Sexual Selection under Parental Choice: Evidence from Sixteen Historical Societies

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Abstract: Asymmetrical fitness benefits between parents and offspring result in the ideal spouse not being the ideal in-law. This enables parents to attempt to control the mating behavior of their children, and when they succeed, parental choice becomes a primary sexual selection force. A number of studies indicate that parental choice is dominant in contemporary pre-industrial societies. This paper presents evidence from the historical record which indicates that parental choice was also dominant during the later stages of human evolution. More specifically, 40 variables have been coded for a sample of 16 historical societies. Consistent with the model of parental choice, it is found that mating is controlled by parents, male parents exercise more control over marriage arrangements than females, and more control is exercised over female than male offspring. Finally, the specific qualities that parents desire in an in-law and offspring desire in a spouse have also been identified. The implications of these findings are discussed.

Keywords: parental choice, sexual selection under parental choice, sexual selection, in-law preferences, historical societies, mate choice

Introduction

Successful reproduction in our species is contingent upon the choice of a mating partner. Mates do not only contribute their genes, but they also provide substantial material (e.g., money, food) and non-material (e.g., support and protection in fights and disputes, psychological support) resources required for survival and reproduction. The significant implications of mate choice give parents a strong interest in the mating decisions of their offspring. This interest is manifested in parental attempts to control mating that are especially successful in pre-industrial societies.

In particular, analysis of 190 contemporary hunting and gathering societies has revealed that the primary mode of mating is arranged marriage, while marriage based on free courtship is prevalent in only a small minority of the cases (Apostolou, 2007b). Subsequent analysis of contemporary agricultural and pastoral societies has revealed
similar patterns, with arranged marriage being the typical mode (Apostolou, 2010b). Since modern pre-industrial societies resemble ancestral ones (Lee and Devore, 1968), it was further argued that parental choice has been an important sexual selection force during most of human evolutionary time (Apostolou, 2007b, 2010b).

This argument, albeit reasonable, is nevertheless inferential. It is true that, lacking any written records, we need to rely on our theoretical framework and evidence from modern foragers if we want to make any inferences about ancestral ones. This is, however, not true for ancestral agropastoral societies. The invention of writing in the fourth millennium BC had a consequence that many of these societies left behind a wealth of written records that describe their way of life. The purpose of this research is to examine this evidence, and, by providing the first systematic study of mating patterns of historical societies, to demonstrate that parental choice was dominant during recent human evolutionary history.

The Model of Parental Choice

Parents and offspring are not genetically identical, and thus they do not share the same interests with respect to mate choice, as specific traits in a mating candidate give unequal benefits to each party (Apostolou, 2007a, 2008; Buunk, Park, and Dubbs, 2008; Trivers, 1974). For instance, 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 would be 50% by spouse or 25% by an in-law. Therefore, individuals reap more genetic benefits from a spouse than from an in-law of superior genetic quality, and as a result they have evolved to prefer this trait more in a spouse than in an in-law (Apostolou, 2008; Buunk et al., 2008; Perilloux, Fleischman, and Buss, 2011).

Asymmetrical preferences interact with the trade-off nature of mating (Gangestad and Simpson, 2000) to give rise to mating decisions that do not satisfy parents. For instance, having a stronger preference for beauty (a proxy of genetic quality), offspring would be willing to make compromises on traits such as good social status, wealth, and good family background in order to gain a good looking spouse. This is costly to their parents as they lose the benefits from this trait and the cost is not balanced by the gain in genetic quality since this trait is not as valuable to them (Apostolou, 2011b). Overall, parent-offspring conflict over mating mandates that mate choice left in the hands of offspring does not maximize the fitness of parents. As a consequence, considerable evolutionary pressure is exercised on the latter to control the mating decisions of the former.

The extensive period during which offspring depend on parental investment for survival and reproduction, and the fact that parents and their kin are physically stronger than their children, enable parents to control mate choice (Apostolou, 2007b). By doing so they become, effectively, a sexual selection force as traits that make an individual more likely to be chosen as an in-law are likely to be selected and increase in frequency in the population.

