

Why are men reporting more sexual partners than women?

ELINA HAAVIO-MANNILA

J.P. ROOS

University of Helsinki, Finland

In a recent article in New York Times on *The myth, the math and sex*, Gina Kolata (2007) takes up the well known fact that heterosexual men and women report widely different numbers of sex partners although this is mathematically impossible. This result seems to hold all over the world (Durex 2005), certainly in Europe and the USA (see below Table 1). The discrepancy has been interpreted by referring to evolutionary psychology, norms, attitudes, and status aspirations.

This problem is one of the most troublesome issues that self-reporting generates in sex research (McConaghy, 1999). David Gale, a Berkeley mathematician, remarks in connection to Kolata's article that he is not just being querulous when he raises the question of logical impossibility. The problem is that when such data are published, with no asterisk next to them saying they cannot be accurate, they reinforce the stereotypes of promiscuous males and chaste females. The survey data themselves may be part of the problem. If asked, a man, believing that other men always have a lot of partners, may feel compelled to exaggerate, and a woman, believing women have few partners, may minimize her past. In this way, the false conclusions people draw from these surveys may accomplish a sort of self-fulfilling prophecy (Kolata 2007).

Behavioral explanations have focused on how men use prostitutes more often than women, that men start having sex earlier than women, or that men are more sexually assertive than women (Jonason, 2007). Some authors have argued that the difference is itself an artifact of reporting biases (Brown & Sinclair, 1999; Wiederman, 1997). For example, men tend to use large round numbers when estimating their sexual success. When participants were told that lie-detection was possible, and assumedly this caused them to be honest, the sex difference became negligible (Alexander & Fisher, 2003). Similarly when the question regarding number of sex partners is vague, men tend to report more sex partners because they self-define more acts as sex than women (Sanders & Reinisch, 1999). However, these explanations do not address the question why men would over-report if not otherwise instructed.

Evolutionary psychologists look for explanations in our species-typical sexual strategies. Both sexes engage in long-term and short-term sexual strategies, the former entailing commitment to a partner and his or her chil-

dren, the latter related to multiple mates chosen with less strict criteria. Both sexes also value such things as humour, fidelity and reliability in a mate. But men and women choose sexual mates according to partly different criteria. On average, men put more emphasis on youth, beauty and sexual fidelity, while women value resources and social status more highly. Among primates including humans, the ascension to status thus holds higher reproductive returns for males than it does for females (Henrich & Gil-White 2001; Buss 1989, cf Baumeister & Vohs 2004). Men are also less choosy about sexual partners in general. (Buss 1989, Buss & Schmitt 1993.) Thus the number of sexual partners is unequally distributed between men, as some men have numerous partners and others none.

The gendered disposition towards sexual strategies is one of *degrees*, as men on average opt more readily for short-term strategies, given the opportunity. This gendered psychological disposition would translate into greater willingness or reluctance to report sexual partners in a survey questionnaire.

Jonason (2007a, b, c) shows how this psychological preference operates. In his experimental studies he found that men were more likely than women to use their perceived amount of sexual success as a means of assessing their status. He also showed that men viewed sexual success as more prestigious than women. He suggests that men may be more likely to boost reports about their sex life both in real-life and in surveys as functions of 1) their perception that with more sex comes more prestige and 2) the desire to enhance their perceived status among others.

In this article we first show that the gender difference in the reported number of sexual partners in lifetime is *restricted to people with numerous sexual partners*. Men and women with a small number of partners report equivalent numbers of partners. We also study which gender is "cheating" more when reporting sexual behaviour. Second, we examine the social and sexual background of the sexually active people. How do social and personality factors explain reporting multiple partners?

Statistics on the gender gap in the number of sexual partners

Thanks to the spread of reliable contraceptive methods, it is relatively safe to have sexual experiences with several partners without fear of unwanted pregnancy or sexually transmitted infections. According to a web survey on sexual attitudes and behaviour (Durex 2005) people around the world have on average nine sexual partners. Men report more sexual partners than women – 10.2 compared to 6.9.

