than using

measures of cognitive style (showing 84% overlap), whereas Arab vs. non-Arab Muslim samples could be distinguished more effectively using measures of cognitive style (showing 80% overlap than using measures of personal values (showing 90% overlap).

We also believe it is important to report similarity information to avoid the possibility that scientific findings are misused (e.g., by misinterpreting mean differences as group differences, which might be a risk given that we compare several polarised groups such as Greeks and Turks; cf. Hanel et al., 2019; Syropoulos & Leidner, 2023). For example, even though some have argued that Greeks and Turks are different (cf. Heraclides, 2010), our findings show that across a range of psychological variables, participants in the samples recruited from Greece and Turkey were on average 84% similar (range of PCRs: 89.26 - 64.19). By communicating the similarities, we can make it more difficult to justify discrimination based on alleged differences in psychological characteristics between Greeks and Turks and even get people on both sides to look at each other more positively.

Information about similarities can also help reduce cultural stereotypes (Ott, 2022) or at the very least help people get an idea of their accuracy. For instance, if there are very large similarities between two groups, cultural stereotypes are even less likely to be correct. For example, converting the effect sizes we found to the probability of superiority (Ruscio, 2008) – probability that a randomly drawn person of one group scores higher than a randomly drawn person of the other group – suggests that there is a 76.2% chance that a randomly drawn person from the Turkish sample scores higher than a randomly drawn person from the Greek sample on Defense of Family Reputation (Honor; Hedges' g = 1.01, PCR = 61.36). Conversely, there is a 23.8% chance that a person from the Greek sample scores higher than a person from the Turkish sample. Assuming that Turkish individuals should value Defense of Family Reputation more than Greek individuals would therefore be in about a quarter of the instances incorrect. The group differences were smaller for the majority of other variables and comparisons in our study, and therefore one would even be less correct when stereotyping from a group membership to a person on one of these characteristics (e.g., "you do not care about loyalty because you belong this particular group"). Together, quantifying the number of similarities and other effect sizes (e.g., probabilities of superiorities) tells us how far wrong someone would be if they generalize from the group to an individual level.

#### Contributions

Our approach and unique dataset allowed us to contribute to discussions on cultural differences and similarities in the following ways. First, our dataset originated from the Mediterranean region, contributing to emerging efforts to put this understudied region on the map of psychological knowledge (e.g., Kirchner-Häusler et al., 2023; Vignoles et al., 2024; Uskul et al., 2023) and to increase cultural diversity within the behavioral sciences (Henrich et al., 2010; Thalmayer et al., 2021; Uskul et al., in press).

Second, by focusing on within-region diversity, our findings contribute to the growing literature on regional variation of psychological processes (e.g., East- vs. South-Asians in the U.S., Lu et al., 2020; rice vs. wheat farming in China, Talhelm et al., 2014; church-exposure within Europe, Schulz et al., 2019). More specifically, they add to the limited evidence on subregional variations in interdependence among groups sampled from the Mediterranean region (e.g., Arabs vs. Ashkenazi Jews in Israel and Lebanese Christians vs. Lebanese Muslims, see San Martin et al., 2018; southern vs. northern Italians, see Knight & Nisbett, 2007; Martella & Maas, 2000).

Third, the current work contributes to research highlighting the importance of capturing similarities (in addition to differences) between groups, which can have implications for how groups are perceived and their inter-relations, as well as the importance of moving beyond traditional approaches of comparing and reporting means. Emphasizing similarities might help to improve attitudes between groups (Hanel et al., 2019; Stephan & Stephan, 2000) and contribute positively to reconciliation efforts in a region that is ripe with ethnic, religious, and national conflicts (Çakal & Husnu, 2022; Lynch et al., 2022).

Fourth, our findings have potential implications for forming hypotheses for future research to test the relative role of socio-ecological factors (e.g., sharing a similar sociopolitical environment as was the case for the two Lebanese samples) versus background/identity-related factors (religious, linguistic, or ethnic group memberships) in giving rise to cultural differences and similarities in psychological processes. Our findings point to the possibility that groups that share an ecology governed by similar socio-political configurations (i.e., Turks in Turkey and Turkish Cypriots in Cyprus; Christian and Muslims in Lebanon) rather than those who share background characteristics (e.g., religious, linguistic, national or ethnic) but are exposed to different socio-political ecologies may show greater similarities in their psychological make-up, consistent with other evidence demonstrating that cultural diversity and similarity around the globe is at least partly due to the socio-ecologies individuals inhabit (Sng et al., 2018; Tooby & Cosmides, 1992).

Fifth, our current findings give insight into which constructs are more or less likely to reveal differences or similarities between cultural groups. This should however be treated with caution as some of the current patterns may or may not replicate in comparisons between other cultural groups from other world regions.

Finally, research testing the role of the environment on cultural variation has been critiqued as not appropriately considering the proximity of cultural groups, as any cultural variables that tend to be similar between neighbors will also tend to correlate with environmental variables (Bromham & Yaxley, 2023). Although this may be true if the focus is limited to the physical environment, the broader socio-ecological environment between closely neighboring groups can vary as, for example, is the case for the neighboring Greek Cypriot and Turkish Cypriot communities. Our approach thus capitalizes on the opportunities of studying neighboring or geographically close cultural groups for providing insights into the role of shared (or non-shared) environmental, socio-political, or cultural identity variables in explaining variation across a range of psychological variables.

#### **Limitations and Conclusions**

Although our comprehensive approach helped us dive into similarities and differences between pairs of groups that were matched in several socio-ecological and background characteristics, it comes with several limitations. We used broad categories when choosing which groups to compare. For example, although Greek Orthodox and Catholics are both Christian groups, they split centuries ago and established their own historical pathways, doctrines, churches, and traditions; thus, these two groups may not be seen as sharing a common religious background. Yet, previous research has shown that members of Christian sub denominations (e.g., Protestants, Catholics, and Orthodox Christians) are highly similar to each other across a variety of cultural value dimensions (White et al., 2021). Similarly, some pairs of groups may be characterized as differing on more than one characteristic (e.g., Greeks and Greek Cypriots in both socio-political and physical environment). Thus, while taking an approach akin to a just minimal difference / similarity design, our approach was limited by not-so-perfect overlaps and differences between the studied groups in terms of their socioecological and background characteristics. Finally, we recognize that the approach adopted here in terms of which groups were compared is only one of many ways in which subregional comparisons could be conducted. We used a particular approach to choosing which pairs of groups (for which data was available) were compared based on their similarities and differences in some respects but not others. Configuring comparisons based on characteristics not used here could shed a different light on our understanding of the Mediterranean region (see also Table S14 for some further limitations).

Despite these limitations, our findings highlight the importance of not equating sociocultural similarities with ethnic, national, religious, or linguistic similarities between groups when examining their members' psychological make-up. Future research should apply a similar approach to analyze data from representative samples of other world regions to contribute further to this field of research. Future research would also benefit from identifying whether certain types of psychological processes or outcomes (e.g., attitudes vs. selfdefinitions) may be more or less open to being shaped by different group characteristics. For example, does shared religious denomination make individuals more similar in their attitudes towards social issues (e.g., conflict, prosociality) than inhabiting similar socio-political ecologies, which might shape similarities between groups in other domains (e.g., selfdefinitions)? Finally, our research highlights the benefits of conducting comparisons on a large number of indicators, as some groups (e.g., Turkish and Greek samples) showed comparable levels of interdependence across several, but differing subsets of indicators. It also raises interesting future directions into the study of the various manifestations of interdependence (see Kitayama et al., 2022) within the Mediterranean region and psychological consequences thereof. Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: preliminary data in healthy white women. *Health Psychology*, *19*(6), 586–592. https://doi.org/10.1037/0278-6133.19.6.586

Akaliyski, P., Welzel, C., Bond, M. H., & Minkov, M. (2021). On "Nationology": The gravitational field of national culture. *Journal of Cross-Cultural Psychology*, 52(8-9), 771-793. <u>https://doi.org/10.1177/00220221211044780</u>

Akgönül, S. (2024). One hundred years of Greek-Turkish relations: The human dimension of an ongoing conflict. Edinburgh University Press. https://doi.org/10.1515/9781399533867

- Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of Other in the Self Scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology*, 63(4), 596–612. <u>https://doi.org/10.1037/0022-3514.63.4.596</u>
- Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and Analysis. In K. J. Klein & S. W. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations* (pp. 349–381). San Francisco, CA: Jossey-Bass.
- Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. (2009). Introduction to meta-analysis. John Wiley & Sons.
- Bromham, L., & Yaxley, K. J. (2023). Neighbours and relatives: accounting for spatial distribution when testing causal hypotheses in cultural evolution. *Evolutionary Human Sciences*, 5, e27. <u>https://doi.org/10.1017/ehs.2023.23</u>

- Çakal, H., & Husnu, S. (Eds.) (2022). Examining complex intergroup relations: Through the lens of Turkey. Routledge.
- Choi, I., Dalal, R., Kim-Prieto, C., & Park, H. (2003). Culture and judgement of causal relevance. *Journal of Personality and Social Psychology*, 84(1), 46–59. https://psycnet.apa.org/doi/10.1037/0022-3514.84.1.46
- Cohen, D. (2007). Methods in cultural psychology. In S. Kitayama & D. Cohen (Eds.), *Handbook of cultural psychology* (pp. 196–236). The Guilford Press.
- Cohen, D., & Gunz, A. (2002). As seen by the other...: Perspectives on the self in the memories and emotional perceptions of Easterners and Westerners. *Psychological Science*, 13(1), 55–59. <u>https://doi.org/10.1111/1467-9280.00409</u>
- Cohen, D., & Kitayama, S. (2018). *Handbook of cultural psychology* (2<sup>nd</sup> Edition). New York: Guilford Press.
- Fischer, R., & Schwartz, S. (2011). Whence differences in value priorities? Individual, cultural, or artifactual sources. *Journal of Cross-Cultural Psychology*, 42(7), 1127– 1144. <u>https://doi.org/10.1177/0022022110381429</u>
- Gallant, T. M. (2000). Honor, Masculinity, and Ritual Knife Fighting in Nineteenth-Century Greece. *The American Historical Review*, 105, 359–382. https://doi.org/10.1086/ahr/105.2.359
- Götz, F. M., Gosling, S. D., & Rentfrow, P. J. (2022). Small effects: The indispensable foundation for a cumulative psychological science. *Perspectives on Psychological Science*, 17(1), 205-215. <u>https://doi.org/10.1177/1745691620984483</u>

Gregg, G. S. (2005). The Middle East: A cultural psychology. Oxford University Press.

Hanel, P. H. P., & Vione, K. C. (2016). Do student samples provide an accurate estimate of the general public? *PLOS ONE*, *11*(12), e0168354. https://doi.org/10.1371/journal.pone.0168354 Hanel, P. H. P., Maio, G. R., & Manstead, A. S. R. (2019). A new way to look at the data: Similarities between groups of people are large and important. *Journal of Personality* and Social Psychology, 116(4), 541–562. <u>http://dx.doi.org/10.1037/pspi0000154</u>

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? Behavioral and Brain Sciences, 33(2–3), 61–83. https://doi.org/10.1017/S0140525X0999152X

Heraclides, A. (2010). The Greek-Turkish conflict in the Aegean. New Perspectives on South-East Europe Series, Palgrave Macmillan.

https://doi.org/10.1057/9780230283398

- Inman, H. F., & Bradley, E. L. (1989). The overlapping coefficient as a measure of agreement between probability distributions and point estimation of the overlap of two normal densities. *Communications in Statistics - Theory and Methods*, 18(10), 3851–3874. https://doi.org/10.1080/03610928908830127
- Ji, L.-J., Zhang, Z., & Nisbett, R. E. (2004). Is it culture or is it language? Examination of language effects in cross-cultural research on categorization. *Journal of Personality* and Social Psychology, 87(1), 57–65. <u>https://doi.org/10.1037/0022-3514.87.1.57</u>

Kızılyürek, N. (2016). Milliyetçilik kıskancında Kıbrıs (5th ed.). İletişim Yayıncılık.

- Kirchner-Häusler, A., Schönbrodt, F. D., Uskul, A. K., Vignoles, V. L., Rodríguez-Bailón,
  R., Castillo, V. A., Cross, S. E., Gezici-Yalçın, M., Harb, C., Husnu, S., Ishii,
  K., Karamaouna, P., Kafetsios, K., Kateri, E., Matamoros-Lima, J., Miniesy, R., Na,
  J., Özkan, Z., Pagliaro, S., ... Uchida, Y. (2023). Proximal and distal honor fit and
  subjective well-being in the Mediterranean region. *Journal of Personality*, 00, 1–17.
  https://doi.org/10.1111/jopy.12803
- Kitayama S., Salvador, C. E., Nanakdewa, K., Rossmaier, A., San Martin, A., & Savani, K. (2022). Varieties of interdependence and the emergence of the Modern West: Toward

the globalizing of psychology. *American Psychologist*, 77(9), 991–1006. https://doi.org/10.1037/amp0001073

- Kitayama, S., Park, H., Sevincer, A. T., Karasawa, M., & Uskul, A. K. (2009). A cultural task analysis of implicit independence: Comparing North America, Western Europe, and East Asia. *Journal of Personality and Social Psychology*, 97(2), 236–255. https://doi.org/10.1037/a0015999
- Kızılyürek, N. (2016). *Bir hınç ve şiddet tarihi: Kıbrıs' ta statü kavgası ve etnik çatışma*. İstanbul Bilgi Üniversitesi Yayınları.

