

Monogamy versus a bit on the side

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Mairi Macleod examines the evidence on what makes one person sexually restrained and another outrageously promiscuous.

Some people revel in a reputation as a Casanova and others proudly proclaim their chastity. But most of us probably prefer not to advertise our sexual proclivities. Still, don't get too comfortable with thinking attitudes to sex are a private affair.

This year, Lynda Boothroyd of Britain's University of Durham and colleagues published a study showing that the majority of men and women were able to accurately judge whether a person would be a good bet for a committed relationship or were more interested in a fling, just by looking at a photograph of their face.

How exactly we make this assessment based on such minimal information is up for debate, though Boothroyd's study did yield one clue. She found that men who were judged to be more "masculine" and women who were considered more "attractive" were likely to be seen as more inclined towards casual sex - and to actually be so.

This surprising talent for accurately reading people's attitude to sex has an obvious benefit - it allows us to hook up with a partner who is likely to want the same out of a sexual relationship as we do.

It also raises the more fundamental question of why individuals have such widely varying attitudes to sex in the first place. The answer is not simply that beautiful people have more opportunity.

So what makes one person sexually restrained and another outrageously promiscuous? And how much do our attitudes to sex depend on factors such as our culture, upbringing, personality, age and gender?

Among the first researchers to take a scientific look at sexual attitudes were evolutionary psychologists Jeffrey Simpson of Texas A&M University and Steven Gangestad from the University of New Mexico. Back in 1991, they devised a questionnaire to measure people's levels of sexual unrestrictedness, which they dubbed sociosexuality.

They found that certain attitudes and behaviours co-vary - people who tend to have more sexual partners are also likely to engage in sex earlier in a relationship, are more likely to have more than one sexual partner at a time and tend to be involved in relationships characterised by less investment, commitment, love and dependency.

Men tend to score high on the sociosexuality scale more often than women and evolutionary biologists say there are good reasons for this.

Men often invest considerably in their offspring but all they actually have to do to father a child is have sex, so there has been strong evolutionary pressure for men to be open to short-term relationships. Women, on the other hand, bear the heavy costs of pregnancy and breastfeeding, and in every culture they tend to do the bulk of child care. So they are best off being choosy about sexual partners or they might get left holding the baby.

Of course, it is not that simple. Women can be as sexually unrestrained as men. In fact, there is a huge overlap in the sociosexuality scores of men and women, with more variation within the sexes than between them. Some researchers are now trying to explain these subtleties in terms of biology and evolution.

Take the fact that women's interest in casual sex can vary wildly over time. A hint that these short-term sexual encounters might have biological and evolutionary advantages comes from the timing of them. Several studies have shown that women are more likely to fancy a fling around the time they are ovulating - although there is no suggestion that this is a conscious decision.

Not only that, says David Schmitt of Bradley University, Illinois, women show a shift in preference to men who look more masculine and symmetrical - both indicators of good genes.

Women may have a dual strategy going, suggests Schmitt.

"Human infants need a lot of help, so we have pair-bonding where males and females help raise a child, but the woman can obtain good genes - perhaps better genes than from the husband - through short-term mating right before ovulation."

That's not all. Schmitt has collected data on the sexual behaviour of men and women from 48 countries and found that while men's sociosexuality peaks in their late 20s, women are most likely to be unfaithful to their partners when in their early 30s. "That's exactly the point where the odds of conceiving start to drop at a bigger rate and it's also the point where the odds of having a child with a genetic problem or birth defect start to go up," he says.

Of course, plenty of women have babies much later, but Schmitt suggests that women's increased sociosexuality around this time reflects an evolved reproductive strategy that maximises the chances of their conceiving and bearing a healthy child.

So there may be times when it pays for women to be more sexually unrestricted, but what about individual differences in sociosexuality? What makes some women more likely to engage in casual sex at any time than others? And, for that matter, why is there also such a large variation among men?

One factor is personality. According to Daniel Nettle from Britain's University of Newcastle, the classically promiscuous man will be high in extroversion, low in neuroticism and fairly low in agreeableness as well. "The extroversion gives you the

desire to do it," he says, "the low neuroticism means you don't worry too much about doing it and the low agreeableness means you don't really care if you mess someone around or cheat on your wife."

The situation is similar for women, says Nettle, although another factor, openness, comes into the mix to some extent. This makes sense since people who are open to experience are likely to want to explore new relationship possibilities.

Our sociosexuality may be influenced by early family circumstances. The developmental psychologist Jay Belsky of Birkbeck College, London, believes that when children grow up in stressful, unpredictable conditions, perhaps an absent father or marital conflict, girls in particular get a biological message to breed sooner and more often because there is no point in waiting around for a good long-term relationship. "We have new evidence from longitudinal studies on this," says Belsky, "showing that harsh parenting in the first four years of life predicts early puberty and growth and thereby predicts more unrestricted sexual behaviour by the time the child reaches 15 years of age."