Because females invest more in their offspring, they become the scarce reproductive
resource to which males are seeking access (Trivers, 1974). Thus, by controlling this resource, parents effectively control mating (Apostolou, 2007b). Moreover, relaxation of parental control over female offspring has potentially severe consequences, such as an unwanted pregnancy (Perilloux, Fleischman, and Buss, 2008). Accordingly, parental control is biased against female offspring, something that is also facilitated by the fact that daughters are physically weaker than sons. Parental choice is also asymmetrical in favor of male parents. By means of greater physical strength, exclusive use of weaponry and control of political institutions (Flinn and Low, 1986), male parents have more influence over the offspring’s mate choices than their female spouses (Apostolou, 2007b).

Parental control over mating, however, is not absolute. Parents cannot always successfully guard their children, and their control wanes as they become older and physically weaker and their offspring stronger and less dependent on parental investment (Apostolou, 2007b). Finally, control over mating creates evolutionary pressures on offspring to evolve adaptations such as psychological manipulation of their parents for their own ends (Trivers, 1974).

Sexual Selection under Parental Choice in the Later Stages of Human Evolution

The Speed of Evolutionary Change

The genus Homo appeared on earth approximately two million years ago, and until approximately 10,000 years ago all of our ancestors lived in small nomadic bands that subsisted on hunting and gathering (Lee and Devore, 1968). Subsequently, the agricultural revolution took place and the majority of the human population became sedentary, subsistence depended on agriculture and animal husbandry, cities that housed thousands or even millions appeared, and social and economic institutions like the Church and money emerged (Bellwood, 2004).

Humans reproduce slowly, so 10,000 years translates roughly to about 400 generations (Irons, 1998). Experiments with non-human species have demonstrated that 400 generations are more than enough for substantial evolutionary change to occur. For instance, captive silver foxes were systematically bred for tameness, and in 30 generations foxes were produced that sought human company and waved their tails when approached (Trut, 1999). In Galapagos finches, a drought resulted in large changes in beak size in only one generation (Weiner, 1995).

Rapid evolution requires genetic variability to work with and a considerable evolutionary pressure caused by environmental factors (Fisher, 1958). The agropastoral revolution satisfied these requirements as the dramatic environmental change it created gave rise to new selection pressures. These were fueled by an increased number of potentially beneficial mutations per generation, owing to substantially increased population sizes (Hawks, Wang, Cochran, Harpending, and Moyzis, 2007), and should have triggered rapid evolutionary change.

This prediction is corroborated by accumulating genetic evidence that shows that human evolution accelerated during the Holocene (the last 10,000 years) (Cochran and Harpending, 2009; Hawks et al., 2007; Kelley and Swanson, 2008; Meisenberg, 2008; Neilsen, Hellmann, Hubisz, Bustamante, and Clark, 2007). The last 10,000 years were
therefore particularly important in shaping human behavior, which makes the study of the selection pressures on human behavior during this period essential for the understanding of the evolutionary history of the mind.

**Parental Choice in Historical Societies**

The model of parental choice predicts that the agropastoral revolution should have resulted in increased parental control over mating. In particular, agropastoral societies have much more material wealth than foraging ones, which means that there is more at stake for offspring if they disobey their parents. For instance, as inheritance can be substantial in agropastoral societies, manipulation of inheritance rights becomes an effective way to manipulate mate choice (Apostolou, 2011a).

There is also more at stake for parents if their offspring disobey them. For instance, if a daughter of high mating value runs away with a handsome but poor man, parents forfeit the opportunity to arrange a marriage with a not so handsome but wealthy individual, which, in an agropastoral context, translates into the loss of the opportunity to acquire substantial resources (e.g., land, animals, money) that can be diverted to them and their family. In addition, because parents are themselves likely to control substantial resources like cattle or farmland, they have more to lose, if for instance, their daughter falls for a good-looking man who is nevertheless lazy and poor and has an eye on their wealth. On this basis, it is predicted that in historical societies parents would have exercised strong control over the mating decisions of their offspring.