Knight, K. N., & Nisbett, R. E. (2007). Culture, class, and cognition: Evidence from Italy. Journal of Cognition and Culture, 7, 283–291.

https://doi.org/10.1163/156853707X208512

- Koc, Y., & Anderson, J. R. (2018). Social distance toward Syrian refugees: The Role of intergroup anxiety in facilitating positive relations. *Journal of Social Issues*, 74, 790-811. <u>https://doi.org/10.1111/josi.12299</u>
- Loizides, N. (2007). Ethnic nationalism and adaptation in Cyprus. *International Studies Perspectives*, *8*, 172-189. <u>https://doi.org/10.1111/j.1528-3585.2007.00279.x</u>
- Lu, J. G., Nisbett, R. E., & Morris, M. W. (2020). Why East Asians but not South Asians are underrepresented in leadership positions in the United States. *Proceedings of the National Academy of Sciences of the United States of America*, 117(9), 4590–4600. <u>https://doi.org/10.1073/pnas.1918896117</u>
- Lynch, M., Schwedler, J., & Yom, S. (Eds.) (2022). *The political science of the Middle East: Theory and research since the Arab uprisings*. Oxford University Press.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98(2), 224-

253. https://doi.org/10.1037/0033-295X.98.2.224

Martella, D., & Maass, A. (2000). Unemployment and life satisfaction: The moderating role

of time structure and collectivism. Journal of Applied Social Psychology, 30, 1095-

1108. https://doi.org/10.1111/j.1559-1816.2000.tb02512.x

- Maney, D. L. (2016). Perils and pitfalls of reporting sex differences. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *371*(1688), 20150119.
- Mensah, Y. M., & Chen, H.-Y. (2012). *Global clustering of countries by culture An extension of the GLOBE study*. SSRN Electronic Journal.
- Morris, M. W. (2014). Values as the essence of culture foundation or fallacy? *Journal of Cross-Cultural Psychology*, 45(1), 14–24. <u>https://doi.org/10.1177/0022022113513400</u>
- Na, J., Igor, G., W., V. M. E., Shinobu, K., Richard, G., & E., N. R. (2010). Cultural differences are not always reducible to individual differences. *Proceedings of the National Academy of Sciences*, 107(14), 6192–6197.

https://doi.org/10.1073/pnas.1001911107

Na, J., Grossmann, I., Varnum, M. E. W., Karasawa, M., Cho, Y., Kitayama, S., & Nisbett, R.
E. (2020). Culture and personality revisited: Behavioral profiles and within-person stability in interdependent (vs. Independent) social orientation and holistic (vs. Analytic) cognitive style. *Journal of Personality*, 88(5), 908–924.

https://doi.org/10.1111/jopy.12536

- Nisbett R. E., & Cohen D. (1996). *Culture of honor: The psychology of violence in the South.* Routledge.
- Ott, C. (2022). Talking about cultural differences in an age of globalization and hybridization: Between Obelix and Stephen Colbert. *Missiology*, 50(1), 63–77. https://doi.org/10.1177/00918296211035746
- Prentice D. A., Miller D. T. (1992). When small effects are impressive. *Psychological Bulletin*, 112, 160–164. <u>https://doi.org/10.1037/0033-2909.112.1.160</u>

- Rodriguez Mosquera, P. M., Manstead, A. S. R., & Fischer, A. H. (2002). Honor in the Mediterranean and Northern Europe. *Journal of Cross-Cultural Psychology*, *33*(1), 16–36. <u>https://doi.org/10.1177/0022022102033001002</u>
- Ruscio, J. (2008). A probability-based measure of effect size: Robustness to base rates and other factors. *Psychological Methods*, 13(1), 19–30. <u>https://doi.org/10.1037/1082-</u> 989X.13.1.19
- San Martin, A., Sinaceur, M., Madi, A., Tompson, S., Maddux, W. W., Kitayama, S. (2018). Self-assertive interdependence in Arab culture. *Nature Human Behavior*, 2, 830–837. <u>https://doi.org/10.1038/s41562-018-0435-z</u>
- Saucier, G., Kenner, J., Iurino, K., Bou Malham, P., Chen, Z., Thalmayer, A. G., ... & Altschul, C. (2015). Cross-cultural differences in a global "survey of world views". *Journal of Cross-Cultural Psychology*, 46(1), 53-70.

https://doi.org/10.1177/0022022114551791

- Schulz, J., Beauchamp, J., Bahrami-Rad, D. & Henrich, J. (2019). The church, intensive kinship, and global psychological variation. *Science*, 366, 1-12. <u>https://doi.org/10.1126/science.aau5141</u>
- Schwartz, S. H. (2014). Rethinking the concept and measurement of societal culture in light of empirical findings. *Journal of Cross-Cultural Psychology*, 45(1), 5–13. <u>https://doi.org/10.1177/0022022113490830</u>
- Sng, O., Neuberg, S. L., Varnum, M. E. W., & Kenrick, D. T. (2018). The behavioral ecology of cultural psychological variation. *Psychological Review*, 125(5), 714– 743. http://dx.doi.org/10.1037/rev0000104
- Stephan, W. G., & Stephan, C. W. (2000). An integrated threat theory of prejudice. In S. Oskamp (Ed.), *Reducing prejudice and discrimination* (pp. 23–45). Lawrence Erlbaum.

- Syropoulos, S., & Leidner, B. (2023). Emphasizing similarities between politically opposed groups and their influence in perceptions of the political opposition: Evidence from five experiments. *Personality and Social Psychology Bulletin*. https://doi.org/10.1177/01461672231192384
- Tahiroğlu, M. (2022). https://us.boell.org/en/2022/12/16/adrift-home-and-abroad-whatsdriving-turkeys-foreign-policy-toward-greece
- Talhelm, T., Zhang, X., Oishi, S., Shimin, C., Duan, D., Lan, X., & Kitayama, S. (2014). Large-scale psychological differences within China explained by rice versus wheat agriculture. *Science*, 344(6184), 603–608. <u>https://doi.org/10.1126/science.1246850</u>
- Thalmayer, A. G., Toscanelli, C., & Arnett, J. J. (2021). The neglected 95% revisited: Is American psychology becoming less American? *American Psychologist*, 76(1), 116– 129. <u>https://psycnet.apa.org/doi/10.1037/amp0000622</u>
- Thompson, S., St. Karayanni, S., & Vassiliadou, M. (2004). Cyprus after history. *Interventions*, 6(2), 282–299. <u>https://doi.org/10.1080/1369801042000238373</u>
- Tooby, J., & Cosmides, L. (1992). The psychological foundations of culture. In J. H. Barkow,
  L. Cosmides, & J. Tooby (Eds.), *The adapted mind: Evolutionary psychology and the* generation of culture (pp. 19–136). Oxford University Press.
- Uskul, A. K., & Cross, S. (2019). The social and cultural psychology of honour: What have we learned from researching honour in Turkey? *European Review of Social Psychology*, 30, 39-73. <u>https://doi.org/10.1080/10463283.2018.1542903</u>

Uskul, A. K., Hanel, P. H. P., Vignoles, V. L., Jin, S., Rodríguez-Bailón, R., Castillo, V.A.,
Cross, S.E., Gezici Yalçın, M., Harb, C., Husnu, S., Ishii, K., Karamaouna, P.,
Kafetsios, K., Kateri, E., Matamoros-Lima, J., Miniesy, R., Na, J., Özkan, Z., Pagliaro,
S., Psaltis, C., Rabie, D., Teresi, M., & Uchida, Y. (2024, October 8). Differences and
Similarities in Psychological Characteristics between Cultural Groups Circum
Mediterranean. Retrieved from osf.io/a5zh6

- Uskul, A. K., Kitayama, S. & Nisbett, R. N. (2008). Ecocultural basis of cognition: Farmers and fishermen are more holistic than herders. *Proceedings of the National Academy of Sciences of the USA, 105*, 8552-8556. https://doi.org/10.1073/pnas.0803874105
- Uskul, A. K., Kirchner-Häusler, A., Vignoles, V. L., Rodriguez-Bailón, R., Castillo, V. A., Cross, S. E., Yalçın, M. G., Harb, C., Husnu, S., Ishii, K., Jin, S., Karamaouna, P., Kafetsios, K., Kateri, E., Matamoros-Lima, J., Liu, D., Miniesy, R., Na, J., Özkan, Z., . . . Uchida, Y. (2023). Neither Eastern nor Western: Patterns of independence and interdependence in Mediterranean societies. *Journal of Personality and Social Psychology, 125*(3), 471–495. <u>https://psycnet.apa.org/doi/10.1037/pspa0000342</u>
- Uskul, A. K., Thalmayer, A. G., Bernardo, A. B. I., González, R., Kende, A., Laher, S.,
  Lášticová, B., Saab, R., Salas, G., Singh, P., Zeinoun, P., Norenzayan, A., Chao, M.
  M., Shoda, Y., & Cooper, M. L. (2024). Challenges and opportunities for
  psychological research in the majority world. *Collabra: Psychology, 10*(1), 123703.
- Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software*, *36*(3), 1–48. <u>https://doi.org/10.18637/jss.v036.i03</u>
- Vignoles, V. L. et al. (2024). Are Mediterranean societies 'cultures of honor'? Prevalence and implications of a cultural logic of honor across three world regions. Manuscript submitted for publication.
- Wang, C. S., Leung, A. K. -y., See, Y. H. M., & Gao, X. Y. (2011). The effects of culture and friendship on rewarding honesty and punishing deception. *Journal of Experimental Social Psychology*, 47(6), 1295–1299. <u>https://doi.org/10.1016/j.jesp.2011.04.011</u>
- White, C. J. M., Muthukrishna, M., & Norenzayan, A. (2021). Cultural similarity among coreligionists within and between countries. *Proceedings of the National Academy of Sciences of the United States of America, 118* (37): e2109650118. https://doi.org/10.1073/pnas.2109650118

- Wormley, A. S., Kwon, J. Y., Barlev, M., & Varnum, M. E. W. (2023). How much cultural variation around the globe is explained by ecology? *Proceedings of the Royal Society B*, 290, 20230485. <u>https://doi.org/10.1098/rspb.2023.0485</u>
- Yao, J., Ramirez-Marin, J., Brett, J., Aslani, S., & Semnani-Azad, Z. (2017). A Measurement Model for Dignity, Face, and Honor Cultural Norms. *Management and Organization Review*, 13(4), 713–738. <u>https://doi.org/10.1017/mor.2017.49</u>
- Yitmen, Ş, & Verkuyten, M. (2018). Positive and negative behavioural intentions towards refugees in Turkey: The roles of national identification, threat, and humanitarian concern. *Journal of Community and Applied Social Psychology*, 28, 230–243. <u>https://doi.org/10.1002/casp.2354</u>

### Table 1

Characteristics of Samples in terms of their Similarities and Differences in Background and Ecological Variables

	<b>Religious Denomination</b>	National / Ethnic Identity	Language	Physical Ecology	Socio-Political Ecology
Muslims vs. Christians in Lebanon	No	Yes	Yes	Yes	Yes
Greek Orthodox (Greek & Greek Cypriots) vs Catholic (Spanish & Italians) Christians	Yes (but different sub-denomination)	No	No	No	No
Arab (Lebanese and Egyptians) vs. non-Arab (Turkish and Turkish Cypriots) Muslims	Yes	No	No	No	No
Greek Cypriots vs. Turkish Cypriots in Cyprus	No	No	No	Yes	No
Greek Cypriots in Cyprus vs. Greeks in Greece	Yes	Yes	Yes	No	Shared to some extent
Turkish Cypriots in Cyprus vs. Turks in Turkey	Yes	No/Yes*	Yes	No	Shared to some extent
Lebanese vs. Egyptian Muslims	Yes	No	No	No	No
Spanish vs. Italians	Yes	No	No	No	No
Turkish vs. Greeks	No	No	No	No	No

*Note.* Yes and No indicate characteristics indicated in the columns being shared between groups (yes) or not (no). See Table S1 in online Supplemental Materials for more details.

