In-Law Preferences in China and in Cyprus: Differences and Similarities

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Abstract
Across different times and cultures, parents exercise considerable influence over their children’s mate choices. When they do so, parents are looking for specific traits in a prospective daughter- and son-in-law. Using a sample of 674 parents, the current research investigated in-law preferences in China. Participants rated 88 different traits, which were clustered in 10 different preference domains. In-law preferences were found to be contingent on the sex of the in-law and the sex of the parent. The data from the current study were compared with data from a different study which took place in the Republic of Cyprus. It was found that preferences varied in the two samples, but specific cultural differences were identified. It was also found that for both samples, the 10 different domains clustered in two supra-domains. The first supra-domain, where personality traits clustered, was preferred more by both Chinese and Greek-Cypriot parents than the second domain, where the rest of the traits clustered.

Keywords
in-law preferences, parental choice, mate choice, sex differences, personality

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Across different times and cultures, parents have been exercising considerable influence over their children’s mate choices. In preindustrial societies, it is usually the case that parents choose directly spouses for their children through the institution of arranged marriage (Broude & Green, 1983; Coonz, 2006), while in postindustrial societies, they influence mate choice indirectly through using manipulation (Apostolou, 2013; Apostolou & Papageorgi, 2014; Sussman, 1953). To guide their in-law choices, parents have well-defined in-law preferences (Apostolou, 2007a). These preferences have been examined in Western postindustrial societies (Apostolou, 2015b) as well as in preindustrial societies (Apostolou, 2010a), but there is limited if any research in non-Western postindustrial societies. Accordingly, the first goal of the current study is to examine in-law preferences in the Chinese culture. Moreover, in-law preferences are not rigid mechanisms, but adaptable to the prevailing ecological conditions, which means that cross-cultural variation is expected (Apostolou, 2014b). Thus, the second goal of the current study is to examine variation in in-law preferences between the Chinese and the Greek-Cypriot culture. We will start by discussing the evolutionary logic of in-law preferences.

In-Law Preferences
Evidence from anthropological studies on contemporary preindustrial societies indicates that parents exercise strong control over their children’s mate choices (Broude & Green, 1983; Stephens, 1963). In particular, in preindustrial societies which base their subsistence on hunting and gathering, the most common mode of long-term mating is arranged marriage, where parents choose spouses for their children (Apostolou, 2007b). This is also the case in preindustrial societies that base their subsistence on agriculture and animal husbandry (Apostolou, 2010b). It is likely that the typical patterns of mating in contemporary preindustrial societies have also been typical in ancestral preindustrial societies (Apostolou, 2014b; Ember, 1978). This argument is consistent with historical evidence.

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which indicates that in historical preindustrial societies, arranged marriage was the typical mode of long-term mating (Apostolou, 2012). It is also supported by evidence from phylogenetic studies which attempt to reconstruct the ancestral human condition (Walker, Hill, Flinn, & Ellsworth, 2011).

Accordingly, there are good reasons to believe that during most of human evolutionary time, parents have been facing the evolutionary problem of choosing beneficial in-laws, that is to say, to screen prospective daughters- and sons-in-law for those who had the most beneficial traits. This problem translated into exercising selection pressure that would favor mechanisms that enabled parents to perform this screening. Such mechanisms are in-law preferences: Parents would tend to find fitness-increasing traits (i.e., traits that would make a positive contribution to the surviving and reproductive success of parents and their genetic relatives) desirable and fitness-decreasing traits undesirable (Apostolou, 2007a).

One study examined in-law preferences in 67 preindustrial societies and identified 13 traits, such as “Good character” and “Good family background,” that parents found desirable in prospective daughters- and sons-in-law (Apostolou, 2010a; see also Koster, 2011). Some traits were reported as important more frequently than others, suggesting that parents had a hierarchy of importance in their in-law preferences.

In postindustrial societies, studies in the United Kingdom and the United States found that parents had a well-defined hierarchy of in-law preferences (Apostolou, 2007a; Perilloux, Fleischman, & Buss, 2011). However, these studies employed instruments that were originally developed to study mate preferences and, thus, could not capture the full range of in-law preferences. To address this limitation, one study administered an open-ended questionnaire in a sample of Greek-Cypriot families and identified 86 desirable traits (Apostolou, 2011). On the basis of anthropological evidence, a subsequent study added two more traits in this list and asked a sample of Greek-Cypriot parents to indicate how desirable they considered each of the 88 traits separately in a prospective son-in-law and in a prospective daughter-in-law (Apostolou, 2014a). Principal components analysis found 11 trait domains for a daughter-in-law and a son-in-law.

A larger scale study employed a large sample of Greek-Cypriot parents who were asked to rate how desirable they would consider the 88 traits in a prospective spouse for their children (Apostolou, 2015b). Principal components analysis revealed 10 in-law preferences domains. This research needs to be extended, however, because there are only two studies that have attempted to examine the structure of in-law preferences, and additional replication is needed. Also, to our knowledge, there is no study that has attempted to examine the structure of in-law preferences in non-Western postindustrial societies.

Contingencies

Daughters-in-law versus sons-in-law. Men and women differ in their capacities and in the social goals ascribed to them (Whyte, 1978). For instance, women face menopause, and as a consequence, their reproductive value declines more sharply than men’s with age (Buss, 2017). To use another example, across different societies, wealth is controlled predominantly by men (Whyte, 1978). Such differences suggest that it would pay for parents to differentiate their preferences depending on the sex of the in-law. In these examples, it would be beneficial for parents to ascribe more value to youth in a daughter-in-law than in a son-in-law and more value to wealth in a son-in-law than in a daughter-in-law. In this way, parents would divert their limited resources in getting daughters-in-law who are young and more likely to give them grandchildren and sons-in-law who control resources and can assist them in their survival and reproductive effort. Overall, certain traits make different contributions to the fitness of parents depending on whether they are found in a daughter-in-law or in a son-in-law. These differences translate into selection pressures to be exercised making in-law preferences contingent to the sex of the prospective in-law (Apostolou, 2007a, 2014b).

