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Continuing Commentary

Commentary on **Douglas T. Kenrick and Richard C. Keefe (1992). Age preferences in mates reflect sex differences in human reproductive strategies. BBS 15:75–133.**

Abstract of the original article: The finding that women are attracted to men older than themselves whereas men are attracted to relatively younger women has been explained by social psychologists in terms of economic exchange rooted in traditional sex-role norms. An alternative evolutionary model suggests that males and females follow different reproductive strategies, and predicts a more complex relationship between gender and age preferences. In particular, males' preferences for relatively younger females should be minimal during early mating years, but should become more pronounced as the male gets older. Young females are expected to prefer somewhat older males during their early years and to change less as they age. We briefly review relevant theory and present results of six studies testing this prediction. Study 1 finds support for this gender-differentiated prediction in age preferences expressed in personal advertisements. Study 2 supports the prediction with marriage statistics from two U.S. cities. Study 3 examines the cross-generational robustness of the phenomenon, and finds the same pattern in marriage statistics from 1923. Study 4 replicates Study 1 using matrimonial advertisements from two European countries, and from India. Study 5 finds a consistent pattern in marriages recorded from 1913 through 1939 on a small island in the Philippines. Study 6 reveals the same pattern in singles advertisements placed by financially successful American women and men. We consider the limitations of previous normative and evolutionary explanations of age preferences and discuss the advantages of expanding previous models to include the life history perspective.

Individual differences in age preferences in mates: Taking a closer look

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Abstract: British marriage statistics ($N = 311,564$) suggest that women of breeding age choose young men. Women past breeding age who could still be raising children extend choices to include older men. After this, women do not marry. The choices of men over 50 are restricted to women between 40 and 55: past breeding but young enough to be raising children; the few men over 50 that marry choose women in this age range.

Kenrick & Keefe (1992a; K&K) make a prediction based on evolutionary theory that a male's preference for younger females should be minimal in the early years and should increase as he gets older, while a woman's preference for a somewhat older male should remain constant. Since few women breed beyond age 45, the older a man becomes, the younger his wife must be. Women have no such restrictions in choosing fertile males.

The data I present here are based on all the marriages that took place in England and Wales in 1992 ($N = 311,564$). The statistics were published by the Office of Population Census and Surveys (OPCS 1994). Table 1 shows the age distribution of those who married, together with representative samples of the size used in K&K's studies. These illustrate both how atypical elderly husbands are and how few people are likely to have contributed to the cells that "matter" in K&K's studies.

At first glance, British marriages conform to K&K's hypothesis: Women choose older husbands and husbands choose younger wives (sign test $p < .001$ in each case). The age gap between couples increases as a function of the man's age, but not as a function of the woman's age ($r = .01$; $r = .91$ respectively. See Table 2). Examination of the quartile ranges shows that for men the age range of partners broadens as they get older ($r = .90$), due to a consistent fall in the lower age quartile ($r = .92$).

Taking a closer look. Concentrating on the marriages of older people gives a very distorted view of mate choice (Table 1): Only 3.8% of women under 30 marry men over 10 years older than themselves; only 0.7% marry men more than 15 years older. Eighty-six percent of all women under 30 marry men under 30; 94% of all women under 40 marry men under 40. When women choose husbands, they do not choose old (or even middle-aged) men. In more traditional societies, marriages are often arranged and age gaps are bigger.

A man marrying a woman of 20 commandeers all of her breeding years; if he marries a woman 35–45 he has up to 12 years of low fertility left (Pollard 1994); by the time she is 45, he has none of her fertile years. Table 3 shows that the older a man is, the less likely he is to marry a woman capable of producing a child. While 89% of men who marry before age 20, and 79% who marry in their early 20s, commandeer all of a woman's breeding years, only 4% of men in their 40s and 1% of men in their 50s do so. Similarly, while less than 1% of men under 25 marry a woman past the age of breeding, 21% of men in their 40s, 38% of men in their 50s, and 86% of men in their 60s do. As can be seen in Table 2 (and in K&K's studies), even though older men marry younger women, wives are frequently too old to breed.

Choosing a younger wife only makes sense within an evolutionary context if a man increases his biological fitness and if, by being chosen, a woman does not prejudice hers. Sociobiologists tend to be rather long on male breeding strategies, but rather short on female ones. At the time that the *evolution* of male and female preferences is likely to have occurred, women depended on the hunting and fighting skills of their husbands. Whether to provide meat and protection or to live long enough to raise children, fertile women needed *young* men.

