



BRILL

*Journal of Cognition and Culture* 13 (2013) 201–230



brill.com/joccc

# The Origins and Effects of Filial Piety (Xiao 孝): How Culture Solves an Evolutionary Problem for Parents

Ryan Nichols<sup>a,b,\*</sup>

<sup>a</sup> Centre for Human Evolution, Cognition and Culture (HECC), University of British Columbia, 1871 West Mall, Vancouver, BC, Canada V6T 1Z2

<sup>b</sup> Department of Philosophy, Cal State Fullerton, Fullerton, CA 92834, USA

\*E-mail: [rnichols@exchange.fullerton.edu](mailto:rnichols@exchange.fullerton.edu)

---

## Abstract

Parent–offspring conflict theory hypothesizes that interests of offspring and parents are asymmetrical in key contexts including the offspring's mating strategies and mate preferences. Evidence supports this hypothesis and documents these asymmetries in humans. However, offspring in East Asia have mate preferences and mating strategies that are in significantly greater harmony with their parents' preferences about their mating choices as compared with offspring elsewhere in the world. The paper hypothesizes that the Confucian virtue of filial piety (xiao 孝) was designed and disseminated in order to benefit parents by enabling them successfully to extract more resources out of their offspring than is expected given either data from parent–offspring conflict theory or data from cross-cultural studies of mate preferences and mating strategies. The results of this project mark an early step in building a stable interdisciplinary platform from which to more accurately observe and appraise the unappreciated, awe-inspiring influence of Confucianism.

## Keywords

Filial piety, parent–offspring conflict, moral, evolutionary psychology, Confu\*, mating, Trivers

## Introduction

From the perspective of evolutionary psychology Confucian filial piety is strange. Filial piety requires individuals to prioritize transfer of resources to parents rather than to children. This paper represents a preliminary effort in the explanation of the rise and success of the filial piety system in Confucian culture. The paper hypothesizes that filial piety developed in order to benefit parents by enabling them successfully to extract more resources out of their offspring than would be expected given data from parent–offspring conflict theory. The analysis of filial piety in the paper's first two parts uses historically influential Early Confucian texts to establish that filial piety is highly plastic,

and that filial piety produces special obligations on offspring concerning reproductive behaviour and mate selection. The next section reports results of recent experiments in evolutionary psychology that have confirmed hypotheses about asymmetries in offspring mate preferences between offspring and their parents. Then the paper juxtaposes these results with cross-cultural data of several types showing that offspring in Confucian diaspora cultures in East Asia more frequently align their preferences with those of their parents about their most important life-choices – how to court a mate and whom to marry – than offspring elsewhere in the world. Contrary to certain behavioural ecologists and evolutionary psychologists, I argue that a significant proportion of the variance between East Asians and others about these facts is explained through the content and influence of Confucian culture on mate preferences and parent–offspring relations. Specifically, the content of the filial piety cultural system of Mencian inspired Confucianism (*Kong Meng zhidao* 孔孟之道) coupled with its effective cultural transmission through Chinese culture explains some of this variance.

This project began with a puzzle. Kin selection accounts for the seemingly altruistic care of children by parents in terms of inclusive fitness, but helping behaviour directed from children to parents presents a greater explanatory challenge. To simplify, children do not appear to serve their somatic or reproductive interests by caring for parents, especially post-reproductive parents. From an evolutionary point of view resources expended on post-reproductive parents do not increase one's inclusive fitness or help one copy one's genes as efficiently as other behaviours do. Cruel thought it may appear, from this point of view it seems children's resources could be better spent on tending to their own children, acquiring other mates or providing for their own interests. Robert Wright captures the problem of motivating care for parents as follows: "Dearness of parents to children declines after adolescence. When parents are old and infirm, they serve no advantage for children. As a result, they can be forgotten. They are as dependent upon us as we were as children on them, but we don't look after their interests with nearly the concern and care" (Wright, 1995: 177). But some parents – and grandparents – are more fortunate than others in this regard. This remark would appear odd to citizens of Early China, for example. There and then parents and grandparents were looked after with great concern and care.

Solving the problem of motivating children to care for parents and grandparents marks a central preoccupation of Early Confucian texts. The term 'Confucian texts' as I will use it refers primarily to writing attributed to Confucius (*Kongzi* 孔子) and Mencius (*Mengzi* 孟子), as well as others' writings redacted into what are considered by most scholars the source texts of the tradition,

though the provenance and authenticity of these texts are disputed (Brooks and Brooks, 1998; Jensen, 1998). The authors of Confucian texts attempt to fill this void of natural caregiving by seeking to influence behaviour of readers and, through readers, many others. Scholars regard Early Confucian texts as not offering deductive arguments aimed at persuading an audience through reason but rather as containing ‘strategic language’ that conditions and guides readers (Geisz, 2008: 190). This insight was used in constructing the affective, behavioural and cognitive system of networked feelings, ritual practices and ideas that promulgated filial piety in ancient Chinese culture, a cultural system and perhaps a ‘memeplex’.

This institutionalization of the system arises in pre-imperial China and takes influential forms in subsequent East Asian history. The imperial examination system and its predecessors, for examples, represent a remarkable source of cultural transmission and a valuable testing ground for theories of cultural evolution. Men who achieved positions in the civil service were required to pass a rigorous examination that tested for rote knowledge of the Confucian ‘Four Books and Five Classics’ and completed their preparations with extensive conditioning from the filial piety system (the Han system issued in the more formal establishment of the Imperial Examination in the Sui Dynasty (581–618 CE)). The examination system was the source of multiple forms of cultural transmission. In terminology used by Boyd and Richerson (2005), due to the great prestige acquired by those who pass the exam the institution insured a model-based transmission for core Confucian ideas like filial piety. Research about the historical dissemination of Confucian ideas throughout all strata of Confucian society, even to the illiterate (Bai, 2005), indicates frequency-based transmission. Lastly, the contents of these texts appear to be subject to a text-based form of guided variation that has no parallel in human history, if that is assessed as a factor of the quantity of people influenced and the depth of influence on emotions, behaviours and cognitions.

Despite these suggestions about forms of cultural transmission for filial piety, the aim of this paper is not to discuss the features of cultural evolution that explain the prevalence of the filial piety cultural variant in the Chinese context, let alone to take a stand on the role of cultural evolution in multi-level selection theory. Rather the hypothesis is that Confucians used filial piety to change our human bioprogram and solve an evolutionary problem for parents. To render this hypothesis partially testable, focus is placed on content within the Confucian system of filial piety that concerns offspring mate preferences and strategies, as well as family relations and offspring reproduction. After presenting the content of filial piety as found in Early Confucian texts, evolutionary psychological studies confirming parent–offspring conflict about mating

preferences and strategies are described. Then three sets of cross-cultural data about offspring mate preference and offspring mate strategy are discussed with attention to the systematic skew observed in results from participants from Confucian diaspora areas. This skew corresponds to a harmonization between parental preferences for traits of offspring mates and offspring mating strategies and the preferences of East Asian offspring themselves. The institutionalization and cultural encoding of filial piety via Confucianism has afforded Chinese parents a key victory within the larger parent–offspring ‘war’.

### Filial Piety as Morally Plastic Obedience to Fathers

This section introduces the content and scope of the Confucian virtue of filial piety first as a form of obedience to authority, whether familial or governmental, and second in relation to concerns of biological evolution. The filial piety system contains normative guidance on issues of reproductive fitness, mate selection, mate guarding, sibling competition, relationships to immediate and extended family, status-seeking behaviour, relations to government authorities, and other issues familiar from evolutionary psychology and biology. Very little literature yet exists tying together purported features and effects of filial piety since sinologists, philosophers and interdisciplinary thinkers have just begun to explore these themes (Munro, 2002, 2005). But studies in cross-cultural parenting have confirmed that the guiding principle of filial piety “justifies absolute parental authority over children,” as one researcher describes it (Ho, 1996: 156).

‘Filial piety’ (*xiao* 孝) is the name of a virtue prized in Confucian philosophy that refers to a set of closely related behaviours, ritual practices, dispositions and mental states specified in terms of one’s care for and duty to one’s parents, one’s familial elders and one’s ancestors, whether alive or dead and in the afterlife. The ideograph ‘孝’ represents a child (*zi* 子) underneath of and giving support to an elder (*lao* 老; lit. ‘old’). *Analects* and *Mencius* portray filial piety as the most important virtue in the tradition, which in the following passage takes shape in botanical terms: “The gentleman applies himself to the roots. ‘Once the roots are firmly established, the Way will grow.’ Might we not say that filial piety and respect for elders constitute the root of Goodness?” (*Analects* 論語 1.2; Slingerland, 2003: 1; see Lau, 2008: 3). The metaphor signals that all the branches of the tree of morality have roots in obedience to one’s father and that these branches are fed by water from filial piety.