Moreover, parental control should have been directed primarily at female offspring who are the scarce reproductive resource. Also, male parents are expected to dominate parental choice by means of greater physical strength and control of weaponry. In comparison to ancestral foraging societies, the importance of men may also have been amplified in historical agropastoral societies. The substantially more resources produced by the latter would have caused intense inter-group conflict as groups would have had a stronger interest in taking control of other groups’ resources. Emphasis would then be put on warfare and military preparation (e.g., the Spartans), giving men more power and higher social status. This would have also enhanced men’s decision-making power within the family unit.

Overall, the model of parental choice predicts that in historical societies, parents had been exercising considerable influence over the mate choices of their children. It further predicts that control over mating had been biased against female offspring, while male parents had been more influential than female ones. Finally, when parents exercised choice, they should have preferred specific qualities in an in-law that in the specific environmental context were the most beneficial for them. These predictions are examined in a sample of 16 societies which includes nearly all historical societies for which there are reliable data on mating patterns.

**Materials and Methods**

Historical studies of marriage and the family, (i.e., Coonz, 2006; Veyne, 1992) were employed in order to identify the societies for which written records on mating patterns
were available. Library research followed to locate the relevant references for each society. Since many of the primary sources were not available in English, only secondary historical sources were used.

To code the variables of interest, modified coding sheets, previously employed in different studies (Apostolou, 2007b, 2010a), were used and new coding sheets were created for variables that had not been coded before. Overall, 40 variables on mating patterns have been coded (the coded variables are listed in Tables 2-6). One researcher and one independent coder were employed. The coding process took place in two stages. In the first stage coding for a small number of societies was performed, and the results from each coder were compared to identify discrepancies and possible errors. On this basis, modification and optimization of the coding sheets took place. The improved coding sheets were employed in the second stage where the variables were coded for the full sample. Intercoder reliability was 0.91. All coding sheets and the list of references used are available from the corresponding author on request.

The Sample

The sample consists of sixteen historical societies which are listed in Table 1. Chronologically, these societies cover a span of approximately 5,000 years. The earliest records of mating patterns come from Pharaonic Egypt and Babylon. These data are rather limited as they are based on brief inscriptions on tombs and clay tablets. The historical record improves dramatically in later societies, such as those of Classical Greece and Imperial Rome where there is a plethora of written records on mating patterns. Even in these societies, however, the historical resources are biased towards reporting mating practices of the upper classes. This bias is considerably reduced in later societies like Imperial China and pre-Victorian England, where written records are also available for the lower strata.
Table 1. The sample of historical societies

| Society            | Chronology       | Area          |
|--------------------|------------------|---------------|
| Pharaonic Egyptians| 26th-11th C. BC  | North Africa  |
| Babylonians        | 19th C. BC       | Middle-East   |
| Old-Testament Jews | 13th C. BC       | Middle-East   |
| Classical Greeks   | 5th–4th C. BC    | Europe        |
| Imperial Romans    | 1st C. BC-5th C AD| Europe        |
| Byzantines         | 4th-15th C. AD   | Europe-Asia Minor |
| Medieval Germans   | 6th-10th C. AD   | Europe        |
| Medieval Arabs     | 7th-14th C. AD   | North Africa-Middle East |
| Imperial Chinese   | 13th-14th C. AD  | North Asia    |
| Renaissance Venetians| 14th-16th C. AD | Europe        |
| Renaissance Florentines| 15th C. AD | Europe        |
| Aztecs             | 16th C. AD       | Central America |
| Incas              | 16th C. AD       | South America |
| Maya               | 16th C. AD       | Central America |
| Pre-Victorian English| 16th-19th C. AD | Europe        |
| Edo Japanese       | 17th-20th C. AD  | North Asia    |