A man committing to a woman must commandeer as many of her breeding years as he can. The older he is, the less acceptable he is to young women and the more he will be pushed toward choosing the marginally fertile and the improbably fertile, which is what happens.

A woman committing to a man must ensure that he can provide for her until the children are grown. Her choice may be less restricted than his (as long as life expectancy at marriage extends beyond her fertility), but while she remains fertile she should

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Table 1 (Einon). *Number who married and age of marriage in England and Wales, 1992*

All marriages			Subsamples A		Subsamples B	
	Males	Females	M	F	M	F
16–19	3,883	15,018	9	36	1	5
20–24	69,520	102,076	417	467	55	62
25–29	102,942	91,735				
30–34	55,012	42,675	198	155	26	21
35–39	27,015	21,355				
40–44	18,349	14,305	75	61	10	3
45–49	13,038	10,934				
50–54	7,887	5,685	32	21	4	3
55–60	5,202	2,755				
60–65	3,572	2,089	15	8	2	1
65–69	2,343	1,398				

Table 1 shows all men and women who married in England and Wales in 1992. The subsamples shown here are representative samples of 753 (A) and 100 (B) drawn from the British sample, grouped in 10-year bands as in K&K's figures.

choose a young man. Once she ceases to be fertile her choices are more open. The older she is, the less likely she is to have dependent children and the less necessary marriage will become – which suggests that young women should marry young men. Middle-aged women should marry who they can, and women over 55 should not marry at all – which is more or less what seems to happen.

Although the present statistics offer superficial support for K&K's thesis, a closer examination suggests that the support is more apparent than real. The marriage patterns seen here were also present in K&K's data, as some of the first-round commentators pointed out. If sociobiological explanations of breeding strategies are to progress beyond male just-so stories, we need to consider all of the players and all of the facts with rather more rigor.

Table 2 (Einon). *Age differences between marriage partners*

M/W	Age his wife	*N*	Age her husband	*N*	Age gaps M-F	Age gaps F-M
19	19:17–27	38	21:20–27	15	0	+2
23	22:21–24	69	25:22–28	102	−1	+2
27	25:23–27	103	28:24–32	92	−2	+1
32	29:25–33	55	33:29–36	43	−3	+1
37	32:27–37	27	37:33–43	21	−5	+0
42	36:31–42	18	43:37–48	14	−6	+1
47	41:35–48	13	47:44–52	11	−6	+0
52	45:39–54	8	53:48–59	6	−7	+1
57	49:43–54	5	59:54–63	3	−6	+2
62	53:47–60	4	64:60–69	2	−9	+2
67	61:53–67	2	68:64–73	1	−6	+1

Table 2 shows the median age of those men or women who marry (column 1) and the age of their husband (column 4) or wife (column 2). *N* shows in thousands the number of instances on which medians are based. The final two columns show the age gap between man and wife (M-F) and wife and husband (F-M).

Table 3 (Einon). *Marrying fertile women*

Age Men	*N*	Fertility gained All	Fertility gained Some	Fertility gained None
<20	38	3440	45	4
20–24	695	54123	778	83
25–29	1029	44057	3158	255
30–34	550	11180	5817	583
35–39	270	2769	7755	1121
40–44	183	940	8201	2494
45–49	130	365	5583	4204
50–54	78	126	2548	4227
55–59	52	46	1122	3667
60–64	35	23	444	2979
65–69	23	10	142	2137

Table 3 shows the number of men in each age band who by marriage commandeer virtually all of a woman's fertile years (women under 25), a woman's last years of fertility (age 35–45), and none of her fertility (women over 45). Column 2 shows the total *N* (in hundreds) for each age band.

Differences between men and women in age preferences for a same-sex partner

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Abstract: We show through analysis of personal advertisements that age preferences for a homosexual or lesbian partner are similar to differences found between men and women in age preferences for a opposite-sex partner. Such data call into question the claim by Kenrick & Keefe (1992) that the sex differences in age selectivity in mate selection are governed by reproductive strategies.