Obedience, specifically to the father, allows for moral plasticity. Filial piety’s versatility as an affective-behavioural-cognitive system that conditions for

obedience allows its wide application by parents. *Analects* captures this in elemental terms: “Meng Yizi asked about filial piety. The Master replied, ‘Do not disobey.’” (*Analects* 2.5; Slingerland, 2003: 9). These and related texts lead some scholars to infer that “The most salient feature of filial piety is the subordination of the will and welfare of each individual to the will and welfare of his or her real classificatory parents” and “Filial Piety is quintessentially described as the subordination of a son to his father . . .” (Jordan, 1998: 268–269). From the perspective of an interest in moral philosophy we can say filial piety functions as parental command morality, akin in structure to what is known as Divine Command morality. An influential twelfth-century Neo-Confucian named Zhu Xi makes the comparison complete by emphasizing a remark from Luo Zhongshu who said “there are no parents in the world who are not right” (in Nuyen, 2004: 434). Filial piety represents obedience to parents, especially fathers.

The ‘root’ metaphor and the *Analects*’ emphasis on filial piety as obedience suggest the modularity and versatility of this virtue enables its exploitation by parents. Perhaps the best illustration of filial piety’s engorgement of various virtues comes from *The Book of Rites* (*lijì* 禮記) (Confucius is traditionally said to have edited this book, though its present form dates from the Han Dynasty). A passage attributed to Zeng Zu reads:

The body is that which has been transmitted to us by our parents; dare any one allow himself to be irreverent in the employment of their legacy? If a man in his own house and privacy be not grave, he is not filial; if in serving his ruler, he be not loyal, he is not filial; if in discharging the duties of office, he be not reverent, he is not filial; if with friends he be not sincere, he is not filial; if on the field of battle he be not brave, he is not filial. If he fails in these five things, the evil (of the disgrace) will reach his parents; – dare he but reverently attend to them? (Legge, 1889: 140–141)

In this single passage the virtue of filial piety requires (i) gravity, (ii) service to the state, (iii) hard-work, (iv) sincerity, (v) bravery and (vi) reverence. The obedience to fathers due them by filial offspring is morally plastic and ranges over a number of very different realms of behaviour.

This list expands with the inclusion of other sources from Early China so much that one might infer that filial piety becomes vacuous and unaccountable. For example, in accord with the Confucian ‘Lord-Father’ analogy, men were to be loyal to their political authorities in just the filial way they were loyal to their own fathers. *Analects* 8.2 recommends that rulers publicly display their own filiality as a means of conditioning the populace to increase their own virtue: “When the ruler feels profound affection for his parents (*qin* 親), the common people will be stirred to benevolence.” On the basis of texts like

this Bi and D'Agostino describe filial piety as “not only a private and personal morality, but also a political method; it is extended from the familial realm to the social realm, and it ensured social order as well as family harmony” (2004, 464). When fatherhood is extended through fictive kinship, for example to include the emperor, the emperor is due filial piety by his fictive offspring, his citizens.

Emphasis on morally plastic obedience to one's father as the hallmark of filial piety distinguishes filial piety from other classic Confucian virtues, and appears to be evidence of its preeminence in the Confucian canon over benevolence (*ren* 仁). To be filial one must obey parents even if parents command behaviours that might conflict with *ren* or other virtues. *Mencius* 4A.19 portrays a conflict between filial piety and honesty. Zeng Zi cares for and feeds his elderly father Zeng Xia in conditions of dire impoverishment. When his father would ask Zeng Zi after a meal whether any food remained, Zeng Zi would always affirm, falsely, that there was food left and would ask his father to whom it should be given. Editors of *Mencius* pair this anecdote with the following remark at 4A.20: “Mengzi said, ‘Of all my duties, which is the greatest? My duty to my own parents! Of all that is held in trust by me which is the greatest? The preservation of my body!’” The discussion of bodily self-care in *Mencius* is framed in relation to parents: one's parents produced one's body, so one's body should be used in the service of one's parents, thus one must take care of it.

The moral plasticity of filial piety in Early Confucianism implies duties of filial piety trump duties that follow from other Confucian virtues. If accurate, this implies the understanding of the majority of Confucian scholars who affirm the subservience of filial piety to benevolence (*ren* 仁) and other virtues is incorrect. The incident of the Duke of She portrayed in *Analects* offers additional justification that filial piety as obedience to one's father trumps lesser virtues. In this famous anecdote a duke from a nearby province consults Confucius. The duke exhibits pride in the moral resolve of his citizens, but Confucius meets his remarks with consternation:

The Duke of She said to Confucius, “In our village we have one upright person. When his father stole a sheep, he (the son) gave evidence against him.” Confucius answered, “In our village those who are upright (*yi* 義) are quite different. Fathers cover up for their sons, and sons cover up for their fathers. In such behaviour is uprightness to be found as a matter of course.” (*Analects* 論語 13.18; Lau, 2008: 127; see Slingerland, 2003: 147)

Confucius resolves the apparent conflict between the duty to honour one's parents and impartial justice decisively in favour of being filial. In this case the son fails to behave in accord with his father's interests, and so is blameworthy even though honest and forthright.

According to Confucius' response to the Duke, filial piety towards one's parents ought to begin in childhood when one takes care of oneself for the sake of one's parents. Filial duty proceeds through adolescence and adulthood and does not conclude with bodily death; sons must continue thereafter to make sacrifices to father and grandfather. Confucian funeral rituals and religious practices in Early China are justified by appeal to the deontology of filial piety and to custom. In terms of overcoming the problem of motivating the investment of children into parents, the evidence surrounding funeral rituals and practices shows massive sacrifices of resources required of sons. In a discussion of coffin building and procurement, Mencius cites tradition when remarking "I have heard that a gentleman will not, for the world, economize in regard to his parents" (2B.7; Van Norden, 2008: 56). The importance of the term *junzi* 君子 ('gentleman') is apt to be overlooked in translation for it too invokes kinship: its literal meaning is 'son of a ruler'. In Confucian texts '*junzi*' retained its connotations of high social status but added synonymy with moral greatness or magnanimity. Since many rituals and practices required of the filial are overt and observable by one's community, knowledge that one is cheap with regard to one's parents funerary arrangements in Early China would signal the considerable diminution of one's social status. Mencius' general maxim aims to motivate resource allocation generationally upward and to condemn the lack of such allocation as a failure of reputation management.

Application of this maxim to mourning rituals is resisted by Zai Wo, one of Confucius' disciples. Zai Wo voices the opinion that the mandatory three year mourning practice demanded of sons causes considerable inconvenience and harm to sons and their families, and so ought to be reduced from three years to one year (*Analects* 17.21). This mourning period requires sons to wear rough hemp clothing, dwell in a purpose-built mourning hut, eat only millet (not rice), and abstain from music and sex. Some, like the *Book of Documents'* Gaozong, interpret it to recommend that sons be silent for the mourning period. At 17.21 Confucius condemns this suggestion twice, once directly to Zai Wo and again after Zai Wo leaves the room. In the latter case Confucius offers one of the most strident condemnations of a disciple recorded in *Analects*. Confucius calls Zai Wo 'inhumane' (不仁), that is, as lacking (*bu* 不) the core virtue of benevolence (*ren* 仁). The underlying transitivity of virtue would appear to imply that by failing to be filial Zai Wo *ipso facto* fails to be benevolent, as though possession of filial piety is a necessary but not sufficient condition for possession of benevolence. In the world of contemporary mainland Chinese philosophy, disapproval of maxims of filial piety tactfully articulated via discussions on the case of Zai Wo (Liu, 2006) foments strong feelings and uncommonly sharp disagreements (see Guo, 2004).

Despite features of society that appear tailor-made for the promulgation of filial piety, seeding and maintaining the system in Chinese history required effort for the simple fact that children have interests of their own, in conflict with those of their parents. Evolutionary biologists have explained systemic conflicts between parents and offspring through appeal to their genetic differences. ‘Parent–offspring conflict’ refers to conflict between parent and offspring for the allocation of parental investment. It begins in the womb as mother and foetus both exert influence on the mother’s blood sugar levels then it does not stop (Haig, 1993). When the mother-foetus conflict remains unresolved, gestational diabetes may result. ‘Parental investment’ refers to anything done by a parent that increases recipient offspring fitness at a cost to some (hypothetical) other offspring (Trivers, 1972).

Early Confucianism instructs parents to manage this conflict through non-violent influence wherever possible. This does not imply violence is out of order in solving parent–offspring conflict. In a renowned case Zengzi hoes a field and accidentally cuts the root of a melon plant. Because of this his father badly beats him. When he recovered, Zengzi’s filial concern was to make sure that his father did not injure himself while administering Zengzi’s punishment. In the *Shuoyuan* 說苑 version Zengzi plays the lute and sings to inform his father that he is not hurt or angry. Confucius rebukes Zengzi, not his father. Confucius rebukes Zengzi for allowing his father to perform a criminal act that might have resulted in his father’s public punishment (had Zengzi died). Confucius points to Shun, who always obeyed his father but who, when his father was piping mad, made himself scarce so as to spare his father potential punishment (see Knapp, 2006: 67–68). The system of Confucian filial piety has burrowed deep enough into Chinese culture that its targets – offspring – have been made more compliant regarding its excesses compared to other cultural populations.

