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The “Birds and the Bees” Differ for Boys and Girls: Sex Differences in the Nature of Sex Talks

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The daughter-guarding hypothesis posits that “parents possess adaptations with design features that function to defend their daughter’s sexual reputation, preserve her mate value, and protect her from sexual victimization” (Perilloux, Fleischman, & Buss, 2008, p. 219). One way that parents may attempt to guard their daughters’ sexualities is by conveying to them certain messages about sex. To explore this possibility we administered an online questionnaire that tested 8 sex-linked predictions derived from the daughter-guarding hypothesis about the content of parent–child communications about sex. Participants were undergraduates from a Northeastern U.S. Jesuit Catholic university ($n = 226$) and young adults recruited through *Facebook* ($n = 391$). As predicted, daughters were more likely than sons to recall receiving messages from their parents that (a) emphasized being discriminating in allocating sexual access; (b) emphasized abstinence; (c) encouraged them to deter, inhibit, and defend against their partners’ sexual advances; (d) encouraged them to not emulate depictions of sexual activity; (e) stipulated when they were old enough to date; and (f) curtailed contact with the opposite sex. Results supported several hypothesized design features of the daughter-guarding hypothesis. Parents may be socializing children in ways that fostered ancestral reproductive success through sex-linked birds-and-the-bees talks and messages.

Keywords: birds and the bees, daughter-guarding, evolutionary psychology, parent–child sex talks, sex differences

A rite of passage for many American children is the parent–child sex talk. Although this “birds and the bees” talk is fairly common and commonly fraught with awkwardness for both parties, relatively little is known about its content. Using evolutionary psychological theories as a guidepost, we explored the content of communications about sex that parents have with

their children. Our focal question was whether parents tell certain things about sex to their daughters and other things to their sons.

Although previous studies have explored parental sex talks, most have adopted an atheoretical perspective with regard to the content of such talks for boys and for girls (e.g., DiIorio, Kelley, & Hockenberry-Eaton, 1999; Downie &

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Coates, 1999; DuRant, Wolfson, LaFrance, Balkrishnan, & Altman, 2006; Epstein & Ward, 2008; Furstenberg, Herceg-Baron, Shea, & Webb, 1984; Hertzog, 2008; Lehr, DiIorio, Dudley, & Lipana, 2000; Martino, Elliot, Corona, Kanouse, & Schuster, 2008; Miller, Levin, Whitaker, & Xu, 1998; Newcomer & Udry, 1985; Nolin & Petersen, 1992; Pluhar, Jennings, & Dilorio, 2006; Raffaelli, Bogenschneider, & Flood, 1998; Simanski, 1998; Walker, 2001; Zhengyan, Dongyan, & Li, 2007). The few studies that have explored the nature of parental sex talks for boys and girls focused mostly on whether the sex of the parent influenced the talk given to one's son or daughter (e.g., Miller, Kotchick, Dorsey, Forehand, & Ham, 1998; Rosenthal & Feldman, 1999). Relatively few studies have explored whether the sex of the child influences the content of the talk given by a parent (e.g., Kapungu et al., 2010; Martin & Luke, 2010).

The Daughter-Guarding Hypothesis

Consequently, most prior research has failed to carve nature at its joints (Plato & Scully, 2003) by exploring the differential functions that parental sex talks may serve for sons and daughters. We tested eight sex-linked predictions about the content of parental sex talks and other messages that parents communicate to their children. Our predictions were derived from the daughter-guarding hypothesis, which posits that "parents possess adaptations with design features that function to defend their daughter's sexual reputation, preserve her mate value, and protect her from sexual victimization" (Perilloux, Fleischman, & Buss, 2008, p. 219). We reasoned that parents may attempt to guard their daughters' sexuality through strategic communication about sex because, relative to ancestral sons, ancestral daughters incurred greater reproductive costs (Buss, 2003; Perilloux et al., 2008; Trivers, 1972) from

1. an untimely or unwanted pregnancy,
2. rape and other forms of sexual victimization, and
3. damage to their long-term mate value as a result of early, premarital, short-term sexual experience.

Examples of daughter-guarding can be found in the anthropological and psychological literatures. Evolutionary anthropologist [Mark Flinn \(1988\)](#) coined the term *daughter guarding* and documented examples of it by rural Trinidadian fathers who restricted their daughters' movements, forced them to take chaperones, and threatened men who came to visit their daughters. In support of their daughter-guarding hypothesis, evolutionary psychologist Carin Perilloux et al. ([Perilloux, Fleischman, & Buss 2008](#)) found that parents of U.S. college students were more likely to control their daughters' than sons' mating decisions, mate choice, and sexual behavior and reported greater upset over their daughters' than sons' sexual activity.