Schmitt's survey also reflects this. "In every culture, men that scored highly on dismissing attachment - which means they think they are important and other people are not worthy of trust and investment - tended to be more short-term-oriented or higher in sociosexuality."

Such insecurity is thought to arise from stress during childhood when parents are unresponsive or unable to give consistent investment. "Secure men tended to be more monogamous," Schmitt adds. Results for women were similar and the underlying factor is trust. "If a person was high in being able to trust other people, they were monogamous. If they were very low in trust they were much more likely to be unrestricted in sociosexuality."

Another factor with strong links to sociosexuality is masculinity. Boothroyd found men with more masculine-looking faces scored higher on sociosexuality, and it seems to be the same story for women. Sarah Mikach and Michael Bailey of Northwestern University in Evanston, Illinois, examined how women's sociosexuality related to the degree to which they looked, felt or behaved in a masculine way. They found heterosexual women who had high numbers of sexual partners were more likely to show higher levels of masculinity.

The researchers argued that these women behave in a way that is more typically male and this could be due to early - probably prenatal - exposure to androgens, such as testosterone, that organise typically "male" brains differently from typically "female" brains. Supporting this idea, Andrew Clark of McMaster University in Ontario, Canada, found a higher rate of sociosexuality in women with a smaller ratio of index-to-ring-finger length - which some researchers believe corresponds to higher prenatal androgen exposure.

It is not just prenatal testosterone that makes a difference. Peter Gray of the University of Nevada in Las Vegas and his colleagues found that saliva samples taken from married men and fathers contained lower levels of testosterone than in other men. Since testosterone is associated with competitive and mating behaviour in a wide range of mammals, the researchers proposed that lower testosterone in fathers allows them to channel more of their energy into their children. In another study, however, Gray found that testosterone levels are higher in married men on the hunt for extramarital sexual relationships.

So, are men with lower than average testosterone simply more likely to enter into a committed relationship, or does being in such a relationship lower men's testosterone levels? "In monkeys and rodents, we know the causal arrow goes both ways," says Gray. There is little data on humans but he believes it would be surprising if the same were not true of men.

Whether testosterone production is affected by the nature of men's relationships, the hormone does seem to influence sociosexuality in another way. There is some evidence that high testosterone levels confer a masculine appearance and we know that masculine-looking men are particularly attractive to women who are looking for short-term relationships. Could it be that such men behave in a sexually unrestricted way because they have more opportunity to do so?

Schmitt suggests that men with a highly masculine and symmetrical appearance may come to realise during adolescence that they have what it takes to attract women for short-term relationships - although they might not know it consciously. So they go for it, at least while they are young. Meanwhile, men who have more trouble attracting women for quick flings may have to settle for monogamy.

So what about particularly attractive women? On the one hand, you might expect that they would capitalise on their good looks to attract a partner with good genes and a tendency to be faithful. On the other, like men, they might simply make the most of their increased opportunities for sex and play the field.

Boothroyd's study certainly found that attractive women had the highest sociosexuality. However, she points out that her subjects were all university students in their early 20s who probably hadn't reached an age when they wanted to have babies and a committed relationship. Besides, other studies indicate that the level of sexual restrictedness in women is generally unrelated to how physically attractive they are.

Fuelling the debate, Schmitt says that female attractiveness is likely to become increasingly related to sociosexuality.

He points out that women are evolved to seek the benefits of short-term flings just as surely as men are and argues that when societies become more liberal and equal, women can express these preferences.

"Historically we've repressed women's short-term mating and there are all sorts of double standards out there where men's short-term mating was sort of acceptable but women's wasn't," says Schmitt.

"When you free a society by giving women ample resources, ample day care and so on, then you see high sociosexuality scores in both men and women."

This is exactly what he and his colleagues found in their cross-cultural study, with Scandinavian countries emerging as the pinnacle of liberal attitudes and unrestricted sexual mores.

Fhionna Moore at Britain's University of St Andrews has also shown that a woman's status affects choice of sexual partner. She found that women with a high level of control over their own finances tend to place higher importance on physical attractiveness in a man than on his financial prospects.

Moore points to an intriguing consequence of this.

If increasing female economic power leads to greater demands for good-looking sexual partners, it may pay men to invest more in their appearance. Given the explosion in the male grooming industry, it seems that men are already on to that one.

Cultural evolution is clearly bringing about changes in human behaviour, but should we expect ever to reach a stage where women and men have equally unrestricted attitudes to sex? Schmitt says that if a scale was constructed to measure sex without commitment with someone you consider especially physically attractive and socially dominant, and tested men and women when the women were nearing ovulation, women might score higher than men in many countries.

But there's no escaping the fact that women are the ones who get pregnant and bear children, so it's hard to imagine the erasure of all the differences in what men and woman look for in a relationship.

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