Kenrick & Keefe (1992) have argued that differences between men and women in age preferences for an opposite-sex mate reflect sex differences in human reproductive strategies. They reported statistics from several cultures showing that whereas women at all ages typically marry a man who is slightly older, men as they age generally marry a woman who is substantially younger than they are themselves. Analysis of personal notices ("lonely-hearts") in newspapers where the advertiser reported his or her own age and specified the lower age and/or the upper age of the woman or man with whom he or she wished to make contact yielded similar sex differences in age preference for a mate. Although acknowledging individual differences in age preference within each sex at each stage in the life span, Kenrick and Keefe contended that the between-sex differences they identified at the nomothetic level reflect biological predispositions. In these terms, mate preferences represent "the hard currency of biological fitness and reproductive value" (p. 77). In discussing why older men prefer a woman much younger than they are themselves, Kenrick & Keefe claimed that "changes in male preferences over the lifespan are a relatively straightforward derivation from the assumption that males will be interested in a female's fertility or general reproductive value" (p. 85). In similar terms, women at all ages prefer (and marry) men who are slightly older than themselves through bias towards a mate showing characteristics related to resource acquisition (e.g., food, money, protection, and security).

The data cited by Kenrick & Keefe and commentators on the target article were limited to age preference for an opposite-sex

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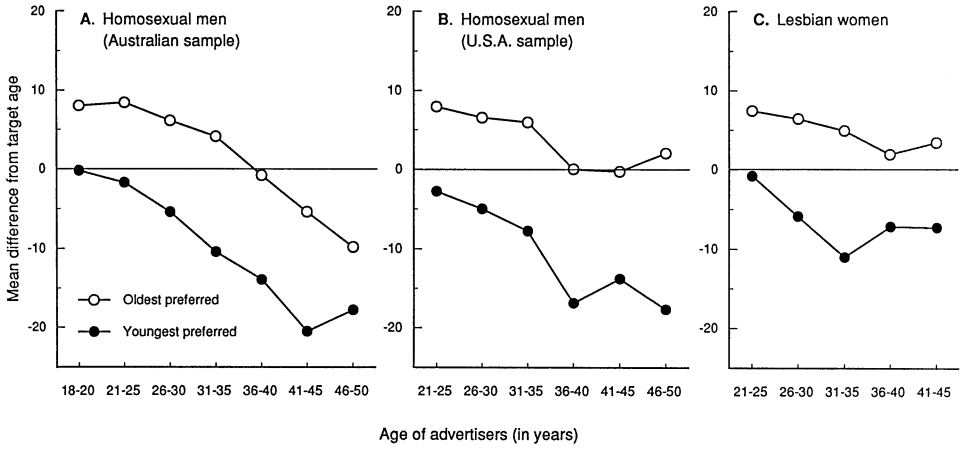


Figure 1 (Over & Phillips). Age differences preferred in same-sex mate advertisements, plotted as a function of minimum differences and maximum differences from advertiser's age. Figure 1A reports values for Australian homosexual men, Figure 1B values for U.S. homosexual men, and Figure 1C for lesbian women.

mate. We have analysed advertisements in gay newspapers to identify age preferences identified for a same-sex mate by homosexual men and by lesbian women. As reported below, younger homosexual men advertising in the gay press generally seek a partner at about their own age whereas older homosexual men express preference for men who are considerably younger than they are themselves. In contrast, for lesbian women there is relatively limited variation over the lifespan in the discrepancy in age between an advertiser and the partner she prefers. Sex differences in age preferences for a same-sex mate thus are similar to the sex differences in age preferences for an opposite-sex mate reported by Kenrick & Keefe.

Our analysis is based on personal advertisements that appeared during 1992 in four newspapers published in Australia (Brother Sister, Capital, Queensland Pride, and Sydney Star Observer) and four newspapers published in the United States (San Francisco Bay Guardian, San Francisco Bay Times, San Francisco Sentinel, and San Francisco Weekly). To avoid repeat advertisements, only a single issue of each newspaper was included. The sample comprised all advertisers who identified their own age and specified a minimum age and/or a maximum age for the person(s) they hoped to contact. Data analysis was limited to advertisers aged 18–50 in the case of Australian homosexual men ($N = 174$) and 21–50 in the case of U.S. homosexual men ($N = 106$). Because only a limited number of advertisements by lesbian women provided sufficient information on age, the Australian and U.S. data were combined to yield a single sample covering 88 advertisers aged 21–45. The upper limits were chosen because there were few advertisements by homosexual men over 50 or lesbian women over 45 specifying minimum and/or maximum age.