Daughter-guarding is but one example of the many and varied ways that parents attempt to influence their children's mate choices ([Apostolou, 2014](#)). In some situations children's mating interests align with their parents, whereas in others, their interests diverge. Conflict between parents and children in the mating realm can arise because "an ideal mating strategy from the perspective of the offspring may depart from an ideal mating strategy from the perspective of the parents" ([Buss, 2012](#), p. 233). Evolutionary psychologist Menelaos Apostolou has explored various sources of conflict between parents and children in the mating realm ([Apostolou, 2014](#); see also [Perilloux, Fleischman, & Buss, 2011](#)). Among other discoveries, he has found that parents and offspring come into conflict over offspring's pursuit of short-term mating relationships. This conflict stems, in part, because "offspring who engage in short-term mating inflict a cost to their parents in terms of compromising parental control over mating, damaging family reputation and loss of desirable traits" ([Apostolou, 2009](#), p. 896). Parents are particularly sensitive to their daughters' short-term relationships and are less accepting of short-term mating relationships involving their daughters than their sons ([Apostolou, 2009](#)).

Predictions Derived From the Daughter-Guarding Hypothesis

Given previous theory and findings, we predicted that daughters would be more likely than sons to report receiving a parental sex talk and other parental messages that encouraged

- abstinence (Prediction 1),

- being discriminating in allocating sexual access (Prediction 2), and
- deterring, inhibiting, and defending against sexual advances (Prediction 3).

We also predicted that daughters would be more likely than sons to report receiving messages

- to not emulate depictions of sexual activity (Prediction 4),
- that defined when they were old enough to date (Prediction 5), and
- that curtailed contact with the opposite sex (Prediction 6).

In addition, given girls' earlier age of pubertal onset (American Academy of Pediatrics, 1991) and greater reproductive costs associated with sexual activity (Trivers, 1972), we predicted that daughters would be more likely than sons to receive a parental sex talk (Prediction 7) and to receive the talk at a younger age than sons (Prediction 8).

Method

Participants

Our 617 participants were undergraduates from a Northeastern U.S. Jesuit Catholic university ($n = 226$; $M_{age} = 18.6$ years; $SD = 1.4$) and young adults recruited through *Facebook* ($n = 391$; $M_{age} = 21.7$ years; $SD = 4.8$). The university students were recruited from a psychology department subject pool and received credit toward their introductory psychology course's research participation requirement. The *Facebook* participants were recruited through posts on our *Facebook* walls that encouraged friends and family to "complete an anonymous, online survey about the timing and content of any sex talk (or other messages about sex) you received from your parents."

Based on predetermined exclusion criteria, we eliminated data from participants who identified as nonheterosexual ($n = 49$), completed the survey too fast (i.e., under 2 min; $n = 44$), and reported that they did not diligently complete the survey in an honest fashion ($n = 3$). This left usable data from 521 participants (379 women, 142 men; $M_{age} = 20.5$ years; $SD = 4.1$).

Materials and Procedure

After accessing the anonymous online survey at a time and place of their choosing, our participants were asked to (a) answer three biographical questions; (b) respond to two questions regarding the timing and delivery of any messages about sex that they received from their parents; (c) answer one question concerning the content of these messages; (d) answer four questions regarding how their parents may have attempted to restrict their access to the opposite sex; (e) answer two questions about how their mother and father reacted when movies or TV shows they watched together discussed or depicted sexual situations; and (f) identify how diligently they completed the survey in an honest fashion.

Section A contained three generic questions about participants' sex, age, and sexual orientation. The two timing/delivery questions in Section B were "Some parents give their children a talk about 'the birds and the bees' in which they talk about sex. Did a parent have this sex talk with you?" and for those who answered "yes," "Approximately how old were you when you received this sex talk?"

The question in Section C listed 29 distinct messages a parent might convey about sex. These messages ranged from "premarital sex is unacceptable" to "have fun" and were compiled from discussions among the authors and with others about what parents told them and what they would tell their future children about the birds and the bees. Preceding these messages was this instruction set: "Your parents' sex talk/messages may have focused on several themes. Please put a check next to each theme that was touched upon in any sex talk/messages you received from your parents."

Section D contained four questions about parental control over contact with unrelated members of the opposite sex: (a) During high school did your parent(s) give you a curfew as to when you had to be home? (b) Did your curfew differ if you were out with the opposite sex? (c) During high school were your opposite sex friends allowed in the house while your parents weren't home? (d) During high school were your opposite sex romantic partners (e.g., your boyfriend or girlfriend) allowed in the house while your parents weren't home?