Empirical evidence is consistent with this prediction. In preindustrial societies, traits such as “Good economic prospects” and “Wealthy” were reported as important significantly more frequently in a son-in-law than in a daughter-in-law (Apostolou, 2010a). On the other hand, “Chastity” was reported significantly more often in a daughter-in-law than in a son-in-law. Studies in postindustrial societies found that traits such as wealth and a good social standing were preferred more in a son-in-law than in a daughter-in-law, while traits such as good looks and good housekeeping abilities were preferred more in a daughter-in-law than in a son-in-law (Apostolou, 2007a, 2014b).

Mothers versus fathers. Certain traits in a prospective in-law are likely to give different fitness benefits to fathers and mothers. For example, due to internal gestation, women are more certain than men that their children are actually their own (Buss, 2000). Accordingly, if a prospective in-law harms their children and grandchildren, the fitness cost would be potentially higher for mothers than for fathers, as the former are more certain that their children and grandchildren are actually their own (Apostolou, 2015a, 2016b). Thus, traits such as kindness and emotional stability, which predict how well a prospective in-law will treat their children, could be more fitness increasing for mothers than for fathers. In this respect, selection pressures may have resulted in in-law preferences diverging depending on the sex of the in-law. However, since most of the traits in a prospective in-law are expected to give the same benefits to both parents, mothers’ and fathers’ preferences are predicted to overlap considerably (Apostolou, 2007a).

Most studies in postindustrial societies found almost a complete overlap in preferences between mothers and fathers (Apostolou, 2007a; Perilloux et al., 2011). One study, however, found that “From a wealthy family” and “Wealthy” traits were preferred more by fathers than by mothers, while mothers valued kindness in a prospective son-in-law more than in a prospective daughter-in-law (Apostolou, 2016a). Thus, additional studies are required in order to examine the degree that mothers’ and fathers’ preferences overlap.
Cultural variation. The prevailing evolutionary conditions affect the importance of traits in an in-law. For instance, if in a given context there is very limited surplus wealth, the wealth an individual possesses is of little relevance to parents. In a different society, where much surplus wealth is produced and is unequally distributed, the wealth an individual possesses is of much higher importance to parents. The ecological conditions that parents found themselves into during human evolutionary time were, most likely, not static which means that the fitness contribution of different traits would vary. For instance, a period of plague would increase considerably the fitness value of being healthy in an in-law, while following the end of the plague, its fitness value would decrease. In the same vein, in a period of war, the fitness value of traits such as physical strength would increase and the same value would decrease following a period of peace.

Consequently, it would not be optimal for parents to have evolved rigid in-law preferences, that is, to prefer specific traits irrespectively of the prevailing conditions. It would be more optimal for parents to have evolved dispositions that would enable them to prefer fitness-increasing traits in a prospective in-law, but these preferences would be flexible and adjustable to local conditions. This being the case, parents would share a similar structure of in-law preferences across different cultures—they would prefer the same basic traits, but the weights they ascribe to each trait would differ.

One study examined differences in preference between preindustrial societies of different subsistence types (Apostolou, 2010a). Comparison between societies which based their subsistence on hunting and gathering with societies that based their subsistence on agriculture and animal husbandry indicated that being wealthy and coming from a good family background were reported more frequently as important in the latter than in the former. To our knowledge, there has not been any study that attempted to examine cross-cultural variation among postindustrial societies.

Overall, although our understanding of in-law preferences has increased considerably over the last years, there are considerable gaps in the literature. To begin with, in-law preferences have not being investigated in non-Western postindustrial societies. In addition, there has been only one attempt to examine the structure of in-law preferences, and additional replication is needed. Last but not least, there has not been any attempt to examine variation in in-law preferences across different postindustrial societies. The current article contributes in closing the gap to our knowledge by examining in-law preferences in China and comparing these findings with the findings of a different study on in-law preferences in the Republic of Cyprus.

More specifically, on the basis of the evolutionary framework developed above, we can make the following predictions: (a) Chinese parents would have a well-defined hierarchy of in-law preferences; (b) these preferences would be contingent on the sex of the in-law; (c) Chinese fathers and mothers would have largely overlapping in-law preferences, but there would be specific differences; and (d) the structure of Chinese and Greek-Cypriot in-law preferences would be similar, but there would be differences, reflecting predominantly ecological differences between the two cultural settings.

Method

Participants

The participants of the study completed an online survey. More specifically, we recruited students registered in courses in psychology in a Chinese university, who contacted their parents about taking part in a research on mate and in-law choice. Parents who agreed to participate were forwarded the link of the study. To distinguish between couples, each family was ascribed a number, and participants would enter this number when answering the survey.

Each participant received a certain payment after completing the survey (i.e., 3.0 ¥,yuán). Overall, 674 Chinese parents took part in this research (345 women, 329 men). The mean age of mothers was 46.57 (SD = 3.99, range = 32), and the mean age of fathers was 48.50 (SD = 4.19, range = 38). All parents had only one child. The male children had a mean age of 21.78 (SD = 3.28, range = 18). The female children had a mean age of 20.11 (SD = 2.13, range = 17).