### Filial Piety and Obligations of Reproduction and Mating

Parents control offspring effectively through obedience that is culturally conditioned in children through filial piety. Filial piety exhibits extensive moral plasticity. It is even used as a psychological motivation to prevent murder, as here: Mengzi said, “From now on, I understand just how serious it is for a man to kill his own kin. If a father or an older brother is killed by an outsider, a man will avenge them by killing the outsider’s father or brother. So that for a man to kill his own kin is not far removed from killing himself” (7.B7). But despite its plasticity, its content is not reducible to open-ended obedience to fathers. Confucian texts reveal substantive connections between filial piety and the morality of marriage and reproduction. I do not wish to make more of

this connection than exists in fact, as some sinologists have done by discussing without data effects of filial piety on population dynamics that trickle down to present-day China. Nonetheless, study of paradigms of filial piety in the Confucian tradition reveals unambiguous linkage between great filiality, success in marriage and increased fecundity.

Consider *Mencius* 4A.26 and the marriage of Shun (舜), referred to as Great Shun (大舜) or Yu Shun (虞舜). His marriage lacked filial piety in a crucial respect, but even in this mistake Shun is filial. *Mencius* says, “There are three ways of being a bad son. The most serious is to have no heir. Shun married without telling his father for fear of not having an heir. To the gentleman, this was as good as having told his father” (Lau, 2003: 169). Shun’s passive disobedience is vastly outweighed by his fulfillment of the command to be filial and multiply. In fact Shun’s marriage, about which he did not pre-inform his father, was especially auspicious. *Mencius* 5A.2 informs us that no less than Emperor Yao (堯) gave Shun multiple daughters in marriage. This increases Shun’s reproductive fitness with an infusion of mates, resources and status greater than which could not be conceived in Ancient China. Though not Yao’s blood son, Shun ascended to the throne at 53 years of age according to legend.

*Mencius* justifies his praise of Shun as being a model of ‘great filial piety’, even outpacing in this quality Emperors and Sage Kings Yao and Yu, on the grounds that Shun served his parents better than they did (see *Mencius* 3A.4, Lau, 2003: 111–121; 3B.9, Lau, 2003: 138–145; 4A.28, Lau, 2003: 168–171). To explain why *Mencius* thought Shun served his parents so well we return to the theme of concealing the wrongdoing of kinsfolk through acts of extreme filiality. In the first of the cases discussed in *Mencius*, disciple Tao Ying asks *Mencius* what Shun does if Gusuo, Shun’s father, commits a murder within Shun’s realm. *Mencius* answers, “Shun looked upon casting aside the Empire as no more than discarding a worn shoe. He would have secretly carried the old man on his back and fled to the edge of the Sea and lived there happily, never giving a thought to the Empire” (7A.35; Lau, 2003, 303). Quoting another Confucian classic with approval, *Mencius* is recorded as saying,

The greatest thing a dutiful son can do is to honour his parents, and the greatest thing he can do to honour his parents is to let them enjoy the Empire. To be the father of the Emperor is the highest possible honour. To give him the enjoyment of the Empire is to give him the greatest enjoyment. The *Odes* say, ‘He was always filial, and, being filial, he was a model to others.’ This describes well what I have said. (5A.4; Lau, 2003: 303)

Shun is the greatest of emperors because he alone places kinship bonds over every other moral principle, and even over his self-interest (had he discarded

the empire to save his father from the gallows, Shun's sacrifice of reproductive fitness and status would have been indescribable). This is what merits Shun's eternal place in the *Book of Odes* (*shijing* 詩經). Mencius' lesson appears to be that filial piety pays vast reproductive dividends.

Few males can hope for a reward such as Shun's, but the general rule that the piety of a son is proportional to the number of or quality of offspring has currency in the Confucian cultural history of China. Bearing a male heir was the son's highest duty. According to R.H. Van Gulick's landmark study of social, sexual and gender relations in the history of China, this was "the most powerful motive for the polygamic family system that has prevailed in China till recent years; for if one wife failed to bear male children, one had to have others who would give birth to one or more sons" (Van Gulick, 1961, 13). The ideal is alive today (Fan, 1996, 100). The duties flowing from filial piety lead to the need for greater fecundity, which yields an obvious and important connection between our basic interest in reproductive fitness and the development of certain cultural components of ancient Chinese society. The institution of the polygynous family structure and the long history of concubinage permits high-status males to maximize their own reproductive fitness and control access to mates. Since historical China was patrilineal, patrilocal, and practiced primogeniture with exceptions, and since it developed agriculture millennia before Confucius, grandfathers and fathers could secure and store wealth. They could then bestow that wealth to the most filial of their sons in order to pay bride-prices. Given the social and cultural mechanisms that surrounded the family in Ancient China, filial piety produced vast reproductive dividends whereas unfilial behaviour would result in undesirable reproductive outcomes. Unfilial sons were not chosen to receive patrilineal wealth and so would not be able to afford a desirable wife and fertile concubines.

### Filial Piety in Cross-Cultural Psychological Perspective

In order to assess the influence of filial piety on Confucian populations we need to locate a source of data that is *ex hypothesi* regarded by the evolutionary sciences as a source of considerable parent–offspring conflict and is also a source of considerable cross-cultural testing. In this way we can compare levels of parental influence on offspring, or offspring obedience to parents, between Confucian and non-Confucian populations. According to Trivers's seminal paper on parent–offspring conflict, the issue likely to foment the most parent–offspring conflict in humans is offspring mating:

Assuming that parent and offspring agree that the offspring should reproduce, disagreement is still possible over the form of that reproduction. Whether an individual attempts to produce few offspring or many is a decision that affects that individual's opportunities for kin-directed altruism, so that parent and offspring may disagree over the optimal reproductive effort of the offspring. Since in humans an individual's choice of mate may affect his or her ability to render altruistic behaviour toward relatives, mate choice is not expected to be a matter of indifference to the parents (Trivers, 1974: 261)

Before making this comparison in the following sections, in this section I summarize research about the psychology of Confucian filial piety in a cross-cultural context.

Chinese psychologists studying filial piety have identified several variables expressed in relation to it. Yeh and Yang (1989, 1990) create a framework for its measurement and analysis. Ho and Lee (1974) create a scale to measure attitudes expressive of Confucian filial piety. Ho (1994, 1996) finds filial piety exemplified by authoritarian morality in two ways. First, filial individuals tend to rank members of societal units from the family up to the nation state in terms of members' hierarchical authority. Second, filial individuals judge people in terms of filial moral principles. Individuals associate filial piety with attitudes including overcontrol, emphasis on proper behavior, inhibition of self-expression and inhibition of independence. Individuals assessed as being filial exemplify personality characteristics like dogmatism, authoritarianism and high conformity more than those not assessed as filial. Ho concludes that filial piety covaries with 'cognitive conservatism' (Ho, 1996). Hwang adds that filial piety predicts traditionalism, i.e. an orientation to the past and a likelihood of "following in the footsteps of one's forebears," and culturocentrism, i.e., commitment to the "permanence, centrality and even superiority of one's own culture" (1999: 179). Noteworthy for the present study, Yeung (1989) shows that attitudes expressive of filial piety in elderly subjects from Hong Kong covaried with higher expectations of social and psychological support from their family members, and negatively correlated with self-reported life satisfaction.

Filial piety is two-natured, according to another set of experts. Yeh (1997, 2003) and Yeh and Bedford (2004) have developed a 'dual filial piety model' to account for the positive and negative influences of this trait. Yeh argues for two focal factors: reciprocity and authoritarianism. Reciprocal filial piety is hypothesized to motivate children to fulfill their duties to care for parents' emotional, financial and physical well-being. This is regarded as 'reciprocal' filial piety because these duties fall from the extensive, multi-dimensional support received by children from parents. Yeh (2003) isolates a specific principle

within the filial piety system that he calls 'favouring the intimate', which is hypothesized to be active in the discharge of these duties. Authoritarian filial piety is hypothesized to demand submission of children to parents, increasing parents' reputations and the repression of children's own desires. Yeh and Bedford (2003) reveal complex interactions between these two dimensions of filial piety, and chart the outcomes of each for psychosocial adjustment. Data appear to bear out this theoretical structure.

Confucian parents adopt a parenting style that emphasizes practical control over children for the sake of their effective socialization. In several studies of Chinese American and European American parents, Chinese American parents were shown to "adhere to parental strictness and discipline that support parents' rights and position of authority" (Wu, 1996: 154). One longitudinal study about parental acceptance and control collected data from Chinese American and European American families at three different times: when children were in preschool and kindergarten, first and second grades, and third and fourth grades. Regarding problem behaviours by children the authors say, "the results suggest that CA (Chinese American) fathers, like mothers of both ethnicities, exerted a positive influence on their children's adjustment, but European fathers' reports of acceptance and control did not appear to be related to the child outcomes measured" (Huntsinger, 2009: 326). Chinese American fathers exert more effective control over children and their socialization than do European American fathers. This is consistent with earlier research that shows that, although Chinese parents do score higher on measures of authoritarianism compared to Western parents, Chinese parents' efforts are aimed at training their children to behave appropriately, achieve in academic circles and most of all to learn to live together harmoniously (Chao, 1995). Not coincidentally, filial piety correlates with authoritarian moralism and cognitive conservatism in children – and with poorer verbal fluency (Ho, 1994).