Age preferences were scored as the difference in years between the age of the advertiser and the minimum age specified for a partner (minimum difference) and the age of the advertiser and the maximum age stipulated for a partner (maximum difference). Figure 1 reports mean minimum age differences and mean maximum age differences for the samples of Australian homosexual men, U.S. homosexual men, and lesbian women (Australian and U.S.) as a function of the age of the advertiser. Similar trends are evident for the Australian and U.S. homosexual men. In both cases the discrepancy in age between preferred mate and advertiser increased with the age of the advertiser. Across both samples, advertisers in their 20s were seeking a partner on average no more than 3.8 years younger or 7.0 years older than they themselves were. Advertisers in their 30s invited replies from men ranging in age on average from 12.8 years younger to 3.7 years older than the advertiser, while homosexual men in their 40s were advertising for a partner ranging from an average of 16.7 years younger to 1.6 years older than they were themselves.

The minimum and maximum age differences for lesbian women are similar to values for homosexual men for advertisers aged 21–25 (in the case of the minimum age difference the values probably represent the floor effect noted by Broude, 1992). However, age preferences differed for the homosexual men and the lesbian women in the case of advertisers beyond 25. The mean minimum age difference was 7.2 years for lesbian women aged 26–35 and 7.2 years for lesbian women aged 36–45; mean values for homosexual men were 7.1 years (advertisers aged 26–35) and 15.5 years (36–45). Lesbian women aged 26–35 years on average sought a partner who was no more than 5.9 years older, and at 36–45 the mean upper limit was 2.5 years older than the advertiser. Homosexual men aged 26–35 specified a mean maximum age difference of 5.6 years, while at 36–45 their mean upper age limit was 1.2 years below their own age.

The sex differences in age preferences for a same-sex mate shown in Figure 1 differ from the sex differences for an opposite-sex mate reported by Kenrick & Keefe primarily in that lesbian women overall express preferences for a younger mate whereas heterosexual women overall indicate preferences for an older mate. However, sex differences in age preference are similar for same-sex and opposite-sex recruitment in an aspect central to the evolutionary hypothesis formulated by Kenrick & Keefe. With increasing age, homosexual men and heterosexual men seek a partner who is much younger than they are themselves. In contrast, as they age neither lesbian women nor heterosexual women demonstrate a preference for a partner who is increasingly younger than they are themselves. Kenrick & Keefe suggested that because sex differences in age preferences for an opposite-sex mate are similar across diverse cultures, the differences in preference pattern for men and women are unlikely to reflect arbitrary rules or social conventions per se. They instead concluded that men and women differ in reproductive strategies, and particularly the cues they are sensitive to in assessing the suitability of a potential partner. Although acknowledging that in the individual case a wide range of variables influence mate selection, Kenrick & Keefe have contended that biological predisposition is of fundamental importance.

Sex differences in age preferences for a same-sex mate cannot be explained by reference to reproductive strategies followed by men and by women. If it is simply coincidental that similar sex differences in age preferences for a mate are found for homosex-

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uals and heterosexuals, the two sets of data might be open to explanation in quite different terms. For example, the different life history trends obtained for male and female heterosexuals may reflect reproductive strategies as suggested by Kenrick & Keefe, while the similar pattern of sex differences obtained for homosexuals could be a product of cultural practices or norms. However, the law of parsimony would suggest that, at least initially, an attempt should be made to account for what seemingly are parallel effects within a single conceptual framework. Our objective in this commentary is not to offer an account of age preference trends that encompasses data for homosexuals as well as data for heterosexuals; the purpose instead is to point to findings that seemingly cannot be dealt with in terms of the perspective adopted by Kenrick & Keefe.

The analysis provided by Kenrick & Keefe is one of several target articles in Behavioral and Brain Sciences that have considered sex differences in mate selection by reference to reproductive strategies. Buss (1989) reported data from 37 cultures on the attributes that men and women value in potential mates. Women placed higher value than men on cues signifying resource acquisition (such as earning capacity and ambition-industriousness), while cues indicative of reproductive capacity (such as youth, physical attractiveness, and chastity) were valued more by men than by women. Since this pattern of results was relatively independent of culture, Buss interpreted the sex differences as indicative of ". . . different evolutionary selection preferences on human males and females" (p. 1). The analyses reported by Buss were concerned solely with opposite-sex attractiveness rated by men and women who presumably were exclusively heterosexual. It would be interesting to compare the data reported by Buss with ratings of the attributes that homosexual men and women value in potential same-sex mates. The data reported in Figure 1, when considered in conjunction with results obtained by Buss, suggest that men more than women, irrespective of whether heterosexual or homosexual, value youthfulness in a potential partner. Analyses of advertisements in the gay media undertaken by Laner (1978) and Laner and Kamel (1978) suggest that homosexual men place more emphasis than lesbian women on physical attributes and appearance as desired traits in same-sex partner selection, while lesbian women give greater weight to personality, education, and intelligence than homosexual men. These sex differences are similar to those established by Buss for opposite-sex partner attractiveness with heterosexual samples. Further research, preferably covering a range of cultures, is needed to establish the extent to which sex differences in preferred partner attributes are similar for same-sex and opposite-sex mate selection.