Moreover, 13.2% of the participants lived in a rural area, 25.5% lived in a small town, and 61.3% lived in an urban area. With respect to education, 11.0% of participants had completed secondary school, 28.6% graduated from a high school, 51.6% had a bachelor degree, and 8.8% had a postgraduate degree. Finally, all of the participants were married.

Materials

The survey had two parts. In the first part, participants were asked to fill their demographic information (such as sex, age, educational level, marital status, and sex of child). In the next part, the participants were asked to rate how desirable they considered a set of 88 traits in the prospective child-in-law, using a 4-point Likert-type scale (0 = unimportant, 1 = somewhat important, 2 = important, 3 = indispensable). The 88 traits to measure in-law preferences have been identified by previous research (Apostolou, 2011). Please note that the order of presentation of the 88 traits was randomized across participants.

Results

In order to classify traits in broader preference domains, principal components method for factor extraction and direct oblimin as the rotation method were used. Direct oblimin was chosen because the assumption of noncorrelated preferences was unlikely to hold (Field, 2013). The results suggested a 10-factor solution (eigenvalue > 1), and the Kaiser-Meyer-Olkin (KMO) statistic was .97, indicating a very good sample adequacy. The factors and the respective loadings were presented in Table 1.

The scales produced by this procedure were checked by means of reliability analysis. The internal consistency (Cronbach’s α) ranged from .71 to .94, with a mean of .84.
Table 1. The Extracted Factors and the Respective Factor Loadings.

| Domains                                                                 | Factor Loadings |
|------------------------------------------------------------------------|-----------------|
| 和善，善解人意 (Kind and understanding)                                | .623            |
| 和善 (Kind)                                                            | .592            |
| 善解人意 (Understanding)                                              | .549            |
| 性情好 (Good character)                                               | .539            |
| 举止得体，懂礼数 (Good manners)                                       | .538            |
| 随和，容易相处 (Easygoing)                                            | .464            |
| 通情达理 (Reasonable)                                                | .461            |
| 容易合作 (Cooperative)                                                | .427            |
| 有耐心 (Patient)                                                      | .425            |
| 善于沟通 (Good communication)                                         | .424            |
| 性情悦悦 (Pleasant personality)                                       | .348            |
| 宽宏大量，大度 (Magnanimous)                                         | .343            |
| 待人贴心 (Sweet)                                                     | .339            |
| 淡定 (Calm)                                                            | .338            |
| 为人谦逊 (Modest)                                                    | .334            |
| 有容忍力 (Tolerant)                                                  | .273            |
| 性格成熟 (Mature)                                                    | .268            |
| 情绪稳定 (Emotionally stable)                                        | .264            |
| 容貌 (Good looks)                                                     | .731            |
| 身材好 (Nice body)                                                   | .703            |
| 长相帅气 (handsome)                                                  | .676            |
| 眼睛好看 (Beautiful eyes)                                             | .666            |
| 外貌有魅力 (Charming)                                                | .634            |
| 身材高大 (Tall)                                                       | .470            |
| 体格健硕，爱运动 (Athletic)                                          | .284            |
| 好资源 (Well-off)                                                     | .715            |
| 有钱 (Wealthy)                                                        | .644            |
| 家境富裕 (From a wealthy family)                                     | .572            |
| 社会地位高 (Good social status)                                      | .564            |
| 家庭背景好 (Good family background)                                  | .506            |
| 能赚钱 (Good provider)                                               | .400            |
| 经济独立 (Financially independent)                                   | .391            |
| 有发展前景 (Good economic prospects)                                 | .317            |
| 教育背景好 (Educated)                                                | .150            |
| 善于社交 (Sociable)                                                  | .613            |
| 有决断力 (Determined)                                                | .505            |
| 有个性 (Strong personality)                                          | .331            |
| 有野心 (Ambitious)                                                   | .329            |
| 严谨，认真 (Serious)                                                 | .308            |
| 愿意做事，主动性强 (Spontaneous)                                    | .299            |
| 勤奋，努力 (Industrious)                                             | .273            |
| 聪明 (Intelligent)                                                   | .266            |
| 有活力，精力充沛 (Dynamic)                                          | .246            |
| 目光长远 (Longsighted)                                               | .239            |
| 厨艺好，善于持家 (Good cook–housekeeper)                            | .749            |
| 厨艺好 (Good cook)                                                   | .749            |
| 会做家务 (Good housekeeper)                                          | .749            |
| 爱整洁 (Tidy)                                                        | .302            |
| 相似的宗教和种族背景 (Similar religious and ethnic background)      | .150            |
| 宗教信仰相同 (Same religion)                                         | .810            |
| 有宗教信仰 (Religious)                                               | .718            |
| 政治观点相似 (Similar political beliefs)                            | .570            |
| 国籍相同 (Same nationality)                                          | .515            |
| 门当户对 (From a family of similar social status)                    | .296            |

