

# Mate guarding and parental influence on mate choice

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## Abstract

The hypothesis that the degree to which parents control the mate choice of their children may explain differences in mate guarding across and within cultures was tested. Study 1, in a sample of 80 students from 30 different countries studying in The Netherlands, showed that the perceived level of parental influence on mate choice in a culture was associated with more mate guarding reported by individuals from that culture. Study 2, in a sample of 242 Argentinean individuals, showed that individuals who were more in favor of parental influence on mate choice did report more mate guarding. The effects remained intact when controlling for potentially confounding variables.

Mate guarding is observed among both males and females of many species, and even the well-known tendency of many species to defend their territories may in fact be a consequence of individuals guarding the sexual rights to their mates (Barash & Lipton, 2001). Mate guarding among males has evolved because it is essential to guarantee paternity certainty: Males who did not allow their mates to mate with other males were evidently reproductively more successful than males who did not pay attention to their mate's extrapair copulations. This explains why mate guarding has evolved in many species, even though it is energetically a quite costly activity and may compromise a male's ability to engage in predator avoidance and foraging (e.g., Alberts, Altmann,

& Wilson, 1996). In avian species, male mate guarding includes close following and surveillance of the female. For example, the socially monogamous male bank swallows, who assist their mates in building the nest and incubating and feeding the young, pursue the female for 7–9 days after pair formation whenever she leaves the nest, as often as 100 times a day (Barash & Lipton, 2001). Mate guarding may also be expressed in the form of aggressive acts toward other males, especially when they constitute an important threat, for instance because they are in the possession of prey (e.g., Mougeot, Arroyo, & Bretagnolle, 2006). In species that live in multimale, multifemale groups, including savannah baboons and chimpanzees, mate guarding typically takes place in consortships, when males engage in frequent sexual activity and in persistent following of the female to attain exclusion of other males from access to the female. In this type of groups, most of the mate guarding is done by the alpha males to prevent sneak copulations by other males. For example, one study showed that among mandrills, alpha males accounted for 94% of periovulatory mate guarding, with apparent reproductive success, as these males accounted for 69% of the paternity (Setchell,

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Charpentier, & Wickings, 2005). In species in which males invest much in their offspring, such as many bird species and humans, mate guarding becomes even more important as males risk investing their resources in the offspring of another male (Barash & Lipton, 2001). Nevertheless, according to Trivers's parental investment theory (1972), all males should have some interest in controlling the fidelity of their mates, even under conditions of high female promiscuity.

There is abundant evidence for the occurrence of mate guarding by males in the human species (Buss, 2002). In his now-classic review, Murdock (1967) noted that in only 4 of the 849 societies males did not show any sign of mate guarding, that is, keeping close tabs of their mates, sometimes even when she is urinating or defecating. The absence of seasonality and the recurrence of ovulation at relatively short intervals make female guarding very relevant for males as they have much to gain by the tremendous investment by a female in their offspring. Indeed, throughout history and in many cultures, all kinds of rules, behavioral practices, and physical measures, including veiling, walled courtyards, and genital mutilation have been applied to prevent contact between women and potential sexual partners (Dickemann, 1997). In claustrating societies, adulterous women may suffer severe penalties, including murder, which are considered "crimes of honor." According to Dickemann (1997), one of the core social meanings of the notions of "honor" and "shame" is the defense of the chastity and fidelity of female kin. Shackelford, Goetz, Guta, and Schmitt (2006) showed that among humans, mate guarding tactics such as vigilance, concealment of mate, and monopolization of a mate's time were correlated with a higher frequency of intrapair copulations, even when controlling for various potentially confounding variables, suggesting that these constitute concurrent strategies of assuring paternity certainty. In general, the extensive literature on the volatile nature and often violent consequences of male sexual jealousy testifies to the importance of mate guarding among humans (e.g., Buss, 2000, 2002; Buunk, 1986; Daly & Wilson, 1983).