Results

Parental Choice

Mating patterns associated with parental control over mating are presented in Table 2. Polygyny is reported in 50% (57%, 8) of the cases and monogamy in 38% (43%, 6) of the cases (note that the reported percentages also include the missing cases; the estimated percentages where the missing cases are not included are reported in parentheses followed by the actual frequencies). No cases of polyandry are reported. When polygyny is practiced it is rare, confined mainly to high status wealthy men. It has to be said, however, that monogamy does not limit a man to one woman at a time but it does limit him to one wife: High status and wealthy men usually had many concubines and mistresses, but only one.
Table 2. Parental choice in historical societies

| Society            | P  | P.F. | D.M. | M.D.M. | P.B.M. | IC.B. | M.C. | V.E. | S.S. | M.A.F. | M.A.M. |
|--------------------|----|------|------|--------|--------|-------|------|------|------|--------|--------|
| Pharaonic Egyptians| Yes| Rare | Males| Father | .      | .     | .    | .    | .    | 14     | 20     |
| Babylonians        | Yes|      | Males| Father | .      | Yes   | .    | .    | .    |        |        |
| Old Testament Jews | Yes| Rare | Males| Father | .      | More over Females | Yes | .    | .    |        |        |
| Classical Greeks   | No |      | Males| Father | Yes     | Yes   | More over Females | Yes | 16    | 30     |
| Imperial Romans    | No |      | Both Males | More Say | Father | Yes | Yes | More over Females | Yes | 14 | 26     |
| Byzantines         | No |      | Both Males | More Say | Father | .    | Yes | More over Females | Yes | 15 | 20     |
| Medieval Germans   | Yes| Rare | Males| Father | .      | More over Females | Yes | .    | 13    | 16     |
| Medieval Arabs     | Yes| Rare | Males| Father | .      | More over Females | .    | .    |        |        |
| Imperial Chinese   | No |      | Both Males | More Say | Father | Yes | Yes | More over Females | Yes | 19 | 21     |
| Renaissance Venetians| No|      | Males| Father | .      | More over Females | Yes | .    | 13    | 30     |
| Renaissance Florentines | No|      | Males| Father | .      | .    | .    |        | 15     |        |
| Aztecs             | Yes| Rare | .    | .      | .      | More over Females | Yes | .    | 15    | 20     |
| Incas              | Yes| Rare | .    | .      | .      | .    | .    |        | 18    | 25     |
| Maya               | Yes|      | Males| Father | .      | .    | .    | .    | .    |        |        |
| Pre-Victorian English | No| Rare | Males| Father | .      | Yes | Both Males and FemalesEqually | . | 19 | 22     |
| Edo Japanese       |    |      | Both Males | More Say | Father | .    | .    | .    | .    |        |        |

Note: P. = Polygyny; P.F. = Polygyny Frequency; M.M. = Mode of Marriage; D.M. = Decision Makers; M.D. M. = Male Decision Maker; P. B. M. = Parents Break Marriage if not Satisfied; IC.B. = Infant-child Betrothal; M.C. = Marriage Control; V. E. = Virginity Expected at Marriage; S.S. = Segregation of Sexes; M.A.F. = Marital Age Females; M.A.M. = Marital Age Males; ‘.’ = No information or contradicting information

With respect to the choice of a spouse, in 94% (100%, 15) of the societies in the sample, the primary mode of marriage is arranged, with parents choosing spouses for their offspring. The only exception is the Incas, for whom the historical resources are inconclusive. In marriage arrangements, men (i.e., fathers) are the decision-makers in 63% (71%, 10) of the cases, whereas in 25% (29%, 4) of the cases both men and women participate but men have more say. In 56% (90%, 9) of the societies, parents control the mating decisions of their daughters more than those of their sons, and in 6% (10%, 1) of the cases both sexes are controlled equally. The asymmetry in parental control over mating is
also reflected in women getting married earlier ($M = 15.5$, $SD = 2.15$) than men ($M = 23$, $SD = 4.61$).

Moreover, in 44% (100%, 7) of the cases parents are reported to arrange the marriages of their children when the latter are still infants or very young (infant-child betrothal). Additionally, in 25% (100%, 4) of the cases, sexes are reported to be segregated. As it prevents offspring from having premarital relationships, parental control over mating is also facilitated by virginity being expected in marriage in 44% (100%, 7) of the cases. Parental control extends after the marriage takes place in 19% (100%, 3) of the cases where parents can dissolve a marriage if they are not satisfied with their in-laws.