More scientifically collected data is available from surveys conducted in 1989–2000 in some European countries and The United States (Leridon,

van Zessen & Hubert 1998; Haavio-Mannila & Kontula 2003; Laumann et al. 1994; Wellings et al. 1994). Among men aged 18-49 years, the highest mean numbers of partners were in The Netherlands (20) and Finland (15) (Table 1). Then came France, Norway, Great Britain and Switzerland (12), and the lowest number was found in Spain (10). Women in The Netherlands, Finland and Norway were reporting 10 partners, Spanish and Swiss women 5 partners, and the lowest numbers, 4, were in France and Great Britain.

Table 1. Number of sexual partners in lifetime

Country	Mean number of partners among 18-45 years olds	
	Men	Women
Nordic countries		
Finland 1992	16.7	6.7
Norway 1992	11.9	5.6
Sweden 1996	14.3	7.7
Western Central Europe		
France 1992	12.0	3.8
Netherlands 1989	19.7	6.0
Switzerland 1992	11.7	4.7
United Kingdom 1991	Mean 11.7 Median 5	Mean 3.8 Median 2
2007 (age unknown)	Mean 12.7	Mean 6.5
Mediterranean area		
Spain 1992	ab. 10	ab. 5
Former Soviet Union area		
Estonia 2000	13.7	6.2
St. Petersburg 1996	12.0	4.6

Sources: *Leridon, van Zessen & Hubert 1998, 178 (1989-1992); Haavio-Mannila & Kontula 2003 (1996-2000). Kolata 2007, whole population, Laumann et al. 1994, 180, Wellings et al. 1994 (no means nor medians published)*

For four European areas: Sweden, Finland, Estonia and St. Petersburg we have data from a wider age group, 18-74 year olds. The gender difference was smallest, 6.5 partners, in Sweden, and largest in Estonia, 8.3. In Sweden, men had 1.9 times as many partners as women, in St. Petersburg 2.7 times more.

How many is "many"?

As shown above, men have a clear tendency to over-report and women to underreport their sexual partners. One possible hypothesis is that men and women have a different definition of what having a sex partner means (eg. as in the case of Clinton-Lewinsky). This is not borne out by the data of

the Finnish sex survey, in which the verbal definitions of sexual intercourse given by men and women were identical. Instead, we propose another explanation.

Inspired by Kolata's article, we checked in our data whether the difference is the same with those who have had few partners and those who have had many. It is plausible to think that those who have had few partners remember the number of partners better than those who have had many. On the other hand, especially men who have had many partners have perhaps little reason to change the reported numbers from the real ones, as Jonason (2007) showed. However, they have more difficulty to remember the precise number and therefore they might round the number off in the preferred direction. In all our data sets, men tend to report even numbers (5, 10, 20, 30 etc.) much more often than women do.

We hypothesized that those who have had few partners remember the number of partners better than those who have had many. Neither did they have any pressure to over-report. Those with many partners have more difficulty to remember the precise number and would tend to round the number off, with each sex going in the preferred direction. The hypotheses were confirmed by our data from Sweden, Finland, Estonia and St. Petersburg in an interesting way (Table 2).

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Table 2. Means and gender differences of number of sexual partners (range 1-800) by dichotomy of the number of lifetime partners, study and gender.

Study	Gender	People with less than 20 partners			People with at least 20 partners			Percentage of people with at least 20 partners
		Mean number of partners	Gender difference	N	Mean number of partners	Gender difference	N	
Sweden 1996	Man	6.1		1025	45.9		295	22.3
	Woman	5.1		1087	28.8		86	7.3
	Total	5.6	1.0	2112	42.0	7.1	381	15.3
Finland 1992-99	Man	5.5		1110	48.5		358	24.3
	Woman	4.1		1660	33.8		110	6.2
	Total	4.7	1.4	2770	45.0	14.7	468	14.4
Estonia 2000	Man	5.9		263	46.9		62	19.1
	Woman	4.2		521	25.6		31	5.6
	Total	4.8	1.7	784	39.8	21.3	93	10.6
St. Petersburg 1996	Man	5.6		507	40.3		104	17.0
	Woman	3.4		909	27.7		28	3.0
	Total	4.2	2.2	1416	37.6	12.6	132	8.5

On the one hand, we found that people with fewer than twenty partners, both men and women, reported about five partners. There was only a negligible difference (1–2) between the numbers of partners reported by men and women. There was no over- or underreporting trends visible between the sexes

On the other hand, people who reported having at least twenty partners (about 15 percent in Sweden and Finland and about 10 percent in Estonia and St. Petersburg) accounted for most of the gender difference: men reported having about 40 partners whereas women reported that they had had only about 30 partners. Such a difference cannot be based only on unintended errors in reporting.