It has sometimes been overlooked that in socially monogamous species, females may also engage in mate guarding for a number of reasons. Female burying beetles, for example, will "beat up" their mates who attempt to attract other females. In socially monogamous birds, female mate guarding does occur frequently and functions to avoid desertion, to prevent sperm depletion, or to reduce the risk of disease and parasite transmission as a consequence of the male's copulation with another female (Lazarus, Inglis, & Torrance, 2004). Humans are no different. Burbank (1987) surveyed 137 societies in the Human Relations Area File and concluded that men were the single most frequent reason for female-female fights (121 out of 297 for which reasons were recorded). Campbell (2002) has extensively documented that women often compete heavily with each other over the access to males, which may result in assaults against other females. The jealousy literature in general shows that women are as aggressive when it comes to responding to infidelity of one's spouse as men (Buunk & Dijkstra, 2006). For example, in a heterogeneous sample of adults, men and women indicated similar levels of anger and aggression when asked how they would behave in response to infidelity of their spouse (Buunk, 1995).

Despite the fact that the tendency to prevent one's spouse from becoming sexually involved with a rival seems to be a universal characteristic of males and females, it seems that there are considerable cultural differences in this regard (e.g., Hupka, 1981). For example, in Western cultures, most husbands do not actively try to prevent contacts between their wife and other men, and a substantial minority of husbands even accept a moderate degree of flirting by one's wife (Buunk & Hupka, 1987). In contrast, in many Islamic cultures husbands actively prevent even superficial contact of one's wife with another man, by such means as having their wives wear veils and by having them stay hidden at home behind fenced windows, among others (Dickemann, 1997). We want to argue here that an important factor influencing the level of mate guarding is the

degree to which one can freely choose one's spouse. Freedom of mate choice is not a universal feature of human mating. Instead, there is considerable evidence that in most societies and historical periods, marriage has been at least partly arranged and has been based on a series of familial considerations rather than on the desires of the individuals concerned (e.g., Harris, 1995; Murstein, 1974; Reiss, 1980). Historical and anthropological evidence suggests that parents have often been wary of love-based unions among their children—indeed, they have been wary of their children's experience of love itself (e.g., Goode, 1959; Murstein, 1974; Reiss, 1980). In China, for example, love was condemned as a potential instigator of filial disobedience that could destroy the family (Theodorson, 1965). Cross-culturally, there is a substantial negative correlation between the presence of arranged marriage and the emphasis on romantic love (Williams, White, & Ekaidem, 1979). Apostolou (2007) reported data from 190 hunting and gathering societies and showed that in 70% of the societies, marriage was arranged by parents and other kin; only in 4% of societies was courtship the primary form of marriage. Of course, the presence of arranged marriage does not rule out the possibility that children may exert their preferences—by influencing the parents' decisions, for example—but it does suggest that the tendency of parents to control the mate choice of their offspring was quite widespread in our evolutionary past.

Even in contemporary society, individuals report that close genetic kin attempt to influence their mating behavior—and the closer the genetic relatedness, the stronger the influence (Faulkner & Schaller, 2007). In addition, although the occurrence of arranged marriage has decreased dramatically in recent decades, it continues to occur in many parts of the world and among many immigrant groups in Western societies. For example, near the end of the 20th century, about half of the marriages of Indian immigrants in the United States were being arranged (Menon, 1989). In a study of second-generation South Asian immigrants living in North America, about 25% of the participants indicated that their

parents would likely arrange their marriage (Talbani & Hasanali, 2000). A recent study of Turkish and Moroccan immigrants in The Netherlands revealed that parents often try to arrange marriages in which daughters are "given away" to friends or relatives of the father (Sterckx & Bouw, 2005).

