What Do First Ages Of SSA Or OSA Tell Us About Their Origin?

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Summary
The timing of puberty, as for gestation time, first tooth, and menopause is tightly under genetic control and occurs in a relatively narrow time-frame. However ages of first recognition of SSA (Same-sex Attraction) and first OSA (Opposite Sex Attraction) are spread over a long period of time. They are in a different class from life-events like puberty and hence almost certainly very little preprogrammed. The data show that first attraction is on average about 2 years before puberty; hence it is not puberty-driven. Very few individuals have SSA (or OSA) as their earliest memories which is hence a false stereotype. One is not born that way. This comparison of the age spread of first attraction with the age spread of known biological events is a general technique for estimation of how "biological" a life-event is. Most first attractions cannot be ascribed to biological causes. Probably the variation in first attraction ages depends strongly on a chance encounter with someone attractive. The age is possibly connected with acceptance/rejection from the peer group at school. The data also show that there has been a 6-year decrease in ages of first attraction for OSA in women since Kinsey's time, and about 10-year decrease in age of first attraction for SSA in women, again emphasizing how culturally tied the attraction is. First attraction turns out to be one of the worst conceivable choices to illustrate alleged innateness.

Introduction
It is rather common to hear gay activists say "Oh, I've always been this way. My earliest memories are of feeling different, and attracted to males." In context this usually means "My earliest memories are of SSA, and so I must have been born this way." It is likewise possible to ask the OSA group – were you always attracted to the opposite sex? But since heterosexuals rarely think deeply about this, they may be hesitant and unclear in their responses.

Everybody knows that neither SSA nor OSA groups are born conscious of their sexual orientation, because immediately after birth, they cannot even differentiate between themselves and their mothers, let alone the different sexes. The phrase "born that way" means in this context *predestined*, bound to develop an SSA or OSA. In this sense it would be like puberty. It would be a biological, programmed event, and should have a narrow cluster in time, like puberty and other known biological-origin life-events. That means we can compare data on time-spread of puberty with those for first attraction, and should get useful information.

There are quite a few sets of data available, but we need data which gives a year-by-year breakdown if possible, or failing that, perhaps a mean age and standard deviation. The earliest readily available data (as expected) are due to Kinsey and co-workers, but

Whitam and colleagues, and Savin-Williams have also contributed valuable later information. The data of Whitam are particularly interesting because they are not just from the United States, but cross-cultural. This gives another perspective on the degree to which first attraction is biological rather than cultural.

Biological factors

A survey of the literature shows that biological events commonly considered as not substantially depending on social or environmental input are fairly tightly clustered in time and that the clustering, or standard deviation as a percentage of the mean age of the event (the "coefficient of variation") is surprisingly constant.

	Mean and SD	Relative SD (SD/Mean)
Gestation length	266±16d	6%*
Tooth #23 eruption	11.2±1.2y	9.6%
Puberty	12.1±1.1y	8.1%
Menopause	51.1±3.8	5.9%

Table 1. Variability of Biological Life-events. Gestation length (e.g. Anon. 2003), Tooth appearance, Hagg & Taranger (1998), Puberty (Finland; Kaltiala-Heino et al. 2003), Menopause, de Bruin et al. (2001). The relative standard deviations are corrected for known percentages of non-genetic content to give only the genetic contents which are all 80% (*except for Gestation length where no correction has been made) derived as follows: Puberty (Pickles et al, 1998), Tooth eruption (Dempsey and Townsend, 2001; this latter paper gives mean and standard deviation for all teeth. Here one was chosen which erupts at around the time of puberty), Menopause (deBruin et al. 2001) (For the technically minded the correction for the genetic content is derived from twin studies and is made on the variance, not the standard deviation).

The corrected standard deviations range from 5.9-9.6% which is an indication of fairly tight clustering in time. A standard deviation of about that size is typical of the Life Events. Biological factors cause puberty at a quite restricted range of ages.