Section E asked, “Which of the following ways was your mom [dad] likely to behave while watching a movie or TV show (or any other form of entertainment) with you that discussed or depicted sexual situations?” Seven options were given that were generated from discussions among the authors about how our parents reacted in such situations: “You better not be doing that!” “Oh, that looks like fun;” “Is that what you or your friends do?” “Don’t get any stupid ideas from this;” act like it was not happening and not address the situation; act disgusted; and change the channel. The eighth option was, “This question is not applicable to me.” The focal option (the one we expected daughters to report experiencing more so than sons) was, “You better not be doing that!”

Results

Because there were no theoretical reasons to expect the university and *Facebook* samples to differentially respond to our survey and because their demographics and responses were similar, all analyses were performed on the overall sample. (No notable differences between the samples emerged when analyses were run on each sample separately.)

Prediction 1: Abstinence

Two preselected messages were used to test this prediction. As expected, daughters (15%) more so than sons (8%) reported being told that “premarital sex was unacceptable,” $\chi^2(1, N = 521) = 4.84, p = .028, \Phi = 0.10$; odds ratio = 0.47. Similarly, daughters (35%) more so than sons (24%) were told that “abstinence is okay,” $\chi^2(1, N = 521) = 5.39, p = .02, \Phi = 0.10$; odds ratio = 0.60.

Prediction 2: Being Discriminating in Allocating Sexual Access

Five preselected messages were analyzed to test this prediction. As depicted in Table 1, daughters were significantly more likely than sons to be told all five messages that encouraged being discriminating in the allocation of sexual access to a romantic partner.

Prediction 3: Deterring, Inhibiting, and Defending Against Sexual Advances

Five preselected messages were analyzed to test this prediction. As expected, daughters were significantly more likely than sons to have received all five messages that related to deterring, inhibiting, and defending against sexual advances from a romantic partner (see Table 2).

Prediction 4: Do Not Emulate Depictions of Sexual Activity

While watching a movie or TV show (or any other form of entertainment) that discussed or depicted sexual situations, daughters (11%) significantly more so than sons (4%) reported that their father said, “You better not be doing that!,” $\chi^2(1, N = 521) = 5.81, p = .016, \Phi = 0.11$; odds ratio = 0.35. Although only approaching significance, daughters (20%) were also more likely than sons (11%) to report that their mother made the same remark, $\chi^2(1, N = 521) = 3.09, p = .079, \Phi = 0.08$; odds ratio = 0.62.

Prediction 5: Defined Dating Age

As predicted, daughters (19%) were significantly more likely than sons (6%) to have their ability to form romantic relationships

Table 1
Percentage of Daughters and Sons Who Received Messages to Be Discriminating When Allocating Sexual Access (Prediction 2)

Message	Daughters	Sons	$\chi^2(N = 521)$	<i>p</i>	Phi	Odds ratio
Wait until you find love	38%	18%	18.64	<.001	.19	0.36
Wait until marriage	40%	25%	10.06	.002	.14	0.50
Wait until you find someone special	40%	24%	11.05	.001	.15	0.48
You’ll want your first time to be special	31%	11%	20.42	<.001	.20	0.29
Don’t sleep around with multiple people	33%	13%	19.40	<.001	.19	0.32

Table 2
Percentage of Daughters and Sons Who Received Messages About Deterring, Inhibiting, and Defending Against Sexual Advances From a Romantic Partner (Prediction 3)

Message	Daughters	Sons	χ^2 (N = 521)	p	Phi	Odds ratio
It's your job to say "no"	18%	1%	24.68	<.001	.22	0.07
It's okay to say "no"	45%	24%	18.52	<.001	.20	0.17
It's your job to put the brakes on sexual activity if it progresses too fast	20%	9%	9.55	.002	.14	0.37
How to deal with unwanted sexual press	14%	1%	17.30	<.001	.18	0.09
Be careful not to be taken advantage of	36%	4%	52.22	<.001	.32	0.08

restricted by having to reach a certain age before being allowed to date, $\chi^2(1, N = 521) = 13.78$, $p < .001$, $\Phi = 0.16$; odds ratio = 0.26.

Prediction 6: Curtailed Contact With Opposite Sex

Three preselected house rules were analyzed to test this prediction. As expected, daughters were significantly more likely than sons to have experienced all three house rules that curtailed contact with the opposite sex (see Table 3).