We would like to argue that in a setting where one's parents choose one's spouse, one may experience more uncertainty that the other will stay faithful than in a setting in which the partner is in the marriage by his or her own volition. Of course, in both settings one may have to be attentive to the possibility of rivals trying to lure away one's partner for either a long-term relationship or casual sex (Dijkstra & Buunk, 2002). We do not assume that there are higher infidelity rates in settings where one's parents choose one's spouse. But in the case of an "assigned" spouse, there is a specific factor that may be perceived as making infidelity a more likely possibility: that spouse's own feelings and desires. Indeed, as one knows that the spouse did not enter the marriage out of love, one may perceive a high risk that the spouse might become sexually involved with, or might fall in love with, someone else. When one knows one's spouse married out of love, there is (especially in the early stages of the relationship) less reason to be concerned about him or her seeking passion or love elsewhere. Consider, for example, the situation of a man of the Yanomamö of Venezuela, where mate selection has been described as "a political process in which girls are promised in marriage at an early age by men who are attempting to create alliances with other men via marriage alliances" (Chagnon, 1992, p. 8). When married to a woman as part of an exchange between males, a man may feel he has to guard this "property" zealously because she has not married out of her own volition. The man may not so much run the risk that she leaves him, as there are usually many sanctions against women who want to leave their husbands in cultures with arranged marriages, but especially the risk that he will, due to the infidelity of his wife, invest in the offspring of another man (cf. Buss, Larsen, Westen, & Semmelroth, 1992; Buunk & Dijkstra, 2006).

However, in arranged marriages, women may also engage in more mate guarding than in marriages that are the result of free mate choice. First, women in arranged marriages may perceive their husband in general as relatively more likely to commit adultery, which may result in a higher risk of disease and parasite transmission; in a higher risk of reduced resources invested by the husband; and in higher risk of being deserted. Second, women may have more to lose in societies with arranged marriages than in societies with love-based marriages. In both types of societies, women lose the support of their husband, who will invest his resources in another woman. However, in societies with arranged marriages, there is usually a severe societal stigma attached to divorced women due to which women may obtain little support from other community members and are less attractive as a wife (Burbank, 1987). Thus, under high levels of parental influence on mate choice, both sexes may suffer in their reproductive opportunities if their spouse should be unfaithful, although there may be, at least in part, different processes that underlie mate guarding for men than for women.

We tested our basic hypothesis that mate guarding is related to higher levels of parental influence on mate choice in two samples. Study 1 was conducted among students from 30 different countries studying in The Netherlands, and we assessed the perceived level of parental influence on mate choice in their culture of origin. In this study, we could assess how the level of mate guarding favored by an individual was related to the degree in which parents in his or her culture of origin had control over the mate choice of their children. Study 2 was conducted in a sample from Argentina and took a complementary approach: We assessed within a single culture how the level of mate guarding favored by an individual was related to his or her *own* preferred level of parental influence on mate choice. Thus, we examined how mate guarding was related to both personal preferences for parental influence and impressions of parental influence in one's country of origin.

