Parent-offspring Conflict over Mating
and the Evolution of Mating-Control Institutions
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Parents and offspring often have conflicting interests over
mating, which results in the ideal spouse not being the ideal in-
law and the ideal in-law not being the ideal spouse. This
induces parents to control the mating decisions of their
offspring, which in turn gives rise to social institutions that
uphold this control. Based on this theoretical framework, it is
predicted that these institutions intend predominantly to
control the mating decisions of the female offspring when they
are young, that they are more prevalent among the upper
strata, and that they arise only in an ecological context where
parents are able to exercise some degree of control over the
mating decisions of their offspring. These predictions are
examined on a number of institutions, such as arranged
marriage and female circumcision.

Key Words: Parent-offspring conflict over mating; Arranged marriage;
Infant-child betrothal; Female circumcision; Clitoridectomy;
Infibulation; Foot-binding; Breast-ironing; Evolutionary sociology;
Mating control institutions; Social institutions.

Man is not only a tool-making animal; he is an institution-making animal
(Chapin 1928, p.375).

‘Among the Nandi in Kenya, when a girl is still very young,
her parents betroth her to a man of their choice. When she
enters puberty, she goes through puberty rites, which involve
the alteration of her genital organs. After the conclusion of
this procedure, she is ready for conjugal life and her parents
arrange her marriage with the parents of her betrothee’
(Langley 1979).

These customs and practices, absent from Western post-

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Volume LIV, Number 1, Fall 2013
industrial societies (at least over the last few generations), are associated with restricting and regulating mating behavior, and as such can be called mating-control institutions. The wide prevalence of these institutions across human cultures (Apostolou 2007b; Blood 1972; Frayser 1985) begs the question of their roots, function and purpose. Notably, their existence cannot be attributed to regulating mating; arguing that mating-control institutions exist to control mating is a circular hypothesis since it does not explain why mating needs to be controlled in the first place.

Although mating-control institutions are commonly found across different cultures, theoretical work in this area has been rather thin. Goode (1982) has argued that humans predominantly depend on culture and not on their innate predispositions. Thus, human societies rely on the effectiveness of socialization of their younger members. Due to this dependence, the community must shape and guide its younger members who will eventually pass on their social values to the next generations. The increasing dependence on culture then requires the human community to control mate choices (Goode 1982).

A theory that aspires to explain these institutions should account for their shared characteristics. Nevertheless, the socialization theory does not predict the asymmetric nature of the mating-control institutions, where more control is exercised over women. Also, it is not reasonable to assume that a given society aims at shaping and guiding its female members without paying much attention to the male ones. Moreover, the socialization theory does not explain why in Western post-industrial societies these institutions are not present. It would be difficult to argue that in post-industrial societies people are guided more by instincts and less by socialization. In fact, the socialization theory fails to make any predictions on the workings of these institutions.

Dismissing human nature as a causal force is unlikely to
produce any fruitful results in the endeavor to understand social institutions. A more productive approach is to view these social structures as cultural epiphenomena associated with phenomena grounded in the interaction of individuals who have a specific nature, a nature shaped by evolution (Murdock 1971; Tooby & Cosmides 1992). To take one example, prostitution is not a social phenomenon that can be explained solely by social forces such as poverty. It is men’s evolved nature to pursue sex with a variety of women without commitment, obligation and courtship which gives rise to this practice (Salmon 2008). To put it differently, if men had been evolved to pursue sex only with women with whom they are emotionally involved, there would be no prostitution. Thus, in the absence of poverty, there would still be prostitution, perhaps at a lower frequency or at a higher price.

Since social phenomena are not unrelated to human nature, and as human nature has been shaped by evolution, evolutionary theory becomes an indispensable tool for analyzing social structures. Accordingly, one way to analyze social phenomena is to identify those with common characteristics, an indication that there is an underlying causal mechanism. An evolutionary analysis can then identify the set of adaptations, that is, the causal mechanism, which gives rise to these phenomena. The next step is to examine how these adaptations interact with the environment a population occupies to shape the observed social structures. For example, in the case of prostitution, men’s evolved nature interacts with the poverty level to determine the frequency of this phenomenon in a given society.