Although our commentary is directed to Kenrick & Keefe, we are also interested in a response from Buss (1989) to the data reported here. If the differences we note between men and women in same-sex mate recruitment cannot be accounted for by reference to sexually differentiated reproductive strategies, what are the implications for the explanation of the sex differences in opposite-sex partner attractiveness and mate selection highlighted by Buss and by Kenrick & Keefe?

Authors' Response

Age preferences in mates: An even closer look, without the distorting lenses

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Abstract: Einon's data support our original claims, although not a claim she seems to assume – of reciprocal attraction between elderly men and 20-year-old women. Implicit in her commentary is an assumption that genetic predispositions are omniscient fitness maximizers. Instead, evolutionary models assume selection-fashioned psychological mechanisms that, in the context of other mechanisms and pressures in past environments, had a positive effect on fitness relative to competing alternatives. The Over & Phillips data fit with our own data on homosexuals, and with the assumption of independent modular mechanisms, rather than any existing sociocultural models. Einon also incorrectly assumes that evolutionary models have overemphasized male choice to the exclusion of female choice.

Although previous sociocultural models presumed that a general male preference for youth was caused by sex-typed norms that should have been at least as strong in young men, data from around the world indicated a strong preference for youth only in older men. Those data also indicated, consistent with Janet Leonard's (1989) evolution-based arguments, that women's choice would remain fairly constant over the lifespan, because of the trade-off between male longevity and male resources.

Although it is not always perfectly clear from **Einon**'s commentary exactly what it is in our target article (Kenrick & Keefe 1992) she disagrees with, her commentary does demonstrate some continuing misconceptions about evolutionary psychology and psychological mechanisms (as does the commentary by **Over & Phillips**). These are worthy of explicit discussion.

We did indeed suggest that one mechanism in males inclines them toward a preference for youthful maturity because signs of youthfulness are associated with fertility. It does not follow, either from this assumption or from the abundant data presented in our target article and in the accompanying commentary, that one would expect to find a strong mutual attraction between very young women and very old men. On the contrary, in a section called "Constraints on males' preference on youth" (Kenrick & Keefe 1992a, sect. 9.4.1, pp. 88–89), we discussed some of the processes, including women's preferences for only slightly older men and men's preferences for similar partners, that should diminish the likelihood of men who were much older selecting and mating with the youngest fertile women. As we discuss below, modern evolutionary theorists assume that what evolved is not a general capacity for maximizing fitness in all environments, but a set of psychological mechanisms that, on average, served to enhance fitness over the alternatives.

R1. Einon's empirical data are indeed consistent with ours. The new data presented in her commentary, as she notes, are consistent with our original premise. Once again, it is found that men, but not women, change their age

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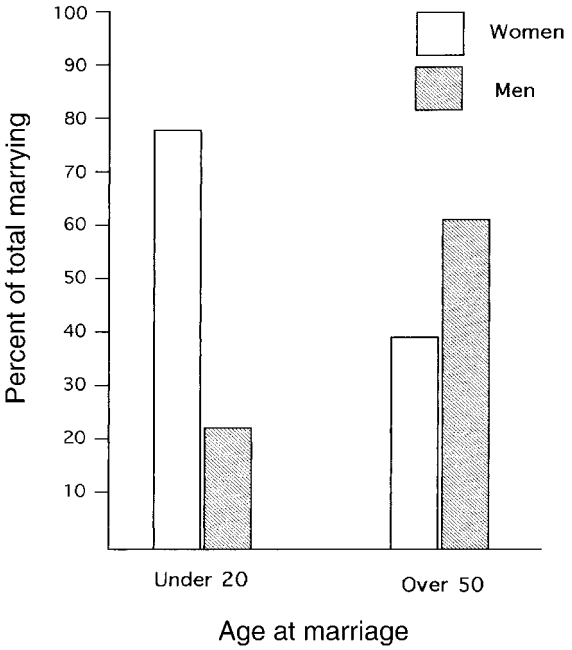


Figure R1. Percentage of males and females under age 20 and over age 50 who married during the year Einon sampled (figure is based on data from **Einon** commentary). These data demonstrate that the sex differences discussed in our original target article have important implications for substantial numbers of people in the younger and older portions of the population.