The relationship is graphed as follows:

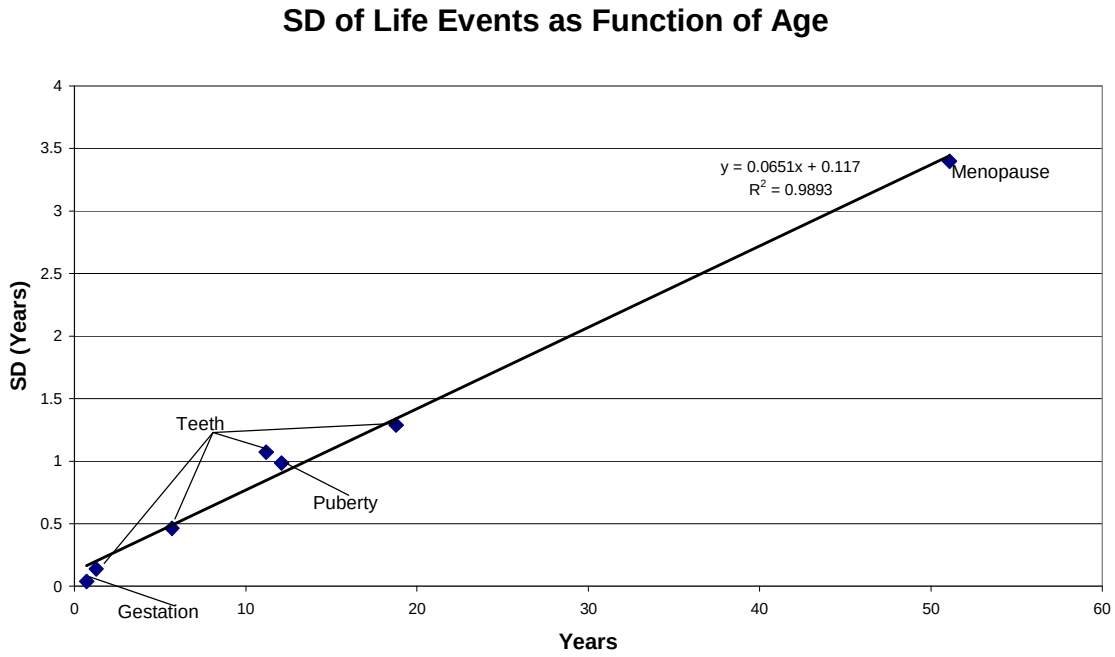

Figure 1. Linear relationship between standard deviation in time units of life events and the mean age they occur. Four points for particular teeth are included. The spread (standard deviation) is an almost constant fraction of the age, therefore.

Data Analysis

Here are the data from Kinsey et al. (1948, 1953)