\* National/ethnic identities in the Cypriot context can be rather blurry and not one type of identity tends to be shared by all (e.g., see Loizides, 2017)

#### Table 2

Dessearch Site		n		A	ge	SSS (	(1-10)	Language	Data Source	Local Institution	Compensation
<b>Research Site</b>	Men	Women	% Women	M	SD	М	SD				
Turkish Cypriot	35	91	72.20%	24.80	9.86	6.46	1.28	Turkish	Online, In- Lab	Eastern Mediterranean University	Course Credit
Greek Cypriot	103	214	67.50%	20.89	2.36	6.04	1.19	Greek	Online, In- Lab	University of Cyprus	Course Credit, Raffle
Egypt	95	110	53.70%	20.73	1.56	6.44	1.31	Arabic	Online	British University of Egypt	Donation to Charity
Greece	284	196	40.80%	23.14	6.07	6.04	1.21	Greek	Online	University of Crete	Course Credit
Italy	112	135	54.70%	22.76	4.07	5.9	1.39	Italian	Online, In- Lab	University of Chieti-Pescara	Course Credit
Lebanon	96	165	63.20%	19.14	1.64	6.70	1.41	English	Online	American University of Beirut	Course Credit
Spain	124	116	48.30%	22.53	6.02	5.72	1.47	Spanish	Online	University of Granada	Course Credit
Turkey	111	241	68.50%	20.8	1.59	5.64	1.29	Turkish	Online	Bolu Abant Izzet Baysal University, Ordu University	Course Credit
Comparison Group											
Christian (Lebanon)	23	57	71.30%	19.15	1.78	7.10	1.20				
Muslim (Lebanon)	63	80	55.90%	19.06	1.47	6.56	1.49				
Arab Muslim	148	180	54.90%	20.01	1.74	6.54	1.34				
Non-Arab Muslim	109	266	70.90%	21.64	4.75	5.82	1.30				
Orthodox	387	410	51.40%	22.24	5.06	6.04	1.20				
Catholic	236	251	51.50%	22.65	5.12	5.81	1.43				

Sample Characteristics for each Data Collection Site and Comparison Group

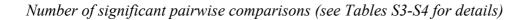
*Note.* SSS: Subjective Social Status (borrowed from Uskul et al., 2023). Arab Muslim = Muslim from Egypt and Lebanon, Non-Arab Muslim = Muslims from Turkey and Turkish Cypriot Community, Orthodox = Christians from *Greece and Greek Cypriot Community, Catholic = Christians from Italy and Spain.* In some cases, the numbers in the two sections of the table may not align due to some participants having listed a group identity other than the ones we compared in dyadic groups.

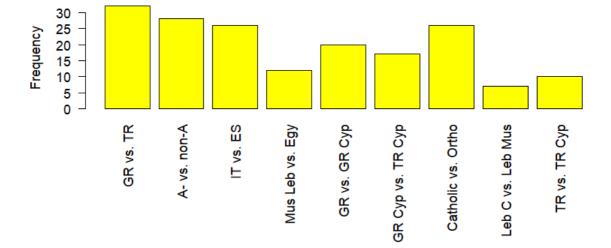
# Table 3

Groups	n	# of sign. differences	Hedges' g	SE	р	95%-CI	PCR
Greek vs. Turkish Samples	830	32/38	0.44	.05	<.001	[0.34, 0.54]	82.60
Arab- vs. non-Arab Muslim Samples	703	28/38	0.35	.04	<.001	[0.26, 0.43]	86.17
Italian vs. Spanish Samples	487	26/38	0.31	.04	<.001	[0.23, 0.40]	87.49
Muslim Lebanese vs. Egyptian Samples	466	12/37	0.25	.06	<.001	[0.06, 0.45]	89.98
Greek vs. Greek Cypriot Samples	796	20/38	0.22	.03	<.001	[0.17, 0.28]	91.10
Greek Cypriot vs. Turkish Cypriot Samples	442	17/38	0.22	.02	<.001	[0.18, 0.26]	91.24
Catholic vs. Orthodox Samples	1,280	26/38	0.20	.02	<.001	[0.16, 0.24]	92.01
Lebanese Christians vs. Lebanese Muslims	223	7/38	0.16	.02	<.001	[0.11, 0.20]	93.75
Turkish vs. Turkish Cypriot Samples	478	10/38	0.15	.02	<.001	[0.11, 0.19]	93.94

Comparison between Pairs of Cultural Groups

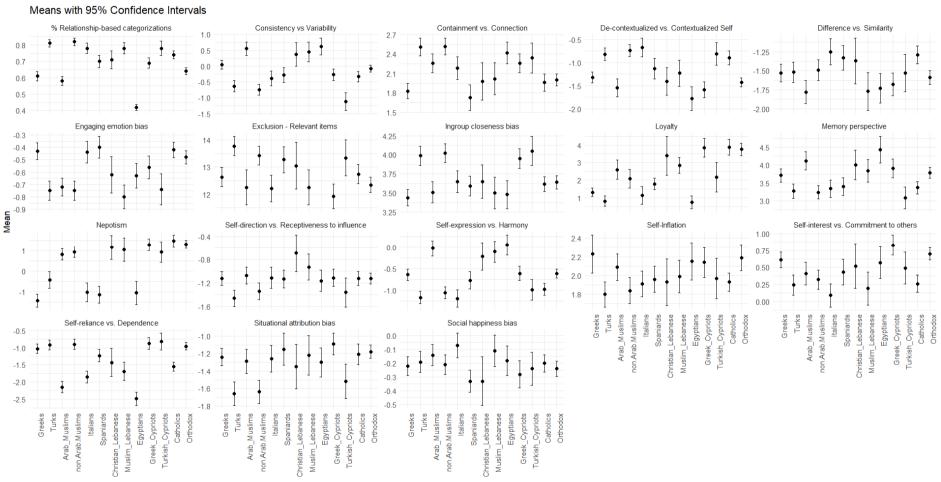
*Note.* Hedges' *g*: Overall meta-analytically derived mean effect size, *SE*: standard error, PCR: Percentage of common responses which expresses overlap or similarities between two groups (Hanel et al., 2019; Inman & Bradley, 1989). Comparisons are listed in ascending order using overall ES and PCR figures. The Inclusion of Contextual Information task was not presented to Egyptian participants.





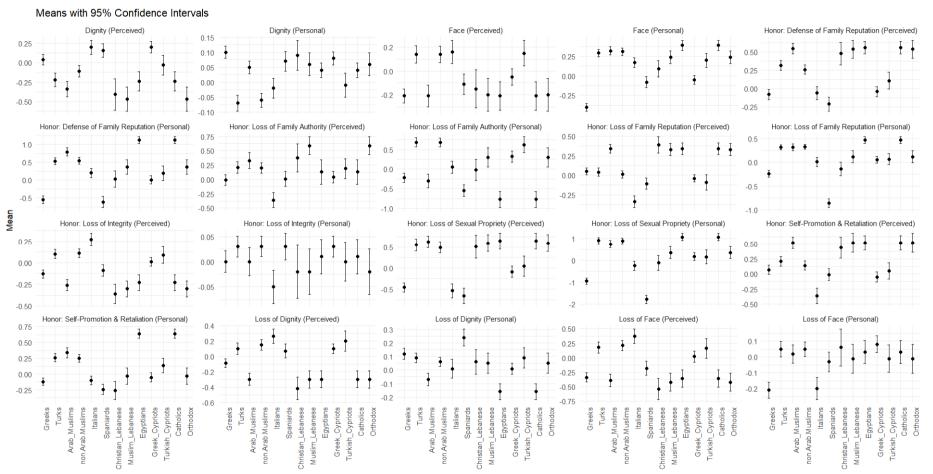
Note. GR: Greek sample, TR: Turkish sample, A: Arab sample, IT: Italian sample, ES: Spanish sample, Mus: Muslim sample, Leb: Lebanese sample, Egy: Egyptian sample, Cyp: Cypriot sample, Ortho: Orthodox sample, C: Christian sample.

Means with 95%-Confidence Intervals for Social Orientation, Self-Construal, and Cognitive Style by Group (Table S3 for details)



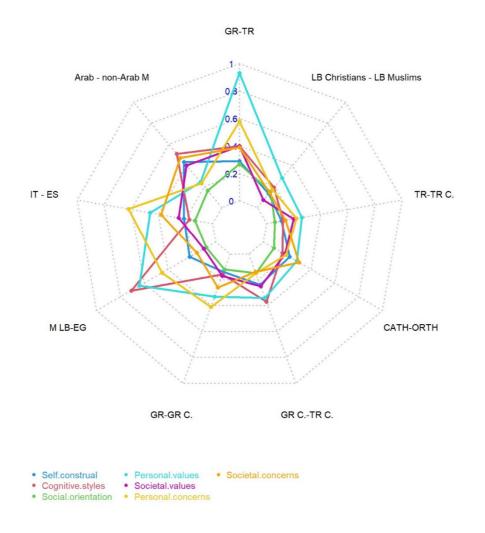
Group

Means with 95%-Confidence Intervals for Cultural Values and Concerns by Group (Table S3 for details)



Group

Radar chart visualizing comparisons across all nine groups for each of the seven sets of variables (absolute mean differences expressed as Hedges' gs in blue font in the top-middle of the chart)



*Note*. CATH: Catholic Christians, C: Cypriot participants, ES: Spanish participants, GR: Greek participants, IT: Italian participants, LB: Lebanese participants, M: Muslim participants, ORTH: Orthodox Christian participants, TR: Turkish participants. For example, the difference between

Greeks and Turks in personal values was g = 0.93, using the absolute numerical values. For details see Tables S1-S7

# Supplemental Materials for Differences and Similarities in Psychological Characteristics between Cultural Groups Circum Mediterranean

# Table S1

Characteristics of Samples in terms of their Similarities and Differences in Background and Ecological Variables

		Religious Denomination	National / Ethnic Identity	Language	Physical Ecology	Socio-Political Ecology
Muslims vs. Christians in Lebanon	These two groups share a national identity (Lebanese), speak the same language (Arabic) and reside in the same location (Beirut and surrounding suburbs), thus are exposed to a shared physical and socio-political ecology. Yet they belong to two different religious denominations (Muslim vs. Christian) with substantial differences in religious beliefs and practices. This comparison allowed us to examine the role of religious identity in the similarities and differences between these two communities in Lebanon.	No	Yes	Yes	Yes	Yes
Greek Orthodox (Greek & Greek Cypriots) vs Catholic (Spanish & Italians) Christians	The Greek-Orthodox groups from Greece and the Greek Cypriot community of Cyprus and the Catholic groups from Spain and Italy share the same religious denomination (Christianity) yet differ in the dominant Christian sub-denomination (Greek-Orthodox vs. Catholic) in addition to ethnic and national identity, spoken language (Greek vs. Italian or Spanish) as well as Yu physical and socio-political ecologies. This comparison allowed us to examine the role of belonging to the same religious denomination in similarities and differences in a variety of psychological processes between these two groups.	es (but different sub- denomination)	No	No	No	No
Arab (Lebanese and Egyptians) vs. non-Arab (Turkish and Turkish Cypriots) Muslims	The Muslim groups of Arab origin from Lebanon and Egypt and the Muslim groups of non-Arab origin from Turkey and the Turkish Cypriot community of Cyprus belong to the same religious denomination (Islam) yet differ in linguistic (Arabic vs. Turkish), ethnic (Arabic vs. Turkish or Turkish Cypriot) and national (Lebanese/Egyptian vs. Turkish/Turkish Cypriot) identities, as well as physical and socio-political ecologies. Thus, this comparison allowed us to study	Yes	No	No	No	No

		Religious Denomination	National / Ethnic Identity	Language	Physical Ecology	Socio-Political Ecology
	the role of belonging to the same religion in shaping the similarities and differences between these two groups.					
Greek Cypriots vs. Turkish Cypriots in Cyprus	Greek Cypriot and Turkish Cypriot communities reside on the island of Cyprus, thus inhabiting the same physical ecology, yet belong to communities with different religious denominations (Orthodox vs. Muslim), ethnic (Turkish vs. Greek), and national (Turkish Cypriot vs. Greek Cypriot) identities. The two communities have been segregated since the de facto partition of the island in 1974 by the 'Green Line', with the Southern region of the island predominantly inhabited by Greek Cypriots and the Northern region by Turkish Cypriots who used to live side-by-side under a shared socio-political environment interacting with each other in all life domains prior to the partition. Thus, the political configuration on the island has resulted in little, if any, mixing of the two communities for almost four decades. In addition, the northern region is also host to Turkish settlers estimated to make up about half the population of Northern Cyprus. This comparison allowed us to test the role of inhabiting a similar physical ecology in similarities and differences between the two groups.	No	No	No	Yes	No
Greek Cypriots in Cyprus vs. Greeks in Greece	Greeks and Greek Cypriots belong to the same religious denomination (Greek Orthodox) and share the same ethnic and linguistic background (Greek) yet reside in different parts of the Mediterranean region in two different countries governed by different state authorities. The two groups have historically had close cultural, religious, political, and educational ties and continue to do so in current times. Both Greek and Cypriot identities have been similarly salient among Greek Cypriots (e.g., Loizides, 2007), with many Greek Cypriots sharing a close cultural affiliation with mainlander Greeks, viewing them as their Hellenic brothers and sisters. There is also considerable overlap	Yes	Yes	Yes	No	Shared to some extent