Table 1. (continued)

| Domains                                                                 | Factor Loadings |
|------------------------------------------------------------------------|-----------------|
| 人格有魅力 (Exciting personality)                                     | −.701           |
| 有好奇心 (Cheerful)                                                  | −.680           |
| 爱笑的 (Smiling)                                                      | −.670           |
| 喜欢逗乐 (Entertaining)                                               | −.655           |
| 有幽默感 (Good sense of humor)                                       | −.435           |
| 性情浪漫 (Romantic)                                                  | −.431           |
| 性格有魅力 (Exciting)                                                | −.412           |
| 乐观 (Lively)                                                        | −.380           |
| 性格外向 (Introverted)                                               | −.348           |
| 有活力 (Energetic)                                                   | −.328           |
| 关爱他人 (Affectionate)                                              | −.301           |
| 有想象力 (Imaginative)                                               | −.296           |
| 为人慷慨 (Generous)                                                 | −.271           |
| 重视家庭 (Family oriented)                                           | .723            |
| 想要孩子 (Wants children)                                            | .574            |
| 喜欢孩子 ( Loves children)                                           | .532            |
| 个好爸爸 (妈妈) (Good father or mother)                              | .523            |
| 重视家庭 (Family oriented)                                           | .404            |
| 对老婆 (好老婆) ( Loves my daughter or son)                         | .387            |
| 身体健康 (Healthy)                                                  | .374            |
| 热爱家庭 (Loves his or her family)                                   | .305            |
| 尊重他人 (Respectful)                                               | .305            |
| 踏实可靠 (Reliable)                                                 | .761            |
| 忠诚可靠 (Faithful)                                                 | .695            |
| 为人可靠 (Reliable)                                                 | .670            |
| 有责任心 (Conscientious)                                            | .544            |
| 人品好 (Moral)                                                       | .520            |
| 值得信赖 (Trustful)                                                  | .518            |
| 诚实 (Honest)                                                        | .424            |
| 为他人着想 (Sincere)                                                | .394            |
| 脚踏实地 (Down to earth)                                            | .302            |
| 为人稳重 (Stable)                                                    | .302            |
| 纯洁 (Chastity)                                                      | .668            |
| 婚前没有性经验 (Few sexual experience before marriage)              | −1.000          |

Note: We have also included the Chinese terms that were used in the study.

In order to construct a hierarchy of preferences, we estimated the means and standard deviations for each extracted factor by summing the traits that composed each factor and dividing them by their number. The results were presented in Table 2. The “Reliable,” “Family oriented,” and “Kind and understanding” topped participants’ preferences. The “Strong personality,” “Exciting personality,” “Well-off,” and “Good cook–housekeeper” were found in the middle of the hierarchy. Finally, the “Chastity,” “Good looks,” and “Similar religious and ethnic background” were found at the bottom of the preferences hierarchy.

**Contingencies**

In order to examine whether parents’ preferences were contingent on the sex of the in-law, and whether mothers and fathers...
were in agreement over what they looked for in a prospective in-law, we run a series of Doubly Multivariate Analysis on each extracted factor. This analysis was similar to multivariate analysis of variance, but it allowed the independent factors to be within subsects. In this case, because the current study employed a within-family design, the answers of mothers and fathers should not be considered independent, and participants’ sex needed to be treated as a within-subjects factor. Also, participants gave ratings only for one in-law (e.g., son-in-law), so the sex of the in-law would be treated as a between-subjects design. Accordingly, the traits that composed each factor were entered as the independent between-subjects factor, and the sex of the in-law was entered as the independent between-subjects factor, and the sex of the parent was entered as the within-subjects independent factor. Overall, 10 tests were performed. Multiple tests were likely to inflate the \( \alpha \) level. Accordingly, Bonferroni correction should be applied to reduce \( \alpha \) to .005 (.05/10). The results were presented in Table 2.

### Table 2. The Hierarchy of Preferences and Age Effects Doubly.

| Domains                      | Overall Rank | Mean (SD) | Daughter-in-law Rank | Mean (SD) | Son-in-law Rank | Mean (SD) | p Value | \( \eta^2_p \) | Removed Effect* | Mothers Mean (SD) | p Value | Fathres Mean (SD) | p Value | \( \eta^2_p \) |
|------------------------------|--------------|-----------|---------------------|-----------|----------------|-----------|---------|---------------|----------------|------------------|-----------|------------------|----------|---------------|
| Reliable                     | 1            | 2.53 (.43)| 2                   | 2.41 (.49)| 1              | 2.57 (.38)| <.001   | .111         | ns             | ns                | ns    | ns               | ns       | ns           |
| Family oriented              | 2            | 2.51 (.42)| 1                   | 2.46 (.47)| 2              | 2.51 (.41)| <.001   | .213         | ns             | ns                | ns    | ns               | ns       | ns           |
| Kind and understanding       | 3            | 2.23 (.45)| 3                   | 2.15 (.49)| 3              | 2.22 (.41)| <.001   | .156         | <.001          | .150             | .132   | 1.14 (.59)       | 1.54 (.59)| .132         |
| Strong personality           | 4            | 1.89 (.50)| 4                   | 1.65 (.54)| 4              | 1.93 (.42)| <.001   | .214         | <.001          | .091             | .117   | .168 (.53)       | .151 (.53)| .091         |
| Exciting personality         | 5            | 1.68 (.53)| 5                   | 1.61 (.57)| 5              | 1.68 (.48)| <.001   | .109         | ns             | ns                | ns    | ns               | ns       | ns           |
| Well-off                     | 6            | 1.59 (.59)| 6                   | 1.31 (.59)| 6              | 1.65 (.52)| <.001   | .243         | <.001          | .185             | .148   | 1.64 (.59)       | 1.53 (.60)| .148         |
| Good cook                    | 7            | 1.58 (.64)| 7                   | 1.54 (.58)| 7              | 1.52 (.59)| ns      | ns           | ns             | ns                | ns    | ns               | ns       | ns           |
| Housekeeper                  | Chastity     | 8          | 1.41 (1.06)         | 7         | 1.40 (1.05)    | 8         | 1.41 (1.04)| ns           | ns             | ns                | ns    | ns               | ns       | ns           |
| Good looks                   | 9            | 1.15 (.60)| 9                   | 1.15 (.56)| 9              | 1.12 (.57)| <.001   | .140         | <.001          | .132             | .148   | 1.14 (.59)       | 1.17 (.61)| .148         |
| Similar religious and ethnic background | 10          | 1.05 (.64)| 10                  | .98 (.62)| 10             | 1.04 (.60)| ns      | ns           | ns             | ns                | ns    | 1.06 (.65)       | 1.05 (.64)| .148         |

*The results refer to the effect of the sex of the in-law on preferences when the unbalanced sex-ratio effect has been removed.