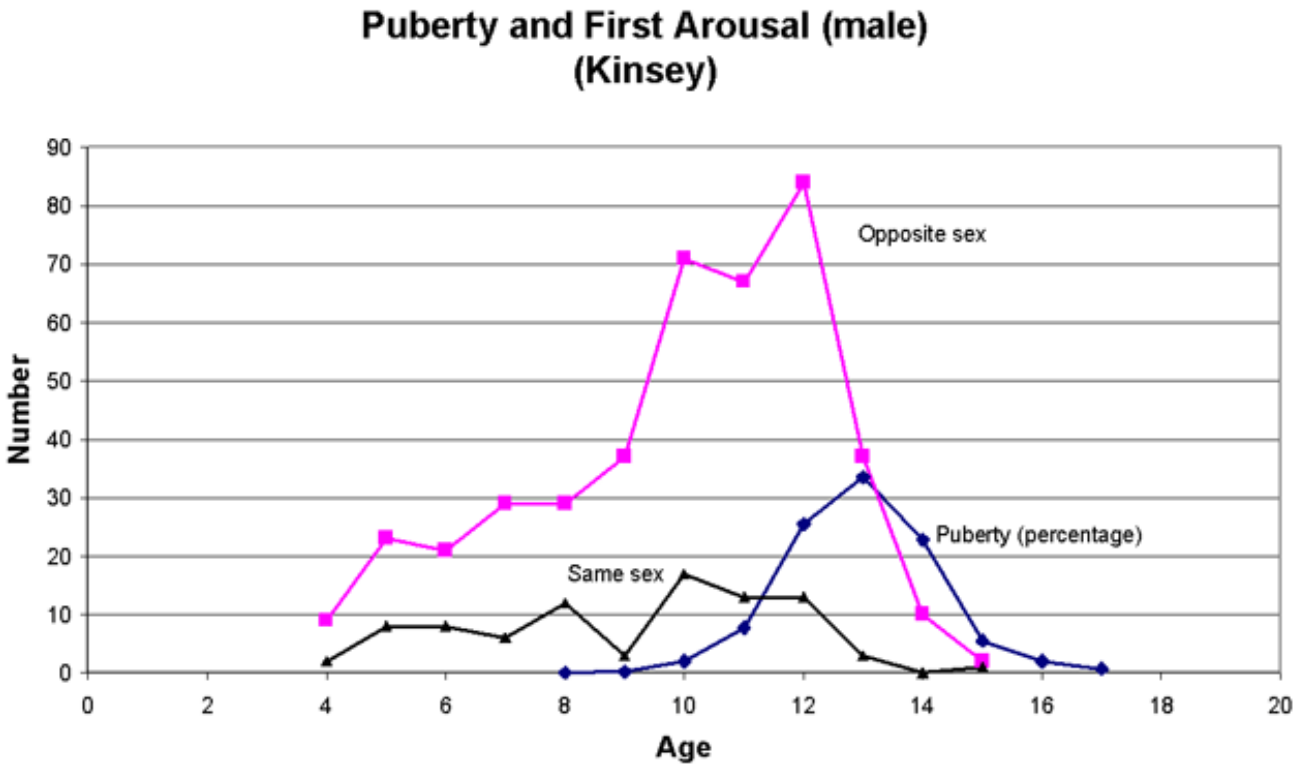

Figure 2. First Attraction for males, derived from the work of Kinsey et al. (1948)

Note that puberty is relatively tightly clustered compared with OSA first attraction, which occurs before puberty. First attraction for SSA does not have a distinct peak at all, and is very spread out compared with puberty.