By taking such a perspective, this paper aims at integrating recent developments in evolutionary theory and evolutionary psychology in order to construct a coherent theoretical framework, which contributes to our understanding of the existence and function of mating-control institutions such as arranged marriage and female circumcision.
Parent-offspring Conflict over Mating

All of the offspring’s genes come from the parents, but not all of a parents’ genes are passed to their offspring. The degree of genetic relatedness between parents and children is .5, indicating that parent and child have half of their genes in common. This means that their genetic interests overlap to some degree. But it also means that the two parties have half of their genes not in common, which indicates that their genetic interests diverge to some degree. One area of divergence is mate choice, where the traits of a mating candidate that maximize the inclusive fitness\(^1\) of parents do not necessarily maximize the inclusive fitness of their children. In consequence, parents and offspring have asymmetric preferences over traits which give them asymmetric benefits (Apostolou 2007a; 2008a; Buunk et al. 2008; Trivers 1974).

A good example of this logic is genetic quality. The coefficient of relatedness of parents to children is 0.5, but the coefficient of relatedness of grandparents to grandchildren is only 0.25. As a result, the odds of a particular gene of an individual being passed into the next generation by a spouse or in-law would be 50% or 25% respectively. This means that parents receive less fitness benefits than their offspring from a prospective mate of high genetic quality (Apostolou 2007a; Buunk et al. 2008). Beauty is a proxy of genetic quality (Thornhill & Gangestad 1993), and as such, is preferred more in a spouse than in an in-law (Apostolou 2008a; Buunk et al. 2008). Preferences divergence is not confined to beauty. Personality, family and religious background constitute other areas of disagreement (Apostolou 2008a,b; Buunk et al. 2008; Perilloux et al. 2011).

Asymmetric preferences interact with the trade-off nature

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\(^1\) Inclusive fitness is a measure of reproductive success. It is calculated by summing the number of personal descendants (i.e., one’s offspring) plus any extra reproduction by relatives that results from the individual’s behavior, adjusted by the degree of genetic relatedness (Hamilton 1964).
of mating (Gangestad & Simpson 2000) to give rise to parent-offspring conflict. In particular, given their own mate value, parents and offspring have to make compromises with regards to the qualities of a mating candidate. However, as the two parties do not share identical preferences, they are going to make different compromises (Apostolou 2008a; Buunk et al. 2008). For example, beauty in a spouse is preferred more by the spouse-seeker than by the spouse-seeker’s parents. Accordingly, if offspring solely exercise mate choice, they will make compromises over traits such as industriousness and social status, so as to get an attractive spouse. Since beauty is less important to parents, the benefit from good looks is not enough to compensate for the loss of other desirable characteristics. Therefore, offspring’s mate choice inflicts a cost upon parents in the form of loss in desirable traits.

This hypothesis was tested with the use of a budget allocation method (Apostolou 2011). In particular, parents were given a budget of mate points and they were asked to allocate them in traits for a prospective son-in-law and a daughter-in-law. Similarly, their children were given the same budget to be allocated to the same traits, but this time in a prospective husband and in a prospective wife. It was found that children compromised on qualities such as good family background in order to get more beauty in a spouse, while their parents compromised on beauty to get more of good family background.

Asymmetrical compromises were also found for traits for which there is no divergence between in-law and mate preferences. For instance, parents allocated more points to the ambition and industriousness traits in an in-law than their children did in a spouse. This indicates that conflict is not the outcome of an overall disagreement between parents and their children over mate choice, but rather disagreement over a relatively small number of traits that, as a consequence of the tradeoffs one needs to make, results in disagreement over
a wider range of traits.

This asymmetry in the preferences between parents and offspring constitutes the basis of the proposed theoretical framework: In order to decrease the cost inflicted upon them, parents attempt to control the mating decisions of their offspring, which in turn gives rise to mating-control social institutions.

