## **Commentary:**

# A REPLY TO SARAH STROUT AND ROSEMARIE S. CHANG: TRACING THE ROOTS OF PARENT-OFFSPRING CONFLICT OVER MATING

Menelaos Apostolou, Ph.D. *University of Nicosia, Cyprus* 

#### Abstract

In the article "Parent-offspring conflict over mating: a replication and extension study" (2011; see this present issue of JISS) I presented evidence that in-law and mate preference diverge over traits such as genetic quality, and I attributed this divergence to differences in genetic relatedness between parents and offspring. In their commentary, Strout and Chang (2011) highlighted some possible methodological issues, and they offered a number of alternative explanations for the results obtained. In this point by point reply, I argue that the design of this study provides a strong support for the evolutionary argument on parent-offspring conflict over mating, whereas competing theories do not really account for the observed differences between in-law and mate preferences. Neither the theoretical background nor the empirical work in this area is yet sufficiently developed, however, and directions for future research are discussed.

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AUTHOR NOTE: Please address all correspondence to: Menelaos Apostolou, Ph.D., Assistant Professor, Department of Social Sciences. University of Nicosia, Nicosia, 1700, Cyprus. Email: m.apostolou@gmail.com

# A reply to Sarah Strout and Rosemarie S. Chang:

In the article 'Parent-offspring conflict over mating: a replication and extension study' (2011; see this present issue of JISS) I have argued that because parents and offspring are not genetically identical, traits such as genetic quality give unequal benefits to each party. As a consequence, in-law and mate preferences do not always overlap, resulting in conflict over mating between parents and offspring. Using a within-participants design, I found support for the hypothesis that in-law and mate preferences diverge with respect to beauty, family and religious background.

Strout and Chang argued that this study suffers from a number of methodological issues, which potentially render its results invalid. They further argued that although there may be disagreement between parents and offspring over mating, the roots of this disagreement need not be genetic, and they discussed alternative explanations for the observed differences. In this reply, I attempt to respond to each of their arguments so as to demonstrate that the participants' responses not only are not invalid but that the within-participants is the most appropriate design for testing hypotheses on parent-offspring conflict over mating. Moreover, I aim to demonstrate that the proposed alternative explanations do not really account for the divergence between in-law and mate preferences. Finally, I discuss certain issues that future research on parent-offspring conflict over mating should address.

# Methodological concerns

One methodological concern is the use of a within-participants design to test hypotheses on parent-offspring conflict over mating. In particular, sexually mature individuals with children were asked to rate a set of traits in a husband or wife and in a son-in-law and a daughter-in-law. Strout and Chang argued that the responses obtained in this way may not be valid considering that participants had already chosen a mate with whom to have children. In a way, this argument is equivalent to saying that an individual's ratings of the desirable characteristics for a spouse cease to be valid once this individual makes the choice of a spouse. This is not true! If someone asks me about my favourite food, it is unlikely that I will give a different answer after I have eaten my dinner than before, and even if my answer is different it cannot be considered invalid on the basis that I have already had my dinner. Moreover, the high incidences of divorce, remarriage, and extramarital relationships indicate that people remain active mate seekers even after they have chosen a long-term partner.

In addition, it has been argued that a between-participants design, where parents' preferences for in-laws are compared with the respective mate preferences of their children, would have been a better way to examine parent-offspring conflict over mating. Still, although this is the most obvious method, it is not the best one, because it does not allow us to distinguish between alternative explanations. For instance, assume that we

find that children value beauty in a spouse more than their parents do in an in-law. Is the difference because of difference in socialisation or because of differences between evolved mate and in-law preferences? Data from a between-participants design cannot answer this question.

Having a proper design that controls for alternative explanations becomes even more important if we consider that most people would ascribe the observed difference to differences in socialisation: if you hear that young people value beauty more in a spouse than their parents in an in-law, you are probably going to think: 'Well, it is probably because parents are older and life experiences have taught them that beauty wears off with time so, it is not such an important trait in someone you are going to marry'. Or it may be the case that young people underestimate the importance of a spouse's family background, because they have never been married and do not know the influence that inlaws can exercise. On the other hand, older people who have been exposed to the pros and cons of close contact with the relatives of their spouse may place greater importance on the family background of a long-term partner.

The within-participants design excludes this argument as a possible explanation for the observed differences. Here, it is the **same** individuals with the **same** life experiences who alter their answers on the basis of whether they act as mate seekers or parents. Thus, even if life has taught people that beauty is not so important and good family background is quite important in a spouse, they still value beauty more and good family background less in a spouse than in an in-law. If socialisation was the correct explanation, then we would not expect to find differences in the ratings: life has taught people that beauty is not important so they would consider it equally unimportant in both a spouse and an in-law.