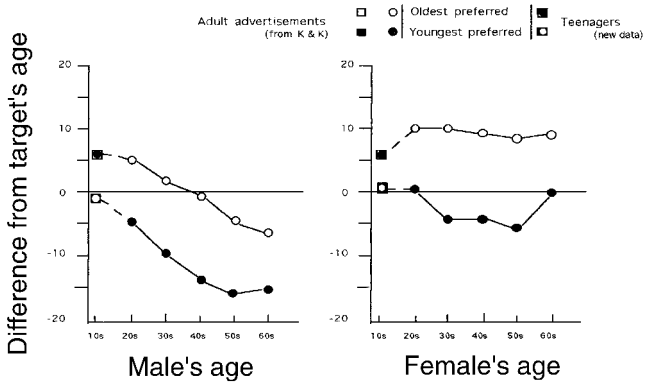


Figure R2. Data from original Kenrick and Keefe (1992) target article, supplemented by data from Kenrick, et al. (1996). The latter data suggest that males, during the sex-typed teenage years, are particularly discrepant from the supposed social norm specifying that men "should" seek younger women as mates. The data are more consistent with a presumption that males of all ages are attracted to women who are in the years of maximum fertility.

preferences as they age. Although Einon does not mention this, her data also show that, at the extremes of the age distribution, there is a pronounced divergence in the ratios of men and women marrying. As shown in Figure 1 (based on Einon's new data), men accounted for only about 20% of the 8,902 people marrying below the age of 20, but over 60% of the 30,931 people above 50 who married in the year she sampled. Such divergences are hardly trivial, and are consistent with patterns found worldwide in data from the United Nations and discussed in the original target article.

Although **Einon** emphasizes the data for older men, the data for younger men are at least as informative in elucidating the general psychological mechanism we presume – a male attraction toward women who manifest features associated with fertility. Unfortunately, teenage males are unlikely either to marry or to take out singles' advertisements. We recently surveyed 209 teenagers regarding the age limits they would find acceptable in a dating partner, as well as the age of a dating partner they would find ideally attractive (Kenrick et al. 1996). Figure 2 places these new data in the context of our (1992) data from adult singles' advertisements. Although teenage males were willing to date girls slightly younger than themselves, they indicated a much wider range of acceptability above their own age, and also reported that their ideally attractive partners would be several years older than themselves. Preferences of teenage females were similar in pattern to those of adult females, ranging, on average, from their own age to several years older. Although teenage males did not appear to believe that they had much chance of attracting women in their early 20s, and had little experience dating older women, they nevertheless found those older women attractive. Those data do not fit with earlier models suggesting that men have an attraction toward younger and less powerful women, but do fit with a model suggesting that men of all ages have a psychological mechanism that leads them to value signs of fertility in women.

R2. But there is no reciprocal attraction between elderly men and young women either found or presumed. Einon is also correct in noting that, although some very old men marry women in their 20s, most marry women who, although younger than the men, have little or no remaining fertility. If there is a lifespan attraction to signs of fertility, then, why do elderly men (and teenage men, for that matter) refrain from courting only women in their 20s and 30s? This question is akin to asking: If there is an attraction to beauty or wealth, why is it that not everyone marries millionaire matinee idols? Obviously, laws of supply and demand as well as simple logic preclude this option. There are a limited number of maximally desirable partners, and they tend to pair off with other partners of high desirability, leaving everyone else to do the best they can. Not everyone can maximize their benefits, and elderly men, like teenage men, may not be capable of competing with men who, for females, represent a better trade-off of remaining longevity and status or resources.