Social Institutions and Parent-offspring Conflict over Mating

If offspring exercise choice freely, they will choose spouses who maximize their own inclusive fitness and not the inclusive fitness of their parents. Thus, conflict over mating gives parents the incentive to control the mating behavior of their daughters and sons, because there are evolutionary gains from being able to have as in-laws individuals who maximize their inclusive fitness (Apostolou 2007b, 2010b). The most effective ways parents employ, with time become more common, and eventually, turn into practices and customs within a given society that can spread to other societies through cultural diffusion. Accordingly, the evolved human nature gives rise to social patterns and ultimately social institutions, which predominately aim at controlling the mating behavior of offspring. This theoretical framework allows the formulation of specific hypotheses regarding the structure of these institutions.

To begin with, parental rule over mating is asymmetrical, with parents exercising more control over their daughters’ than their sons’ mating decisions (Apostolou 2007b; Flinn 1988; Perilloux et al. 2008). The reason behind this asymmetry is explained by the theory of parental investment (Trivers 1972): The female, by investing more in her offspring, becomes the scarce reproductive resource to which males are seeking access; she is then in a position to exercise choice. Accordingly, by controlling the mating behavior of their daughters, parents effectively gain control over mate choice (Apostolou 2010b). In addition, the risk of pregnancy,
which can commit a woman’s parental investment to an undesirable man, further motivates parents to exercise more control over their daughters than over their sons (Perilloux et al. 2008). Parents’ main interest in controlling the mating decisions of their female offspring should be mirrored in the mating-control institutions, which are predicted to focus predominantly on controlling the mating behavior of a society’s female members.

Furthermore, children’s dependence on parental investment and parents’ superior physical strength are two factors that allow parents to control the mate choices of their children, especially when the latter are young (Alexander, 1974; Apostolou 2007b). However, as offspring grow older, they become stronger than their parents, who can no longer use their physical strength to influence mate choice. In addition, grown-up offspring are more experienced in subsistence activities and thus less dependent on parental investment. Therefore, parents’ capacity to control mate choice is inversely related to the age of their offspring: The younger their daughters and sons, the easier it is for parents to influence their choices. This induces parents to control the mating decisions of their offspring when the latter are still young and dependent on them, which in turn predicts that mating-control institutions are focused on controlling offspring’s mating decisions when they are young.

High status and wealthy parents have more to lose from an undesirable marriage. For instance, if their daughter falls for an attractive man who comes from a poor family, they forfeit the opportunity of arranging a marriage with a wealthy family. Moreover, charming men with no other qualities may seek access to the parents’ wealth through their daughters. This gives well-off families a stronger incentive to control the mating decisions of their offspring than less affluent ones. Additionally, wealthier parents have more resources at their disposal, which make them more effective manipulators of
their children. It is no surprise then that high status families grant their daughters and sons less freedom in mating decisions than lower rank families do (Goode, 1982). On this basis, it is predicted that mating-control institutions are more frequently found among the higher strata of a given society.

Parents have the incentive to control the mating decisions of their daughters and sons, but ecological constraints can prevent them from doing so. For instance, in technology-based post-industrial societies, extensive educational demands lead to the postponement of marriage until late adulthood when the offspring are financially independent from their parents. This, combined with the liberalizing effects of education and a legal system which does not allow the use of physical force, prevents parents from controlling their children’s mating decisions. Consequently, mating-control institutions are predicted to be absent from these societies.

On this basis, it is further predicted that mating-control institutions should be prevalent in pre-industrial societies, where parents are not constrained from controlling their offspring, and where offspring are less independent from their parents. Moreover, among pre-industrial societies, these institutions are expected to be more prevalent in societies which base their subsistence on agropastoralism than in societies which base their subsistence on hunting and gathering. The reason is that in the former more material wealth is produced and parents control more parental investment, which enables them to exercise more influence over their children’s mating decisions. Similarly, more wealth means that there is more at stake for parents, giving them an additional incentive to control the mating decisions of their children (Apostolou 2010b; Blood 1972).