The specific qualities that parents desire in a daughter-in-law and in a son-in-law are presented in Table 3. The first thing to observe is that the evidence is rather incomplete, one reason being that historical resources are not very informative on the specifics of in-law choice. The data available indicate an emphasis on family background. In particular, good family background is the most frequently reported trait, both in a son-in-law and in a daughter-in-law. Moreover, in a number of cases, parents are reported to prefer an in-law from a wealthy family background and from a family background similar to their own. Finally, parents also value wealth, good working ability, favorable social status and good character.

### Table 3. In-law preferences in historical societies

| Society * | Wealthy | Good Character | Favorable Social Status | Good Worker | Good Family Background | Similar Family Social Status | Wealthy Family |
|-----------|---------|----------------|-------------------------|-------------|------------------------|-----------------------------|----------------|
| Pharaonic Egypt | . . | Yes | . . . | . . . | . . . | . . . | . . . |
| Old-Testament Jews | Yes | . . . | . . . | . . . | . . . | . . . | . . . |
| Classical Greece | . . . | Yes | . . . | . . . | Yes | . . . | Yes . |
| Imperial Rome | . . . | . . . | Yes | Yes | . . . | Yes | Yes | Yes |
| Byzantium | Yes | Yes | Yes | Yes | . . . | Yes | Yes |
| Imperial China | . . . | Yes | Yes | Yes | Yes | Yes | . . . |
| Renaissance Venice | Yes | . . . | . . . | . . . | . . . | . . . | . . . |
| Renaissance Florence | . . . | . . . | . . . | . . . | Yes | Yes | . . . |
| Incas | . . . | . . . | . . . | . . . | . . . | . . . | Yes |
| Pre-Victorian England | Yes | . . . | . . . | . . . | Yes | Yes | Yes |
| Edo-Japan | . . . | . . . | Yes | Yes | . . . | . . . | . . . |

*Note: S = Son-in-law; D = Daughter-in-law; , = No information or contradicting information; * this table includes only the societies for which there is evidence on in-law preferences.*
Table 4. Mate choice in historical societies

| Society                | O.C.B. | O.C.G. | E.R. | F.P.A. | M.P.A. | R.   | P.   | D.   | D.A. |
|------------------------|--------|--------|------|--------|--------|------|------|------|------|
| Pharaonic Egyptians    |        |        | Yes  |        |        |      |      |      |      |
| Babylonians            | No     |        |      | Punished Severe |      |      | Yes  |      |      |
| Old-Testament Jews     | No     | Yes    | Consent Necessary | Yes  | Punished Severe-Death |      | Yes  | Yes  | Yes  |
|                       |        |        |      |        |        |      |      |      |      |
| Classical Greeks       | No     |        | Yes  | Punished Severe | No Punishment | Yes  | Yes  | Yes  | Both, Equally |
| Imperial Romans        | Yes    | Yes    | Consent Necessary | Yes  | Punished Severe-Death | No Punishment |      | Yes  |      |
|                       |        |        |      |        |        |      |      |      |      |
| Byzantines             | Yes    | Yes    | Consent Necessary | Yes  | Punished Severe | Punished Severe | Yes  | Yes  |      |
| Medieval Germans       | No     |        |      | Punished Severe-Death | No Punishment |      | Yes  | Yes  | Both, Easier for Males |
| Medieval Arabs         |        |        | Yes  |        |        |      |      |      | Both, Easier for Males |
| Imperial Chinese       |        |        | Yes  | Punished Severe | Punished Severe | Yes  | Yes  |      | Both, Easier for Males |
| Renaissance Venetians   |        | Yes    |        | Punished Severe | Punished Severe | Yes  | Yes  |      |      |
| Renaissance Florentines |        |        |      |        |        |      |      |      |      |
| Aztecs                 |        | Yes    |      | Punished Severe-Death |        |      |      |      |      |
| Incas                  |        | Yes    |      |        |        |      |      |      |      |
| Maya                   |        |        |      |        |        |      | Yes  |      | Both Equally |
| Pre-Victorian English  | No     | No     | Yes  |        |        |      |      |      |      |
| Edo Japanese           |        |        |      |        |        |      |      | Yes  | Both, Easier for Males |