On the flipside, European American parents have been shown to be more permissive than Chinese American parents and more likely to give their children unconditional positive regard than Chinese parents (Jose et al., 2000). This is consistent with traditional parenting practices in the Confucian diaspora in which fathers who express affection for sons were thought to invite a breakdown of respect and obedience required by filial piety (Russell and Yik, 1996). A large comparative study of adolescent problem behaviour in China and the United States (China  $N=51\ 739$ ; United States  $N=51\ 596$ ) produced evidence of considerably greater parental rule-following behaviour among Chinese adolescents: 27% of Chinese students had missed 1 or more days of school the previous semester compared to 80% of US students; Chinese students spent over twice as much time doing homework than US students; and, there were significantly fewer cases of student-student harassment at Chinese schools compared with

US schools (Jessor et al., 2003: 342). The role of parental disapproval of problem behaviour in explaining cross-cultural variance was a strongly significant deterrent for the Chinese adolescents but only a significant deterrent for the US adolescents (2003: 351). Greater relevance of family controls is consistent with Chinese cultural expectations of filial piety and kin obligation (Jessor et al., 2003: 354, citing Wong, 1995). This is expected given numerous studies showing Chinese parents are more authoritarian than Western parents (Dornbusch et al., 1987; Lin and Fu, 1990; Kelley, 1992).

Interestingly, parental authoritarianism in Chinese parents has a positive effect on socialization and academic achievement in Chinese children (Ho, 1986; Chen et al., 1997), implying that Confucian forms of parental control are beneficial to children. This is subject to qualifications, for example, Kim (2007) gives evidence of a negative correlation between Confucianism and four well-documented conditions for creativity, invoking the role of filial piety and its prescription of hierarchical relationships in this connection. Filial piety beliefs correlate with family cohesion (Cheung et al., 1994), motivations to care for one's parents (Selig et al., 1991), positive intergenerational relationships and support of one's parents (Sung, 1995), and negatively correlates with parent-child conflict in adolescents (Yeh and Bedford, 2004). Chinese parents have also been shown to exhibit higher rates of parental control and emphasis on achievement than immigrant Chinese parents and Caucasian-American parents (Lin and Fu, 1990). In one study of parental reactions to children's negative emotions, Chinese parents who reported higher authoritative parenting and lower authoritarian parenting also reported more encouragement of expression in children (Tao et al., 2010: 143).

To summarize, robust work in cross-cultural psychology with East Asian and non-East Asian populations reveals that filial piety, as assessed in accord with several scales developed for the purpose, is alive and well in the Confucian diaspora.

### **Evolutionary Psychology, Parent–Offspring Conflict and Offspring Mate Preferences**

Representations of filial piety amongst East Asians in emotion, cognition and behaviour correlate closely with the content of the filial piety cultural system as represented in Early Confucianism. In addition to outcomes just discussed that strongly correlate with filial piety, filial piety also appears to predict certain stereotypic forms of mating behaviour. Parental influence marks an underappreciated but influential factor in mating behaviour, mate preferences and mating strategies, and it has been used to test parent–offspring gene conflict

theory. “Parental control over mating is the result of parents and offspring not having identical interests with respect to mating, and the former being able to impose their will on the latter” (Apostolou, 2008b: 90). Parents attempt to control several components of their offspring’s mating behaviour, including offspring mate preference and offspring mate strategies, i.e., short-term or long-term strategies for acquiring sex. To understand the importance of data in relation to the role of obedience to parents encoded in filial piety one first must understand hypotheses regarding parent–offspring conflict over both mate preferences and mating strategies.

First consider mate preferences. The reproductive resources of females are more highly valued than those of males, which is why males seek access to females more than females seek access to males. This fact puts parents in the position of preferring to direct control over female offspring more than to direct control over male offspring since female choice of mates is more decisive. Since parents historically and, in many parts of the globe, contemporarily exercise mate choice for females, male traits are selected on the basis of parental preferences rather than on the basis of female preferences (Apostolou, 2008b: 90). Parents’ interests in their daughter’s mate are not identical to their daughter’s interest in a mate, and neither of these two sets of interests are identical to the male suitor’s interests in the daughter as a mate. Data confirming the asymmetry between parent preferences for offspring mates and offspring preferences for offspring mates hypothesized by evolutionary psychology includes anthropological research in the field and psychological testing. Studies in foraging and pastoral societies indicate that the asymmetry results in parental preferences for high social status, wealth, loyalty and character (Borgerhoff Mulder, 1988), industry, earning potential, and coming from a good family (Apostolou, 2007a,b) in an offspring’s mate.

If you are a parent, how do you know that the mate you have selected for your daughter actually possesses these characteristics rather than merely appears to possess these characteristics? To address this question parents impose costs on potential mates through customs and rituals in the form of dowries, bridewealth and brideservice. The work of Amotz Zahavi on honest signalling assists in explaining degrees of resource exchange through bride-wealth customs (Zahavi, 1975). The existence of the institution of bridewealth depends on material wealth and the level of parental control over offspring mate choice. This latter fact leads to hypotheses that cross-cultural differences in bridewealth will covary with parents winning the parent–offspring battle over mate choice (Apostolou, 2008b: 95).

Bridewealth occupies a large role in the selection of offspring mates in Early China, but other customs and rituals also aided parents in selecting suitable

mates for offspring and aided potential mates in signalling their desirability to future in-laws. Many ritual behaviours (*li* 禮) discussed in works from Early China have this purpose. Confucian teachings about filial piety encourage men to establish and signal features of character that are desirable to parents of daughters whom they might wed. *Analects* 1.11 prescribes overt behaviour with high salience and visibility to signal to the community that one is obedient, filial and possessing a reliable character: “Confucius said, ‘When a man’s father is alive, look at the bend of his will. When his father is dead, look at his conduct. If for three years (of mourning) he does not change from the way of his father, he may be called filial’ ” (see also *Analects* 17.21 and Liu, 2006). The ability of a family to survive, maintaining the desirability of its males as offspring, while forsaking valuable labour of sons for three years – literally, into the third year, thus two years and one month – signals great wealth. There is no evolutionary reason for daughters (or their parents) to prefer a male mate who mourns his father for three years than one who does not. *Ceteris paribus*, they have reasons against preferring such a mate since it exhibits an apparent dereliction of duty to wife and children. The point is rather that the cultural evolution of Confucianism gave rise to features of the filial piety system that offer parents unique opportunities to overtly observe the presence or absence of desirable traits in potential mates for their daughters.

In a majority of pre-industrial societies parental influence on offspring mate choice led to arranged marriages in which parents select mates for daughters according to their own preferences (Minturn et al., 1969; Whyte, 1978; Broude and Greene, 1983; Frayser, 1985; Apostolou, 2007a,b). This process creates parent–offspring conflict so long as traits valued in an offspring mate offer asymmetrical benefits to parent and offspring. The losing party is forced to compromise. Several traits offer asymmetrical benefits, including physical beauty, as do short-term and long-term mating strategies. Genetic quality of the offspring’s potential mate is a trait that offers asymmetrical benefits because it is in the offspring’s interest to acquire a mate with the highest genetic quality possible. Of course high gene quality in a mate is beneficial to both competitors, but while grandparents share 25% of their genes with grandchildren, parents share 50%. Since physical beauty is a proxy for genetic quality, Apostolou hypothesized that mate beauty would be more valued by offspring than by parents. This was confirmed (Apostolou, 2008a; Buunk et al., 2008). Conflict arises because short-term extra pair copulations aim to maximize genetic quality in a mate, rather than identify mates by family background; but high genetic quality gives less benefit to parents than good family background. In addition, casual relationships by daughters risk the necessity of high parental and grandparental investment, making short-term strategies by females much

more costly to the family. Women also gain immediate resources like gifts (Buss and Schmitt, 1993). To understand the process in more detail, consider the asymmetry of family background preferences.

The family background of the mate is asymmetrically beneficial. According to Trivers, “Parents may also use an offspring’s marriage to cement an alliance with an unrelated family or group, and insofar as such an alliance is beneficial to kin of the parent in addition to the offspring itself, parents are expected to encourage such marriages more often than the offspring would prefer” (Trivers, 1974: 261). Parents’ interest in selecting an offspring mate for his or her family background allows creating, sustaining or enhancing family alliances; increasing political and economic benefits of parents; and adds support in conflict with out-groups. To win this battle in the parent–offspring war and exercise complete control over formal mating decisions (the offspring can always exercise mate choice within a formal relationship through extra-marital relationships), parents in traditional societies marry offspring early, often while pre-pubescent children. Evolutionary psychologists hypothesize that strong evolutionary pressures on parents in the context of parent–offspring conflict led to strong preferences to maximize their own fitness in offspring mate choice. These fitness benefits include, for example, payments for the transfer of bridewealth from one family to another, and greater rates of care by offspring of parents late in life.

Hypotheses about asymmetric mate choice involving the family background of the potential offspring mate have been tested in a few contexts. Apostolou (2008a) found that individuals prefer similar religious background more in an in-law than spouse, which is evidence that parents value family background of in-laws more than do offspring. Buunk et al. (2008) showed preferences for mate candidates who do not come from good families to be more acceptable to offspring for mates than to parents as mates for offspring. Apostolou (2008b) studied mate preferences of parents with children for mates for themselves and for mates for their children, and the differences strongly support the hypotheses described. Traits much more preferred in potential husbands than in potential sons-in-law included physical attractiveness, exciting personality and being easy going, whereas traits more preferred in potential sons-in-law than potential husbands included good family background and good family reputation. Comparisons between ratings of potential daughters-in-law and potential wives yielded similar results. Traits more preferred in potential wives included exciting personality and intelligence, while traits preferred in potential daughters-in-law included good family reputation and good family background (Apostolou, 2008: 464). These results support the hypothesis that parents prefer good family background in an offspring mate more than off-

spring do, while offspring prefer beauty in an offspring mate more than parents do. Buunk (2008) interprets these results as indicating parents' interests are served best if offspring have mates likely to invest in the family because this will yield greater benefits directly to parents than the genetic quality of the offspring mate. Family background, for Buunk, is proxy for ability to invest.