Hence, the male attraction toward women in the peak years of fertility, though it is apparent in all available data sets, is dampened by reality constraints. It may also be dampened by other mechanisms, such as the attraction toward similar partners, as noted above. To argue that male mate selection includes such a mechanism is not to argue that there is a reciprocal attraction between young women and men of their grandfathers' generation. **Einon**'s reasoning here is consistent with our arguments in the original target article. There is a market, there are other forces operating in that market besides the male preference for youth, and some of those forces are the choices of the other sex. We also agree that most of the action in terms of mate selection occurs when people are in their 20s and 30s, yet the expressed preferences of the old and of the very young help lay bare a mechanism that is less obvious by examining only people in the years of normal mate selection.

R3. Modern humans are not omniscient fitness maximizers. There is a common misconception that natural

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selection results in organisms that somehow calculate the genetic benefits of available strategies and then choose a course designed to maximize their fitness. Connected to this assumption is a corollary: Wherever one sees a pattern of behavior that does not maximize fitness, one is observing a mechanism that operates outside the realm of natural selection. These assumptions are implicit in the comments by both **Einon** and **Over & Phillips.** There are some important problems with these correlated assumptions. Natural selection shapes particular physical or psychological mechanisms that served well in the past against the alternatives. It is a mistake to assume that each mechanism will manifest some accompanying ability to maximize fitness in all individuals, in all phases of each individual's lifespan, and in all environments. (See Buss 1995; Symons 1992; Tooby & Cosmides 1992 for a further discussion of these issues.)

With regard to **Einon**'s comment on our life history model of age preferences, we do indeed assume that there is, in human males, an evolved mechanism that leads to an attraction to signs of youthful maturity in women. We do not assume that this mechanism operates either (a) in a social vacuum, or (b) in a way that makes it possible for men to maximize the number of offspring they might have at all choice points. In other words, men's attraction for features associated with female fertility should not be assumed to operate in some omnisciently fitness-maximizing manner. We assume that such a mechanism would have been selected because our male ancestors who possessed it had more offspring than men who ignored indications of fertility. Should this mechanism, which would serve well during the years of maximal reproduction (the 20s and 30s for men), disappear in older men, for whom it no longer serves as substantial a function? Only if continued attraction to signs of youth was harmful. Because many men in their 40s, and even some elderly men, do attract women with remaining years of fertility, and because there is no apparent harm (and may be indirect benefits) to grandfatherly types remarrying even if they do not produce new offspring, Einon's data hardly suggests any adaptive function to an age-related atrophying of the mechanism. If Einon is asking why all octogenarians do not maximize their reproductive success by marrying women in their 20s, it seems likely that at least part of the answer, as discussed above, is that female choice precludes it. As indicated in Figure R2 above, and as we discussed at some length in the original target article, women in their 20s are interested in men only slightly older than themselves – up to 10 years or so, on average.

The problem of the "omniscient fitness maximizer" assumption is apparent if we look at other apparently evolved mechanisms. For example, a mechanism leading to a preference for sweets might not, when considered in isolation, seem "adaptive" in an obese or diabetic individual living in the modern world, and might not even be of great benefit to a normal-weight, nondiabetic person living under the dietary conditions of the modern industrial world. Presumably, however, such a mechanism evolved because it served, on average, to promote the survival of our ancestors (who profited from a tendency to favor ripe over unripe fruit; Lumsden & Wilson 1981). Likewise, the avoidance of strong sexual attraction amongst kibbutz pod-mates may not, when considered in isolation, demonstrate any "adaptiveness," yet it may be based on a mechanism that served to

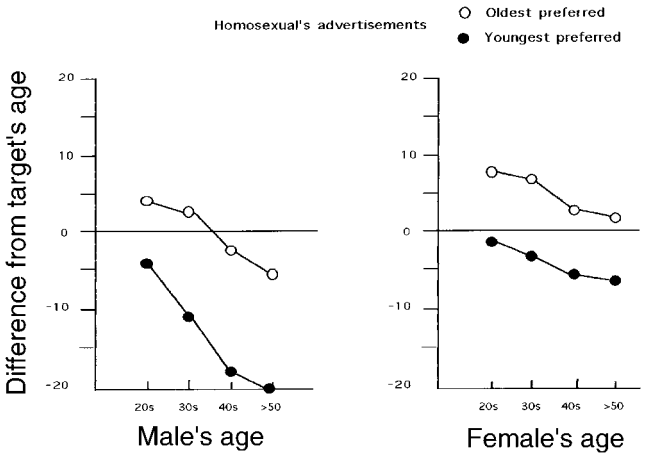


Figure R3. Age preferences among homosexuals from Kenrick, Keefe, Bryan, Barr, & Brown, (1995). These data are consistent with those reported by Over & Phillips, but inconsistent with a number of hypotheses about mate choice, including the likelihood that mate choice mechanisms manifest themselves in rational and/or conscious choices, or that mate choice is controlled by a simple "one-switch" mechanism.

decrease the probability of recessive gene combinations by dampening incestuous desire among siblings (Shepher 1971).