Daughters-in-law versus sons-in-law. In most cases, the sex of the in-law came significant with a large effect size. An examination of the means for the significant domains indicated that these traits were preferred more in a son-in-law than in a daughter-in-law. The exception was the “Good looks,” where the means overlapped. In this case, the significant difference came predominantly from the “Tall” and the “Athletic” components of this domain that were preferred more in a son-in-law than in a daughter-in-law.

These findings were inconsistent with our original predictions. In particular, we predicted that certain traits would be preferred more in son-in-law and others more in a daughter-in-law, but we found that most traits were preferred more in a son-in-law than in a daughter-in-law. We believe that this finding could be explained by the unbalanced sex ratio currently prevailing in China. More specifically, the one-child policy prevented parents from having more than one child, and most parents favored male children, resulting in more young men to be available as grooms and fewer young women available as brides (Deng, 2000). Such difference allowed parents with daughters to be more selective than parents with sons, which was reflected in the stronger preferences for sons-in-law.

This argument is consistent with the argument that in-law preferences are adjustable to prevailing conditions (here, the unbalanced sex ratio). However, the unbalanced sex-ratio effect may have potentially masked evolved in-law contingencies. Parents may have evolved to prefer certain traits more in a daughter-in-law than in a son-in-law, but the unbalanced sex ratio resulted in parents placing extra weight to the ones in a son-in-law which, in turn, could result in these traits not to come significant **and/or to come significant in favor of sons-in-law.

We can apply a simple way to remove the unbalanced sex-ratio effect, so that we can better examine the contingencies in in-law preferences. More specifically, in a balanced sex-ratio scenario, the overall preference strength would be the same for daughters- and sons-in-law. The observed divergence in preferences would be due to the unbalanced sex-ratio effect, so if this difference could be estimated, it could be removed from the data. For this purpose, we added all scores for the 88 traits that parents gave for a son-in-law and all scores they gave for a daughter-in-law, and we divided them by their number. The grand mean for a son-in-law was 1.92 (SD = .35) and for a daughter-in-law 1.80 (SD = .44). The difference between the two was .117 units in our 4-point scale. On this basis, we can assume that the unbalanced sex-ratio effect resulted in in-law preferences for parents with daughters to increase by about .117 units.

We have deducted from all the scores for a son-in-law the .117, and we have repeated the analysis above. The results were presented in Table 2. We can see that the “Reliable” and the “Family oriented” came no longer significant. The “Good looks” came significant, but this time because most of the composing traits were preferred significantly more in a daughter- than in a son-in-law.

**Table 2. The Hierarchy of Preferences and Age Effects Doubly.**
Mothers versus fathers. Moving on to fathers and mothers, there was considerable agreement between the two, as only 2 of the 10 domains were preferred differently. For the “Strong personality,” the “Intelligent," “Dynamic,” and “Longsighted” subcomponents were preferred more by mothers than by fathers. For the “Well-off,” the “Good provider” and the “Educated” were preferred more by mothers than by fathers, while the “Good economic prospects” was preferred more by fathers than by mothers.

In addition, a significant interaction was found between the sex of the parent and the sex of the in-law, \( F(1, 335) = 8.12, p = .005, \eta^2_p = .024 \). In particular, mothers gave a higher score for a son-in-law than for a daughter-in-law, but fathers gave a higher score for a daughter-in-law than for a son-in-law.

### Cultural Effects and Similarities

In order to examine cross-cultural differences in preferences, we employed evidence from a study conducted in the republic of Cyprus. More specifically, this study employed evidence from Greek-Cypriot parents to rate the same 88 traits we employed here, in a prospective daughter- or son-in-law (Apostolou, 2015b).

We can start by comparing the factor structure derived here, with the factor structure derived in Apostolou (2015b) study. The factor structure was very similar across the two groups. More specifically, the “Family oriented,” “Good looks,” “Exciting personality,” “Good cook–housekeeper,” and “Similar religious and ethnic background” were found in both settings. The “Kind and understanding” found here was very similar to the “Kind, understanding, and cooperative,” with the main difference being that the cooperative component did not load here. The “Reliable” found in the current study was very similar to the “Reliable and tolerant” but without the tolerant component to load in the Chinese case. Moreover, the “Well-off” was similar to the “Good economic prospects,” with the difference that the family background components did not load to the latter. Also, there was overlap between the “Strong personality” and the “Spontaneous and selfless.” The “Well-off” family background found in the Apostolou (2015b) study was not found here, but it seemed to have been integrated to the “Well-off” domain. Finally, the “Chastity” found in the current study was not found in the Apostolou (2015b) study, but it was found in the Apostolou (2014a) study which also employed a Greek-Cypriot sample. Overall, although there are differences, the structure of in-law preferences appears to be very similar in the two cultures.

We can now proceed to investigate cultural differences in more detail. In order to make comparisons possible, we needed to employ a common factor structure, and for this purpose, we used the factor structure produced for the Chinese sample. Accordingly, we estimated the means and standard deviations for the Greek-Cypriot sample, and we ranked them next to the Chinese sample (Table 3). In order to examine similarity, we applied Spearman’s correlation between the ranks for each sample. The correlation was significant and very strong, \( r(10) = .939, p < .001 \) (two tailed), suggesting that the hierarchy of in-law preferences across the two samples was very similar.