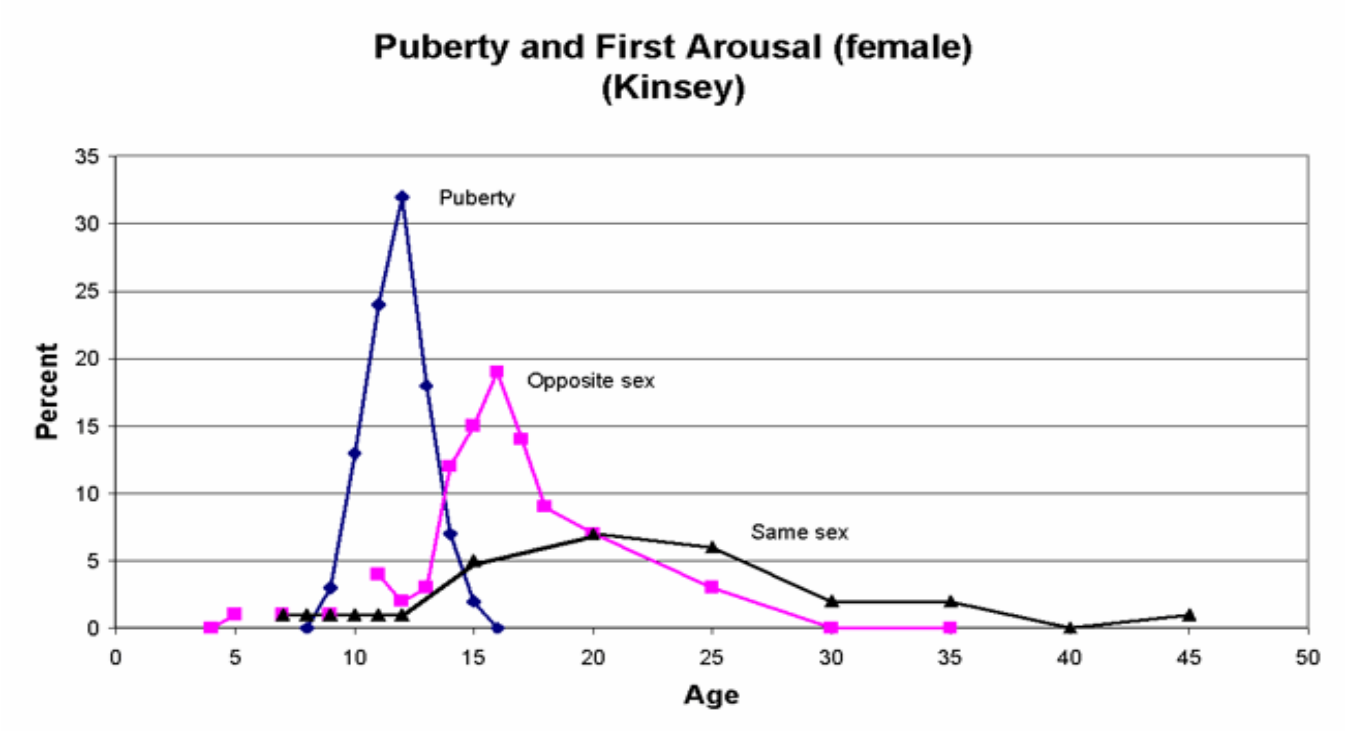

Figure 3. First Attraction for females from the work of Kinsey et al. (1953)

For females, note how relatively tight the puberty peak is. Notice too that there is a peak for first attraction for the opposite sex at about age 16, with other points into the late twenties. The SSA peak is very broad and has a mean about 20 y. The shape of the SSA peak is taken to indicate that a real peak also exists for the other SSA data used in this paper, although that is not very obvious on inspection.

We note in the light of later data that particularly for females, there have been large changes in the age of peak first attraction since Kinsey's time. We will see that the means for SSA and OSA have mostly shifted down to an age earlier than puberty, arguing they are independent of the latter. This argues a high sexualization of the American culture at increasingly early ages in the last 50 y.

We now examine the male data derived and redrawn from Hamer et al. (1993) which are modern and particularly clear, because given separately for each year of age. We see that once again the data for SSA are very spread out, compared with the data for puberty. There is a dip at 9 years for both Hamer's graph and Kinsey's and a peak at age 10. This is probably due to rounding – people taking 10 as a nearest estimate of their first attraction.