Note: O.C.B. = Opinions Considered – Bride; O.C.G. = Opinions Considered – Groom; E.R. = Extramarital Relationships; F.P.A. = Female Punishment for Adultery; M.P.A. = Male Punishment for Adultery; R. = Rape; P. = Prostitution; D. = Divorce; D.A. = Divorce Access; ‘.’ = No information or contradicting information

Mate Choice

As Table 4 indicates, mate choice can be exercised when parents ask the opinion of their children in marriage arrangements. For female offspring, however, this is so only in 13% (25%, 2) of the societies, whereas in 38% (75%, 6) of the societies a daughter’s opinion is not considered. For male offspring, in 19% (60%, 3) of the cases opinion is considered and consent is necessary, and in 6% (20%, 1) of the cases opinion is considered but consent is not necessary. Also, in 6% (20%, 1) of the cases opinion is not considered at all. Rape, a form of male mate choice that is not controlled by parents, is reported in 43.8% (100%, 7) of societies. The presence of prostitution in 63% (100%, 10) of the societies constitutes another case of mate choice not controlled by parents (unless parents prostitute
their children, which does not appear to be the case).

The offspring can exercise mate choice primarily through extramarital relationships and divorce. In particular, in 69% (100%, 11) of the cases extramarital relationships are reported. It has to be said however that this is not a risk-free strategy. In particular, if they are caught cheating, in 31% (50%, 5) of the cases females are punished severely and in 31% (50%, 5) of the cases punishment goes as far as killing the wife. There are no societies reported where punishment is mild or there is no punishment for adulterous women. Things are different for men, who if caught cheating are punished severely (including physical punishment) in 19% (50%, 3) of the cases, whereas they receive no punishment in 19% (50%, 3) of the cases.

Divorce, reported in 88% (100%, 14) of societies, is perhaps the most effective way for individuals to exercise their choice. Not everyone, however, has equal access to divorce. In 38% (67%, 6) of the cases, both sexes have access but it is easier for men to obtain a divorce, in 13% (22%, 2) of the cases divorce is equally available to both sexes, and in 6% (11%, 1) of the cases, divorce is available only to men.

The reasons given for seeking a divorce are presented in Table A1. Adultery is the most frequent reason reported for a man to divorce his wife. On the other hand, women are rarely reported to divorce their husbands on the grounds of adultery, which constitutes one more indication that cheating by men is not particularly frowned upon. Men are also reported to divorce their wives for being barren. Health problems, incompatibility and problems with in-laws are other reasons that lead to divorce.

Given that, in almost all societies, the primary mode of marriage is an arranged one, and given also that historical sources do not go into the details of mate choice, it has been difficult to identify mate preferences. The limited evidence (Table 5) indicates that good looks, good character, industriousness, good health, wealth, good family background and chastity are some of the preferred traits.

### Table 5. Mate preferences in historical societies

| Society     | Good Looks | Good Family Background | Good Character | Wealthy | Chastity | Industrious | Healthy |
|-------------|------------|------------------------|----------------|---------|----------|-------------|---------|
|             | H  | W  | H  | W  | H  | W  | H  | W  | H  | W  | H  | W  |
| Imperial Romans | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Byzantines | .  | .  | .  | .  | .  | .  | .  | .  | .  | Yes | .  | .  |
| Medieval Germans | .  | Yes | Yes | Yes | Yes | Yes | .  | .  | Yes | Yes | .  | .  |
| Medieval Arabs | .  | .  | .  | .  | .  | .  | .  | .  | .  | .  | .  | .  |
| Imperial Chinese | Yes | .  | .  | Yes | .  | .  | Yes | .  | .  | .  | .  | .  |

**Note:** H = Husband and refers to the mate preferences of women; W = Wife and refers to the mate preferences of men; this table includes only the societies for which there is evidence on mate preferences; ‘.’ = No information or contradicting information
Discussion

The mating patterns found in historical societies are consistent with the predictions of the model of parental choice: Mating is primarily controlled by male parents, whereas control is biased against daughters.