In addition to this are asymmetries in parent and offspring preferences about the mating strategies of offspring. Offspring will seek to employ short-term mating strategies, but though beneficial for them, short-term mating strategies in offspring are harmful to parents' fitness interests. By seeking short-term mates, women can receive gifts of wealth and food otherwise unavailable to them (Buss and Schmitt, 1993). Women can also receive high quality genes through short-term mating since men of high genetic quality are much more likely to engage in short-term mating than men of low genetic quality (Buss, 2003). Costs of short-term mating to women are greater than costs to men since women risk pregnancy. Pregnancy may, at a given time, be in the woman's fitness interests of course, but it represents great danger to parents for several reasons. Pregnancy acquired through short-term mating without parents' permission sullies parents' reputations. Such events also prevent the daughter's parents from using marriage to forge an alliance with another family, which has been demonstrated as one of the most important functions of marriage in pre-industrial societies (Apostolou, 2007a,b). Not only this, short-term mating will amplify concerns about paternal uncertainty, which often preclude getting any resources from the father, let alone getting bridewealth. This in turn will force parents of unmarried daughters to shoulder a greater portion of the burdens of child rearing than they would have, had their daughter become pregnant while married. Keeping in mind that social status and good family background are preferred in offspring mates by parents, a daughter engaging in short-term mating presents risks to parents since her short-term mating decisions are not guided by the quality of the family background of her mate. Besides, even if the short-term mate she has chosen is of high genetic quality, parents gain much less from having an offspring mate with an individual of high genetic quality than do their daughters.

The case with sons is much less complicated since their short-term mating strategies are not as asymmetrical as their parents' interests in their son's mating strategies. If a man mates with 100 women, the outcomes offer much greater likelihood of many offspring in comparison with a woman who mates with 100 men over the same period of time. Thus, men express much greater interest in short-term mating strategies than women (Schmitt, 2005) and parents disapprove of short-term mating strategies less in male offspring than in female offspring.

In a recent study mate strategy preferences of females with children were compared with their mate strategy preferences for their female children, and mate strategy preferences of males with children were compared with their mate strategy preferences for their male children. This survey included eight Likert-rated items about mating strategies, including 'Have sex with someone you/she/he met an evening in the bar', 'Have sex without commitments', 'Have a casual relationship', 'Have a one night stand', 'Go out with someone who only wants to have sex with you/her/him' and 'Dress up to attract someone for casual sex'. Results show that preference asymmetries for self and daughter were highly significant for these and other items. The only items on the eight-item scale that were not were 'Flirt with someone without having serious intentions' and 'Have serial short-term sexual partners'. Mothers of daughters approve of short-term mating strategies for themselves at significantly greater rates than they approve of short-term mating strategies for their daughters. The asymmetries for fathers of sons were even more robust (Apostolou, 2009: 897).

This study also revealed several interesting interactions. The first is between age of parent and the negative assessment of short-term mating strategies in offspring. As parents age, they become significantly less approving of short-term mating strategies in offspring. The second is an asymmetry in the degrees of disapproval for short-term strategies in sons versus daughters. This asymmetry revealed significantly greater disapproval for daughters' use of short-term mating strategies than sons'. Likewise, the study also revealed significantly greater disapproval for women's use of short-term mating strategies than for men. This is consistent with data showing that parents are more likely to control the sexual behaviour and mate choice of daughters than sons, and more likely to experience anger when daughters engage in short-term mating strategies (Perilloux et al., 2008).

This section has laboured to justify two asymmetries hypothesized by evolutionary psychology about parental influence over offspring. First, parents have different preferences about the traits of their offspring's marriage partner than do offspring themselves. Principally parents prefer their offspring's mate has good family background, loyalty and earning potential more than offspring do, whereas offspring prefer beauty in a mate more than parents do. Second, parents have different preferences about the mating strategies of their offspring than do their offspring themselves. Parents prefer that their offspring, especially daughters, use long-term mating strategies that avoid casual coupling and one night stands to a greater degree than offspring do, whereas offspring, especially men, prefer casual coupling and one night stands for themselves to a greater degree than parents do for them.

## Cultural Variance in Offspring Mate Preferences and Strategies: Confucian Exceptions

The hypothesis of this paper is that Confucian filial piety, the product of guided cultural variation, allows parents (and grandparents) to exert greater control over offspring as compared to parents outside Confucian culture. The previous section documented evidence of asymmetrical preferences about offspring mates between parents and offspring. This section presents evidence in the next stage of the justification of the paper's hypothesis by discussing cross-cultural differences in mate preference with special attention to data from East Asia – countries in the Confucian diaspora. Despite confirmation of these evolutionary hypotheses, cross-cultural data reveal significant cultural differences in the degrees to which offspring adopt or do not adopt parental preferences regarding offspring mate preference and offspring mate strategies.

Before continuing, non-cultural factors obviously explain various proportions of the cross-cultural variance in amounts of parent–offspring conflict. Goetz and Shackelford (2005) show cross-cultural variation in sexual behaviour is partially explained by factors including sex ratio. Schmitt (2005) finds that sex ratio correlates negatively with sociosexuality. This implies that in areas where the ratio of men to women is high – and in China is extremely high – individuals tend to be less promiscuous. Gangestad et al. show that parasite threat explains mate preferences across geographical regions and cultures much better than does a measure of gender inequity, which represents a competing theory from the social sciences (Gangestad et al., 2006: 87–88). This might also account for certain observed patterns of mate preference across genders in East Asia.

Explanations such as these clearly account for significant but underdetermined proportions of variance in mate preferences and strategies across cultures. However, for several reasons non-cultural explanations are not the whole story. First, without improved ways of quantifying cultural influences on populations, researchers will not be in a position to run the large, complex regressions needed to distinguish the proportion of cross-cultural variation – in asymmetries in mate preferences, say – explained by culture from the proportions explained by sex ratio and pathogen load. This represents an opportunity for humanities researchers to collaborate with social scientists and psychologists, especially those interested in modelling cultural evolution. Second, some apparently non-cultural influences, like sex ratio, may be found to have deeper explanations that turn out to be predicted by culture. For example, Confucian emphasis on filial piety and attendant cultural systems like patrilineality would themselves predict a significantly male-biased sex ratio. Demographers have supported this correlation with data for some time (Arnold, 1985).

The degree to which offspring have been successfully conditioned by their culture to adopt parental preferences about their mating behaviour serves as evidence for the hypothesis that some cultures have resolved the problem of parent–offspring conflict in the favour of parents. Put a different way, parents can be declared victors in the parent–offspring battle over offspring mating preferences and offspring mating strategies to the extent that offspring adopt mates and mating strategies that are in the parents' interests and not in their own interests. The data below show that obedience of children to parents on these most important matters is higher in Confucian populations than anywhere else in contemporary industrialized countries.

### *Cross-Cultural Data on Parental Influence over Mate Choice*

Buunk et al. (2009) tested parental influence on mate choice among three groups of university students in British Columbia, Canada. Two groups were descended from ancestors in Europe and East Asia. The third group Buunk labels as 'Other'. The results that generate further justification for the hypothesis of this paper include data drawn from responses on the Parental Influence on Marriage (PIM) scale, which the authors develop using reliable instruments from previous studies. The PIM scale includes 10 items presented to subjects who responded on a 1–5 Likert scale with 1=I disagree completely and 5=I agree completely. The higher a subject's PIM score the greater parental influence on the subject's mate choice. PIM scale statements include "It is the duty of parents to find the right partner for their children and it is the duty of children to accept the choice of their parents" and "When selecting a partner, children should take into account the wishes of their parents," for examples (Buunk, 2009: 29).

The results from descendants of East Asian ancestors on the PIM scale indicate statistically significant differences from the results from descendants of European ancestors. Buunk summarizes the variation: "The means (and SD values) for participants of East Asian, European and Other ethnic backgrounds were, respectively, 2.76 (0.75), 1.86 (0.49) and 2.83 (0.99). These means differed significantly from each other,  $F(2, 99) = 14.71, p < 0.001$ " (Buunk, 2009: 35). Buunk asks three further questions about parental influence on marriage in the subject's own life, including "How do you think you will end up with a marriage partner?" Higher PIM scores indicate that in their marriage decision their parents are likely to play a large role ( $r = -0.26, p = 0.008$ ; Buunk, 2009: 34–35).