To summarize, parents and offspring have conflicting interests over mating which induces the former to control the mating decisions of the latter. This gives rise to social institutions with the primary and perhaps only function to
place the mating behavior of the offspring under parental control. The main target of these institutions is the female offspring when she is young. Moreover, mating-control institutions are more prevalent among the upper strata. Finally, they arise in an ecological context where parents are able to use their physical strength and parental investment in order to manipulate their children. We can now turn to examine whether these predictions are consistent with what is known, so far, about specific mating-control institutions. The evidence is summarized in Table 1.

**Mating-Control Institutions**

*Female Circumcision*

Female circumcision involves the alteration of female genital organs. The most common practice is clitoridectomy, the surgical removal of the clitoris. Among the Nandi of Kenya:

‘Holding the clitoris between the thumb and first and second fingers of the left hand the circumciser quickly cuts it with a small sharp knife called mwatindet or mwaiteiyot. It is intended that the clitoris only should be cut, but if anything goes wrong-insufficient preparation, a slipping of the operator’s hand-then the labia can be mutilated. Profuse bleeding may then ensue and girls have been known to die even in recent years’ (Langley, 1979, p.60).

It is estimated that there are more than 100 million women, mainly in Africa, whose bodies have been altered by some form of female circumcision (Gruenbaum 2001; Toubia 1993). It is further estimated that an additional two million girls undergo some form of female genital cutting each year (Gruenbaum 2001). The radical nature of this practice along with its wide prevalence begs the question of why loving parents submit their daughters to such a painful and risky procedure.

The clitoris is a source of sexual pleasure, and clitoral
stimulation is almost always involved in a woman achieving orgasm (Hyde 1994). As such, it can be understood as a mate choice organ in the sense that women employ it to choose mates on the basis of how much pleasure they receive (Baker & Bellis 1993; Miller 2000; Smith 1984). Such choice, of course, may not be compatible with their parents’ wishes. For instance, given that more weight is ascribed by offspring to genetic quality (Apostolou 2008a; Buunk et al. 2008), a woman may receive more pleasure from having sex with an attractive man rather than with one say, from a good family. And this is what actually happens: Thornhill, Gangestad, and Comer (1995) found that women experience more orgasms with symmetric partners (with symmetry signaling good genetic quality), an indication that the function of orgasm is to enable women to select mates of high genetic quality. Given the underlying conflict, parents can benefit by compromising their daughters’ ability to choose mates. Walker and Parmar (1993) called clitoridectomy ‘the sexual blinding of women’ because it deprives her of a mate-selecting, sex-seeking organ. Thus, by removing the clitoris parents prevent a preference for high genetic quality to be expressed, while it makes it easier for them to impose their choices on their daughters, whose selection abilities are handicapped.

Additionally, sexual pleasure from genital organs motivates women to seek sex as soon as they become sexually mature. Such sexual interactions may lead to the development of feelings of love or to pregnancy, which can potentially compromise parental plans for marriage. One study examined the sexual experience of women who were sexually active prior to undergoing circumcision and found that they experienced a reduced level of sexual satisfaction after the procedure (Koso-Thomas, 1987). Thus, circumcised women receive less pleasure from sexual contact, so they are less likely to look for it. Accordingly, by practicing clitoridectomy, parents can more easily control their daughters, who become
less likely to seek sexual relationships.

A less frequent type of female circumcision, confined predominantly to Eastern Africa, is infibulation. The commonest form of infibulation takes place before puberty and involves the sewing of the labia majora together, allowing only a small opening for urination. It is usually the case that during the procedure, parts of the clitoris and labia minora are removed (Gregersen 1982; Lowenfels 1977). No other sound reason, apart from control of sexuality, can account for this practice. Hygienic reasons are unlikely because, if anything, infibulation makes personal hygiene more difficult. Similarly, cosmetic reasons can be discounted since the operation does not increase the attractiveness of the pudendal region (Lowenfels 1977). This practice then constitutes perhaps one of the most direct methods for controlling female sexuality: Infibulation prevents intercourse by a sort of built-in chastity belt (Gregersen 1982).