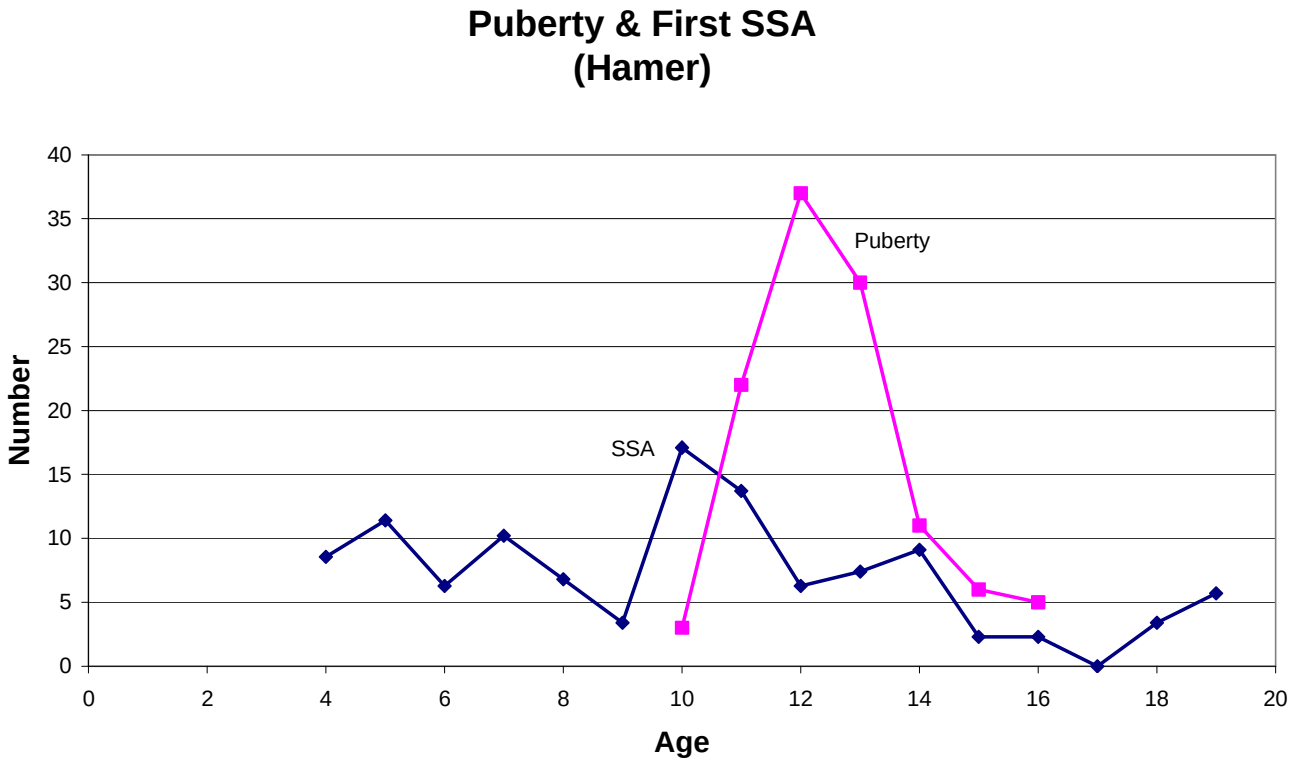

Figure 4. Male first SSA attraction from the work of Hamer et al. (1993).

A comparison of the (mostly) genetically influenced puberty with SSA, shows again that they are different. SSA doesn't look like the genetic-derived shape due to puberty. The two means and standard deviations are respectively 10.0±4.1 years, and 12.5±1.4 years.

The relative spread for SSA (41% = 4.1/10, and similarly for OSA) is much larger than any other life event data available in the literature, the largest spread of which is 28% (for hair graying). The relative standard deviations before birth are smaller than after birth, but we only consider post-natal data in this paper.

The following are other standard deviations/age for: 10mm fetal sac (4% Creighton University Hospital 2006), first fetal head rotation (4.6%, Kurjak et al. 2006), fetal brain singular sulcus formation (2.2%, Garel et al. 2001), crawling (19% Garruth and Skinner 2002), walking (14% Taanila et al. 2004), talking (12.3% e.g. Barbone et al. 2004) , hair graying (28% calculated from Keogh and Walsh 1965), baldness (26%,calculated from Hayakawa et al. 1992) and life expectancy (17%, US life tables – taking SD as half the 66% confidence interval). Except for events in pregnancy these standard deviations are mostly larger than for puberty and they are not just "genetic", there is significant environmental/random input into them, but usually a quantitative measure of this input is not available in the literature, so we cannot extract the purely "genetic" component..