In order to compare differences further, we applied Doubly Multivariate Analysis on each domain. In particular, the traits composing each factor were entered as the dependent variables and the sex of the in-law and the sample (Chinese/Greek-Cypriot) were entered as the between-subjects factors and the sex of the parent as the within-subjects factor. Please note that in the Greek-Cypriot sample, if parents had two adult children of different sexes, they would give ratings for both prospective daughters- and sons-in-law. In order to make comparisons between samples possible, we dropped these cases (about 8% of the Greek-Cypriot sample). The results of this analysis were presented in Table 3.

We can see that the sample came significant in all cases. The “Reliable” and the “Kind and understanding” were preferred more by the Chinese than by the Greek-Cypriot parents. For the “Family oriented,” the means overlapped; the results indicated that the “Wants children,” “Loves children,” and “Good parent” subcomponents were preferred more by Greek-Cypriot parents than by Chinese parents. The “Chastity” and the “Educated” were preferred more by mothers than by fathers, while the “Good economic prospects” was preferred more by fathers than by mothers.

| Table 3. Cross-cultural Comparisons Between Chinese and Greek-Cypriot Samples. |
|-----------------|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Domains         | Chinese Sample  | Greek-Cypriot Sample | Sex of In-Law | Sex of Parent | Sample | Sex of In-Law | Sex of Parent | Sample |
|                 | Rank | Mean (SD) | Rank | Mean (SD) | p Value | Value | Value | p Value |
| Reliable        | 1    | 2.53 (.43) | 2    | 2.34 (.46) | <.001 | .332 | .052 | ns |
| Family oriented | 2    | 2.51 (.42) | 1    | 2.52 (.47) | <.001 | .225 | .002 | .038 |
| Kind and understanding | 3 | 2.23 (.45) | 3    | 2.15 (.43) | <.001 | .458 | .106 | <.001 |
| Strong personality | 4 | 1.89 (.50) | 4    | 1.94 (.39) | <.001 | .560 | .126 | <.001 |
| Exciting personality | 5 | 1.68 (.53) | 6    | 1.85 (.39) | <.001 | .379 | .156 | <.001 |
| Well-off        | 6    | 1.59 (.59) | 5    | 1.85 (.50) | <.001 | .389 | .155 | <.001 |
| Good cook–housekeeper | 7 | 1.58 (.64) | 7    | 1.73 (.57) | <.001 | .683 | .033 | <.001 |
| Chastity        | 8    | 1.41 (1.06) | 9    | 1.56 (.86) | ns   | ns   | ns   | ns   |
| Good looks      | 9    | 1.15 (.60) | 10   | 1.52 (.53) | <.001 | .340 | .111 | <.001 |
| Similar religious and ethnic background | 10 | 1.05 (.64) | 8    | 1.72 (.51) | <.001 | .579 | ns   | ns   |
parents, while the “Family oriented” and the “Healthy” subcomponents were preferred more by Chinese parents. The remaining seven domains were preferred more by Greek-Cypriot than by Chinese parents.

The effect sizes indicated that the largest difference was over “Similar religious and ethnic background,” where Chinese parents indicated a very weak interest in comparison to Greek-Cypriot parents. The second largest difference was over “Strong personality” which was considered important in both cultures, but as more important in the Greek-Cypriot culture.

Moreover, for 6 of the 10 domains, a significant interaction was found between the sex of the in-law and the sample. We have plotted the interaction using grand means (i.e., adding the domains together and dividing them by their number) in Figure 1. We can see that the interaction came predominantly from Chinese parents giving higher scores for prospective sons-in-law than for prospective daughters-in-law, which was not the case for Greek-Cypriots. Finally, significant interactions between the sample and the sex of the parent were found for the “Well-off” and the “Strong personality.” In these cases, when we moved from the Chinese to the Greek-Cypriot sample, the scores increased for both parents, but more for fathers than for mothers.

Second-order factor structure. We would like to examine whether the 10 different domains clustered in even broader supra-domains. For this purpose, we applied second-order principal components analysis. In particular, we estimated 10 new variables by summing and dividing by their number the traits that composed each domain. We subsequently applied principal components analysis on these variables, with direct oblimin as the rotation method. We performed this analysis twice, once for the Chinese sample and once for the Greek-Cypriot sample.

For the Chinese sample, the results suggested a two-factor solution (eigenvalue > 1), and the KMO statistic was .88, indicating a very good sample adequacy. The scales produced by this procedure were checked by means of reliability analysis. The internal consistency (Cronbach’s α) was .91 for the first supra-domain and .81 for the second. For the Greek-Cypriot sample, the results also suggested a two-factor solution. The KMO statistic was .82, and the internal consistency was .94 for the first supra-domain and .76 for the second. The supra-domains and the respective loadings were presented in Table 4.

The personality domains clustered in the first supra-domain, while the rest of the traits clustered to the second supra-domain. In order to assess importance, we estimated the means for each supra-domain. For the Chinese sample, the personality supra-domain was considered more important ($M = 2.17$, $SD = .32$) than the other traits supra-domain ($M = 1.36$, $SD = .42$). This was also the case for the Greek-Cypriot sample ($M = 2.14$, $SD = .38$; $M = 1.68$, $SD = .041$). These findings can be interpreted to indicate that parents cared predominantly about the personality of their prospective in-laws and secondary about the rest of their prospective in-laws traits.