This data show that East Asian university students in Canada allow considerably more parental influence on mate choice than do European Canadians or (as reported from another experiment conducted by the same team) Dutch. Quantified in terms of the average PIM scale scores, the differences

approach a full order of magnitude. In other words, parental influence on mate choice among East Asian Canadians was nearly twice as great (2.76) than that reported by Dutch (1.45) or European Canadians (1.86). Setting aside for now any appeal to genetic differences (which are not ruled out), appeal to cultural differences, foremost among them the filial piety system for obedience to parents, best explains the extensive variance. In addition to support for the power of filial piety, this result ought to interest experts in cultural evolution due to the apparent effects on the PIM scale on second and third generation Canadian East Asians.

### *Cross-Cultural Data on Mate Preferences*

David Buss and co-authors (1990) found that one's culture and country of residence has greater effect than gender on variance across 18 variables concerning mate preference. The study reveals unique variance between the preferences of Chinese and non-Chinese samples. Buss et al.'s mainland Chinese sample ( $N=500$ ) included 265 males and 235 females. Average age of males was 23.37 ( $SD=4.87$ ) and average age of females was 22.46 ( $SD=5.29$ ). The Taiwanese sample ( $N=566$ ) included 288 males and 278 females. Average age of males was 21.13 ( $SD=1.85$ ) and average age of females was 20.54 ( $SD=1.63$ ). Chinese and Taiwanese samples were among the largest taken of 37 cultures (see Buss et al. 1990, 6, for information about other cultural samples). Buss and colleagues used two instruments. The first included 18 mate preference characteristics that subjects rated on a 1–4 Likert scale with 1='irrelevant or unimportant' and 4='indispensable'. The second instrument assessed mate preferences and asked subjects to rank each characteristic according to its 'desirability in someone you might marry' (Buss, 1990: 11).

Of special interest to the hypothesis of this paper is the data collected on chastity, which Buss defines as having "no previous experience in sexual intercourse" (Buss, 1990: 14). Results about preferences for chastity reveal information about both offspring mate preference and about offspring mating strategies – insofar as preferences for mates with no previous sexual intercourse is evidence of preference for a mate with a long-term mating strategy. Data about the desirability of chastity in a mate is proxy for parental influence on offspring mate strategies given the results reported above from Apostolou (2009) on the parent–offspring preference asymmetries surrounding mating strategies.

Buss writes, "The largest effect of culture occurred for the variable of *chastity*... Samples from China, India, Indonesia, Iran, Taiwan, and Palestinian Arab placed great importance on chastity in a potential mate... In contrast, samples from Sweden, Finland, Norway, Netherlands, and West Germany

generally judged chastity to be irrelevant or unimportant” (Buss, 1990: 16). For the sake of comparison, using results from the first instrument, Swedish men rate chastity in their prospective mates at 0.25 (out of 3) and Swedish women rate chastity at 0.28. Chinese men rate it at 2.54 and Chinese women rate it 2.61. Using these results, the quality of chastity is approximately 10 times more desired by a Chinese person, male or female, in his or her mate, than it is for a male or female Swedish person. The rank order preferences across countries for chastity reveal that “the mainland Chinese sample departs from the international norms in placing greater value on the health, chastity, and domestic skills of potential mates.” He adds that in the Chinese sample, “Less value is given to dependability, mutual attraction, sociability, pleasing disposition, exciting personality, appearance, and religious similarity” (Buss, 1990: 23). The sample from Taiwan, “like the mainland Chinese sample, places greater than average value on chastity, health, housekeeping skills, and heredity, and less than average value on sociability and appearance in potential mates” (Buss, 1990: 23).

In the second instrument subjects rated 18 features of potential mates in order of preference. Men and women from mainland China ranked chastity as more important than corresponding groups elsewhere in the world (Buss, 1990: 24). Women ranked chastity sixth. Data from Chinese men from the mainland is remarkable because they want a mate who is first healthy, second has a desire for children and third has no prior sexual experience. Chinese men rank chastity as the third most desirable trait in a potential mate. Men from the subcontinent placed their preference for chastity at fourth. The next highest ranking of chastity is 7th, by Taiwanese men. For most other groups – in fact, for all the African, Eastern European, Western European and South America groups – chastity ranked near the bottom of their preferences. Every group of men and every group of women in Western Europe, Oceania, Scandinavia and South America ranked chastity either 16th, 17th or 18th out of 18 in their preference list. All but Brazilian and Colombian men ranked it either 17th or 18th.

The China Health and Family Life Survey (1999–2000) confirms these results with data revealing unique patterns of first sexual intercourse for men and women in mainland China. Having first sex later in life, having first sex with one’s fiancé or fiancée and having first sex with one’s marriage partner indicate an avoidance of short-term mating strategies and *ipso facto* indicate preference for long-term mating strategies. Fewer than 15% of either men or women in mainland China who reached age twenty before 1964 had had premarital sex. The majority of Chinese men and women in various cohorts who have had premarital sex have had sex only with their fiancé or fiancée (Parish et al., 2007: 789ff). The only exception involved men who turned 20 between 1995

and 2000. Even here lurks a surprise: greater rates of procurement of commercial sex for this cohort distort rates of premarital sex. For this group the rate of premarital commercial sex plus the rate of premarital sex with fiancée and/or possible fiancée reaches about 50% of total premarital sex of the cohort. 19% of urban and 14% of rural Chinese men between 1990 and 2000 reported paying for commercial sex (Parish et al., 2007: 742).

According to survey results the median age at which men in China have first sex is 24, identical to the median age at which men in China marry. According to survey results the median age at which women in China have their first sex is 23, also the median age at which women in China first get married (Parish et al., 2007: 745). For comparison, of the 25 other countries represented in the comparison class by the study's authors, only Hungary, Sri Lanka and Singapore had higher median ages of first sex for women. For men only Sri Lanka and Singapore had higher median ages of first sex (Parish et al., 2007: 745). Singapore is highly Confucian in orientation; Sri Lanka has been at war for decades, delaying marriage and mating and disincentivizing marriage. In addition, "the emerging tendency of women's premarital sex" in mainland China is that it occurs "only with one's fiancé, a pattern also common in some other societies, including Taiwan" (Parish et al., 2007: 746). Parish et al. conclude that "Although the situation is changing, virginity remains the norm before marriage" in China (Parish et al., 2007: 750). Since the delay of first sex represents an avoidance of short-term mating opportunities, the remarkable delays of first sex in men and women in China indicate greater parental influence on sexual behavior. This extensive variance is best explained by appeal to cultural differences, foremost among them the filial piety system for obedience to parents.

### *Cross-Cultural Data on Short- and Long-Term Mating Strategies*

As part of the International Sexuality Description Project, David Schmitt and 118 co-authors gathered data from samples of 52 nations about sex preferences, mate preferences and mating strategies. Among the publications generated from this project, one (Schmitt, 2003) focuses on mating strategies. Several evolutionary hypotheses about correlations between gender differences and mating strategies were confirmed, for example, that significantly more men than women desire more than one sexual partner in the next month, which held within every major region of the world. However, examining cross-cultural differences about short-term versus long-term mating strategies, East Asians again exhibit an exception. Note 'East Asian men' in this sample refers to college students tested in Hong Kong, Japan, Republic of Korea and Taiwan but not mainland China, in which no data was gathered for this project.

When asked whether subjects desired more than one sexual partner “in the next month”, the International Sexuality Description Project data reveal a worldwide high of 35.0% amongst South American men and a worldwide low of 17.9% for East Asian men. For most regions 25% of men responded affirmatively (Schmitt, 2003, 93). This data indicates East Asian men are opposed to short-term mating strategies at numbers that mark a worldwide high. Mating preferences of men yield more interest since men are much more promiscuous than women across all world regions. But when looking at variance in the data gathered about this question from women across world regions, a mere 2.6% of East Asian women sampled answered affirmatively to the question, “Do you desire more than one sexual partner in the next month?” This result about Chinese women represents a world-wide low, confirming that the East Asian exception applies to men and women (Schmitt, 2003: 93).

In addition to this data, the mean levels at which subjects would consent to sex after knowing someone for “one month” show that East Asian and South/Southeast Asian women are least likely to consent (Schmitt, 2003: 96). African and East Asian men were the only two groups sampled that would not consent to sex knowing someone one month. The African mean was nearly twice lower than the East Asian mean. The authors explain this otherwise surprising result by remarking that “the reduced tendencies toward short-term mating in Africa may be influenced by the widespread rate of HIV/AIDS in several of the African cultures sampled by the ISDP” (Schmitt, 2003, 97). With this exception noted, East Asian men represented the only group of men who would not have sex with their partner after knowing their partner for one month. Instead East Asian men reached an average positive response at the three-month interval, representing conservative sexual values (Schmitt, 2003: 97).

These three studies’ data regarding the mate preferences and mating strategies of East Asian men and women consistently indicate that men and women in the Confucian diaspora are significant outliers as compared to worldwide populations. Furthermore, the directionality of the East Asian data strongly indicates that East Asian men and women are significantly more likely to adopt their parents’ preferences for their mating strategies and mate preferences than populations elsewhere in the world.

## **Conclusion**

Each of the studies reported in the previous section represents a type of parent–offspring preference asymmetry. And in each of the three sets of data East Asian subjects reveal that they have adopted and internalized the preferences of their parents to a greater degree than any other population in

the industrialized world. The extensive variance present in this data is best explained by appeal to cultural differences. What does Chinese culture have that other cultures lack? For various reasons that will not be discussed in the short space that remains, alternative explanations including appeals to genetic differences between races, appeals to contemporary sociological phenomena, differences in political governance and mainland China's one-child policy all fail to explain the variance at issue. Foremost among unique cultural properties of the Confucian diaspora sampled in these studies relevant to explaining this data is the presence of the filial piety cultural system for morally plastic obedience to parents. The effects of filial piety include data revealing that Confucian parents have acquired decisive influence over offspring mate preferences to a degree unknown elsewhere in the world.