Nevertheless, I agree with Strout and Chang that there may be age effects that this design does not measure. For instance, it may indeed be the case that older individuals value beauty less than younger individuals. This effect would add to the effect from evolved preferences to produce an even stronger disagreement between parents and offspring than the one measured here. This means that the degree of conflict between parents and offspring over beauty is underestimated in this study. To look for such possible effects, conflicting preferences were regressed on age without producing any significant results. Such age effects may still be present, however, but cannot be detected because there are few participants of a younger age in the sample. Accordingly, although a between-participants design which compares the answers of parents with those of their children cannot distinguish between alternative explanations, it could be used instead to measure the full extent of parent-offspring conflict over mating.

Strout and Chang have also pointed out that in this study participants indicate their preferences for an ideal in-law/spouse, but in real life people do not always get what they consider ideal. This is obviously the case, but the key result of this study is that the ideal in-law is not the ideal spouse, and the ideal spouse is not the ideal in-law. When

people exercise actual choice, they are expected to strive to get what they consider ideal, and because what is ideal for parents is not ideal for offspring, they are likely to end up getting different things.

Furthermore, it was argued that if people are granted the ability to choose spouses for their children, they should be allowed to choose an in-law not only for the same sex child but also for children of a different sex. That is exactly how this study was conducted: participants were placed in a scenario where they would be able to choose spouses for themselves and spouses for both their sons and daughters. Comparisons were only made, however, between husbands and sons-in-law and between wives and daughters-in-law. Comparisons between wives and sons-in-law and between husbands and daughters-in-law were not made, as this would not be meaningful for measuring parent-offspring conflict over mating.

In particular, if we were to compare for instance a man's ratings for beauty in a wife with the respective ratings for beauty in a daughter-in-law and find a difference, this would tell us that people value beauty differently in a wife and in a daughter-in-law. Accordingly, this would be informative on father-son conflict over mating as it predicts that fathers would get a less beautiful daughter-in-law than their sons would desire. If, however, if we were to compare a man's ratings for beauty in a wife with respective ratings for beauty in a son-in-law and find a difference, this is not going to tell us anything about conflict between father and daughter, because from this we cannot infer that fathers would get a son-in-law who is less beautiful than their daughters would like.

Furthermore, Strout and Chang examined the mean ratings that participants gave for in-laws and spouses, and argued that although there are significant differences in the ratings, the magnitude of the differences is small. One reason is that the within-participants design may mask the real difference between in-law and mate preferences (see the argument above). Another reason may be that differences in preferences may be less than we expect them to be because an overlap between in-law and mate preferences may bring benefits from less conflict (Apostolou, 2009). Although the size of divergence between in-law and mate preferences has yet to be adequately estimated, it has to be said that differences do not need to be of a great magnitude in order to have a substantial evolutionary effect (Fisher, 1958).

## **Alternative explanations**

One alternative explanation for the observed differences in preferences that Strout and Chang put forth is that children should be more concerned about attractiveness because they are the ones who will actually be mating with a partner. This argument turns out to be invalid, however, when it is examined from an evolutionary perspective. Psychological mechanisms, including preferences, have evolved because they increase the probability that the genes that code for them will be represented in the next

generations. Accordingly, a preference for good looks in a spouse enables individuals to choose better-looking mates, gaining survival and reproductive benefit for their children. Similarly, a preference for good looks in an in-law enables individuals to choose better-looking in-laws, gaining survival and reproductive benefits for their grandchildren. If the benefits were identical in each case, the preferences for beauty would also have been identical. Who mates with whom is actually irrelevant here. What is more, this argument does not explain conflicting preferences over religious and family background.

In addition, it was argued that too much emphasis is placed on good genes although this is not the only trait of interest when it comes to mate choice. I agree that other traits are of equal or greater importance than genes in a mate. The focus of the discussion was on good genes not because I intended to simplify mating, but because good genetic quality constitutes an area of conflict between parents and offspring. Traits such as favourable social status are of importance in mating but are not the focus of this paper simply because it appears that they are valued equally in an in-law and in a spouse.

Overall, the specific predictions derived from evolutionary theory on conflicting preferences between parents and offspring, combined with evidence produced by a design that controls for alternative explanations based on social learning, provide strong support for the evolutionary argument of parent-offspring conflict over mating.