In order to examine contingencies in these factors, we run a four-way mixed design analysis of variance, where in-law preferences were entered as the dependent variable, the sex of the parent and the domain type were entered as the within-subjects factors, and the sample (Chinese/Greek-Cypriot) and the sex of the in-law were entered as the between-subjects factors. The results indicated several significant interaction and main effects.

To begin with, there was a significant main effect of the sex of the parent, $F(1, 627) = 84.14, p < .001, \eta_p^2 = .118$, where mothers gave overall higher scores ($M = 1.86$, $SD = .39$) than fathers ($M = 1.81$, $SD = .40$). This difference was present for the Chinese sample (mothers: $M = 1.80$, $SD = .41$; fathers: $M = 1.73$, $SD = .41$) as well as the Greek-Cypriot sample (mothers: $M = 1.91$, $SD = .36$; fathers: $M = 1.88$, $SD = .38$).

Moreover, there was a significant main effect of the domain, $F(1, 627) = 1,845.79, p < .001, \eta_p^2 = .792$, where the personality supra-domain was preferred more ($M = 2.16$, $SD = .35$) than the other traits supra-domain ($M = 1.51$, $SD = .44$). The effect size was very large, suggesting considerable divergence in preferences. In addition, there was a significant main effect of sample, $F(1, 627) = 31.48, p < .001, \eta_p^2 = .048$, where the Chinese parents gave lower overall score ($M = 1.76$, $SD = .34$) than the Greek-Cypriot parents ($M = 1.90$, $SD = .33$).

There was a significant interaction between the sample and the domain, $F(1, 627) = 154.17, p < .001, \eta_p^2 = .197$, where for the personality supra-domain, Chinese and Greek-Cypriot parents gave similar scores. However, when we moved to the other traits supra-domain, the scores of both parents decreased, but the scores of Chinese parents decreased more than the scores of Greek-Cypriot parents. There was a significant three-way interaction between the sample, the sex of the

Figure 1. The figure depicts the interaction between the sample and the sex of the in-law. We can see that when we moved from a son-in-law to a daughter-in-law, the scores of Chinese parents decreased considerably, but the scores of Greek-Cypriot parents remained relatively unchanged.
in-law, and the domain, $F(1, 627) = 17.52, p < .001$, $\eta_p^2 = .027$, where the same interaction as before was observed, but the decrease in scores when we moved to the other traits supra-domain was much more pronounced in the case of a daughter-in-law than in the case of a son-in-law, that is to say, the scores of Chinese parents dropped more sharply in the former than in the latter case.

There was a significant interaction between the sex of the in-law and the domain, $F(1, 627) = 36.52, p < .001$, $\eta_p^2 = .055$, where for the other traits supra-domain the scores for the two in-laws were similar, but when we moved to the personality supra-domain, the scores increased more for a son-in-law than for a daughter-in-law. In addition, there was a significant interaction between the sex of the parent and the domain, $F(1, 627) = 102.21, p < .001$, $\eta_p^2 = .140$, where the scores decreased when we moved from mothers to fathers and decreased more for the other traits supra-domain than for the personality supra-domain.

Finally, there was a significant three-way interaction between the sex of the parent, the sex of the in-law, and the domain, $F(1, 627) = 14.14, p < .001$, $\eta_p^2 = .022$, where, as above, for the other traits supra-domain the scores for the two in-laws were similar, but when we moved to the personality supra-domain, the score increased more for a son-in-law than for a daughter-in-law. This increase was more pronounced for fathers than for mothers.

**Discussion**

Our results indicate that parents in China had a well-defined hierarchy of in-law preferences. Their preferences were contingent on the sex of the in-law, while mothers and fathers had largely overlapping preferences. In-law preferences were also found to be contingent on the cultural context, as comparisons between the Chinese and Greek-Cypriot samples indicated considerable similarities but also specific differences.

In more detail, the primary concern of Chinese parents was the personality of their prospective in-laws. The first 5 of the 10 preferences domains referred directly to personality and clustered to a single personality supra-domain. This is not surprising, as personality predicts a wide range of human conduct (Buss & Hawley, 2010) which is relevant to in-law choice (Apostolou, 2014a). Reliability ensures that parents have in-laws who will be consistently there for them and their family, kindness ensures that in-laws will treat parents and their children well, family oriented ensures stability in marriage, strong personality ensures success in fitness-increasing goals, and exciting personality ensures successful integration to the family unit.

**Table 4. The Factor Loadings for the Second-Order Principal Components Analysis.**

| Supra-Domains | Chinese | Greek-Cypriot |
|---------------|---------|---------------|
| Supra-domain 1 |         |               |
| Reliable      | .976    | .956          |
| Family oriented | .883    | .937          |
| Kind and understanding | .871    | .939          |
| Strong personality | .669    | .875          |
| Exciting personality | .470    | .687          |
| Supra-domain 2 |         |               |
| Good looks    | .807    | .899          |
| Similar religious and ethnic background | .743    | .338          |
| Chastity      | .691    | .650          |
| Well-off      | .584    | .608          |
| Good cook–housekeeper | .489    | .597          |
Parents also cared to have in-laws who were well-off and came from well-off families and could bring to their family unit monetary resources. The well-off domain was in the middle of the in-law hierarchy, below personality traits, indicating that Chinese parents valued personality more than wealth and family background. One possible explanation is that personality constitutes a more reliable predictor of resources than the actual resources one controls, as money can be spent or lost, but personality traits that lead to money making cannot. Moreover, in the Chinese context, as well as in other post-industrial societies, families are relative independent, so alliances with other families become less important than in a preindustrial context.