The institution of female circumcision targets young girls usually between the ages of four and eight (Gruenbaum 2001). By being circumcised when they are young, the window of opportunity for women to exercise mate choice narrows. If the procedure takes place in adulthood, women may have several sexual liaisons before marriage. Moreover, when children are young, parents can more easily use physical force to impose their will on them. Among the Abagusii of Kenya, where clitoridectomy takes place between the age of six and eight:

‘As many as 93 per cent [of a sample of 604 informants] emphasised the lower age at clitoridectomy, it being argued that the younger the girls the easier they were to control, and that those not fully aware of what was going to happen would not be terrified’ (Gwako 1995, p. 336).

Volume LIV, Number 1, Fall 2013
### Table 1  
Characteristics of mating-control institutions

<table>
<thead>
<tr>
<th>Institutions</th>
<th>More or exclusive control is exercised over the female</th>
<th>Target the younger generation</th>
<th>More prevalent among the upper strata</th>
<th>Practiced in post-industrial societies</th>
<th>More prevalent in agropastoral than in foraging societies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arranged marriage</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Female circumcision</td>
<td>Yes</td>
<td>Yes</td>
<td>?</td>
<td>No</td>
<td>?</td>
</tr>
<tr>
<td>Infant-child betrothal</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>?</td>
</tr>
<tr>
<td>Foot binding</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Breast ironing</td>
<td>Yes</td>
<td>Yes</td>
<td>?</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

? Evidence is unavailable, or circumstantial evidence.
Circumcision is also applied to young men, but this is a very different institution as it does not aim to control male sexuality. It is estimated that nearly 30 percent of males worldwide, primarily Muslims, are circumcised (World Health Organization, 2007). When a boy is circumcised the foreskin is removed, which has little, if any, effect on his ability to experience sexual pleasure (Bhattacharjee 2008, see also van Gennep 1961). An equivalent to female circumcision would be the removal of the glans of the penis. The striking difference between the two practices constitutes a good demonstration of the asymmetry in parental control over mating.

In Western societies, where the legal system prevents parents from mutilating their offspring, female circumcision is not practiced. Also, even if no systematic study is presently available to compare the prevalence of female circumcision across different subsistence types, it seems that the majority of societies where it is reported base their subsistence on agropastoralism.

Foot-binding and Breast-ironing

Breast-ironing is a mating-control institution confined predominantly to Cameroon. In this practice, when a girl enters puberty her breasts are flattened, usually by her mother, so as to make her less sexually attractive to men. This procedure involves pounding and massaging the breasts with hot objects to try to make them disappear (BBC News 2006). A woman describes her experience:

My mother took a pestle, she warmed it well in the fire and then she used it to pound my breasts while I was lying down. She took the back of a coconut, warmed it in the fire and used it to iron the breasts (BBC News 2006).

Developed breasts may attract potential suitors who do not necessarily comply with parents’ preferences or have no intention of marrying their daughters. Thus, parents justify
this practice as necessary for preventing men from pursuing their daughters and avoiding early pregnancies (Tetchiada 2006). A mother explained: ‘Breast ironing is not a new thing. I am happy I protected my daughter. I could not stand the thought of boys spoiling her with sex before she completed school’ (BBC News 2006). As early pregnancies can compromise the parents’ ability to arrange the marriage of their daughters with sons-in-law of their choice, parents take advantage of their physical strength to modify the body of their daughters so as to control their sexuality and promote their own choice.

It has to be noted that parents, by reducing the attractiveness of their daughters through breast-ironing, impose also a cost on themselves as the mate value of their daughters decreases. However, this cost is minimal, because when marriages are arranged parents give little weight to the looks of a prospective daughter-in-law, while this cost is more than balanced by the strengthening of parental control over mate choice.