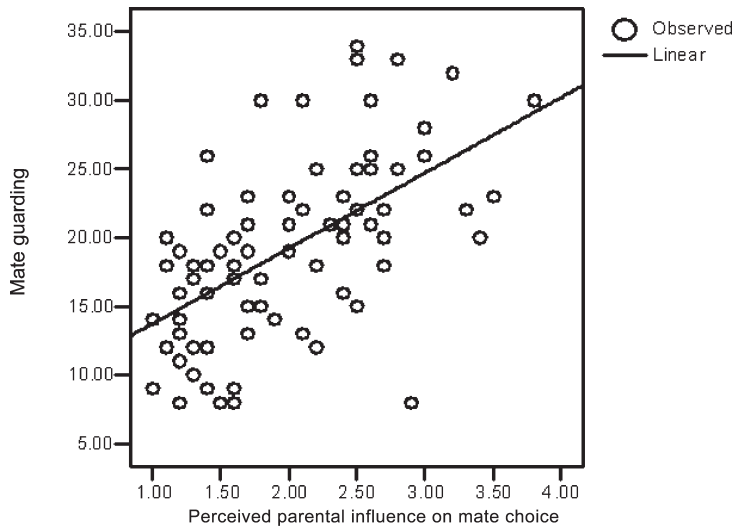
## Study 1

### *Method*

The sample consisted of 40 female and 40 male exchange students at the University of Groningen (mean age = 23.01,  $SD = 2.78$ ). These students had come from a variety of European, Asian, and African countries (30 in total). All students had a good command of English (a precondition to study in The Netherlands). They were approached by a fellow exchange student in the student dormitories with the request to fill out questionnaires on relationship issues across cultures. Virtually all students who were contacted agreed to participate.

### *Parental influence on mate choice*

To assess the parental influence on mate choice, the scale developed by Buunk and Park (2010) was used. This scale was guided by previous works (e.g., Goode, 1959; Hortaçsu & Oral, 1994; Pool, 1972; Rao & Rao, 1976; Riley, 1994; Theodorson, 1965; Xie & Combs, 1996) and covers the *range* of possible forms of parental influence on mate choice (varying from complete autonomy of children to complete control by parents). The scale was developed to be sensitive to variations in the degree of parental influence within and between cultures. For instance, it included an item that seemed to represent the most extreme form of parental influence—the practice in which a daughter is treated as a kind of property that the father is allowed to give to another man (Goode, 1959)—as well as an item that represents the other extreme—the norm that children have the right to select their own partner without any interference by their parents. In the present sample, because we were interested particularly in cultural differences, the instructions emphasized that we were interested in the beliefs in their respective cultures rather than in their personal opinions. Participants were explicitly informed that the questionnaire assessed their perceptions of the norms in their culture and not their personal beliefs or opinions. All items had the format of a statement with which people could respond on a 5-point scale from *1 disagree*



**Figure 1.** Perceived parental influence on mate choice and mate guarding in an international sample.

*completely to I agree completely*. Seven items consisted of statements expressing parental influence on mate choice, whereas four items consisted of statements expressing individual choice. In the present sample,  $\alpha = .80$ ,  $M = 1.98$ ,  $SD = .68$ . Thus, the mean was below the scale midpoint, but not extremely so. Men and women did not differ ( $p = .47$ ).

#### *Mate guarding*

This variable was assessed by an expanded version of the scale developed by Buunk (1997) for possessive jealousy. The scale had eight items, that is, referring to the inclination to prevent even innocent, superficial contact between the partner and members of the opposite sex. The following five items were taken from Buunk's scale: "I don't want my partner to meet too many people of the opposite sex"; "It is not acceptable to me if my partner sees people of the opposite sex on a friendly basis"; "I demand from my partner that he/she does not look at other women/men"; "I am quite possessive with respect to my partner"; and "I don't want my partner go his/her own way." In addition, the scale included the following items: "I demand from my partner that he/she does not flirt with other men/women"; "I prefer

it that my partner does not leave the house alone"; and "I have the feeling my partner is mine, and that others have to keep their hands off him/her." For each item, the five possible answers ranged from *not applicable* to *very much applicable*. In the present sample,  $\alpha = .82$ ,  $M = 2.40$ ,  $SD = .81$ .<sup>1</sup>

#### *Results and discussion*

As predicted, the degree of perceived parental influence on mate choice in one's culture was correlated quite highly with one's own mate guarding  $r = .56$ ,  $p = .000$ . The correlation for males ( $r = .55$ ,  $p = .000$ ) was quite similar to that of females ( $r = .63$ ,  $p = .000$ ), for the difference between both correlations,  $z = .53$ ,  $p = .60$ . Therefore we did the other analyses for the total sample. A regression analysis regressing mate guarding on parental influence showed that there was significant linear trend,  $R^2 = .34$ ,  $F(1, 77) = 39.27$ ,  $p = .000$ . As Figure 1 shows, mate

1. Correlational and regression analyses may be sensitive to outliers. Therefore, we removed for mate guarding outliers with scores 3  $SD$  above the mean or 3  $SD$  below the mean. When we also removed for parental control the individuals with scores 3  $SD$  above the mean or 3  $SD$  below the mean, the results stayed virtually the same.



guarding was higher for those perceiving higher levels of parental influence.