This paper attempted to test the general hypothesis that the system of Confucian filial piety developed under the influence of cultural leaders, leaders who were also fathers and grandfathers, to solve the problem of offspring investment in parents, especially post-reproductive parents. Applying Trivers's insight about weapons used in parent–offspring conflict, the Early Confucian corpus functions as a tool wielded by fathers to moralize doctrines about obedience to parents and encode them in offspring for the express benefit of parents. The specific hypothesis examined here is that the presence, transmission and influence of the advocacy of filial piety in Early Confucian texts would correlate with variance in Chinese populations in data regarding contemporary parental influence on offspring preferences about mates and mating strategies. First, the paper described the origins and contents of the Early Confucian filial piety cultural system. Second, the paper presented evidence on behalf of hypotheses from evolutionary psychology about asymmetries in parent and offspring preferences about mates and mating strategies. Third, it confirmed cross-cultural variance on these axes by reporting on studies showing that Chinese offspring in the Confucian diaspora adopt their parents' preferences on these matters to significantly greater degrees than do offspring in any other industrialized society in the world.

This paper ought to be understood as justifying a hypothesis about strong, statistically significant correlations between the content of Early Confucian texts that concern filial piety and the reported data collected from residents of the Confucian diaspora. However, the paper also makes a stronger claim, a causal claim, to the effect that Early Confucian texts coupled with their successful cultural transmission through Chinese history caused these strong correlations. The justification provided this causal hypothesis here is clearly incomplete since space allows no justification for the supplemental claim about the effectiveness of Early Confucianism's cultural transmission over

2500 years. Though justification of this claim is the work of a companion paper about the cultural epidemiology of Early Confucianism and its influence, a brief word about this is in order.

Confucian filial piety correlates with Early Chinese patrilineality, ancestor worship, patrilocality, rituals, educational systems, and much more, each of which functions as a mechanism of cultural transmission. Through these cultural tools the system of Confucian filial piety gave rise to a number of other solutions to problems facing parents. For example, paternal uncertainty must be overcome to insure that a father doesn't reduce his fitness by allocating resources to non-kin. For Confucians this problem takes on much greater importance than for fathers in most other cultures due its extensive and multi-generational usage of agnatic kinship to engineer culture, share wealth and more. Fathers in ancient China crafted a solution to this problem by building exogamous patrilocality into the moral duties owed to fathers by sons. The wife, wives and concubines of male offspring were required to move out of their natal homes to live in the home of the father of the groom. These and other forms of filial piety were transmitted through rituals and cultural practices that gain considerable interest when examined through a gene-cultural co-evolutionary point of view. These practices include the '*zhengjie*' doctrine (貞節, lit. 'chastity') about feminine ideals of Confucianism, the 'separation of the sexes' (*nannü youbie* 男女有別) doctrine, the doctrine and practice of footbinding, unique Confucian pedagogies and more.

The program of which this paper is a part marks a fruitful research area for multi-disciplinary scholars with considerable potential for varied public policy applications, as a final example makes clear. In a population of Hong Kong Chinese, filial piety was negatively correlated with desire for sources of eldercare and support from non-familial sources among people 40 and older (Cheung et al., 2006). Furthermore, the more financial resources adult children possessed, the more likely they are to provide monetary and emotional support for their parents (Smith and Hung, 2012). Public policy makers appear able to leverage the fact that older Chinese prefer filial care over non-familial care into considerable savings since filial care directly costs the state nothing. Several states have begun this process. Television programming by CCTV in mainland China includes a reality show highlighting supererogatory acts of filial piety and a variety of advertisements funded by the Singaporean government promote this virtue. But precisely what is the relationship between filial piety and health care costs and savings? What conceptual tools are required by public policy analysts and social engineers to maintain the filial bonds between generations that surround health, wealth and well-being in the face of increasing individualization in the Confucian diaspora? With health care costs alone

bankrupting many Western companies and reducing the solvency of some nations in Europe, filial piety's influence appears well worth further funding and multi-disciplinary exploration.

## Acknowledgements

此文已有中译版，如需中译版请通过邮件联系作者。This paper has received help from Justin Lynn, Aaron Goetz, Laura Dane, Chenfeng Hao, Cheng Lian, Justin Gregory, Amy Coplan, Emma Cohen, Amy Steffes, Kelly Clark, Ryan Hornbeck, and audiences at University of Central Oklahoma, 北京大学 (Peking University), University of Nebraska-Omaha, Cal State Fullerton, 清华大学 (Tsinghua University), and the NEH Summer Institute on Experimental Philosophy. Support from the John Templeton Foundation and the SSHRC-funded Cultural Evolution of Religion Research Consortium (CERC) is gratefully acknowledged as a *sine qua non* of the research for this paper and the larger project of which it is a part.

## References

- Allan, S. (1979). Shang Foundations of Modern Chinese Folk Religion. In *Legend, Lore and Religion in China*, ed. S. Allan and Alvin P. Cohen. San Francisco: Chinese Materials Center.
- Apostolou, M. (2007a). Elements of Parental Choice: The Evolution of Parental Preferences in Relation to In-Law Selection. *Evolutionary Psychology* 5, 70-83.
- . (2007b). Sexual selection under parental choice: The role of parents in the evolution of human mating. *Evolution and Human Behavior* 28, 403-409.
- . (2008a). Parent-offspring conflict over mating: The case of beauty. *Evolutionary Psychology* 6, 303-315.
- . (2008b). Bridewealth and Brideservice as Instruments of Parental Choice. *Journal of Social, Evolutionary, and Cultural Psychology* 2, 89-102.
- . (2009). Parent-offspring conflict over mating: The case of mating strategies. *Personality and Individual Differences* 47, 895-899.
- Arnold, F. (1985). Measuring the effect of sex preference on fertility: The case of Korea. *Demography* 22, 280-288.
- Bai, L. (2005). *Shaping the Ideal Child: Children and their Primers in Late Imperial China*. Chinese University Press, Hong Kong.
- Bi, L. and D'Agostino, F. (2004). The Doctrine of Filial Piety: A Philosophical Analysis of the Concoalmnt Case. *Journal of Chinese Philosophy* 31, 451-467.
- Borgerhoff Mulder, M. (1988). Kipsigis bridewealth payment. In Betzig, L., Borgerhoff Mulder, M. and Turke, P. (Eds.), *Human reproductive behavior, a Darwinian perspective*, pp. 65-82. Cambridge University Press, Cambridge.
- Boyd, R. and Richerson, P. J. (2005). *Not by Genes Alone: How Culture Transformed Human Evolution*. Chicago University Press, Chicago, IL.
- Brooks, E. B. and Brooks, A. T. (1998). *The Original Analects; Sayings of Confucius and his successors*. Columbia University Press, New York, NY.

- Broude, G. and Greene, S. (1983). Cross-cultural codes on husband-wife relationships. *Ethnology* 22, 263-280.
- Buss, D. (1990). Toward a biologically informed psychology of personality. *Journal of Personality* 58, 1-16.
- . (2003). *The evolution of desire: Strategies of human mating*, 2nd edn. Basic Books New York, NY.
- and Schmitt, D. (1993). Sexual strategies theory: An evolutionary perspective on human mating. *Psychological Review* 100: 204-232.
- , Abbott, M., Angleitner, A., Biaggio, A., Blanco-Villasenor, A., Bruchon Schweitzer, M. (and 45 additional authors) (1990). "International preferences in selecting mates: A study of 37 cultures. *Journal of Cross-Cultural Psychology* 21, 4-47.
- Buunk, A. P., Park, J. H. and Dubbs, S. L. (2008). Parent-offspring conflict in mate preferences. *Review of General Psychology* 12, 47-62.
- , Park, J. H. and Duncan, L. A. (2009). Cultural variation in parental influence on mate choice. *Cross-Cultural Research* 44, 23-40.
- Chao, R. (1995). Chinese and European-American cultural models of the self reflected in mothers' child-rearing beliefs. *Ethos* 23, 328-354.
- Chen, X., Dong, Q. and Zhou, H. (1997). Authoritative and authoritarian parenting practices and social and school performance in Chinese children. *International Journal of Behavioral Development*, 21, 855-873.
- Cheung, C. K., Lee, J. J. and Chan, C. M. (1994). Explicating filial piety in relation to family cohesion. *Journal of Social Behavior and Personality* 9, 565-580.
- , Kwan, A. Y. and Ng, S. H. (2006). Impacts of filial piety on preference for kinship versus public care. *Journal of Community Psychology* 34, 617-634.
- Dornbusch, S., Ritter, P., Leiderman, R., Roberts, D. and Fraleigh, M. (1987). The relation of parenting style to adolescent school performance. *Child Development* 58, 1244-1257.
- Fan, C. (1996). Language, gender, and Chinese culture. *International Journal of Politics, Culture, and Society* 10, 95-114.
- Fraser, S. G. (1985). *Varieties of sexual experience*. HRAF Press, New Haven, CT.
- Gangestad, S., Haselton, M. and Buss, D. (2006). Evolutionary foundations of cultural variation: evoked culture and mate preferences. *Psychological Inquiry* 17, 75-95.
- Geisz, S. (2008). Mengzi, strategic language, and the shaping of behavior. *Philosophy East and West* 58, 190-222.
- Guo, Q. (2004). *Debate on Confucian Ethics: On the Mutual Concealment (of Wrong Doings) Among Family Members*. Hubei Shifan Daxue Chuabanshe, Wuhan.
- Haig, D. (1993). Genetic conflicts in human pregnancy. *Quarterly Review of Biology* 68, 495-532.
- Ho, D. Y. F. (1986). Chinese patterns of socialization: A critical review. In Bond, M. H. (Ed.), *The Psychology of the Chinese People*, pp. 1-37. Oxford University Press, New York, NY.
- . (1994). Filial piety, authoritarian moralism, and cognitive conservatism in Chinese society. *Genetic, Social and General Psychology Monograph* 129, 349-365.
- . (1996). Filial piety and its psychological consequences. In Bond, M. H. (Ed.), *The Handbook of Chinese Psychology*, pp. 155-165. Oxford University Press, Hong Kong.
- and Lee, L. Y. (1974). Authoritarianism and attitudes toward filial piety in Chinese teachers. *Journal of Social Psychology* 92, 305-306.
- Huntsinger, C. (2009). Relations among parental acceptance and control and children's social adjustment in Chinese-American and European-American families. *Journal of Family Psychology* 23, 321-330.
- Hwang, K. K. (1999). Filial piety and loyalty: Two types of social identification in Confucianism. *Asian Journal of Psychology* 2, 163-183.