Foot-binding is a well-known mating-control institution, albeit confined to China, where it was practiced for more than 10 centuries. It originally appeared as a practice of the aristocracy, but eventually found its way to the lower social strata (Mackie 1996; Ping 2002). In this institution, the mother or another female relative binds her daughter’s feet when she is four or five years old and sometimes before that age (Jackson 1997). This is a painful procedure, which involved each of the toes to be broken and pressed under the sole of the foot. Following that, the arches of the feet are also broken, and the broken feet are bound tightly with the toes folded under the sole of the foot (Jackson, 1997; Ping 2002). The result of this procedure is for women’s feet to remain small when they reach adulthood and for their walking to be severely impaired (Jackson 1997).

Effectively, women became irreversibly dependent on
their family. A bound-foot woman could not venture far without escort and help and would remain under the control of her family, and later on under the control of her husband (Jackson 1997; Ko, 2007). Through this institution parents impaired the mobility of their daughters when the latter were young and could not resist such manipulation. When they reached sexual maturity, daughters could not elope with a man of their choice who did not comply with their parents’ wishes. Consequently, through the institution of foot-binding parents score a pre-emptive strike that ensures that their sexually mature daughters will remain under their control. The asymmetry of parental control over mating is clearly reflected in this practice, which is applied only to female offspring as parents do not break the feet of their sons. In modern China, where adult offspring are no longer financially dependent upon their parents, foot-binding is no longer practiced.

*Infant-child Betrothal*

Parents in many societies betroth their children, and more commonly their daughters, when they are born or when they are very young (Apostolou 2007b; Blood 1972; Frayser 1985). Among the Tiwi foragers in Australia:

Put bluntly, in Tiwi culture daughters were an asset to their father, and he invested these assets in his own welfare. He therefore bestowed his newly born daughter on a friend or an ally, or on somebody he wanted as a friend or an ally (Hart et al. 1988, p. 20).

For Goode (1959) early marriage is the most widely used institution for guaranteeing kin control over mating. In particular, young children are totally dependent upon their family for food and protection, and thus, more prone to manipulation than older ones. Moreover, under this system, young girls and boys have little opportunity to fall in love with other people as there is not enough time between sexual
maturity and marriage for them to engage in unapproved courtship. Also, living with their spouses before the marriage is physically consummated makes them more likely to fall in love with each other than with anyone else (Goode 1982). In this case then, parents can choose in-laws without any resistance from their children. Among the Rif in North Africa: ‘One reason for exceptionally early marriages is the desire of the parents to have their wishes fulfilled before the children are old enough to make preferences and insist upon them strongly’ (Coon 1931, p.133).

Moreover, as children are not sexually mature yet, they do not exercise mate choice. This makes them even more prone to manipulation. For instance, among the !Kung in Africa:

‘Informants argued that the young age at marriage at Nyae Nyae was due to the desire of parents to have their daughters safely married before rivals could stake their claims, or before the girl was old enough to have an affair with one man after her parents had betrothed her to another. If a girl was married before she became sexually active, peace could be assured in the community’ (Lee 1984, p.8).

Thus, with early marriage parents prevent any unwelcome pregnancies, and they ensure their daughters’ parental investment is committed to a man whom they have selected themselves.

The institution of infant-child betrothal is more frequently practiced among the upper strata. For example, among the Shasta in California infant-child betrothal is practiced only by the wealthy (Silver 1978). In pre-Victorian England nobles children’s marriages were arranged at a very young age, a practice which did not apply among the lower strata (Stone, 1990). Moreover, evidence indicates that females are married younger in agropastoral than in foraging societies (Apostolou 2010b).
Arranged Marriage

Within the institution of arranged marriage, when a son reaches adulthood, his parents consider possible wives for him while sometimes, he points to his parents a desirable girl. When they make up their mind, they pay a visit to the girl’s family and ask her in marriage for their son. The bride’s parents assess the family’s background, the character and the working ability of the prospective son-in-law and, if these traits satisfy their criteria, they give their consent. The bride is often consulted, but her consent is usually not a pre-requisite for the marriage to proceed. In certain variations of the custom, the parents of the bride may take the initiative in seeking out a spouse for their daughter; however this is rare (Apostolou 2007b). Also, it is frequent for parents not to negotiate in person, but to use a match-maker, usually an older woman (Goode 1982).