Of course, even such an association may be due to the fact that both variables are influenced by another variable. One such candidate would be cultural differences in collectivism. Parental control over mate choice is higher in highly collectivistic cultures (Buunk & Park, 2010). For 57 respondents in the present sample, we had available the scores in their country of origin for in-group and institutional collectivism from the GLOBE project (Gelfand, Bhawuk, Nishii, & Bechtold, 2004), a part of an edited volume by House, Hanges, Javidan, Dorfman, and Gupta (2004). Gelfand and colleagues (2004) distinguished between *in-group collectivism* and *institutional collectivism*. A high level of in-group collectivism refers to the degree to which individuals express pride, loyalty, and cohesiveness in their organizations and families, and a high level of institutional collectivism represents a high degree of interdependence with the organization, encouragement of group loyalty, and an economic system that tends to maximize the interests of collectives. A hierarchical regression in which these variables were first entered did not show effects of these variables on mate guarding, for in-group collectivism,  $\beta = .16$ ,  $p = .26$ , and for institutional collectivism,  $\beta = .14$ ,  $p = .23$ , whereas the effect of parental influence remained highly significant,  $\beta = .41$ ,  $p = .005$ . Thus, it seems that mate guarding is indeed cross-culturally directly affected by high levels of perceived parental influence on mate choice and that the association between both variables cannot be explained by cultural differences in the level of collectivism.

## Study 2

Study 1 assessed the association between parental influence and mate guarding cross-culturally and showed that individuals reported more mate guarding when they perceived a higher level of parental influence on mate choice in their culture of origin. To complement this finding, in Study 2, we assessed the association between parental influence and mate guarding within a single

culture and examined if individuals reported more mate guarding when they themselves preferred more parental influence over mate choice. This allowed us to establish if both variables were also correlated at the individual level.

## Method

Participants were 242 young people from Buenos Aires, Argentina (119 women, 123 men; mean age = 25.57, minimum = 18, maximum = 41,  $SD = 3.72$ ). Most of them were students from different faculties (social sciences, administration, design, law, etc.) and 60 of them were acquaintances or friends of those who were interviewed, who had been students in different faculties. The participants were at random recruited in different schools of the University of Palermo (Buenos Aires, Argentina) and were asked if they wanted to participate in a study on personal relationships. The questionnaires were anonymously answered. A team of five people who were doing a research practice collected the data. They were supervised by A.C.S. Of the participants, 10% were married, 16% were living with a partner, 26% had a steady partner without being married, 12% had a more or less steady partner, and 36% did not have a partner. To assess the preferred degree of parental influence on mating, the Spanish version of the scale used in Study 1 was used. However, in this study, participants were instructed to give their own opinions, not those perceived in their culture. In the present sample,  $\alpha = .83$ ,  $M = 1.49$ ,  $SD = .58$ . The mean was quite below the scale midpoint and virtually identical to the mean found for Dutch students (Buunk & Park, 2010), and considering the low standard deviation, it is clear that a large majority of the respondents disagreed with the statements emphasizing parental influence. There was no sex difference in the preferred parental influence on mate choice,  $t(240) = 0.14$ ,  $p = .88$ .

We then calculated the coefficient of congruence,  $\phi$ , to assess the metric equivalence of the parental influence scale, that is, the equivalence in the psychometric properties of the Spanish and English versions of the scale.

This coefficient was .97, which is very high (Tucker, 1951). On the basis of an empirical analysis of the perceived similarity of factors, Lorenzo-Seva and ten Berge (2006) suggested that a range of .85 to .94 corresponds to a fair similarity, whereas a value higher than .95 implies that both scales can be considered equal. Thus, the congruence between the Spanish and English versions of the scale was very good.