- Jensen, L. (1998). *Manufacturing Confucianism: Chinese Traditions and Universal Civilization*. Duke University Press, Durham, NC.
- Jessor, R., Turbin, M., Costa, F., Dong, Q., Zhang, H. and Wang, C. (2003). Adolescent problem behavior in China and the United States: A cross-national study of psychosocial protective factors. *Journal of Research on Adolescence* 13, 329-360.
- Jordan, D. K. (1998) Filial piety in Taiwanese popular thought. In Slote, W. H. and DeVos, G. A. (Eds.) *Confucianism and the Family*, pp. 267-284. State University of New York Press, Albany, NY.
- Jose, P. E., Huntsinger, C. S., Huntsinger, P. R. and Liaw, F.-R. (2000). Parental values and practices relevant to young children's social development in Taiwan and the United States. *Journal of Cross-Cultural Psychology* 31, 677-702.
- Kelley, M. L. (1992). Cultural differences in child rearing: A comparison of immigrant Chinese and Caucasian American mothers. *Journal of Cross-Cultural Psychology* 23, 444-455.
- Kim, K. H. 2007. Exploring the Interactions between Asian culture (Confucianism) and creativity. *Journal of Creative Behavior* 41, 28-53.
- Knapp, K. (2006). Creeping absolutism: parental authority as seen in early medieval tales of filial offspring. In Hershock, P. and Ames, R. (Eds.) *Confucian Cultures of Authority*, pp. 65-89. State University of New York Press, Albany, NY
- Lau, D. C., trans. (2003). *Mencius*. Chinese University Press, Hong Kong.
- , trans. (2008). *The Analects*. The Chinese University Press, Hong Kong.
- Legge, J. (1889). *The Sacred Books of the East: The Texts of Confucianism*. Oxford University Press, Oxford.
- Lin, C. C. and Fu, V. R. (1990). A comparison of child-rearing practices among Chinese, immigrant Chinese, and Caucasian-American parents. *Child Development* 61, 429-433.
- Liu, Q. (2006). On Confucius' Principle of consanguineous affection: a reading of the dialogue about the three-year mourning in the *Lunyu*. *Asian Philosophy* 16, 173-188.
- . (2007). Confucianism and corruption: an analysis of Shun's two actions described by Mencius. *Dao*, 1-19.
- Minturn, L., Grosse, M. and Haider, S. (1969). Cultural patterning of sexual beliefs and behavior. *Ethnology* 8, 301-318.
- Munro, D. J. (2002). Reciprocal Altruism and the Biological Basis of Neo-Confucianism. *Dao: A Journal of Comparative Philosophy* 1, 131-142.
- . (2005). *A Chinese Ethics for the New Century: The Ch'ien Mu Lectures in History and Culture, and Other Essays on Science and Confucian Ethics*. The Chinese University Press, Hong Kong.
- Nuyen, A. T. (2004). The Contemporary Relevance of the Confucian Idea of Filial Piety. *Journal of Chinese Philosophy* 31, 433-450.
- Parish, W., Laumann, E. and Mojola, S. (2007). Sexual behavior in China: trends and comparisons. *Population and Development Review* 33, 729-756.
- Perilloux, C., Fleischman, D. S. and Buss, D. M. (2008). The daughter guarding hypothesis: parental influence on, and emotional reaction to, offspring's mating behavior. *Evolutionary Psychology* 6, 217-233.
- Russell, J. A. and Yik, M. S. M. (1996). Emotion among the Chinese. In Bond, M. H. (Ed.), *The Handbook of Chinese psychology*, pp. 166-188. Oxford University Press, Hong Kong.
- Schmitt, D. (2003). Universal sex differences in the desire for sexual variety: tests from 52 nations, 6 continents, and 13 islands. *Journal of Personality and Social Psychology*, 85-104.
- . (2005). Sociosexuality from Argentina to Zimbabwe: A 48-nation study of sex, culture, and strategies of human mating. *Behavioral and Brain Sciences* 28, 247-311.
- Selig, S., Thomlinson, T. and Hickey, T. (1991). Ethical dimensions of intergenerational reciprocity: Implications for practice. *The Gerontologist* 31, 624-630.

- Slingerland, E. trans. (2003) *Analects*. Hackett Publishing, Indianapolis, IN.
- Smith, C. S. and Hung, L.-C. (2012). The influence of Eastern philosophy on elder care by Chinese Americans: attitudes toward long-term care. *Journal of Transcultural Nursing* 23, 100-105.
- Sung, K. T. (1995). Measures and dimensions of filial piety in Korea. *The Gerontologist* 35, 240-247.
- Tao, A., Zhou, Q. and Wang, Y. (2010). Parental reactions to children's negative emotions: prospective relations to Chinese children's psychological adjustment. *Journal of Family Psychology* 24, 135-144.
- Trivers, R. (1972). *Parental investment and sexual selection*. In Campbell, B. (Ed.) *Sexual Selection and the Descent of Man, 1871-1971*, pp. 136-180. Aldine, Chicago, IL.
- . (1974). Parent-offspring conflict. *American Zoologist* 24, 249-264.
- van Gulick, R. H. (1961). *Sexual Life in Ancient China*. Brill, Leiden.
- Van Norden, B. trans. (2008). *Mengzi: With Selections from Traditional Commentaries*. Hackett Publishing, Indianapolis, IN.
- Whyte, M. K. (1978). *The status of women in preindustrial societies*. Princeton University Press, Princeton, NJ.
- Wilson, M. and Daly, M. (1992). The man who mistook his wife for a chattel. In Barkow, J. H., Cosmides, L. and Tooby, J. (Eds.) *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*, pp. 289-326. Oxford University Press, Oxford.
- Wright, R. (1995). *The Moral Animal*. Vintage Books, New York, NY.
- Wu, D. Y. H. (1996). Chinese childhood socialization. In Bond, M. H. (Ed.) *The Handbook of Chinese Psychology*, pp. 143-154. Oxford University Press, Hong Kong.
- Yeh, K. H. (1997). Changes in the Taiwanese people's concept of filial piety. In Cheng, L. Y., Lu, Y. H. and Wand, F. C. (Eds.) *Taiwanese Society in the 1990s*, pp. 171-214. Institute of Sociology, Academia Sinica, Taipei.
- . (2003). The beneficial and harmful effects of filial piety: An integrative analysis. In Yang, K. S., Hwang, K. K., Pederson, P. S. and Daibo, I. (Eds.) *Progress in Asian social psychology: Conceptual and empirical contributions*, pp. 67-82. Greenwood, Westport, CT.
- and Bedford, O. (2003). A test of the Dual Filial Piety model. *Asian Journal of Social Psychology* 6, 215-228.
- . (2004). Filial piety and parent-child conflict. *International Journal of Psychology* 39, 132-144.
- and Yang, K. (1989). Cognitive structure and development of filial piety: Concepts and measurement (in Chinese). *Bulletin of the Institute of Ethnology* 56, 131-169.
- . (1990). An analysis of the typology of cognitive structures of filial piety (in Chinese). In Yang, K. S. and Hwang, K. K. (Eds.) *Psychology and Behavior of Chinese People: Proceedings of the First Interdisciplinary Conference*. Institute of Psychology, National Taiwan University, Taipei.
- Yeung, S. (1989). *The dynamic of family care for the elderly in Hong Kong*. Doctoral dissertation. University of Hong Kong, Hong Kong.
- Zahavi, A. (1975). Mate selection- a selection for a handicap. *Journal of Theoretical Biology* 53, 205-214.