Our next question is, who is "cheating", men or women?

We assumed that men who have had a large number of partners have no reason to over-report the numbers of their life-time sex partners, except for occasional rounding off, whereas women who have had over twenty partners have an interest in underreporting, as they do not want to appear promiscuous. We did a further check controlling for education, under the assumption that it is even more important for highly educated, i.e. more high status women to under-report. The evolutionary psychological hypothesis is that as heterosexual women prefer males from social positions higher than their own, highly educated women compete with most other women for the same group of elite men, which makes their display of fidelity even more important. The opposite hypothesis is also possible: women in a power position have no need to underreport as they e.g. are financially more independent of male partners.

In Sweden and Finland educational groups are more or less similar but the classifications in Estonia and St. Petersburg are so different from the Nordic ones that we could not use the data. In Sweden and among Finnish men, education did not predict the number of sexual partners (Table 3). In Finland, women with university and college education reported more partners than people with less education.

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Table 3. Mean and median number of sexual partners by country, gender and education

Education	Swedish men		Swedish women		Finnish men		Finnish women	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Academic	15.5	7	7.1	5	14.7	5.5	8.9	4
Vocational college	15.0	7	6.8	4	19.1	8	7.3	4
Vocational school	15.5	8	7.9	5	14.1	6	5.2	3
Basic	11.7	5	6.1	4	16.9	6	4.9	3
Total	14.8	7	6.9	5	16.0	6	6.0	3
N	1 311		1 157		1 452		1 742	
Significance of differences in means	ns		ns		ns		***	

In the less than twenty partners' groups, gender differences in the number of sexual partners were small in both countries and among more and less educated people (Figure 1). Among Finns with more than twenty partners, they were smaller among the more educated people than among the less educated ones. Higher status Finnish men did not seem to over-report and higher status women did not appear to under-report the number of partners as much as lower status people tended to do.

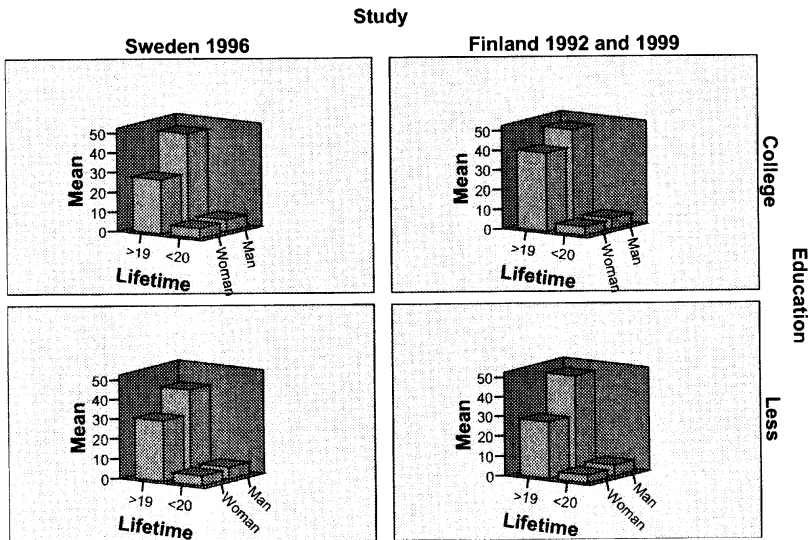
To conclude, it seems clear that a relatively small minority group of men and women having many lifetime sexual partners is responsible for the gender difference in reporting sex partners.

Profile of multi-partner respondents

Our second research question is: What kind of people are those sexually active people who have many (twenty or more) sexual partners? We first present tables of Swedish and Finnish men and women having less than twenty and at least twenty sexual partners. These countries are used because there is more comparable data than from Estonia and Russia. Second, we include also Estonia and St. Petersburg for a wider international comparison with fewer explaining variables. The second analysis is conducted by using regression analysis technique in which the simultaneous impact of the variables included in the statistical model is adjusted for.

Women with many partners were in both Sweden and Finland younger than those with less than twenty partners whereas men were older (Tables 4 and 5). People with multiple partners had had their first intercourse at a younger age than the others. They had received slightly more education than other people, and had been married more times. In Finland but not in Sweden, people with many partners were less commonly married at present.