Mate guarding was assessed by a Spanish version of the scale used in Study 1. The reliability was .80 ( $M = 2.26$ ,  $SD = .72$ ). The coefficient of congruence  $\phi$  with the English version was .98, which is excellent.

### *Results and discussion*

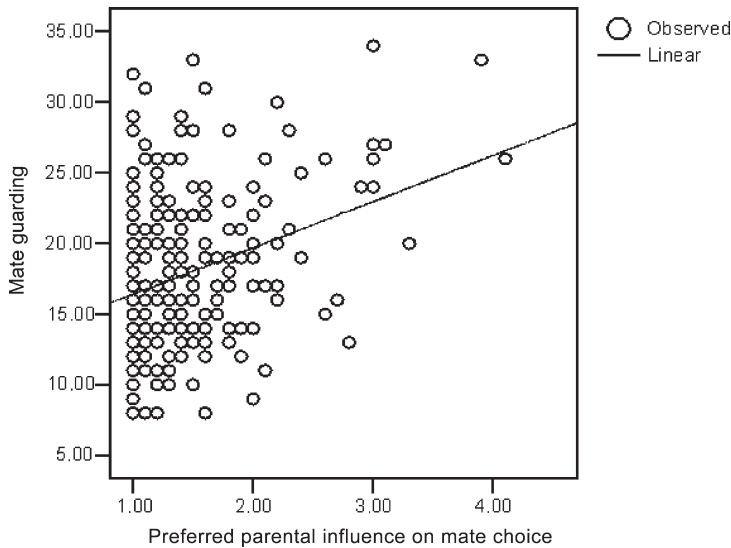
As predicted, preferred parental influence on mate choice was correlated moderately with mate guarding  $r = .34$ ,  $p = .000$ . The correlation for males ( $r = .34$ ,  $p = .000$ ) was virtually identical to that of females ( $r = .33$ ,  $p = .000$ ), for the difference between both correlations,  $z = .09$ ,  $p = .93$ . Therefore, we did the other analyses for the total Argentinean sample. A regression analysis regressing mate guarding on parental influence showed that there was a significant linear trend,  $R^2 = .12$ ,  $F(1, 238) = 31.70$ ,  $p = .000$ . As Figure 2 shows, mate guarding was higher for those preferring higher levels of parental influence.

Again, one might assume that other variables were in fact responsible for the association between both variables. We examined the possible influence of age, relationship status (no relationship, casual dating, steady dating, living together, married), relationship duration, and birth order. However, none of these variables was correlated with either preferred parental influence or mate guarding and thus could not explain the relationship between the two variables. A question on global mate value, that is, "When you compare yourself in comparison with others of the same sex and the same age as you, how attractive do you consider yourself" (7-point scale from *not attractive* to *very attractive*) was correlated negatively with parental influence ( $r = -.22$ ,  $p = .00$ ), but not with mate guarding

( $r = -.06$ ,  $p = .39$ ), and could therefore neither explain the correlation between both variables. Thus, the relation between preferred parental influence on mate choice and mate guarding seemed quite robust in this sample.

### **General Discussion**

We started our research with the observation that mate guarding has been observed in many species, that it is widespread in socially monogamous species like humans, and that it may occur in males as well as in females. However, at the same time it seems obvious that there are substantial cultural and individual differences in the prevalence and severity of mate guarding. We hypothesized that the degree in which parents control the mate choice of their children is an important factor that may explain variation in the occurrence of mate guarding. The results in two quite different samples—international students in The Netherlands and young people from Argentina—clearly supported this hypothesis. Men as well as women reported more mate guarding when they perceived a higher level of parental influence on mate choice in their culture of origin and when they themselves preferred more parental influence on mate choice. These findings are especially noteworthy because we found the effect not only when assessing both variables on the individual level but also when asking participants from many countries to report their own mate guarding and related this to the perceived level of parental influence in their country of origin. Of course, this last variable may be biased and influenced by the motivations of the participants. However, perceived parental influence on mate choice assessed in this way seems indeed to indicate something about the culture of origin of the participants as it is correlated substantially with in-group collectivism assessed independently (Buunk & Park, 2010). A high level of in-group collectivism refers to the degree to which individuals express pride of, and loyalty to, their organizations and families, and includes an emphasis on duties and obligations, a strong distinction between in-groups and out-groups



**Figure 2.** Preferred parental influence on mate choice and mate guarding in an Argentinean sample.

and an emphasis on one's relatedness with groups.