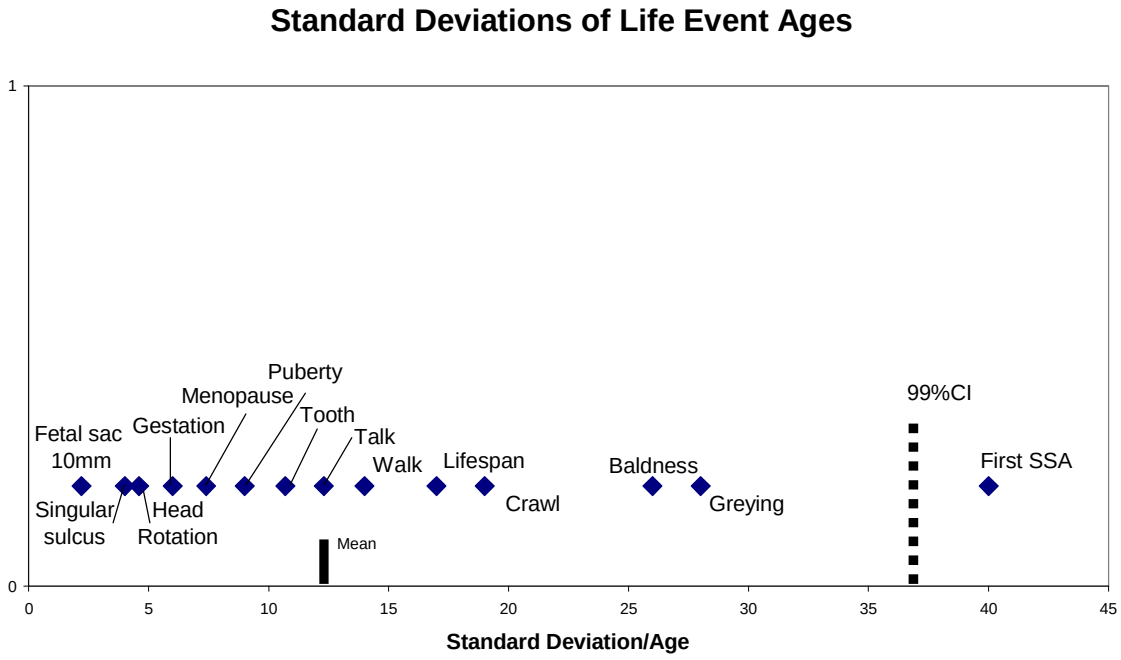

Figure 5. Relative spread in ages for life events. 99% CI is the 99% confidence interval for the group of points to the left of the line, explained below.

The above graph shows that First SSA (and similarly First OSA from data given later) is in a class apart. The SSA point is more than three standard deviations to the right of the other points in the group (the same as being above the 99% confidence interval). This standard statistical test shows it is unlikely to belong to the same group. If the points from pregnancy had been included the contrast would have been even clearer.

This makes it extremely unlikely one is "born that way" either for SSA or OSA. The romantic idea that one was born to fall in love with someone at some star-fated year, is alas not sustained. But one is certainly born to go through puberty in quite a narrow time range.

It is not absolutely impossible that first attraction is genetically mandated, but simply has a much wider time frame of occurrence. However we have to say (a) OSA and SSA are grossly different from the known biological life events (b) their peak age occurrence has changed dramatically in the last 50 years and this shows they are greatly influenced by changing influences within one culture. It seems there is little genetic contribution.

The total variance (or factors leading to increased spread) includes a contribution from genetic, social, environmental factors, and chance. So we compare the genetic variance from puberty with this total variance. The part due to factors other than genetic might be social, environmental or chance.

One can make a rough stab at what the genetic contribution might be, by comparing spreads for puberty and first attraction. After making various corrections we end up comparing the variances – the squares of the standard deviations. This comparison is graphed below in figure 6. The genetic contribution is much smaller, in fact only 6.0% of the total.

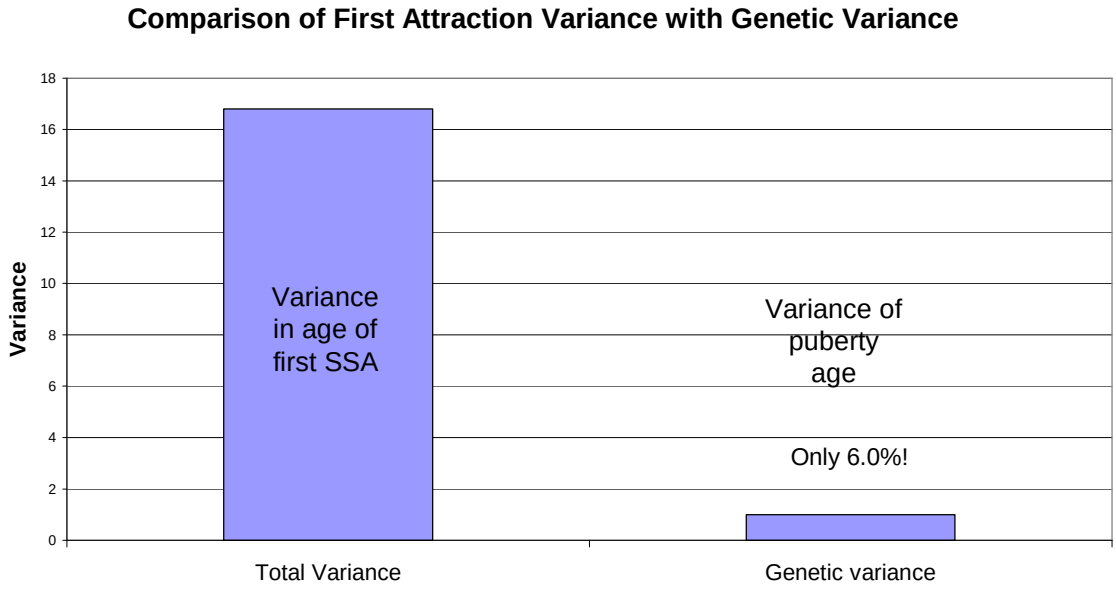

Figure 6. The variance for a genetic event compared with the variance for first SSA for males.