		Religious Denomination	National / Ethnic Identity	Language	Physical Ecology	Socio-Political Ecology
	in the type of media (e.g., TV programs) and cultural elements (e.g., music, arts) being consumed by the two communities. This comparison allowed us to study the similarities and differences between two groups whose members share many background variables yet differ in the physical and socio-political ecologies in which they pursue their lives.					
Turkish Cypriots in Cyprus vs. Turks in Turkey	As with Greek and Greek Cypriot groups, Turkish and Turkish Cypriots belong to the same religious denomination (Islam) and share the same ethnic and linguistic background (Turkish) yet reside in two different countries governed by two separate state authorities. As the previous pair, this comparison allowed us to study the similarities and differences between two groups whose members share many background variables yet differ in the physical and socio-political ecologies in which they live their lives. Yet important differences also exist. For example, the connection between the states of Turkey and the Turkish Republic of Northern Cyprus (TRNC) is much stronger; Turkey is the only country which recognizes TRNC and the two have strong links in terms of education, finance, politics, and contemporary culture (e.g., the two countries have a cooperation protocol in the field of education). Turkey also acts as a bridge connecting TRNC with the rest of the world and provides basic services such as transportation and telecommunication. Another difference that sets apart this comparison from the Greek versus Greek Cypriot one is that a significant portion of the Turkish Cypriot community now consists of Turkish settlers which provides opportunities for mixing between the two groups on daily basis (Kızılyürek, 2016; Thompson et al., 2004).	Yes	No/Yes*	Yes	No	Shared to some extent

		Religious Denomination	National / Ethnic Identity	Language	Physical Ecology	Socio-Political Ecology
Lebanese vs. Egyptian Muslims	Lebanese and Egyptians are both of Arab origin and share religious (Islam) and linguistic (Arabic) background yet live under different socio-political systems governed by two separate states (Egypt and Lebanon), thus endorsing different national identities. This comparison allowed us to test the role of shared religious, linguistic, and ethnic identities in similarities between these two groups.	Yes	No	No	No	No
Spanish vs. Italians	Spanish and Italians share a religious background (Catholic), but differ in ethnic, national, and linguistic background as well as the socio-political conditions by which they are governed. This comparison allowed us to test the role of belonging to a Catholic identity in the psychological similarities between these two groups.	Yes	No	No	No	No
Turkish vs. Greeks	Turkish and Greek samples do not share any of the background characteristics considered above or the physical and socio-political ecologies in which their populations reside. We included this comparison as a case study to examine the degree of similarities in psychological characteristics despite not sharing any of the ecological or demographic characteristics we set out to examine here.	No	No	No	No	No

Note. Yes and No indicate characteristics indicated in the columns being shared between groups (yes) or not (no)

\* National/ethnic identities in the Cypriot context can be rather blurry and not one type of identity tends to be shared by all (e.g., see Loizides, 2017)

# Table S2Description of Study Tasks and Measures

	Tasks	Measures	<b>Operationalization/Assessment</b>	Meaning of the Dependent Variables
Social Orientation	Implicit Social Orientation Questionnaire (ISOQ)	Intensity of Engaging (vs. Disengaging) Emotions	Intensity of socially engaging emotions (e.g., ashamed) minus intensity of socially disengaging emotions (e.g., proud)	Stronger relative intensity of socially engaging emotions associated with stronger social interdependence
	(Kitayama et al., 2006)	Predictors of Happiness	Regression coefficient for socially engaging emotions for happiness minus regression coefficient for socially disengaging emotions	Stronger relative prediction of happiness by socially engaging emotions is associated with stronger social interdependence
	Sociogram Task (Kitayama et al., 2009)	Symbolic Self-Inflation	Size of circle drawn for the self minus the average size of all circles drawn for others	Stronger symbolic self-inflation associated with greater <i>in</i> dependence
	Inclusion of Other in the Self Scale (IOS) (Aron et al., 1992)	Ingroup (vs. Outgroup) Closeness Bias	Average of felt closeness to ingroup members (the person they feel closest to, a good friend and family members) minus average of felt closeness to outgroup members (others in general, a stranger on the street)	Relatively greater ingroup closeness bias is associated with stronger social interdependence
	Nepotism Task (Wang et Nepotism in Reward Contexts al., 2011)		The amount of money allocated to reward an <i>honest friend</i> minus the amount of money allocated to reward an <i>honest</i> stranger	Greater monetary reward of friends than strangers is associated with stronger social interdependence
		Nepotism in Punishment Contexts	The amount of money allocated to punish a dishonest stranger minus the amount of money allocated to punish a dishonest friend	Greater monetary punishment of strangers than friends is associated with stronger social interdependence
Self-Construal	Culture & Identity Research Network Self Construal Scale (CIRN- SCS-3) (Krys et al., 2021)	Interdependent self-construal (on 8 dimensions): 1. Similarity (vs. Difference) 2. Connection to Others (vs. Self- Containment) 3. Receptiveness to Influence (vs. Self-Direction) 4. Dependence on Others (vs. Self-Reliance)	Participants rated statements within each dimension for how well each statement described them	Higher scores on each dimension are associated with a stronger interdependent (vs. independent) self- construal for that dimension

	Tasks	Measures	<b>Operationalization/Assessment</b>	Meaning of the Dependent Variables
		5. Variability (vs. Consistency)		
		6. Harmony (vs. Self-Expression)		
		7. Commitment to Others (vs. Self-Interest) 8. Contextualized (vs. De- contextualized) Self		
Cognitive Style	Attribution Task (Kitayama et al., 2006)	Causal Situational (vs. Dispositional) Attribution	Average across situational attribution items minus average across dispositional attribution items	Relatively greater attribution of causality to situational factors is associated with stronger holistic cognition
	Triad Task (Ji et al., 2004)	Thematic (vs. Taxonomic) Categorization	Percentage of items with thematic categorizations out of all items	Relatively greater tendency to categorize objects in thematic terms (based on their spatial, causal, or temporal relationships) is associated with stronger holistic cognition
	Inclusion Task (Choi et al., 2003)	Inclusion of Contextual Information	Number of pieces of information that were perceived as relevant in resolving the murder case	Higher number of pieces of information perceived as relevant is associated with stronger holistic cognition
	Outside-In Task (Cohen & Gunz, 2022)	Third-Person Perspective Taking	Extent to which somebody took a third- versus a first-person perspective when remembering specific situations	A stronger tendency to take a third- person perspective is associated with stronger holistic cognition
Cultural Values	Personal Endorsement	Dignity	Extent of personal agreement with cultural beliefs and norms about how people should behave ("How much do <u>you</u> agree or	Higher values reflect greater personal agreement with dignity beliefs and norms
		Face	<pre>disagree with the following statements?")</pre>	Higher values reflect greater personal agreement with face beliefs and norms
		Honor: Self-Promotion & Retaliation	_	Higher values reflect greater personal agreement with honor beliefs and norms related to promoting a positive self-image and retaliating against reputation threats

	Tasks	Measures	<b>Operationalization/Assessment</b>	Meaning of the Dependent Variables
		Honor: Defense of Family Reputation		Higher values reflect greater personal agreement with honor beliefs and norms related to caring about and upholding a positive reputation of one's family
	Perceived-Societal Endorsement	Dignity	Extent of perceived-societal agreement with cultural beliefs and norms about how people should behave ("How much would	Higher values reflect greater perceived societal agreement with dignity beliefs and norms
		Face	most people in your society agree or disagree with the following statements?")	Higher values reflect greater perceived societal agreement with face beliefs and norms
		Honor: Self-Promotion & Retaliation	-	Higher values reflect greater perceived societal agreement with honor beliefs and norms related to promoting a positive self-image and retaliating against reputation threats
		Honor: Defense of Family Reputation	_	Higher values reflect greater perceived societal agreement with honor beliefs and norms related to caring about and upholding a positive reputation of one's family
Cultural Concerns	Personal Endorsement	Loss of Dignity	Extent to which an individual would personally experience negative feelings if	Higher values reflect greater personal endorsement of dignity concerns
		Loss of Face	they would behave in a certain way or have their reputation threatened ("How bad	Higher values reflect greater personal endorsement of face concerns
		Honor: Loss of Family Reputation	would <u>you</u> feel about yourself if")	Higher values reflect greater personal endorsement of honor concerns related to maintaining a good family reputation
		Honor: Loss of Family Authority	-	Higher values reflect greater personal endorsement of honor concerns related to maintaining authority over one's family

Tasks	Measures	<b>Operationalization/Assessment</b>	Meaning of the Dependent Variables
	Honor: Loss of Sexual Propriety		Higher values reflect greater personal endorsement of honor concerns related to maintaining sexual propriety
	Honor: Loss of Integrity		Higher values reflect greater personal endorsement of honor concerns related to maintaining a personal integrity
Perceived-Societal Endorsement	Loss of Dignity	Extent to which an individual thinks that most others in their society would experience negative feelings if they would	Higher values reflect greater perceived- societal endorsement of dignity concerns
	Loss of Face	behave in a certain way or have their reputation threatened ("How bad would	Higher values reflect greater perceived- societal endorsement of face concerns
	Honor: Loss of Family Reputation	<u>most people in your society</u> feel about themselves if")	Higher values reflect greater perceived- societal endorsement of honor concerns related to maintaining a good family reputation
	Honor: Loss of Family Authority		Higher values reflect greater perceived- societal endorsement of honor concerns related to maintaining authority over one's family
	Honor: Loss of Sexual Propriety	_	Higher values reflect greater perceived- societal endorsement of honor concerns related to maintaining sexual propriety
	Honor: Loss of Integrity	-	Higher values reflect greater perceived- societal endorsement of honor concerns related to maintaining a personal integrity

*Note.* Initial sections of this table focusing on social orientation, self-construal and cognitive style measures are borrowed from Uskul et al. (2023) with slight modifications. Items used in the honor values and concerns measures were extracted from the scales used by Yao and colleagues (2017), Smith and colleagues (2017), and Guerra and colleagues.

#### Table S3

Descriptive Statistics and ANCOVA Results for All Comparisons across Social Orientation, Self-Construal, and Cognitive Style

	Gre	ek Sam	ple	Turk	ish Sam	ple				-	b-Musli Sample	im	-	Arab Mu Sample	slim			
	М	SD	n	М	SD	n	F	р	ηp2	М	SD	n	М	SD	n	F		ηp2
Social Orientation																		
Engaging emotion bias	-0.43	0.74	471	-0.75	0.74	351	35.71	***	0.04	-0.72	0.65	317	-0.75	0.76	375	1.23		0
Social happiness bias	-0.22	0.75	472	-0.19	0.74	351	0.1		0	-0.14	0.7	315	-0.21	0.72	374	1.76		0
Self-Inflation	2.23	2.26	469	1.8	1.26	345	9.14	**	0.01	2.09	1.26	309	1.84	1.33	365	3.86	+	0.01
Ingroup closeness bias	3.44	1.2	473	3.99	1.2	352	36.36	***	0.04	3.51	1.26	317	4.02	1.2	375	35.63	***	0.05
Loyalty	1.31	2.65	473	0.8	2.82	351	7.38	**	0.01	2.6	5.06	318	2.09	5.27	375	1.57		0
Nepotism	-1.43	3.45	473	-0.44	3.86	352	13.16	***	0.02	0.81	2.57	318	0.93	2.77	375	0.23	*	0.01
Self-Construal																		
Difference vs. Similarity	-1.53	1.28	472	-1.52	1.27	352	0.44		0	-1.78	1.4	326	-1.49	1.33	375	8.36	**	0.01
Containment vs. Connection	1.83	1.3	472	2.51	1.31	352	44	***	0.05	2.26	1.33	326	2.52	1.27	375	7.4	**	0.01
Self-direction vs. Receptiveness to influence	-1.12	1.31	472	-1.46	1.34	352	16.92	***	0.02	-1.07	1.3	326	-1.34	1.39	375	6.54	*	0.01
Self-reliance vs. Dependence	-1.03	1.48	472	-0.92	1.43	352	0.13		0	-2.15	1.52	326	-0.9	1.43	375	125.71	***	0.15
Consistency vs Variability	0.05	1.56	472	-0.63	1.72	352	37.11	***	0.04	0.55	1.9	326	-0.75	1.72	375	90.52	***	0.12
Self-expression vs. Harmony	-0.64	1.45	472	-1.17	1.34	352	24.29	***	0.03	-0.03	1.6	326	-1.06	1.36	375	85.95	***	0.11
Self-interest vs. Commitment to others	0.61	1.26	472	0.24	1.4	352	13.37	***	0.02	0.41	1.55	326	0.32	1.37	375	0.65		0
De-contextualized vs. Contextualized Self	-1.32	1.3	472	-0.82	1.28	352	28.32	***	0.03	-1.55	1.76	326	-0.74	1.27	375	49.71	***	0.07
Cognitive Style																		
Situational attribution bias	-1.24	1.07	473	-1.66	1.31	352	23.43	***	0.03	-1.29	1.25	318	-1.64	1.3	375	10.55	**	0.02
% Relationship-based categorizations	0.61	0.31	473	0.81	0.21	352	95.03	***	0.1	0.58	0.25	316	0.82	0.22	375	173.99	***	0.2
Exclusion - Relevant items	12.63	3.94	473	13.77	3.39	352	19.92	***	0.02	12.25	3.91	140	13.42	3.37	375	9.48	**	0.02
Memory perspective	3.71	2.1	471	3.27	1.9	344	9.06	**	0.01	4.12	2.3	304	3.24	1.85	369	29.01	***	0.04