Figure 1. Mean number of sexual partners by country, education, number of lifetime partners, and gender



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Table 4. Characteristics of men with less than 20 and at least 20 partners in lifetime in Sweden and Finland. Percentages, means and significance of the difference (chi square or analysis of variance). *** $p < .001$, ** $p < .01$, * $p < .05$.

Characteristics of the study subject	Swedish men		Finnish men	
	Less than 20 N=1025	At least 20 N=295	Less than 20 N=1112	At least 20 N=358
Age, years	39.8	42.2*	41.1	42.1
Age at first intercourse, years	16.8	17.1	18.9	16.6***
Number of marriages	1.0	1.1	0.9	1.4***
Intercourse in a month %	79	83	82	90***
Latest partner the steady one %	73	79*	80	74**
Orgasm (almost) always in intercourse %	53	50	80	74**
Has read pornographic books in last year %	39	34	59	66*
Has watched sex movies last year %	48	45	54	65***
Education				
Academic	25	27*	10	9***
Vocational college	30	26	16	23
Vocational school	30	37	38	37
Basic only	15	10	36	31
Total	100	100	100	100
Type of relationship %				
Marriage	28	34***	59	50***
Cohabitation	28	35	13	18
Living apart together	16	12	10	18
Single	28	19	18	14
Total	100	100	100	100
Sexual activities				
Masturbation %				
Weekly	37	43	23	27
Monthly	25	20	18	19
More seldom	38	37	59	54
Total	100	100	100	100
Received oral sex ever, Sweden / in last 5 years, Finland %	87	86	67	80***
Gave oral sex ever, Sweden / in last 5 years, Finland %	84	86	71	81***
Satisfied with sexual life, mean 1-5	3.9	4.0	4.0	4.1

About 80 percent of the study subjects had had sexual intercourse in past month, those with multiple partners slightly more often than those with few partners. Achieving orgasm in intercourse was not related to the number of partners. In Finland, the latest partners of people with many partners had not been their present steady partners. Sexually active Finns had often read or glanced at pornographic books or magazines and watched sex movies. In both countries, women with many partners masturbated significantly

more often than women with less partners, but there was no connection between male masturbation frequency and multiple partners. Receiving and giving oral sex was typical to people with many partners in Finland but not in Sweden. Men and women with many and few partners were equally satisfied with their sexual life as a whole. Having had multiple partners was thus connected to sexually liberated and pluralistic lifestyle particularly in Finland.

*Table 5 Characteristics of women with less than 20 and at least 20 partners in lifetime in Sweden and Finland. Percentages, means and significance of the difference (chi square or analysis of variance). *** $p < .001$, ** $p < .01$, * $p < .05$.*

Characteristics of the study subject	Swedish woman		Finnish woman	
	Less than 20 N=1087	At least 20 N=86	Less than 20 N=1660	At least 20 N=110
Age, years	40.0	36.2*	42.1	35.8***
Age at first intercourse, years	17.7	16.9*	18.7	16.3***
Number of marriages	1.3	1.4	1.0	1.3***
Intercourse in a month %	74	80	77	84
Latest partner the steady one %	74	81	26	52**
Orgasm (almost) always in intercourse %	54	58	54	61
Has read pornographic books in last year %	16	19	59	66*
Has watched sex movies last year %	24	27	26	35*
Education %				
Academic	25	26	10	15***
Vocational college	23	24	22	35
Vocational school	20	26	30	24
Basic only	32	24	38	26
Total	100	100	100	100
Type of relationship %				
Marriage	67	79*	55	27***
Cohabitation	12	2	15	27
Living apart together	5	4	12	26
Single	16	15	18	20
Total	100	100	100	100
Sexual activities				
Masturbation %				
Weekly	12	33***	9	28***
Monthly	24	34	13	24
More seldom	64	33	78	48
Total	100	100	100	100
Received oral sex ever, Sweden / in last 5 years, Finland %	67	71	67	89***
Gave oral sex ever, Sweden / in last 5 years, Finland %	63	64	61	95***
Satisfied with sexual life, mean 1–5	4.0	4.0	4.0	4.0

Next we present models which explain the number of partners in the groups of less than twenty and at least twenty partners in the four geographical areas. Do the same or different social and sexual factors explain the number of partners among people with few and many partners? Ten of the available comparable variables were chosen for regression analyses conducted separately in all four areas. They were chosen because they correlated with the number of partners in at least some area. These assumed predictors of the number of partners are gender (man), age (older), early start of intercourse, not being married at present, many marriages, latest sexual partner not the steady one, recent intercourse, mutual oral sex, rare masturbation, and dissatisfaction with sexual life as a whole.