Parents are frequently reported to use their offspring’s mating to forge beneficial alliances. In Imperial Rome: “Fathers would sometimes promise their infant children to each other, would finalize the engagement when the two children had reached the age of consent, and would then have time to break off the engagement in favor of other alliances before the time of the first marriage” (Corbier, 1991, p. 62). Similarly, in Imperial China: “the great families found no better way of increasing their influence and prestige than recourse to judicious matrimonial alliances” (Gernet, 1970, p. 158). It is no surprise then that parents have a strong interest in the family background of their prospective in-laws.

Alliance building, although beneficial to parents, is not always as beneficial to their offspring. In Imperial China: “Parents did not ask whether their daughter would be disadvantaged by marrying into a prominent family far away or becoming the second wife of a man fifteen years her senior” (Ebrey, 1993, p. 63). Accordingly, there are instances reported where offspring react against these decisions, something that meets with a strong reaction from their parents. In pre-Victorian England: Elizabeth, daughter of Agnes Paston, obstinately insisted in choosing her own husband. To bring her to heel, her mother put her in virtual solitary confinement, forbidden to speak either to visitors or to male servants. In addition, “she hath since Easter the most part been beaten once in the week or twice, and sometimes twice on a day, and her head broken in two or three places” (Stone, 1990, p. 130). It is hardly surprising that few children had the strength of will to resist such treatment.

Segregation of sexes prevents the formation of love affairs and enhances parental control over mating. In Classical Greece, women were confined to their houses where they were restricted in a special compartment, the gynaekonites, usually located on the upper floor (Vrissimtzis, 1997). In the Byzantine Empire, women: “wore garments that concealed virtually all of their body except for their hands...Proper women were always expected to have their heads covered when they were out in public, wearing the maphorion, a shoulder-length veil, over a tight headdress that concealed their hair” (Cavallo, 1997, p. 127).

Although marriage decisions were predominantly controlled by parents, offspring could still exercise their own choice in extramarital relationships, which was reported in almost all societies in the sample. Extramarital relationships constitute a dangerous endeavor, however, particularly for wives. Among the Germanic tribes: “an adulterous woman was likely to be turned out of her house immediately and later perhaps strangled and thrown to rot in a swamp” (Rouche, 1987, p. 471). The dangers of adultery leave divorce as the most effective means for individuals to exercise mate choice.

Parents do not just choose mates for their offspring, but also families to build alliances with. This indicates that selection pressure is exercised on parents to preserve and enhance their family’s status. That is, parents who were indifferent to their reputation would severely compromise their ability to arrange beneficial marriages for their children. On this basis, it can be predicted that parents care about the status and the reputation of
Sexual selection under parental choice

their family and would be particularly wary of anything that could compromise it. As men were primarily involved in mating arrangements, there should also be a sex difference, with men being more concerned about their own and their family’s status than women.

Historical records provide a valuable picture of our evolutionary history; they are not, however, without limitations. First of all, recording of mating patterns was not performed by anthropologists or social scientists, but by chroniclers whose primary goal was not to investigate the mating patterns of their times. Other sources are more direct. For instance, in Pharaonic Egypt men made a record of their daily activities and achievements, and this “autobiography” was preserved on the walls of their tombs (Tyldesley, 1995). Although this first-hand information is valuable, it inevitably involves exaggerations and biases.

Moreover, most of the historical sources are biased towards reporting the ways of life of the upper class, providing us with limited information on the lower echelons. Upper class parents have more to lose if their children make an inappropriate mate choice while they have more means (e.g., wealth) at their disposal to influence their children. Thus, they have a stronger incentive and a higher ability than lower class parents to control their children’s mating decisions. In effect, although the mating patterns of the lower strata are unlikely to be radically different from the respective patterns of the upper strata, extrapolating from the latter to the former can be problematic.