Prediction 7: Likelihood of Receiving Sex Talk

We found that 49% of men but only 44% of women reported receiving "a talk about 'the birds and the bees' in which a parent talked about sex," with the average talk-recall span being 6.5 years. This nonsignificant difference between the sexes was in the wrong direction and disconfirms the prediction that daughters would be more likely than sons to receive a parental sex talk, $\chi^2(1, N = 519) = 1.27$, $p = .259$. Similarly, a nonsignificant difference in the wrong direction was found in response to, "Aside from an explicit sex talk, did your par-

ents ever send you implicit or explicit messages about appropriate sexual behavior (e.g., via conversational asides, jokes, books)?" We found that 56% of men but only 47% of women reported receiving such off-hand messages about sex, $\chi^2(1, N = 496) = 2.98$, $p = .084$.

Prediction 8: Age That Sex Talk Was Received

Prediction 8 was also disconfirmed as daughters ($M_{age} = 12.67$ years, $SD = 2.77$) did not receive a parental sex talk at a significantly younger age than did sons ($M_{age} = 13.12$ years, $SD = 2.42$), $t(230) = 1.18$, $p = .121$, one-tailed.

Unpredicted Sex Differences and Similarities

Although not predicted, daughters were also significantly more likely than sons to be asked if they wanted birth control (16% vs. 3%; $\chi^2 = 17.12$, $p < .001$, $\Phi = 0.18$; odds ratio = 0.15), to be told to use birth control (26% vs. 15%; $\chi^2 = 6.88$, $p = .009$, $\Phi = 0.12$; odds ratio = 0.51), and to be told not to get entangled with a pregnancy (58% vs. 45%; $\chi^2 = 6.45$, $p = .011$, $\Phi = 0.11$; odds ratio = 0.61).

Table 3
Percentage of Daughters and Sons Who Experienced House Rules That Curtailed Contact With the Opposite Sex (Prediction 6)

Rule	Daughters	Sons	χ^2	p	Phi	Odds ratio
OSFs not allowed in house when parents weren't home	48%	30%	11.74	.001	.16	2.12
Romantic partners not allowed in house when parents weren't home	59%	43%	7.78	.005	.14	1.89
Curfew when out with OSFs different from normal curfew	34%	15%	7.39	.007	.15	0.42

Note. Ns were 481, 416, and 339 for each rule, respectively. OSFs = opposite sex friends.

Although sons (9%) were significantly more likely than daughters (3%) to be told to “have fun”— $\chi^2(1, N = 521) = 6.57, p = .01, \Phi = 0.11$, odds ratio = 2.82—messages such as “sow your wild oats while you can,” “sex should be enjoyable,” and “here’s some advice on how to please a partner’s sexual needs” were equally likely to be told to daughters and sons.

Discussion

With six of eight predictions confirmed, the results from this study largely support the daughter-guarding hypothesis (Perillooux et al., 2008) from which the predictions were derived. As expected, daughters more so than sons received a parental sex talk and other parental messages that encouraged abstinence, being discriminating in allocating sexual access, and deterring, inhibiting, and defending against sexual advances. Also as expected, daughters were more likely than sons to receive messages to not emulate depictions of sexual activity, that defined when they were old enough to date, and that curtailed their contact with unrelated members of the opposite sex. It appears that our participants’ parents were more focused on guarding the sexuality of their daughters than their sons.

Although daughters were significantly more likely than sons to receive each of the predicted messages about sex from their parents, these findings are not due to daughters being more likely to receive any and all messages about sex. Sons were significantly more likely than daughters to be told to “have fun” and equally likely as daughters to be told other messages (e.g., “sex should be enjoyable”).

Why were our participants’ parents (apparently) so focused on guarding the sexuality of their daughters? On the one hand, it’s in both parents’ and daughters’ reproductive interests for daughters to receive messages that mitigate the risks of an untimely or unwanted pregnancy, rape and other forms of sexual victimization, and damage to their long-term mate value as a result of early, premarital, short-term sexual experience. On the other hand, daughters can acquire benefits from short-term mating relationships, and these benefits are sometimes costly to parents. Among other benefits, short-term mating may help women acquire resources, protection, or a new mate (Greiling &

Buss, 2000; Buss, 2012 Table 6.2). From a parent’s perspective, however, these benefits can be quite costly as daughters

who engage in casual and extramarital relationships may get a reputation for promiscuity or unfaithfulness, which will damage their own status, but also the status and reputation of their family. And this is particularly costly for parents, especially in preindustrial societies where good family background is considered one of the most important criteria for forming a marriage alliance. (Apostolou, 2009, p. 896)

As such, when parents socialize their daughters against engaging in behaviors that could benefit the daughters at the expense of the parents, the parents’ socialization may be an example of parent–offspring conflict (Trivers, 1974) in which the parents are attempting to manipulate their daughter to promote the parents’ reproductive interests over their daughter’s reproductive interests. Apostolou (2013) argued that parents frequently attempt to manipulate their daughters by advising them “[To] be choosy whom you date so you do not get hurt,” “Do not sleep with your boyfriend very early in the relationship,” and “Do not sleep around because you will acquire a bad reputation and then nobody will want you as a wife and you will end up a spinster.” Parental manipulation may explain why some of the daughters in our study were encouraged to be abstinent and to be discriminating in the allocation of sexual access.