The looks of a prospective in-law did not appear to be important for parents. Similarly, parents did not care about similarity in ethnic and religious background, which was located at the bottom of the in-law preferences hierarchy. Other studies have found that similarity was important for parents, one reason for this being that it enables effective integration to the family unit (Apostolou, 2014b). This finding should not be interpreted, however, as indicating that Chinese parents did not look for similarity, but that they did not look for similarity in these traits. We believe that the main reason for this finding is that China is relative homogenous in terms of ethnicity and religion, so prospective in-laws are unlikely to vary in these dimensions, turning them irrelevant to in-law choice.

Moreover, it was found that parents gave higher scores for their prospective sons-in-law than for their prospective daughters-in-law. We have argued that this difference was due to the unbalanced sex-ratio effect; that is, the one-child policy in China has resulted in more young men than young women to be available as spouses, which allowed parents with daughters to be more selective than parents with sons. This finding indicates that in-law preferences can adjust to local conditions. This being the case, we can predict that this effect will reside in the future. In particular, the one-child policy has been recently relaxed (see the Communist Party of China the fifth Plenary Session of the 18th CPC Central Committee Bulletin, 2015), which is likely to lead to a more balanced sex ratio that, in turn, will result in parents with daughters not being able to be that selective.

The unbalanced sex-ratio effect has probably masked evolved contingencies in in-law preferences. Accordingly, we have attempted to remove this effect from the data. We found that when doing so, good looks were preferred more in a daughter-in-law than in a son-in-law, while being reliable and family oriented was valued the same in both in-laws. Yet, on the basis of previous research and evolutionary theorizing (Apostolou, 2007a, 2014a; Perilloux et al., 2011), we would expect that chastity and housekeeping/cooking capacities would be preferred more in a daughter-in-law than in a son-in-law, but such sex differences were not found. We have to say that our method of removing the unbalanced sex-ratio effect was crude, and this may explain the nonsignificant differences. Future research may attempt to control better this effect, by replicating this study in areas of China where the sex ratio is balanced.

The preferences of mothers and fathers largely overlapped. In the cases where differences were found, mothers gave higher scores than fathers. In addition, the aggregate scores of mothers were significantly higher than the aggregate scores of fathers. One possible interpretation of this difference is that mothers are more selective than fathers when it comes to in-law choice. One reason may be the difference in parental uncertainty. Since mothers are more certain than their children are actually their own, they may have more at stake in the mate choices of their children and so they may be more selective over in-law choice (Apostolou, 2015a). If this difference constitutes an evolved predisposition, it should also be found in other cultures. Consistent with this prediction, it was also found in both samples, but more cross-cultural replication is needed.

Comparisons between Chinese and Greek-Cypriot samples indicated that in-law preferences were very similar across samples. First-order principal components analysis indicated a very similar factor structure across samples, and second-order principal components analysis indicated an identical factor structure across the two samples. In addition, correlational analysis indicated that the hierarchy of in-law preferences was very similar across the two samples. Yet, specific differences have been found in the two samples.

The primary differences were that Chinese parents gave higher scores for their prospective son-in-law than for their prospective daughters-in-law, and Greek-Cypriot parents placed considerable more emphasis on the similarity in religious and ethnic background. Starting from the former difference, the sex ratio in Cyprus is much more balanced, which means that, as opposed to Chinese parents with daughters, Greek-Cypriot parents with daughters could not afford to be more selective than parents with sons.

Moving on to the second difference, the Republic of Cyprus is much less homogenous than China in terms of ethnicity and religion, as there are many different ethnic groups of different religious backgrounds in the country. Accordingly, marriage with prospective in-laws of different ethnic and religious backgrounds is much more probable in Cyprus than in China, which makes these dimensions much more important in the former than in the latter. Finally, parents in both cultures converged in their preferences for the personality supra-domain, but they diverged for the other traits supra-domain. The latter difference can be partially explained by the difference in preferences for similarity over religious and ethnic background. The former convergence can be interpreted to indicate that the personality of a prospective in-law is of high fitness relevance for parents in both contexts.

Consistent with our theoretical framework, our findings suggest that parents share the same basic in-law preferences, but these preferences adjust to the local conditions. They also suggest that personality is the most important concern for parents in both prospective daughters- and sons-in-law in a postindustrial context. Still, more cross-cultural work and replication is required in order to reach more definite conclusions.
This work is not without limitations. One advantage of this research was that it was online, which gave privacy to individuals who, in turn, were more likely to give honest answers (Kreuter, Presser, & Tourangeau, 2008). The drawback was, however, that the sample is not representative of the population, as people who were younger, more educated, and more open-minded were likely to be overrepresented (Ross, Måansson, Daneback, Cooper, & Tikkanen, 2005). Future studies need to attempt to replicate these findings using different research methods. Moreover, this is a self-report study, so there is the possibility that people may behave differently from the way they have indicated here, when the situation in question actually arises.

Last but not least, for the purposes of this study, we have employed an instrument that was developed in a different cultural context. Thus, although this instrument is inclusive, there is the possibility that it does not capture preferences for traits which may have only local relevance. In particular, there may be traits which are important for Chinese parents, but which were not present in our instrument, because it has been developed in a different culture, where they were not important. Future qualitative research that can construct an instrument specific for the Chinese cultural context can address this limitation.

Studying in-law preferences, especially in a non-Western context, has received little attention from researchers. The current article contributes toward closing this gap in our knowledge by providing evidence about in-law preferences and their contingencies in China, as well as differences and similarities between Greek-Cypriot and Chinese parents. However, more research is required in order to fully understand in-law preferences and how they vary across cultures.

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