### **Future considerations**

Strout and Chang point out that mate preferences are not inflexible and are likely to change from time to time and from place to place. This is expected to be the case for in-law preferences. A recently published study supports this hypothesis (Apostolou, 2010). In particular, I collected evidence on parental preferences from 67 pre-industrial societies and I found that parental preferences are contingent upon the subsistence type of a given society. For instance, good family background is valued more by parents in agropastoral societies than by parents in foraging societies. If in-law and mate preferences are flexible, then parent-offspring conflict over mating may also be flexible. For instance, it may be the case that conflict over a given trait may be much more intense in certain cultural settings than in others.

Finally, the authors argue that sociosexuality (SOI) (Simpson & Gangestad, 1992) constitutes another source of variation when one considers in-law versus mate preferences. Future research should address this question as it could provide useful insights into the parent-offspring conflict over mating argument.

### Further considerations and directions for future research

There are still several theoretical and empirical issues that future research needs to address. To begin with, most of the results on parent-offspring conflict over mating come

from British and Dutch samples, reflecting the locations of the two primary research groups in the field. The next step is to replicate these findings in different cultural contexts, preferably non-Western. This would enable us to examine whether conflict is contingent upon the cultural background of a given society. Moreover, if similar patterns of conflict are found across different cultural settings, this would provide additional evidence for the evolutionary roots of parent-offspring conflict over mating.

Furthermore, empirical work is needed to decompose conflicting traits, such as good family background, into their constituent parts. In particular, Apostolou (2007) introduced the term 'good family background' because this is a trait frequently mentioned in anthropological sources as preferred by parents. Good family background, however, is a composite of traits such as a family's social and financial status, a family's religious background, a family's similarity over a range of traits, and so on. Accordingly, further work is necessary to identify in which constituent parts of good family background conflict is located.

Additional theoretical work is also necessary for an understanding of why parents and offspring are in conflict over family background. I have suggested that historically a preference for a mating candidate with good family background increased the fitness of parents more than it increased the fitness of offspring (Apostolou, 2008). In particular, parents would arrange the marriages of their children when they were young and, as their prospective in-laws were also young, they had to base their choice on the latter's family background rather than on their individual qualities. When exercising in-law choice, parents would choose an individual with a family background which maximised their own fitness and not the fitness of their offspring.

Buunk, Park and Dubbs (2008) argued that in a mating trade-off, which involves an investing mate versus a mate with good genes, parents' interests are served better if their offspring have highly investing mates than mates of superior genetic quality. This is because parents get fewer benefits from the genetic quality of their in-laws, so they do not like to have as much of this trait as their offspring. Family background is a proxy of an individual's ability to invest, so parents tend to prefer this trait more than their offspring, since such a preference will enable them to make a more optimal trade-off. I believe that these arguments explain part of the story, but not all of it. Consequently, the theoretical framework showing why parents and offspring are likely to disagree over religious background needs further theoretical development.

In addition, the effects of disagreement over family background should be further explored. In particular, cross-cultural research on parental preferences indicates that good family background is one of the most important traits parents look for in a prospective in-law (Apostolou, 2010). Accordingly, anything that is damaging to the family status would compromise parents' ability to make a marriage alliance with a desirable family, as their own family would become less desirable. One such example could be their

offspring divorcing their current spouse; as a consequence, their family could be characterised as a 'broken family' and its social status damaged.

This status loss is not as costly for the offspring as it is for the parents since good family background is not something that is particularly valued in a spouse. It is quite costly to the parents, however, because if they were to exercise choice, other parents would be interested in their family background. This implies that parents may wish their children to remain in a marriage that they find unsatisfactory. For instance, they may be more willing than their daughters to forgive the cheating of a son-in-law so as not to risk divorce. Overall, conflict over family background may also result in conflict over divorce decisions, a hypothesis that future research should address.

#### Conclusion

Evidence favours the evolutionary argument of parent-offspring disagreement over mating. Although Trivers posited his theory of parent-offspring conflict more than 30 years ago (Trivers, 1974), its application to understanding disagreement over mating decisions was only recently recognised (Apostolou, 2007). This means that much more empirical and theoretical work is needed if disagreement over mating is to be better understood and the full range of its implications for the social sciences assessed. Accordingly, as Strout and Chang point out, many aspects of this research should be explored in more depth.

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### **AUTHOR INFORMATION:**

Menelaos Apostolou, Ph.D. studied psychology at the University of Warwick, UK and he is currently an assistant professor at the University of Nicosia, Cyprus. His research interests include sexual selection, mating choice and parent-offspring conflict over mating. He is currently working on identifying areas of disagreement between parents and their offspring with respect to the latter's mating decisions. Address: Menelaos Apostolou, Ph.D., Assistant Professor, Department of Social Sciences. University of Nicosia, Nicosia, 1700, Cyprus. Email: m.apostolou@gmail.com. Website: http://www.menelaosapostolou.com