Last but not least, all historians and chroniclers were men, and thus the role of women may have been undervalued in their works. Women were probably more influential in marriage arrangements than it may appear in the historical record. For instance, owing to the age difference at marriage, wives were more likely to outlive their husbands. In Byzantium, data from a number of villages indicate that 20% of households were headed by widows (Cavallo, 1997). With their husbands gone, women should at least have acquired some of their spouse’s decision-making power over marriage arrangements.

The study of the historical records indicates that parental choice was a strong sexual selection force during the later stages of human evolution. Sexual selection under individual mate choice has also been exercised, primarily within marriage through the institution of divorce. The speed at which evolutionary change can occur in response to environmental changes indicates that these evolutionary pressures would have had substantial impact in shaping the human mind.

To summarize, the study of the historical records indicates that parental choice was a strong sexual selection force during the later stages of human evolution: Male parents dominated over the mating decisions of their female offspring with in-law choice being guided by specific preferences. Sexual selection under individual mate choice has also been exercised, primarily within marriage through the institution of divorce. Given that evolutionary change can advance rapidly in response to considerable environmental change brought about by the agropastoral revolution, along with the fact that the last 10,000 years constitute our more recent evolutionary past, these evolutionary pressures would have had substantial impact in shaping the human mind.

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Appendix

Table A1. Reasons for divorce in historical societies

| Society         | B.W. | B.H. | I.W. | I.H. | A.W. | A.H. | H.P.W. | H.P.H. | P.I.W. | P.I.H. |
|-----------------|------|------|------|------|------|------|--------|--------|--------|--------|
| Pharaonic       | Yes  | Yes  | Yes  | Yes  | Yes  | Yes  | .      | .      | .      | .      |
| Egyptians       |      |      |      |      |      |      |        |        |        |        |
| Babylonians     | Yes  | .    | .    | .    | .    | .    | .      | .      | .      | .      |
| Old-            |      |      |      |      |      |      |        |        |        |        |
| Testament       |      |      |      |      |      |      |        |        |        |        |
| Jews            |      |      |      |      |      |      |        |        |        |        |
| Classical       | Yes  | .    | .    | .    | Yes  | .    | .      | .      | Yes    |        |
| Greeks          |      |      |      |      |      |      |        |        |        |        |
| Imperial        | Yes  | Yes  | Yes  | Yes  | Yes  | .    | .      | .      | Yes    |        |
| Romans          |      |      |      |      |      |      |        |        |        |        |
| Byzantines      |      |      |      |      | Yes  | Yes  | Yes    | Yes    | Yes    | .      |
| Medieval        | Yes  | Yes  | .    | .    | Yes  | .    | .      | .      | .      | .      |
| Germans         |      |      |      |      |      |      |        |        |        |        |
| Medieval        |      |      |      |      |      |      |        |        |        |        |
| Arabs           |      |      |      |      |      |      |        |        |        |        |
| Imperial        | Yes  | Yes  | Yes  | Yes  | Yes  | .    | .      | .      | .      | .      |
| Chinese         |      |      |      |      |      |      |        |        |        |        |
| Edo Japanese    | Yes  | .    | .    | .    | Yes  | .    | Yes    | .      | Yes    | .      |

Note: B.W. = Bareness Wife; B.H. = Bareness Husband; I.W. = Incompatibility Wife; I.H. = Incompatibility Husband; A.W. = Adultery Wife; A.H. = Adultery Husband; H.P.W. = Health Problems Wife; H.P.H. = Health Problems Husband; P.I.W. = Problems with In-laws Wife; P.I.H. = Problems with In-laws Husband; ‘.’ = No information or contradicting information; ‘Wife’ refers to reason for divorce given by men and ‘husband’ refers to reasons for divorce given by women; a this table includes only the societies for which there is evidence on reasons for divorce.