Table S3	(continued)
10010 33	(continucu)

	Italian Sample		Span	ish San	nple				Muslim Lebanese			Egyptian Sample						
	М	SD	n	М	SD	n	F		ηp2	М	SD	n	М	SD	n	F		ηp
Social Orientation																		
Engaging emotion bias	-0.44	0.7	245	-0.4	0.69	238	0.46		0	-0.8	0.58	140	-0.66	0.70	177	2.40		0.0
Social happiness bias	-0.07	0.71	246	-0.33	0.64	237	18.41	***	0.04	-0.11	0.69	139	-0.17	0.71	176	0.83		0
Self-Inflation	1.91	1.08	246	1.96	1.08	236	0.28		0	1.99	1.04	139	2.18	1.41	170	1.29		0
Ingroup closeness bias	3.65	1.14	246	3.59	1.01	239	0.12		0	3.5	1.24	140	3.51	1.28	177	0.17		0
Loyalty	1.14	3.99	246	1.79	2.57	239	4.42	*	0.01	1.04	2.69	140	0.63	2.64	178	1.09		0
Nepotism	-1.03	3.69	246	-1.15	3.16	239	0.16		0	-1.26	3.44	140	-1.15	4.02	178	0.97		0
Self-Construal																		
Difference vs. Similarity	-1.25	1.38	246	-1.33	1.25	239	0.57		0	-1.79	1.5	139	-1.80	1.28	177	0.12		0
Containment vs. Connection	2.18	1.4	246	1.73	1.56	239	10.33	**	0.02	1.98	1.5	139	2.44	1.15	177	10.77	***	0.0
Self-direction vs. Receptiveness to influence	-1.11	1.43	246	-1.13	1.2	239	0.01		0	-0.93	1.33	139	-1.20	1.3	177	3.26		0.0
Self-reliance vs. Dependence	-1.85	1.38	246	-1.23	1.41	239	23.68	***	0.05	-1.67	1.6	139	-2.54	1.36	177	27.20	**	0.0
Consistency vs Variability	-0.39	1.82	246	-0.28	1.89	239	0.34		0	0.46	1.88	139	0.62	1.9	177	0.55		C
Self-expression vs. Harmony	-1.19	1.56	246	-0.77	1.55	239	9.47	**	0.02	-0.08	1.5	139	0.04	1.69	177	0.33		C
Self-interest vs. Commitment to others	0.09	1.35	246	0.43	1.46	239	6.92	**	0.01	0.22	1.44	139	0.59	1.64	177	4.48		0.0
De-contextualized vs. Contextualized Self	-0.67	1.62	246	-1.13	1.73	239	9.45	**	0.01	-1.27	1.68	139	-1.80	1.79	177	6.86	*	0.0
Cognitive Style																		
Situational attribution bias	-1.26	1.22	246	-1.15	1.44	239	0.67		0	-1.22	1.35	140	-1.35	1.17	178	0.14		C
% Relationship-based categorizations	0.78	0.26	246	0.7	0.3	239	9.86	**	0.02	0.78	0.21	139	0.42	0.13	177	276.9	***	0.4
Exclusion - Relevant items	12.21	3.91	244	13.27	3.79	239	8.61	**	0.02	12.25	3.91	140	/	/	/	/	/	/
Memory perspective	3.34	1.92	236	3.4	1.94	238	0.08		0	3.84	1.88	138	4.36	2.57	166	4.18	*	0.1

#### Table S3 (continued)

	Greek Sample			Greek Cypriot Sample						Greek Cypriot Sample				tish Cyp Sample				
	М	SD	n	М	SD	n	F		ηp2	М	SD	n	М	SD	n	F		ηp
Social Orientation																		
Engaging emotion bias	-0.43	0.74	471	-0.56	0.82	310	4.62	*	0.01	-0.56	0.82	310	-0.74	0.71	124	4.47	*	0.0
Social happiness bias	-0.22	0.75	472	-0.28	0.88	310	1.43		0	-0.28	0.88	310	-0.24	0.69	124	0.32		0
Self-Inflation	2.23	2.26	469	2.14	1.43	310	0.78		0	2.14	1.43	310	1.97	1.21	122	1.27		0
Ingroup closeness bias	3.44	1.2	473	3.95	1.17	312	27.45	***	0.03	3.95	1.17	312	4.05	1.08	125	1.65		0
Loyalty	3.7	5.17	473	3.85	4.9	312	0.19		0	3.85	4.9	312	2.18	4.79	125	10.97	**	0.0
Nepotism	1.31	2.65	473	1.28	2.54	312	0.23		0	1.28	2.54	312	0.92	2.86	125	1.13		0
Self-Construal																		
Difference vs. Similarity	-1.54	1.28	479	-1.68	1.33	315	2.45		0	-1.68	1.33	315	-1.53	1.41	126	1.21		C
Containment vs. Connection	1.84	1.31	479	2.26	1.31	315	19.4	***	0.02	2.26	1.31	315	2.34	1.34	126	0.39		C
Self-direction vs.	-1.12	1.31	479	-1.11	1.33	315	0.01		0	-1.11	1.33	315	-1.36	1.4	126	3.05		0.0
Receptiveness to influence	-1.02	1.48	479	-0.88	1.57	315	1.77		0	-0.88	1 5 7	315	0 02	1.38	126	0.11		C
Self-reliance vs. Dependence	-1.02	1.48	479 479	-0.88	1.57	315	7.34	**	0.01	-0.88	1.57 1.62	315 315	-0.82 -1.12	1.58	126	24.84	***	0.0
Consistency vs Variability			-				-	•••		-							*	
Self-expression vs. Harmony Self-interest vs. Commitment	-0.64	1.46	479	-0.61	1.48	315	0.06		0	-0.61	1.48	315	-0.99	1.34	126	6.3		0.0
to others	0.62	1.25	479	0.83	1.36	315	4.87	*	0.01	0.83	1.36	315	0.49	1.34	126	5.55	*	0.0
De-contextualized vs. Contextualized Self	-1.32	1.31	479	-1.59	1.56	315	7.11	**	0.01	-1.59	1.56	315	-0.81	1.42	126	23.69	***	0.0
Cognitive Style																		
Situational attribution bias	-1.24	1.07	473	-1.09	1.1	312	2.58		0	-1.09	1.1	312	-1.52	1.13	125	12.06	***	0.0
% Relationship-based categorizations	0.61	0.31	473	0.69	0.28	316	9.67		0.01	0.69	0.28	316	0.78	0.25	125	16.58	***	0.0
Exclusion - Relevant items	12.63	3.94	473	11.92	4.13	312	5.15	*	0.01	11.92	4.13	312	13.34	3.73	125	11.72	***	0.0
Memory perspective	3.71	2.1	471	3.91	2.27	302	1.25		0	3.91	2.27	302	3.08	1.71	121	9.74	**	0.0

Tab	le S3 (	continued

	Catholic Sample		Orthodox Sample						Turkish Sample				kish-Cyp Sample					
	М	SD	n	М	SD	n	F		ηp2	М	SD	n	М	SD	n	F		ηp2
Social Orientation																		
Engaging emotion bias	-0.42	0.69	483	-0.48	0.77	781	1.96		0	-0.75	0.74	351	-0.74	0.71	124	0.08		0
Social happiness bias	-0.2	0.69	483	-0.24	0.8	782	1.22		0	-0.19	0.74	351	-0.24	0.69	124	0.1		0
Self-Inflation	1.93	1.08	482	2.19	1.97	779	5.79	*	0.01	1.8	1.26	345	1.97	1.21	122	0.46		0
Ingroup closeness bias	3.62	1.08	485	3.64	1.21	785	0		0	3.99	1.2	352	4.05	1.08	125	0.36		0
Loyalty	3.87	4.99	485	3.76	5.06	785	0.11		0	1.56	5.51	352	2.18	4.79	125	0.65		0
Nepotism	1.46	3.38	485	1.3	2.61	785	1.04		0	0.8	2.82	351	0.92	2.86	125	0.06		0
Self-Construal																		
Difference vs. Similarity	-1.29	1.32	485	-1.59	1.3	786	8.85	***	0.02	-1.52	1.27	352	-1.53	1.41	126	0.01		0
Containment vs. Connection	1.96	1.5	485	2	1.32	786	7.89		0.02	2.51	1.31	352	2.34	1.34	126	1.45		0
Self-direction vs. Receptiveness to influence	-1.12	1.32	485	-1.12	1.32	786	0.54		0	-1.46	1.34	352	-1.36	1.4	126	0.49		0
Self-reliance vs. Dependence	-1.55	1.43	485	-0.96	1.52	786	17.63	***	0.04	-0.92	1.43	352	-0.82	1.38	126	0.44		0
Consistency vs Variability	-0.33	1.85	485	-0.08	1.59	786	5.61	**	0.01	-0.63	1.72	352	-1.12	1.57	126	7.79	**	0.02
Self-expression vs. Harmony	-0.98	1.57	485	-0.62	1.46	786	7.39	***	0.02	-1.17	1.34	352	-0.99	1.34	126	1.63		0
Self-interest vs. Commitment to others	0.26	1.41	485	0.7	1.3	786	11	***	0.03	0.24	1.4	352	0.49	1.34	126	3.07		0.02
De-contextualized vs. Contextualized Self	-0.9	1.69	485	-1.43	1.42	786	14.89	***	0.03	-0.82	1.28	352	-0.81	1.42	126	0		0
Cognitive Style																		
Situational attribution bias	-1.21	1.33	485	-1.18	1.09	785	0.23		0	-1.66	1.31	352	-1.52	1.13	125	0.51		0
% Relationship-based categorizations	0.74	0.28	485	0.64	0.3	789	30.67	***	0.02	0.81	0.21	352	0.78	0.25	125	0.08		0
Exclusion - Relevant items	12.74	3.89	483	12.34	4.03	785	2.44		0	13.77	3.39	352	13.34	3.73	125	1.26		0
Memory perspective	3.37	1.93	474	3.79	2.17	773	11.57	***	0.01	3.27	1.9	344	3.08	1.71	121	0.37		0

#### Table S3 (continued)

		Auslims		-	hristian				
	in	Lebano	n	in	Lebano	n			
	М	SD	n	М	SD	n	F		ηp2
Social Orientation									
Engaging emotion bias	-0.8	0.58	140	-0.62	0.67	80	5.2	*	0.0
Social happiness bias	-0.11	0.69	139	-0.33	0.81	80	4.02	*	0.0
Self-Inflation	1.99	1.04	139	1.93	1.11	78	0.18		0
Ingroup closeness bias	3.5	1.24	140	3.65	1	80	0.32		0
Loyalty	2.84	4.88	140	3.39	5.01	80	0.77		0
Nepotism	1.04	2.69	140	1.15	2.63	80	0.08		0
Self-Construal									
Difference vs. Similarity	-1.77	1.53	142	-1.37	1.37	80	3.71		0.0
Containment vs. Connection	2.02	1.5	142	1.98	1.32	80	0.02		0
Self-direction vs. Receptiveness to influence	-0.93	1.32	142	-0.69	1.43	80	1.61		0.0
Self-reliance vs. Dependence	-1.69	1.6	142	-1.43	1.84	80	1.24		0.0
Consistency vs Variability	0.45	1.87	142	0.37	1.72	80	0.09		0
Self-expression vs. Harmony	-0.11	1.51	142	-0.22	1.44	80	0.27		0
Self-interest vs. Commitment to others	0.19	1.43	142	0.52	1.5	80	2.6		0.0
De-contextualized vs. Contextualized Self	-1.23	1.69	142	-1.41	1.36	80	0.68		0
Cognitive Style									
Situational attribution bias	-1.22	1.35	140	-1.35	1.17	80	0.29		0
% Relationship-based categorizations	0.78	0.21	139	0.71	0.25	80	4.27	*	0.0
Exclusion - Relevant items	12.25	3.91	140	13.05	3.91	80	2.68		0.0
Memory perspective	3.84	1.88	138	4.01	1.88	80	0.98		0.0

Note. Arab Muslim = Muslim from Egypt and Lebanon, Non-Arab Muslim = Muslims from Turkey and Turkish Cypriot Community, Orthodox = Christians from Greece and

Greek Cypriot Community, Catholic = Christians from Italy and Spain. We did not collect data on Exclusion - Relevant items from the Egyptian Sample.