Any genetic factor causing male SSA, if it was like puberty, would therefore be about 6% of the total factors causing attraction. This suggests that 94% is not genetic and is due to other factors – social effects or chance. Although an genetic estimate for SSA is usually about 30% (Bailey et al., 2000; adults rather than children), this is likely to be a maximum as documented in the book *My Genes Made Me Do It!* (Whitehead and Whitehead 1999) and a variety of other evidence in that book seems to converge on an approximate figure of around 10% for a genetic contribution to SSA, as consistent with the present approach.

This relative genetic contribution to First Attraction (feelings) may be affected by age. That is, the relative contribution of genetic factors will rise or fall depending on the magnitude of the other factors. The absolute genetic contribution will remain constant, but the relative amount will probably change. We calculated the total variance for first attraction in childhood, but adult sexual identity could be argued to be something different and have a different relative genetic contribution.

It is not clear which direction any changes with age might be. It could be argued that the earliest manifestation of these feelings is most likely to have large genetic influence being closer in time to birth, and that later manifestations in adulthood may have been affected by social pressures. Conversely it might be argued that while a child there is

considerable control from parents and social effects might be relatively large and relative genetic effects might be minimized. Later when one is able to make ones own decisions one may elect to go along with whatever genetic influences there may be and their relative importance might increase. Regardless it seems SSA First Attraction is a very erratic affair, and we will see it is the same for OSA. It seems clear that those who argue their earliest memories are of SSA are perhaps telling the truth, but are entirely exceptional individuals. The mean age is 10, and the spread is very wide.

We now turn to Whitam's cross cultural data. These had to be calculated from age ranges he provided, rather than year-by-year data. This introduces some approximation.

	Brazil	Guatemala	Philippines	USA
First				
SSA	10.6±5.5	8.2±4.9	11.4±3.4	10.9±4.5
OSA	11.6±2.9	9.1±4.2	11.8±3.3	10.3±4.8

Table 2. Whitam et al's (1986) data for first attraction for males. Values are years, and errors are one standard deviation.

	Brazil	Peru	Philippines	USA
First				
SSA	14.8±6.9	14.7±7.2	15.2±6.1	13.7±7.3
OSA	12.5±2.8	12.4±3.7	15.1±3.2	9.9±3.6

Table 3. Whitam et al's (1998) data for first attraction for females. Values are years and errors are one standard deviation.

We note that the standard deviations are very large both for SSA and OSA, but generally rather smaller for OSA. The intensified sexualization of US culture is suggested by the lower mean ages than for other countries.

In figures 7 and 8 we note an interesting difference between male and female first attractions.