First we examine the study subjects who had less than twenty partners. In Sweden the available sexual and social factors explained the number of partners much less than elsewhere (Table 6). Only 2.4 percent of the variation was explained by the ten variables (see the adjusted R square in Table 6). Merely male gender, rare masturbation, and dissatisfaction with sexual life predicted the number of partners of Swedes. In the other areas, 23 – 25 percent of the variation was explained by the ten variables. Approximately the same variables were associated with high number of partners in Finland, Estonia, and St. Petersburg. Even the regression coefficients (beta) were fairly similar in the three areas. In these three areas, the predictors of having had many partners were older age, early sexual initiation, not being married, having been married several times, latest partner not the steady one (only Finland), recent intercourse, oral sex, rare masturbation, and dissatisfaction with sexual life as a whole (only Finland).

Table 6. Predictors of number of sexual partners. Standardized regression coefficients (beta) and their statistical significance. People with fewer than 20 partners in lifetime.

Social or sexual predictor	Sweden N=1 762	Finland N=2 604	Estonia N=70	St. Petersburg N=1 314
Male gender	.10***	.18***	.17***	.18***
Age	–	.08***	.27**	.19***
Early age at first sexual intercourse	–	.31***	.23**	.32***
Married	–	-.14***	-.23***	-.22***
Number of marriages	–	.20***	.19***	.11***
Latest partner not the steady one	–	.17***	–	–
Long time since latest sexual intercourse	–	-.06**	-.14***	-.14***
Oral sex	–	.14***	.24***	.16***
Masturbation often	-.08**	–	-.09**	-.11***
Satisfied with sexual life	-.07**	-.06***	–	–
Adjusted R square	.024	.251	.254	.277

Second, we have a look at the people who have had at least twenty partners in their lifetime (Table 7). The number of partners of the sexually active Swedes and Russians was explained only by being a man even when ten possible predictors (see Table 6) were included in the regression model. Also in Estonia being a man had a strong connection with the number of partners; the regression coefficient there was as high as .44.

Table 7. Predictors of number of sexual partners. Standardized regression coefficients (beta) and their statistical significance. People with at least 20 partners in lifetime.

Social or sexual predictor	Sweden N=323	Finland N=437	Estonia N=78	St. Petersburg N=117
Male gender	.18**	.10*	.44***	.15
Early age at first sexual intercourse	–	.10*	.31**	–
Number of marriages	–	.10*	–	–
Satisfied with sexual life	–	.15**	–	–
Adjusted R square	.013	.041	.221	.038

Among Finns with at least twenty sexual partners gender was not a very important predictor of the number of sexual partners. In this multi-partner group in Finland, having been married several times and satisfaction with sexual life added the likelihood of having engaged in sexual intercourse with many partners. It is noteworthy, that in Finland and Estonia, people who had started to have intercourse at an early age, tended to have many partners. This can be interpreted by stating that they were early socialized into flexible and active sexual life.

Our basic idea was that gender difference in the number of sexual partners is concentrated into a special sexually active group of people with many partners. This proposal was supported by our empirical findings from four geographical areas. With the exception of gender in all areas and early sexual initiation in Estonia and Finland, the available social and sexual background characteristics did not in the regression analysis explain who belongs to the group which has had at least twenty sexual partners. Maybe other, for instance, personality related factors would explain the appearance of these “sex addicts”. For example, Finnish sex surveys indicate that the sexual desire is strong among people with many partners. In Sweden, Bo Lewin (1998) found people with a multitude of partners in all social classes and interprets this kind of sexual super-activity as a personality and life style characteristics.

In any case, we can confidently say that the paradox of male and female partner gap has been explained: sexually active women are those who belit-

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tle the number of partners they have had during their lifetime. This again is explained by evolutionary theory: it is much more risky socially for women than for men to reveal the actual number of their partners

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