\*p < .05. \*\*p < .01. \*\*\* p < .001. † p = .05. The figures reflect the Sidak adjustment used in conducting the multiple comparisons. The bold effect size indicates the highest effect size reported in this table.

	Greek	Greek Sample		Sample				Arab-Muslim Sample			-Arab Sample			
	М	SD	М	SD	F		ηp2	М	SD	М	SD	F		ηp2
Values														
Personal Endorsement	n =	471	n =	350				n =	317	n =	374			
Dignity	0.1	0.22	-0.07	0.25	135.4	***	0.14	0.05	0.19	-0.06	0.23	45.85	***	0.06
Face	-0.4	0.54	0.29	0.46	383.5	***	0.32	0.32	0.45	0.31	0.46	0.25		0
Honor: Self-Promotion & Retaliation	-0.12	0.62	0.26	0.62	97.83	***	0.11	0.34	0.71	0.25	0.62	0.76		0
Honor: Defense of Family Reputation	-0.55	1.17	0.53	0.91	235.8	***	0.22	0.79	1	0.54	0.93	5.89	*	0.01
Perceived-Societal Endorsement	n =	470	n =	348				<i>n</i> =	306	n =	373			
Dignity	0.04	0.73	-0.22	0.82	17.58	***	0.02	-0.34	0.88	-0.11	0.76	15	***	0.02
Face	-0.21	0.64	0.14	0.69	47.99	***	0.06	-0.21	0.82	0.14	0.67	33.3	***	0.05
Honor: Self-Promotion & Retaliation	0.07	0.81	0.21	0.74	4.98	*	0.01	0.52	0.87	0.14	0.74	36.14	***	0.05
Honor: Defense of Family Reputation	-0.08	0.74	0.32	0.62	67.88	***	0.08	0.55	0.65	0.26	0.62	27.56	***	0.04
Concerns														
Personal Concerns	n =	473	n =	351				n =	318	n =	375			
Loss of Dignity	0.12	0.46	0.09	0.34	2.86		0	-0.07	0.43	0.06	0.34	15.78	***	0.02
Loss of Face	-0.21	0.54	0.05	0.46	25.21	***	0.03	0.02	0.52	0.05	0.45	0.77		0
Honor: Loss of Family Reputation	-0.24	0.75	0.32	0.5	146.4	***	0.15	0.32	0.64	0.33	0.47	0.01	***	0
Honor: Loss of Family Authority	-0.22	1.34	0.68	1.11	95.18	***	0.1	-0.3	1.52	0.68	1.13	91.7		0.12
Honor: Loss of Sexual Propriety	-0.95	1.55	0.91	1.39	250.7	***	0.23	0.75	1.43	0.89	1.35	0.14		0
Honor: Loss of Integrity	0	0.24	0.03	0.2	0.29		0	0	0.25	0.03	0.2	0.57		0
Perceived-Societal Concerns	<i>n</i> =	472	n =	351				<i>n</i> =	314	n =	375			
Loss of Dignity	-0.09	0.61	0.1	0.7	17.03	***	0.02	-0.3	0.71	0.15	0.67	63.56	***	0.08
Loss of Face	-0.34	0.86	0.18	0.91	53.33	***	0.06	-0.39	0.97	0.21	0.88	52.32	***	0.07
Honor: Loss of Family Reputation	0.05	0.45	0.04	0.48	1.39		0	0.34	0.5	0.01	0.45	81.91	***	0.11
Honor: Loss of Family Authority	-0.01	1.02	0.21	0.94	8.42	**	0.01	0.33	1.26	0.2	0.93	0.73		0
Honor: Loss of Sexual Propriety	-0.46	1.22	0.55	1.35	75.22	***	0.08	0.62	1.24	0.49	1.31	9.69	**	0.01
Honor: Loss of Integrity	-0.13	0.5	0.1	0.51	35.93	***	0.04	-0.26	0.58	0.11	0.49	64.59	***	0.09

# Table S4 Descriptive Statistics and ANCOVA Results for All Comparisons across All Cultural Values and Concerns

	Italian	Sample	Spanish	Sample				Muslim I	Lebanese	Egyptiar	n Sample			
	М	SD	М	SD	F		ηp2	М	SD	М	SD	F		ηp2
Values														
Personal Endorsement	n =	246	n =	239				n =	140	n =	177			
Dignity	-0.02	0.26	0.07	0.26	20.11	***	0.04	0.06	0.23	0.04	0.16	0.46		0
Face	0.17	0.48	-0.08	0.56	27.89	***	0.05	0.24	0.48	0.39	0.43	8.12	**	0.03
Honor: Self-Promotion & Retaliation	-0.1	0.56	-0.24	0.61	7.61	**	0.02	-0.03	0.77	0.64	0.49	88.87	***	0.22
Honor: Defense of Family Reputation	0.2	0.98	-0.61	1.24	64.51	***	0.12	0.37	1.2	1.12	0.63	51.16	***	0.14
Perceived-Societal Endorsement	<i>n</i> =	246	n =	239				n =	138	n =	168			
Dignity	0.2	0.72	0.16	0.68	0.17		0	-0.47	0.93	-0.24	0.82	5.97	*	0.02
Face	0.16	0.79	-0.11	0.67	15.23	***	0.03	-0.2	0.83	-0.21	0.81	0		0
Honor: Self-Promotion & Retaliation	-0.36	1.02	-0.01	0.78	17.17	***	0.03	0.52	0.97	0.52	0.79	0.04		0
Honor: Defense of Family Reputation	-0.06	0.7	-0.21	0.76	4.83	*	0.01	0.54	0.74	0.56	0.57	0.03		0
Concerns														
Personal Concerns	n =	246	n =	239				n =	140	n =	178			
Loss of Dignity	0.01	0.55	0.24	0.49	22.61	***	0.04	0.05	0.45	-0.16	0.4	19.46	***	0.06
Loss of Face	-0.2	0.56	-0.03	0.49	15.31	***	0.03	-0.01	0.55	0.03	0.49	0.68		0
Honor: Loss of Family Reputation	0.01	0.74	-0.86	0.74	165.2	***	0.26	0.12	0.75	0.47	0.48	26.22	***	0.08
Honor: Loss of Family Authority	0.05	1.19	-0.55	1.15	32.19	***	0.06	0.3	1.46	-0.77	1.39	44.19	***	0.12
Honor: Loss of Sexual Propriety	-0.25	1.69	-1.78	1.47	108.8	***	0.18	0.35	1.64	1.08	1.15	25.64	***	0.08
Honor: Loss of Integrity	-0.05	0.26	0.03	0.21	14.19	***	0.03	-0.02	0.27	0.01	0.23	0.89		0
Perceived-Societal Concerns	<i>n</i> =	246	n =	239				n =	140	n =	174			
Loss of Dignity	0.26	0.76	0.07	0.72	7.96	*	0.02	-0.3	0.68	-0.3	0.74	0		0
Loss of Face	0.37	0.99	-0.18	0.92	38.83	***	0.08	-0.42	0.93	-0.36	1.01	0.46		0
Honor: Loss of Family Reputation	-0.34	0.6	-0.11	0.56	18.52	***	0.04	0.33	0.48	0.34	0.51	0.03		0
Honor: Loss of Family Authority	-0.36	1.04	0.01	1.02	14.71	***	0.03	0.59	0.93	0.13	1.44	10.98	**	0.03
Honor: Loss of Sexual Propriety	-0.54	1.28	-0.66	1.4	0.69		0	0.59	1.21	0.64	1.27	0.29		0
Honor: Loss of Integrity	0.27	0.59	-0.09	0.54	46.5	***	0.09	-0.3	0.55	-0.23	0.61	1.15		0

## Table S4 (continued)

	Greek	Sample		Cypriot nple					Cypriot 1ple		Cypriot nple			
	М	SD	М	SD	F		ηp2	М	SD	М	SD	F		ηp2
Values														
Personal Endorsement	n =	471	n =	314				n =	314	n =	125			
Dignity	0.1	0.22	0.08	0.2	4.5	*	0.01	0.08	0.2	-0.01	0.23	17.61	***	0.04
Face	-0.4	0.54	-0.05	0.5	87.86	***	0.1	-0.05	0.5	0.2	0.51	20.08	***	0.04
Honor: Self-Promotion & Retaliation	-0.12	0.62	-0.05	0.64	6.81	**	0.01	-0.05	0.64	0.14	0.65	8.18	**	0.02
Honor: Defense of Family Reputation	-0.55	1.17	0.01	1.08	49.99	* * *	0.06	0.01	1.08	0.19	1.17	2.51		0.01
Perceived-Societal Endorsement	<i>n</i> =	470	n =	310				n =	310	n =	124			
Dignity	0.04	0.73	0.2	0.67	8	**	0.01	0.2	0.67	-0.03	0.73	10.76	**	0.02
Face	-0.21	0.64	-0.05	0.63	9.71	**	0.01	-0.05	0.63	0.15	0.61	7.54	**	0.02
Honor: Self-Promotion & Retaliation	0.07	0.81	-0.05	0.74	3.74		0	-0.05	0.74	0.05	0.77	1.34		0
Honor: Defense of Family Reputation	-0.08	0.74	-0.04	0.63	1.53		0	-0.04	0.63	0.11	0.65	3.79		0.01
Concerns														
Personal Concerns	n =	473	n =	316				n =	316	n =	125			
Loss of Dignity	0.12	0.46	0.01	0.37	13.59	***	0.02	0.01	0.37	0.09	0.42	4.07	*	0.01
Loss of Face	-0.21	0.54	0.08	0.48	34.31	***	0.04	0.08	0.48	-0.01	0.49	4.77	*	0.01
Honor: Loss of Family Reputation	-0.24	0.75	0.06	0.64	29.81	***	0.04	0.06	0.64	0.07	0.69	0.03		0
Honor: Loss of Family Authority	-0.22	1.34	0.32	1.29	29.4	***	0.04	0.32	1.29	0.62	1.16	3.39		0.01
Honor: Loss of Sexual Propriety	-0.95	1.55	0.17	1.57	62.28	***	0.07	0.17	1.57	0.16	1.76	0.39		0
Honor: Loss of Integrity	0	0.24	0.03	0.19	1.03		0	0.03	0.19	0	0.22	3.48		0.01
Perceived-Societal Concerns	<i>n</i> =	472	n =	315				n =	315	n =	125			
Loss of Dignity	-0.09	0.61	0.1	0.58	20.77	***	0.03	0.1	0.58	0.2	0.76	1.95		0
Loss of Face	-0.34	0.86	0.02	0.85	25.69	***	0.03	0.02	0.85	0.16	0.98	1.4		0
Honor: Loss of Family Reputation	0.05	0.45	-0.04	0.42	10.88	**	0.01	-0.04	0.42	-0.09	0.56	1.15		0
Honor: Loss of Family Authority	-0.01	1.02	0.04	0.94	0.07		0	0.04	0.94	0.19	0.98	1.93		0
Honor: Loss of Sexual Propriety	-0.46	1.22	-0.09	1.2	5.87	*	0.01	-0.09	1.2	0.04	1.35	0.42		0
Honor: Loss of Integrity	-0.13	0.5	0.01	0.47	15.09	***	0.02	0.01	0.47	0.09	0.55	1.51		0