Our findings suggest that individuals do indeed feel a need to guard their spouse more when he or she is assigned to them rather than when he or she has chosen to marry them out of free choice, and this thus documents an important implication of the control of parents over the mate choice of their offspring. Put differently, freedom of mate choice seems to make mate guarding less necessary. Our findings clearly indicate that in cultures and social contexts in which freedom of mate choice is valued highly, the level of mate guarding is relatively low. This finding is particularly noteworthy because the association between perceived as well as preferred parental influence on mate choice and mate guarding remained intact when controlling for several potentially confounding variables. It may further be noted that there were no sex differences in this respect and that both men and women reported to engage in similar levels of mate guarding. This is in line with the observations by Burbank (1987) that cross-culturally, women often engage in fights over mates, with the findings reviewed by Campbell (2002) that women often compete heavily, and occasionally violently, with each

other over the access to males, and with the finding established in many studies that women are overall as jealous as males (Buunk 1995; Buunk & Dijkstra, 2006).

We would like to note a few possible limitations of our research. First, while our scale for mate guarding may be appropriate for a first pass at this issue, future work might benefit from using a more in-depth scale of mate guarding, like the Mate Retention Inventory (Buss & Shackelford, 1997). This scale assesses the frequency with which individuals perform mate guarding behaviors and includes different categories of mate guarding behavior. It will be interesting to assess which categories of mate guarding behavior are related especially to parental control of mate choice. Nevertheless, the present research suggests at least a partial answer to the question as to why there may be more mate guarding in countries with a tradition of arranged marriages than in Western countries like the United States and may help to explain why in countries with a historical freedom of mate choice, mate guarding seems less prevalent (albeit not absent).

Of course, there are various alternative explanations for our findings. Theoretically, the possibility exists that instead of parental



influence affecting mate guarding, an intense preoccupation with mate guarding influences the motivation to control the mate choice of one's offspring. Although it seems not easy to explain how this can come about, it is important to note that both variables may be related in a more complex manner than a simple effect of parental control on a tendency to engage in mate guarding. Although we could exclude the effect of a number of variables, one might argue that the correlation between perceived or preferred parental influence on mate choice and mate guarding still reflects another third variable. For example, one may evoke "traditionalism" as a factor related to both phenomena. However, in that case one would have to explain why some cultures are more traditionalistic than others. Moreover, there is considerable evidence that, for example, in The Netherlands, freedom of mate choice was already widespread in the quite "traditional" middle ages (De Moor & Van Zanden, 2006). Nevertheless, the correlation between parental influence and mate guarding may be in part due to individual differences in feelings of powerlessness; more powerless individuals may feel that their parents control their mate choice and that they themselves need to be concerned about their spouse engaging in extradyadic sex. However, even if the correlation between both variables would disappear when controlling for powerlessness, that would not discount our findings but would rather suggest a proximate factor underlying the association between parental influence on mate choice and mate guarding. That is, individuals in a culture with a high level of parental influence on mate choice may feel a lack of control in one of the most important domains in one's life—the choice of one's mate.

To conclude, although future research may clarify more in detail the psychological mechanisms involved in the relationship between freedom of mate choice and relatively low levels of mate guarding, the present research clearly suggests that these phenomena are, within and between cultures, closely intertwined. By demonstrating this, the present research illuminates a potentially powerful

determinant of mate guarding that thus far has not received due attention.

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