The two predictive failures were that daughters were not more likely than sons to receive a parental sex talk and that they did not receive it at a younger age than did sons. A potential explanation for these surprising findings is that due to certain political and religious influences, some of our participants’ parents may have believed that they were daughter-guarding by not discussing sex with their daughters at an early age, or at all. The notion that to talk about sex with children is to condone it and to give license to being sexually active is not uncommon in certain conservative and Catholic circles. Future research might explore the relationships between parents’ religious and political beliefs and whether and when they talk about sex with their children.

Limitations and Future Directions

A limitation of this study is that it relied solely on children’s recollections of the mes-

sages about sex that their parents conveyed to them. Although it would be informative to explore the degree to which parents' recollections dovetail with children's recollections, there are at least two reasons to expect children's reports to be more veridical than their parents' reports. For one, a child likely received only one sex talk or set of messages from a parent, whereas a parent may have given several different talks to several different children, which could muddy the recall of what was said to any given child. Second, unlike children's reports, American parents' reports are more likely to have been influenced by pressure parents may feel to report that they treated their sons and daughters equally and without any double-standards. Ideally, future studies would query children and their parents immediately after a sex talk was given, as opposed to assessing just children an average of 6.5 years after their sex talks occurred, as the present study did.

Querying parents would also shed light on the possibility that sons and daughters are, for unknown reasons, motivated to recall information about sex from their parents that corresponds to their sociosexual orientation (Simpson & Gangestad, 1991). If so, given that heterosexual women are typically more restricted in their sociosexual orientation than men (Schmitt, 2005), an alternative explanation for our results is that daughters are simply recalling more sex-inhibition messages than are sons. Assessing the prevalence, nature, and timing of birds and bees talks in children and parents from a variety of cultures and mating systems would help address this possibility.

A potential concern is whether our findings are due to some of our participants' parents being Catholic. Although not queried, it is indeed likely that our university sample's ($n = 226$) modal religion was Catholicism. However, the participants from our larger *Facebook* sample ($n = 391$) were likely far more religiously diverse than our university sample, and their modal religion was unlikely to have been Catholicism. Given that the religious demographics of our samples likely differed but the pattern of findings within each sample were largely identical, our participants' parents' focus on guarding the sexuality of their daughters more so than their sons is unlikely attributable to Catholic social teaching. Future explorations of this topic should verify this by explicitly que-

rying participants and their parents on their religious affiliations.

Conclusions

In an increasingly murky sea of behavioral research awash with failures to replicate and with fraudulent findings (Pashler & Wagenmakers, 2012), the present results suggest that Perilloux et al.'s (2008) findings hold water. Like they, we found that daughters were significantly more likely than sons to have their contact with the opposite sex curtailed. However, this replicated finding and our other results are mere descriptions, not proscriptions. The daughter-guarding hypothesis and the supportive findings here are not justifications for treating sons and daughters differently. When deciding what to tell children about sex and when establishing house rules, parents should avoid appealing to nature, committing the naturalistic fallacy, or falling prey to the is–ought problem by using evolutionary psychological theories and findings to validate treating boys and girls differently.

But treated differently many boys and girls are, especially when it comes to messages about sex from their parents (Low, 1989). The fallacy of the "Is it due to nature or nurture?" dichotomy is evidenced here, as children appear to be socialized (commonly chalked up to nurture) in ways that are sensitive to sex differences and parent–offspring differences in ancestral reproductive costs (i.e., nature). Boys' and girls' subsequent forays into the sexual arena may diverge because of their sex-differentiated evolved mating minds (Buss, 2003; Miller, 2000) which are sensitive to information from the environment, including messages from their parents that may serve their and their parents' genetic interests. Contra nature versus nurture, proximate (socialization) and ultimate (fitness promoting) causes of behavior are often complementary. Modern-day American parents appear to socialize children in ways that fostered ancestral reproductive success through the communication of sex-linked birds-and-the-bees talks and messages.

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