Arranged marriage is the most prevalent mode of marriage across cultures. In a sample of 190 hunting and gathering societies, Apostolou (2007b) found that arranged marriage was the most frequent type of marriage practiced in approximately 70% of the societies in the sample. This is also the case for societies which base their subsistence on agriculture and animal husbandry, with the prevalence of arranged marriage being around 70% (Apostolou, 2010b). Arranged marriage had also been the prevalent mode of marriage in most Western pre-industrial societies a few generations ago (e.g., in England, Stone 1990).

Despite being the most common type of marriage, arranged marriage remains unexplained as there is no satisfactory theory outside the evolutionary framework, so far, which accounts for why parents exercise control over the spouse choices of their offspring. Moreover, this institution constitutes a human peculiarity, as all sexually reproducing species find their own mates without parental control or assistance.
It can be argued that parents have vested interests in their offspring’s marriage as they are closely related to them; so, they use their experience to promote a good marriage. But this view does not reflect the way the institution of arranged marriage actually works. Parents are not confined into advisory roles or propose good options, but rather choose who they want as in-laws and enforce their choice upon their children. For instance, evidence from the Standard Cross Cultural Sample indicates that in most cases the bride’s consent is not necessary for the marriage to proceed (i.e., it is necessary in approximately 30% of the societies where marriages are arranged), although it is not infrequent for parents to ask her opinion (Apostolou 2010b). Also, in many cases the offspring not only have no say in the choice of their spouse, but they do not even know with whom they are going to marry until the marriage is concluded. In imperial China:

‘Parents arranged marriages with family interests in view. Personal affection of bride and groom for each other was considered not only unnecessary but harmful. Decent young people did not meet each other even after betrothal; they did not meet until after their marriage’ (Lang 1946, p.32).

Consequently, the institution of arranged marriage is not explained by parents promoting their offspring’s interests, but rather by promoting their own. Furthermore, consistent with the predictions of the theoretical framework developed here, arranged marriage takes place when the offspring are young, while marriage is more frequently arranged for women than for men (Apostolou 2010b; Blood 1972; Frayser 1985). Also, arranged marriage is practiced more frequently in the upper strata (Blood 1972; Goode 1982). Finally, with the exception of certain minority groups (see below), it is not practiced in Western post-industrial societies, while it is significantly more common in agropastoral than in foraging pre-industrial societies (Apostolou 2010b).
Discussion

Asymmetrical interests over mating induce parents to control the mating decisions of their offspring, and especially the females. In human societies where parents are able to impose their will on their children, social patterns and eventually social institutions, such as arranged marriage and female circumcision, arise. These institutions impair the ability of offspring to exercise choice, while they facilitate parental choice of spouses for their offspring who are advantageous for the parents. This theoretical framework accounts for the mating-control nature of these institutions, the asymmetry of the control which predominately targets females, the younger ages at which this control is directed, the higher prevalence of these institutions among the upper strata, and their cross-cultural variability.

In effect, the proposed theoretical framework puts together the pieces of knowledge currently available on mating-control institutions. Nevertheless, for a number of these institutions insufficient evidence prevents us from examining whether they comply fully with the theoretical predictions outlined here. For instance, there are no coded data that would allow us to examine whether female circumcision is more prevalent among agropastoralists than foragers, or whether it is more frequently practiced among the higher strata of a given society. Future research should compile sufficient anthropological evidence in order to examine the consistency of these predictions for different mating-control institutions.

The multiplicity of mating-control institutions is not limited to the ones reported in this article. The anthropological record is full of customs and practices, such as purdah, chaperonage, and chastity belts, which have not been discussed here. It is beyond the scope of this paper to examine all recorded mating-control institutions, an endeavor that requires more than a journal-length work. On the basis of
the proposed framework, however, it can be predicted that all mating-control institutions, irrespective of the culture they are found in and the form they take, have the same basic purpose: to control the sexual behavior of offspring, and primarily the female ones, when they are young.