# Table S4 (continued)

	Catholic	: Sample	Orthodo	x Sample				Turkish	Sample		-Cypriot nple			
	М	SD	М	SD	F		ηp2	М	SD	М	SD	F		ηp2
Values														
Personal Endorsement	n =	177	n =	140				n =	350	n =	125			
Dignity	0.04	0.16	0.06	0.23	0.46		0	-0.07	0.25	-0.01	0.23	7.81	**	0.02
Face	0.39	0.43	0.24	0.48	8.12	**	0.03	0.29	0.46	0.2	0.51	4.19	*	0.01
Honor: Self-Promotion & Retaliation	0.64	0.49	-0.03	0.77	88.87	***	0.22	0.26	0.62	0.14	0.65	3.57		0.01
Honor: Defense of Family Reputation	1.12	0.63	0.37	1.2	51.16	***	0.14	0.53	0.91	0.19	1.17	10.8	**	0.02
Perceived-Societal Endorsement	<i>n</i> =	168	n =	138				n =	348	n =	124			
Dignity	-0.24	0.82	-0.47	0.93	5.97	*	0.02	-0.22	0.82	-0.03	0.73	4.42	*	0.01
Face	-0.21	0.81	-0.2	0.83	0		0	0.14	0.69	0.15	0.61	0.06		0
Honor: Self-Promotion & Retaliation	0.52	0.79	0.52	0.97	0.04		0	0.21	0.74	0.05	0.77	3.46		0.01
Honor: Defense of Family Reputation	0.56	0.57	0.54	0.74	0.03		0	0.32	0.62	0.11	0.65	11.65	**	0.02
Concerns														
Personal Concerns	n =	178	n =	140				n =	351	n =	125			
Loss of Dignity	-0.16	0.4	0.05	0.45	19.46	***	0.06	0.09	0.34	0.09	0.42	0.01		0
Loss of Face	0.03	0.49	-0.01	0.55	0.68		0	0.05	0.46	-0.01	0.49	1.11		0
Honor: Loss of Family Reputation	0.47	0.48	0.12	0.75	26.22	***	0.08	0.32	0.5	0.07	0.69	19.3	***	0.04
Honor: Loss of Family Authority	-0.77	1.39	0.3	1.46	44.19	***	0.12	0.68	1.11	0.62	1.16	0.56		0
Honor: Loss of Sexual Propriety	1.08	1.15	0.35	1.64	25.64	***	0.08	0.91	1.39	0.16	1.76	26.98	***	0.05
Honor: Loss of Integrity	0.01	0.23	-0.02	0.27	0.89		0	0.03	0.2	0	0.22	1.45		0
Perceived-Societal Concerns	<i>n</i> =	174	n =	140				n =	351	n =	125			
Loss of Dignity	-0.3	0.74	-0.3	0.68	0		0	0.1	0.7	0.2	0.76	1.95		0
Loss of Face	-0.36	1.01	-0.42	0.93	0.46		0	0.18	0.91	0.16	0.98	0.09		0
Honor: Loss of Family Reputation	0.34	0.51	0.33	0.48	0.03		0	0.04	0.48	-0.09	0.56	7.4	**	0.02
Honor: Loss of Family Authority	0.13	1.44	0.59	0.93	10.98	**	0.03	0.21	0.94	0.19	0.98	0.22		0
Honor: Loss of Sexual Propriety	0.64	1.27	0.59	1.21	0.29		0	0.55	1.35	0.04	1.35	19.47	***	0.04
Honor: Loss of Integrity	-0.23	0.61	-0.3	0.55	1.15		0	0.1	0.51	0.09	0.55	0.02		0

#### Table S4 (continued)

	Muslims ir	n Lebanon	Christians i	n Lebanon			
	М	SD	М	SD	F		ηp2
Values							
Personal Endorsement	<i>n</i> =	140	n =	80			
Dignity	0.06	0.23	0.09	0.23	0.56		0
Face	0.24	0.48	0.09	0.49	5.11	*	0.02
Honor: Self-Promotion & Retaliation	-0.03	0.77	-0.26	0.66	5.58	*	0.03
Honor: Defense of Family Reputation	0.37	1.2	0.03	1.03	4.12	*	0.02
Perceived-Societal Endorsement	n =	138	n =	80			
Dignity	-0.47	0.93	-0.41	0.92	0.04		0
Face	-0.2	0.83	-0.15	0.73	0.01		0
Honor: Self-Promotion & Retaliation	0.52	0.97	0.44	0.81	0.07		0
Honor: Defense of Family Reputation	0.54	0.74	0.48	0.7	0.11		0
Concerns							
Personal Concerns	<i>n</i> =	140	<i>n</i> =	80			
Loss of Dignity	0.05	0.45	0.06	0.42	0.02		0
Loss of Face	-0.01	0.55	0.06	0.53	0.41		0
Honor: Loss of Family Reputation	0.12	0.75	-0.14	0.65	7.24	**	0.03
Honor: Loss of Family Authority	0.3	1.46	-0.02	1.21	2.21	*	0.01
Honor: Loss of Sexual Propriety	0.35	1.64	-0.12	1.54	6.79		0.03
Honor: Loss of Integrity	-0.02	0.27	-0.02	0.24	0		0
Perceived-Societal Concerns	n =	140	<i>n</i> =	80			
Loss of Dignity	-0.3	0.68	-0.42	0.67	2.78		0.01
Loss of Face	-0.42	0.93	-0.54	0.84	1.89		0.01
Honor: Loss of Family Reputation	0.33	0.48	0.39	0.47	1.43		0.01
Honor: Loss of Family Authority	0.59	0.93	0.38	1.11	0.98		0
Honor: Loss of Sexual Propriety	0.59	1.21	0.51	1.24	0.28		0
Honor: Loss of Integrity	-0.3	0.55	-0.36	0.5	1.53		0.01

*Note.* Arab Muslim = Muslim from Egypt and Lebanon, Non-Arab Muslim = Muslims from Turkey and Turkish Cypriot Community, Orthodox = Christians from Greece and Greek Cypriot Community, Catholic = Christians from Italy and Spain. \*p < .05. \*\*p < .01. \*\*\*p < .001. The figures reflect the Sidak adjustment used in conducting the multiple comparisons. The bold effect size indicates the highest effect size reported in this table.

Comparison between Pairs of Cultural Groups: Self-construal

Groups	n	# of sign. differences	Hedges' g	SE	p	95%-CI	PCR
Greek vs. Turkish Samples	830	6/8	.29	.06	<.001	[.17, .41]	88.44
Arab- vs. non-Arab Muslim Samples	703	7/8	.43	.10	< .001	[.23, .64]	82.90
Italian vs. Spanish Samples	487	5/8	.21	.05	< .001	[.11, .31]	91.71
Muslim Lebanese vs. Egyptian Samples	466	4/8	.22	.06	< .001	[.10, .33]	91.44
Greek vs. Greek Cypriot Samples	796	3/8	.14	.04	< .001	[.07, .21]	94.52
Greek Cypriot vs. Turkish Cypriot Samples	442	4/8	.24	.07	< .001	[.11, .37]	90.30
Catholic vs. Orthodox Samples	1,280	6/8	.22	.08	< .001	[.12, .32]	91.38
Turkish vs. Turkish Cypriot Samples	478	1/8	.11	.03	.001	[.04, .18]	95.63
Lebanese Christians vs. Lebanese Muslims	223	1/8	.13	.05	< .001	[.04, .23]	94.73

Comparison between Pairs of Cultural Groups: Cognitive style

Groups	n	# of sign. differences	Hedges' g	SE	p	95%-CI	PCR
Greek vs. Turkish Samples	830	4/4	.40	.11	<.001	[.18, .62]	84.06
Arab- vs. non-Arab Muslim Samples	703	4/4	.51	.18	.003	[.17, .86]	79.70
Italian vs. Spanish Samples	487	2/4	.17	.07	.009	[.04, .30]	93.27
Muslim Lebanese vs. Egyptian Samples	466	2/3	.71	.54	.190	[35, 1.76]	72.45
Greek vs. Greek Cypriot Samples	796	2/4	.16	.04	< .001	[.09, .23]	93.52
Greek Cypriot vs. Turkish Cypriot Samples	442	4/4	.37	.05	< .001	[.27, .46]	85.40
Catholic vs. Orthodox Samples	1,280	2/4	.16	.06	.009	[.04, .29]	93.47
Turkish vs. Turkish Cypriot Samples	478	0/4	.12	.05	.007	[.03, .21]	95.11
Lebanese Christians vs. Lebanese Muslims	223	1/4	.19	.07	.005	[.06, .32]	92.54

Note. Hedges' g: Overall meta-analytically derived mean effect size, SE: standard error, PCR: Percentage of common responses which expresses overlap or similarities between two groups (Hanel et al., 2019; Inman & Bradley, 1989). Comparisons are listed in ascending order using overall ES and PCR figures. The Inclusion of Contextual Information task was not presented to Egyptian participants.

Comparison between Pairs of Cultural Groups: Social orientation

Groups	n	# of sign. differences	Hedges' g	SE	p	95%-CI	PCR
Greek vs. Turkish Samples	830	5/6	.27	.06	<.001	[.14, .39]	89.42
Arab- vs. non-Arab Muslim Samples	703	3/6	.16	.06	.005	[.05, .27]	93.53
Italian vs. Spanish Samples	487	2/6	.13	.06	.039	[.007, .26]	94.69
Muslim Lebanese vs. Egyptian Samples	466	0/6	.08	.04	.039	[.00, .15]	96.89
Greek vs. Greek Cypriot Samples	796	2/6	.12	.06	.044	[.00, .25]	95.05
Greek Cypriot vs. Turkish Cypriot Samples	442	1/6	.15	.04	<.001	[.07, .22]	94.09
Catholic vs. Orthodox Samples	1,280	1/6	.09	.02	<.001	[.04, .13]	96.59
Turkish vs. Turkish Cypriot Samples	478	0/6	.06	.04	.106	[01, .13]	97.59
Lebanese Christians vs. Lebanese Muslims	223	2/6	.15	.05	.007	[.04, .26]	94.11

Comparison between Pairs of Cultural Groups: Personal Values

Groups	n	# of sign. differences	Hedges' g	SE	p	95%-CI	PCR
Greek vs. Turkish Samples	830	4/4	.93	.16	<.001	[.61, 1.25]	64.17
Arab- vs. non-Arab Muslim Samples	703	2/4	.24	.10	.017	[.04, .43]	90.49
Italian vs. Spanish Samples	487	4/4	.46	.10	<.001	[.25, .66]	81.97
Muslim Lebanese vs. Egyptian Samples	466	3/4	.64	.20	.002	[.24, 1.03]	75.04
Greek vs. Greek Cypriot Samples	796	1/4	.33	.14	.019	[.05, .60]	86.96
Greek Cypriot vs. Turkish Cypriot Samples	442	3/4	.34	.07	<.001	[.20, .48]	86.48
Catholic vs. Orthodox Samples	1,280	4/4	.28	.11	.009	[.07, .48]	89.03
Turkish vs. Turkish Cypriot Samples	478	3/4	.26	.05	<.001	[.17, .35]	89.63
Lebanese Christians vs. Lebanese Muslims	223	3/4	.28	.07	<.001	[.15, .41]	88.97

## Comparison between Pairs of Cultural Groups: Perceived Societal Values

Groups	n	# of sign. differences	Hedges' g	SE	p	95%-CI	PCR
Greek vs. Turkish Samples	830	4/4	.40	.09	<.001	[.23, .58]	84.04
Arab- vs. non-Arab Muslim Samples	703	4/4	.40	.04	<.001	[.31, .49]	84.21
Italian vs. Spanish Samples	487	4/4	.25	.08	<.002	[.09, .40]	90.21
Muslim Lebanese vs. Egyptian Samples	466	1/4	.10	.06	.107	[02, .22]	96.07
Greek vs. Greek Cypriot Samples	796	1/4	.17	.04	<.001	[.09, .25]	93.37
Greek Cypriot vs. Turkish Cypriot Samples	442	3/4	.25	.05	<.001	[.15, .35]	90.19
Catholic vs. Orthodox Samples	1,280	3/4	.18	.04	<.001	[.10, .26]	92.98
Turkish vs. Turkish Cypriot Samples	478	2/4	.20	.07	.002	[.08, .33]	91.85
Lebanese Christians vs. Lebanese Muslims	223	0/4	.07	.07	.310	[06, .20]	97.29

## Comparison between Pairs of Cultural Groups: Personal concerns

Groups	n	# of sign. differences	Hedges' g	SE	p	95%-CI	PCR
Greek vs. Turkish Samples	830	4/6	.58	.19	.002	[.22, .95]	77.10
Arab- vs. non-Arab Muslim Samples	703	2/6	.23	.11	.032	[.02, .44]	90.86
Italian vs. Spanish Samples	487	6/6	.62	.14	<.001	[.34, .91]	75.50
Muslim Lebanese vs. Egyptian Samples	466	4/6	.45	.12	<.001	[.22, .68]	82.31
Greek vs. Greek Cypriot Samples	796	5/6	.41	.08	<.001	[.25, .57]	83.79
Greek Cypriot vs. Turkish Cypriot Samples	442	2/6	.15	.04	<.001	[.06, .23]	94.19
Catholic vs. Orthodox Samples	1,280	4/6	.19	.05	<.001	[.09, .29]	92.39
Turkish vs. Turkish Cypriot Samples	478	2/6	.22	.08	.008	[.06, .39]	91.14
Lebanese Christians vs. Lebanese Muslims	223	1/6	.17	.06	.004	[.06, .29]	93.11