In a recent study, we found an attraction toward partners in their 20s among subjects for whom it could serve no obvious fitness-maximizing function – homosexual males (see Figure 3).

Over & Phillips's data, which include a sample of Australians, show the same pattern. In older homosexual males, a preference for younger partners is, from a market-based perspective, decidedly "irrational," because younger homosexual males are even less likely than younger heterosexual females to reciprocate the attraction of older males. (Compare the preferences of the young homosexual males in Fig. R3 with those of young heterosexual females in Fig. R2, for example.) Other aspects of male homosexual choice, including the strong attraction for physical beauty and the lack of attraction for status, as well as the preferences of homosexual females, are consistent with the argument that mate preference, like language or color perception systems, is under the control of a number of independent mechanisms, and not simply one switch that controls "mating like a male" versus "mating like a female" (Kenrick, et al. 1995). Such findings also show the futility of assuming that preference mechanisms will always maximize the reproductive fitness of all individuals who possess them. They also indicate the problems caused by assuming that such mechanisms operate at the level of consciousness, which they apparently do not in the case of homosexuals. We agree with Over & Phillips that the similarities between homosexual and heterosexual males are probably not merely a coincidence. We disagree, however, with their implicit assumptions that (a) all evolved mechanisms must manifest themselves along with conscious plans to maximize reproduction, and (b) any behavior that does not manifest fitness maximization in all individuals rules out the operation of "biological predisposition." Sociocultural models that posit differentially attractive depictions of older men versus women in the written and filmed media, for example, would lead to the expectation that like heterosexual females,

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homosexual males would be attracted to older men. That is quite clearly not the case in either our data or that of Over & Phillips. (See Kenrick et al. 1995, for further discussion of the issues raised by Over & Phillips.)

Again, modern evolutionary theorists assume the existence of mechanisms that, operating within the constraints of a range of environmental pressures and other evolved mechanisms, served their average possessor better than the competing alternatives. The question is not: Does every elderly male manage to marry a woman in her years of peak fertility? Nor is it: Does every living organism maximize fitness by enacting evolved mechanisms in every ontogenetic context? It is: Did the general preference for characteristics associated with youthful maturity in women serve our male ancestors better than the alternatives?

R4. "Male just-so stories" versus politically incorrect misconceptions. Einon's commentary ends with a rather judgmental suggestion that evolutionary hypotheses are "male just-so stories." This remark suggests that her critique is founded on a set of commonly shared political assumptions that are out of touch with developments in modern evolutionary theory (e.g., Buss 1995; Small 1992). Indeed, evolutionary hypotheses about gender differences, including several advanced by us and our colleagues (e.g., Kenrick et al. 1990; 1993; Kenrick & Trost 1996; Sadalla et al. 1987), have, for theoretical reasons related to differential parental investment, generally focussed more on female choice than on male choice. This emphasis on female choice can be traced to Charles Darwin, but has been increasingly appreciated in recent years (Small 1992; Smuts 1985). Unlike our other research, our series of studies on age preference focussed on male choice because it is male choice that changes over the lifespan, and because female patterns, unlike male patterns, were also predicted by previous models that posited arbitrary cultural norms as causal (although the universality was not predicted by the previous models).

The problem here is related to a common misconception about evolutionary hypotheses that is both unfortunate and ironic. Previously dominant models of gender differences, sometimes seen as more "politically correct," had assumed that gender differences are caused by male subjugation of passive, powerless females. Compared to the evolutionary model emphasizing female selectivity based on inherent differences in parental investment, those arbitrary, male-power cultural models seem to us politically insulting to both sexes. Beyond their political correctness or incorrectness, however, the prior models presumed cultural determination without collecting data across cultures that would have tested their assumptions. When such data have been collected (e.g., Daly & Wilson 1988; Kenrick & Trost 1996), the "arbitrary norms" model has not been supported. Hence, we recommend still another look at not only all the available data, but also at a set of erroneous assumptions that have kept many academics from learning about current developments in evolutionary theory and research.

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