The proposed evolutionary framework predicts that parent-offspring conflict over mating would result in the emergence of mating-control institutions in cultures where parents exercise some degree of control over mate choice. However, it does not make any predictions on why specific mating-control institutions are found in some cultures but not in others. Most probably, there are multiple factors that determine which institution will prevail in each culture that future research should identify.

Furthermore, mating-control institutions enhance parental control over mating in at least three ways: First, institutions such as female circumcision function so as to remove daughters’ sexual motivation. Second, institutions such as foot binding function so as to increase offspring’s dependence on parents. Finally, institutions such as chaperoning function so as to deter men from attempting to gain direct sexual access, forcing them to use a different avenue namely, parental choice. By strengthening parental control over mating, these institutions establish parental choice as an important sexual selection force in the societies where these institutions are practiced. This constitutes a gene-culture co-evolution process: Evolved human nature gives rise to social institutions, the practice of which feeds back into shaping human nature (Gintis 2011). Future research will have to address the question of which specific genetic traits are favored under cultural conditions of parental control versus individual mate choice.

Parent-offspring conflict may not be the only driving force behind the evolution of social structures associated with control over mating. In particular, men value chastity in a
woman (Buss 2003), and women who appear chaste look more attractive to men. Broken feet and a removed clitoris signal to prospective husbands that a woman has been under the control of her parents and not under the control of her sexual impulses. They also signal that a woman will be more easily controlled by her husband, and will be less likely to engage in sexual affairs with other men. Accordingly, these practices increase the market value of a daughter who can attract a spouse of a higher mate value. On this basis, it can be argued that parents alter the bodies of their daughters in order to increase their mate value rather than to control their mate choices.

Although these practices can potentially increase the value of women in the mating market, this is not necessarily beneficial for them. One reason is that they handicap women and make them more vulnerable to manipulation and control by their spouses, which partially balances the benefit of higher mate value. Another reason is that the benefits from the increased mate value accrue to the parents, who control the mating of their ‘handicapped’ daughter, and who can cash in the increase in their mate value to get a son-in-law who is more desirable to them but not necessarily more desirable to their daughter.

Additionally, if such practices were for the benefit of women, parents would not need to enforce them; their daughters would simply apply them to themselves. It is not uncommon for women to engage in painful and dangerous body alteration (earrings, tattoos, breast enlargement, plastic surgery, etc.), but women do not break their feet or remove their clitoris. Therefore, it is more reasonable to argue that mating-control institutions have evolved to enable parents to control the mating decisions of their offspring. By making their daughters more controllable, parents also make them more appealing; this, in turn, offers them additional benefits as it enables them to attract more desirable sons-in-law.
Mating-control institutions are not totally absent from Western post-industrial societies, as they are practiced by certain population subgroups. In particular, a substantial number of foreign immigrants currently live and work in Western societies. Many of these immigrants come from cultures where mating-control institutions are prevalent and they strive to keep their old customs in their new homes. The practice of mating-control institutions is facilitated by the formation of inner-city ghettos and cultural isolation due to homogamous marriages and being identifiable as a minority group (e.g., the Hmong in the USA, Hutchison & McNall 1994).

Such ghettos and culturally isolated groups create the conditions for these institutions to be practiced: Individuals who are trapped in them may not be able to benefit from the rule of law or to be given the opportunities for financial independence more easily available to other society members. Consequently, although conditions in mainstream Western societies prevent the existence of these institutions, these conditions may not apply to specific subgroups, where institutions such as arranged marriage can still be found.

Overall, it is difficult or even impossible to understand social phenomena without reference to their underlying cause, which is human nature. And human nature cannot be understood without reference to the process of evolution which has shaped it. Mating-control institutions constitute a good demonstration of this logic: If parents and offspring did not have conflicting interests over mating, there would be no reason for parents to betroth their infant offspring, to arrange their marriages, to mutilate their daughters’ genital organs, to break their feet and iron their breasts.

**Acknowledgments**

I would like to thank Lia Mexa, Selina Brooks, Stelios Papanastasiou and Evangelos Aspiotis for their help during the preparation of this manuscript.
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