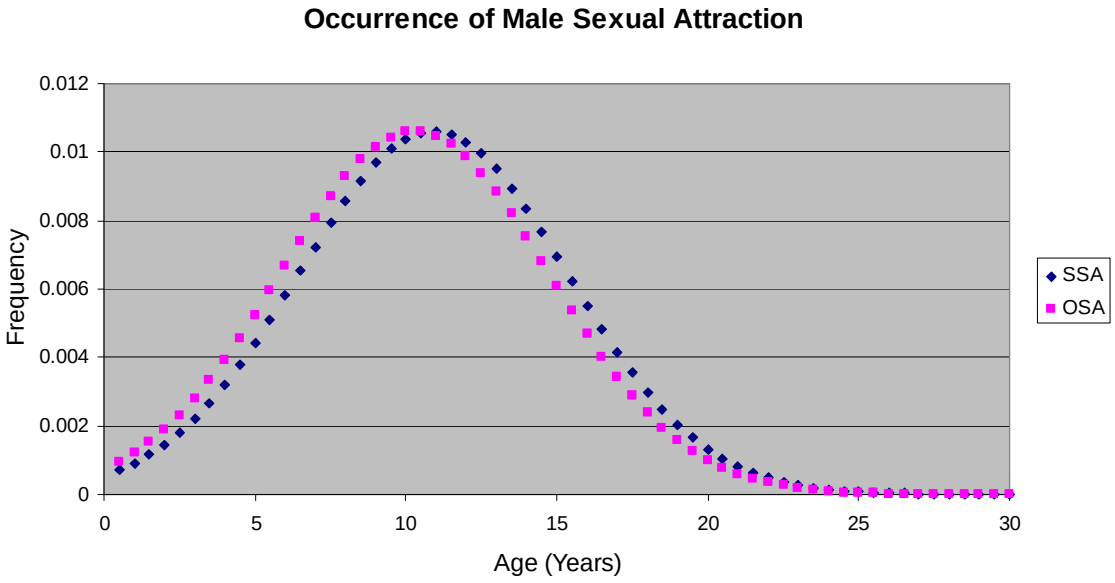

Figure 7. Age spread of first attraction for males.

The peak and spread are very similar for male SSA and OSA. This could argue for a similarity in origin – or a different reaction to the same event.

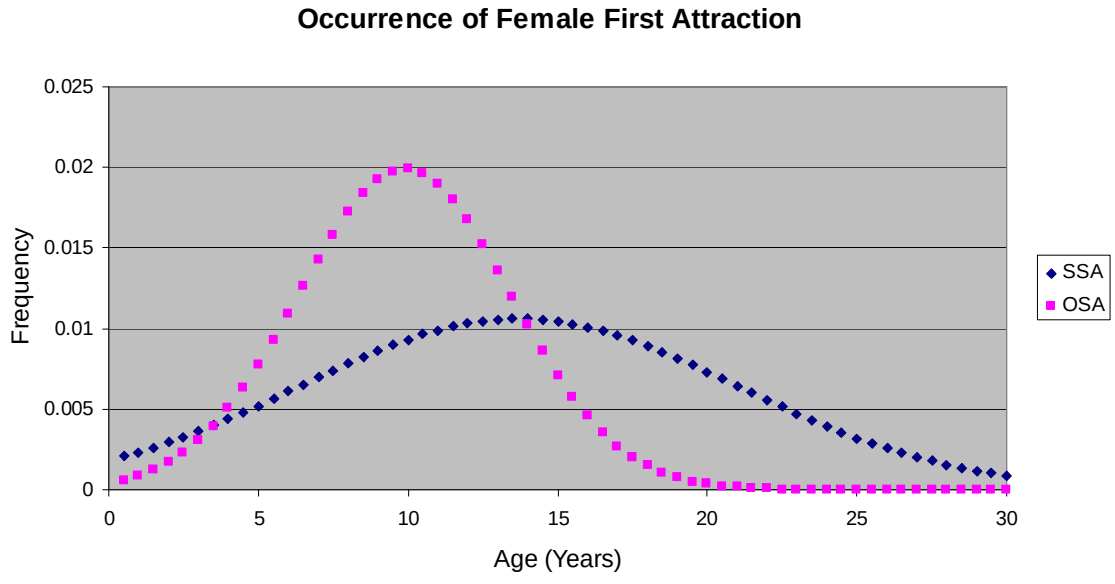

Figure 8. There are strong differences in age and form of female first attraction for SSA and OSA.

In passing we note that an age of 9-10 for average first male SSA does not correspond to any currently known genetic event like puberty. However, it does correspond with the broad age of sociosexual gender formation at school in the peer group, and, for example, possible rejection from that group but longing for acceptance by it. Similarly first OSA occurs when gender differences have been deliberately made very wide, and girls and boys are mutually seen as strange and potentially fascinating creatures. This could explain the current relative similarity in ages for male and female, but does not explain the results in Kinsey's time, which appear to rely on very different socio-sexual dynamics.

Conclusion

First Attraction for both SSA and OSA has a mean for males of about 10 years currently in the US and is obviously strongly influenced by other factors than sheerly biological ones. It is not a pre-programmed event like puberty. Some of the factors creating it are cultural, as shown by the differing ages of First Attraction in different countries. Some are probably random, such as encountering an attractive person. It seems as though falling in love, even in its earliest stages is sufficiently random that it allows room for the feeling that there is an air of mystery and unpredictability about it.

The results are consistent with the surprisingly low estimate of 10% for a genetic contribution to SSA in Whitehead and Whitehead (1999).

Rather than SSA or OSA being outstanding examples of innate biological events, they appear less innate than any other life-event for which we can find data.

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