## Comparison between Pairs of Cultural Groups: Perceived societal concerns

Groups	n	# of sign. differences	Hedges' g	SE	p	95%-CI	PCR
Greek vs. Turkish Samples	830	5/6	.39	.11	<.001	[.17, .62]	84.40
Arab- vs. non-Arab Muslim Samples	703	5/6	.47	.12	<.001	[.25, .70]	81.37
Italian vs. Spanish Samples	487	5/6	.38	.08	<.001	[.23, .54]	84.88
Muslim Lebanese vs. Egyptian Samples	466	1/6	.16	.04	<.001	[.08, .25]	93.58
Greek vs. Greek Cypriot Samples	796	5/6	.26	.05	<.001	[.16, .36]	89.58
Greek Cypriot vs. Turkish Cypriot Samples	442	0/6	.14	.04	<.001	[.06, .22]	94.42
Catholic vs. Orthodox Samples	1,280	6/6	.30	.04	<.001	[.21, .38]	88.26
Turkish vs. Turkish Cypriot Samples	478	2/6	.14	.06	.018	[.03, .26]	94.27
Lebanese Christians vs. Lebanese Muslims	223	0/6	.14	.05	.010	[.03, .25]	94.36

## Table S12a

Heatmap of Variability in Dignity, Face, and Honor Values

		Personally En	dorsed Values		Perceived Normative Values					
<u>Honor</u> Values	Dignity	Face	Self- Promotion & Retaliation	Defense of Family Reputation	Dignity	Face	Self- Promotion & Retaliation	Defense of Family Reputation		
Greek sample	0.22	0.54	0.62	1.17	0.73	0.64	0.81	0.74		
Turkish sample	0.25	0.46	0.62	0.91	0.82	0.69	0.74	0.62		
Arab-Muslim sample	0.19	0.45	0.71	1.00	0.88	0.82	0.87	0.65		
Non-Arab Muslim sample	0.23	0.46	0.62	0.93	0.76	0.67	0.74	0.62		
Italian sample	0.26	0.48	0.56	0.98	0.72	0.79	1.02	0.70		
Spanish sample	0.26	0.56	0.61	1.24	0.68	0.67	0.78	0.76		
Lebanese Muslim sample	0.23	0.48	0.77	1.20	0.93	0.83	0.97	0.74		
Egyptian Muslim sample	0.16	0.43	0.49	0.63	0.82	0.81	0.79	0.57		
Greek Cypriot sample	0.20	0.50	0.64	1.08	0.67	0.63	0.74	0.63		
Turkish Cypriot sample	0.23	0.51	0.65	1.17	0.73	0.61	0.77	0.65		
Catholic sample	0.16	0.43	0.49	0.63	0.82	0.81	0.79	0.57		
Orthodox sample	0.23	0.48	0.77	1.20	0.93	0.83	0.97	0.74		
Lebanese Christian sample	0.23	0.49	0.66	1.03	0.92	0.73	0.81	0.70		

## Table S12b

Heatmap of Variability in Dignity, Face, and Honor Concerns

		Personal Concerns					Perceived Normative Concerns					
<u>Honor</u> <u>Concerns</u>	Loss of Dignity	Loss of Face	Loss of Family Reputation	Loss of Family Authority	Loss of Sexual Propriety	Loss of Integrity	Loss of Dignity	Loss of Face	Loss of Family Reputation	Loss of Family Authority	Loss of Sexual Propriety	Loss of Integrity
Greek sample	0.46	0.54	0.75	1.34	1.55	0.24	0.61	0.86	0.45	1.02	1.22	0.50
Turkish sample	0.34	0.46	0.50	1.11	1.39	0.20	0.70	0.91	0.48	0.94	1.35	0.51
Arab-Muslim sample	0.43	0.52	0.64	1.52	1.43	0.25	0.71	0.97	0.50	1.26	1.24	0.58
Non-Arab Muslim sample	0.34	0.45	0.47	1.13	1.35	0.20	0.67	0.88	0.45	0.93	1.31	0.49
Italian sample	0.55	0.56	0.74	1.19	1.69	0.26	0.76	0.99	0.60	1.04	1.28	0.59
Spanish sample	0.49	0.49	0.74	1.15	1.47	0.21	0.72	0.92	0.56	1.02	1.40	0.54
Lebanese Muslim sample	0.45	0.55	0.75	1.46	1.64	0.27	0.68	0.93	0.48	0.93	1.21	0.55
Egyptian Muslim sample	0.40	0.49	0.48	1.39	1.15	0.23	0.74	1.01	0.51	1.44	1.27	0.61
Greek Cypriot sample	0.37	0.48	0.64	1.29	1.57	0.19	0.58	0.85	0.42	0.94	1.20	0.47
Turkish Cypriot sample	0.42	0.49	0.69	1.16	1.76	0.22	0.76	0.98	0.56	0.98	1.35	0.55
Catholic sample	0.40	0.49	0.48	1.39	1.15	0.23	0.74	1.01	0.51	1.44	1.27	0.61
Orthodox sample	0.45	0.55	0.75	1.46	1.64	0.27	0.68	0.93	0.48	0.93	1.21	0.55
Lebanese Christian sample	0.42	0.53	0.65	1.21	1.54	0.24	0.67	0.84	0.47	1.11	1.24	0.50

## Table S12c

Heatmap of Variability in Self-Construal Measures

Self-Construal Measures	Difference vs. Similarity	Containment vs. Connection	Self-Direction vs. Receptiveness to Influence	Self-Reliance vs. Dependence	Consistency vs. Variability	Self- Expression vs. Harmony	Self-Interest vs. Commitment to Others	De-Contextualized Self vs. Contextualized Self
Greek sample	1.28	1.30	1.31	1.48	1.56	1.45	1.26	1.30
Turkish sample	1.27	1.31	1.34	1.43	1.72	1.34	1.40	1.28
Arab-Muslim sample	1.40	1.33	1.30	1.52	1.90	1.60	1.55	1.76
Non-Arab Muslim sample	1.33	1.27	1.39	1.43	1.72	1.36	1.37	1.27
Italian sample	1.38	1.40	1.43	1.38	1.82	1.56	1.35	1.62
Spanish sample	1.25	1.56	1.20	1.41	1.89	1.55	1.46	1.73
Lebanese Muslim sample	1.50	1.50	1.33	1.60	1.88	1.50	1.44	1.68
Egyptian Muslim sample	1.38	1.19	1.30	1.40	1.90	1.67	1.66	1.80
Greek Cypriot sample	1.33	1.31	1.33	1.57	1.62	1.48	1.36	1.56
Turkish Cypriot sample	1.41	1.34	1.40	1.38	1.57	1.34	1.34	1.42
Catholic sample	1.32	1.50	1.32	1.43	1.85	1.57	1.41	1.69
Orthodox sample	1.30	1.32	1.32	1.52	1.59	1.46	1.30	1.42
Lebanese Christian sample	1.37	1.32	1.43	1.84	1.72	1.44	1.50	1.36

## Table S12d

Heatmap of Variability in Social Orientation Measures

Social Orientation Measures	Engaging Emotion Bias	Social Happiness Bias	Self-Inflation	Ingroup Closeness Bias	Loyalty	Nepotism
Greek sample	0.74	0.75	2.26	1.20	2.65	3.45
Turkish sample	0.74	0.74	1.26	1.20	2.82	3.86
Arab-Muslim sample	0.65	0.70	1.26	1.26	5.06	5.06
Non-Arab Muslim sample	0.76	0.72	1.33	1.20	5.27	5.27
Italian sample	0.70	0.70	1.08	1.14	3.99	3.99
Spanish sample	0.69	0.69	1.08	1.01	2.57	2.57
Lebanese Muslim sample	0.58	0.69	1.04	1.24	2.69	2.69
Egyptian Muslim sample	0.71	0.76	1.38	1.31	2.64	2.64
Greek Cypriot sample	0.82	0.88	1.43	1.17	4.90	2.54
Turkish Cypriot sample	0.71	0.69	1.21	1.08	4.79	2.86
Catholic sample	0.69	0.69	1.08	1.08	4.99	3.38
Orthodox sample	0.77	0.80	1.97	1.21	5.06	2.61
Lebanese Christian sample	0.67	0.81	1.11	1.00	5.01	2.63

## Table S12e

Heatmap of Variability in Cognitive Style Measures

Cognitive Style Measures	Situational Attribution Bias	Categorization	Exclusion	Memory Perspective
Greek sample	1.07	0.31	3.94	2.10
Turkish sample	1.31	0.21	3.39	1.90
Arab-Muslim sample	1.25	0.25	3.91	2.30
Non-Arab Muslim sample	1.30	0.22	3.37	1.85
Italian sample	1.22	0.26	3.91	1.92
Spanish sample	1.44	0.30	3.79	1.94
Muslim Lebanese sample	1.35	0.21	3.91	1.88
Egyptian Muslim sample	1.19	0.13		2.57
Greek Cypriot sample	1.10	0.28	4.13	2.27
Turkish Cypriot sample	1.13	0.25	3.73	1.71
Catholic sample	1.33	0.28	3.89	1.93
Orthodox sample	1.09	0.30	4.03	2.17
Lebanese Christian sample	1.17	0.25	3.91	1.88

Note: *SD*s increase in size as color move from yellow to green. The exclusion task was not presented to Egyptian participants due to the potentially offensive nature of some of its items (given their reference to sexual relationships).

Intraclass correlations (ICC[1]) across all countries, separately for each of the 38 dependent variables

	Variable	ICC(1)
Self-construal	Similarity (vs. Difference)	.01
Self-construal	Connection (vs. Containment)	.04
Self-construal	Receptiveness to Influence (vs. Self-Direction)	.01
Self-construal	Dependence (vs. Self-Reliance)	.11
Self-construal	Variability (vs. Consistency)	.07
Self-construal	Harmony (vs. Self-Expression)	.07
Self-construal	Commitment to others (vs. Self-Interest)	.03
Self-construal	Contextualized Self (vs. De-Contextualized Self)	.05
Cognitive style	Causal Situational attribution	.02
Cognitive style	Inclusion of contextual information	.03
Cognitive style	Thematic categorization bias	.17
Cognitive style	Third-person perspective taking	.03
Social Orientation	Intensity of engaging emotions	.04
Social Orientation	Predictors of happiness	.01
Social Orientation	Symbolic self-inflation	.01
Social Orientation	Ingroup closeness bias	.04
Social Orientation	Nepotism (reward)	.01
Social Orientation	Nepotism (punishment)	.01
Values	Dignity (own)	.08
Values	Face (own)	.24
Values	Honor: Self-Promotion & Retaliation (own)	.20
Values	Honor: Defense of Family Reputation (own)	.14
Values	Dignity (perceived)	.09
Values	Face (perceived)	.05
Values	Honor: Self-Promotion & Retaliation (perceived)	.14
Values	Honor: Defense of Family Reputation (perceived)	.09
Personal concerns	Loss of Dignity (PC)	.05
Personal concerns	Loss of Face (PC)	.05
Personal concerns	Honor: Loss of Family Reputation (PC)	.24
Personal concerns	Honor: Loss of Sexual Propriety (PC)	.27
Personal concerns	Honor: Loss of Family Authority (PC)	.12
Personal concerns	Honor: Loss of Integrity (PC)	.01
Perceived-societal concerns	Loss of Dignity (PSC)	.08
Perceived-societal concerns	Loss of Face (PSC)	.09
Perceived-societal concerns	Honor: Loss of Family Reputation (PSC)	.15
Perceived-societal concerns	Honor: Loss of Sexual Propriety (PSC)	.15
Perceived-societal concerns	Honor: Loss of Family Authority (PSC)	.05
Perceived-societal concerns	Honor: Loss of Integrity (PSC)	.10

# Study Limitations

Study samples were drawn from student populations, which raises the question whether t
representative samples drawn from the countries included here. However, while student s
outcome measures compared to more representative samples (e.g., Petersen & Merunka,
similar in terms of their variability across numerous countries and variables (Hanel & Vione
Our analysis does not allow us to capture all possible similarities between the groups inclu
possible factors on which they differ or not and that may account for the observed similari
not permit us to identify which exact features of these shared socio-ecologies might drive
to similar educational or political systems).
Our study was limited to set of variables used in an existing dataset (Uskul et al., 2023) and
differences in a large battery of variables including four indicators of social orientation, eig
four indicators of cognitive style, and personal and perceived normative honor, face, and c
is a larger coverage of variables than many existing studies in the field, it still falls short of
examined domains such as attitudes and opinions.
Our data originates from one particular world region (i.e., the Mediterranean) and thus we
current findings generalize to other world regions. Note, however, that this contained focu
were comparing groups from subregions that were found to be more similar to each other
interdependent make-up of their social orientation, self-construal, and cognitive style thar
Anglo-Western regions, making comparisons between groups in this region more conserva