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Comment

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Although Fieder & Huber's (2007) effort to quantify the fitness effects of partner age differences that may drive mating preferences in humans was impressive, it is dismaying that they reported disparate optimal age differences for males and females. Their finding that, in monogamous partnerships, men maximize fitness if their partner is 6 years younger while women should choose partners 4 years older is a statistical impossibility. Let X be the mean offspring count in couples where the man is 6 years older and Y be the mean offspring count in couples where the man is 4 years older. Either $X > Y$ or $X < Y$, but it cannot be one way for males and another for females since the mean offspring count for each sex must be equal (an argument advanced by Darwin and Düsing and later popularized by Fisher's analysis of sex ratios; see Edwards (2000)).

The statistical discrepancy they report is probably an artefact of sampling error in that only one individual from each couple was included in the dataset. For example, they could have also asked the study participants how many guests attended their wedding ceremony and averaged the results separately for male and female participants. These averages would probably differ slightly due to sampling error (or perhaps significantly due to reporting bias), but clearly, the actual mean number of wedding guests must be exactly equal for each sex in the population.

Owing to the nature of the problem, it would have been more appropriate to aggregate the male and female data and find the single optimal age difference in monogamous partnerships in this society rather than report separate maxima for each sex. Although this should not affect the results of the study appreciably, it would clear up any confusion regarding the conclusions that can be drawn from this analysis.

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The accompanying reply can be viewed on page 83 or at http://dx.doi.org/doi:10.1098/2007.0548.

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