Why I Will Never Have a Girlfriend

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Informal empirical and anecdotal evidence from the (male) scientific community has long pointed to the difficulty in securing decent, long-term female companionship. To date, however, no one has pub lished a rigorous study of the matter. In this essay, the author investigates himself as a case study and presents a proof, using simple statistical calculus, of why it is impossible to find a girlfriend.

Why Don't I Have a Girlfriend?

This is a question that practically every male has asked himself at one point or another in his life. Unfortu-nately, there is rarely a hard and fast answer to the query. Many men try to reason their way through the dilemma nonetheless, often reaching a series of ridiculous explanations, each more self-deprecating than the last: "Is it because I'm too shy, and not aggressive enough? Is it my opening lines? Am I a boring person? Am I too fat or too thin? Or am I simply ugly and completely unattractive to women?" When all other plausible explanations have been discounted, most fall back on the time-honoured conclusion that "there must be Something Wrong™ with me" before resigning themselves to lives of perpetual chastity.[1]

Not the author, though. I, for one, refuse to spend my life brooding over my lack of luck with women. While I'll be the first to admit that my chances of ever entering into a meaningful relationship with someone special are practically non-existent, I staunchly refuse to admit that it has anything to do with some inherent problem with *me*. Instead, I am convinced that the situation can be readily explained in purely scientific terms, using nothing more than demographics and some elementary statistical calculus.

Lest anyone suspect that my standards for women are too high, let me allay those fears by enumerating in advance my three criteria for the match. First, the potential girlfriend must be approximately my age — let's say 21 plus or minus three or four years. Second, the girl must be beautiful (and I use that term all-encompassingly to refer to both inner and outer beauty). Third, she must also be reasonably intelligent — she doesn't have to be Mensa material, but the ability to carry on a witty, insightful argument would be nice. So there they are — three simple demands, which I'm sure everyone will agree are anything but unreason-able.

That said, I now present my demonstration of why the probability of finding a suitable candidate fulfilling the three above-noted requirements is so small as to be practically impossible — in other words, why I will never have a girlfriend. I shall endeavour to make this proof as rigorous as the available data permits. And I should note, too, that there will be no statistical trickery involved here; I have cited all my sources and provided all relevant calculations[2] in case anyone wishes to conduct their own independent review. Let's now take a look at the figures.

Number of people on Earth (in 1998): 5,592,830,000

[CB99, Table A–3]

We start with the largest demographic in which I am interested — namely, the population of this planet. That is not to say I'm against the idea of interstellar romance, of course; I just don't assess the prospect of

Figure 1. A representative sample of individuals who will never be the author's girlfriend. Photo: Library of Congress.

finding myself a nice Altairian girl as statistically significant. Now anyway, the latest halfway-reliable figures we have for Earth's population come from the United States Census Bureau's 1999 *World Population Profile* [CB99]. Due presumably to the time involved in compiling and processing census statistics, said report's data is valid only as of 1998, so later on we'll be making some impromptu adjustments to bring the numbers up to date.

…who are female: 2,941,118,000

[CB99, Table A–7]

I'd've thought that, given the title of this essay, this criterion goes without saying. In case anyone missed it, though, I am looking for exclusively *female* companionship. Accordingly, roughly half of the Earth's population must be discounted. Sorry, guys.

…in "developed" countries: 605,601,000

[CB99, Table A–7]

We now further restrict the geographical area of interest to so-called "first-world countries". My reasons for doing so are not motivated out of contempt for those who are economically disadvantaged, but rather by simple probability. My chances of meeting a babe from Bhutan or a goddess from Ghana, either in person or on the Internet, are understandably low. In fact, I will most likely spend nearly my entire life living and working in North America, Europe, and Australia, so it is to these types of regions that the numbers have been narrowed.

…currently (in 2000) aged 18 to 25: 65,399,083

[CB99, Tables A–3, A–7]

Being neither a pedophile nor a geriatrophile, I would like to restrict my search for love to those whose age is approximately equal to my own. This is where things get a bit tricky, for two reasons: first, the census data is nearly two years old, and second, the "population by age" tables in WP/98 are not separated into individual ages but are instead quantized into "15–19" (of whom there are 39,560,000) and "20–44" (population 215,073,000). Women aged 15 to 19 in 1998 will be aged 17 to 21 in 2000; in this group, I'm interested in dating those 18 or older, so, assuming the "15–19" girls' ages are uniformly distributed, we have

$$39\,560\,000 \leftrightarrow \frac{|21-18|+1}{|19-15|+1} = 31\,648\,000.$$

Similarly, of 1998's "20–44" category, there are now

$$215\,073\,000 \leftrightarrow \frac{|25-22|+1}{|44-20|+1} = 34\,411\,680$$

females within my chosen age limit. The sum, 66 059 680, represents the total number of females aged 18 to 25 in developed countries in 2000. Unfortunately, roughly 1% of these girls will have died since the census was taken.[3] Thus, the true number of so-far eligible bachelorettes is 65 399 083.

Figure 2. Another representative sample of individuals who will never be the author's girlfriend. Photo: Library of Congress.

…who are beautiful: 1,487,838

Personal attraction, both physically and personality-wise, is an important instigator of any relationship. Of course, beauty is a purely subjective trait whose interpretation may vary from person to person. Luckily it is not necessary for me to define beauty in this essay except to state that for any given beholder, it will probably be normally distributed amongst the population.[4] Without going into the specifics of precisely which traits I admire, I will say that for a girl to be considered really beautiful to me, she should fall at least two standard deviations above the norm. From basic statistics theory, the area to the left of the normal curve at $z = 2$ is

$$\frac{1}{2} - \frac{1}{\sqrt{2\pi}} \int_0^2 e^{-\frac{1}{2}z^2}\, dz \approx 0.02275$$

and so it is this number with which we multiply our current population pool.

…and intelligent: 236,053

Again, intelligence can mean different things to different people, yet I am once more relieved of making any explanation by noting that it, like most other characteristics, has a notionally normal distribution across the population. Let's assume that I will settle for someone a mere one standard deviation above the normal; in that case, a further

$$\frac{1}{2} + \frac{1}{\sqrt{2\pi}} \int_0^1 e^{-\frac{1}{2}z^2}\, dz \approx 84.1345\%$$

of the population must be discounted.

…and not already committed: 118,027

I could find no hard statistics on the number of above-noted girls who are already married, engaged, or otherwise committed to a significant other, but informal observation and anecdotal evidence leads me to believe that the proportion is somewhere around 50%. (Fellow unattached males will no doubt have also noticed a preponderance of girls legitimately offering, "Sorry, I already have a boyfriend" as an excuse not to go on a date.) For reasons of morality (and perhaps too self-preservation), I'm not about to start hitting on girls who have husbands and boyfriends. Accordingly, that portion of the female population must also be considered off-limits.

…and also might like me: 18,726

Naturally, finding a suitable girl who I really like is no guarantee that she'll like me back. Assuming, as previously mentioned, that personal attractiveness is normally distributed, there is a mere 50% chance that any given female will consider me even marginally attractive. In practice, however, people are unlikely to consider pursuing a relationship with someone whose looks and personality just *barely* suffice. Let's make the rather conservative assumption, then, that a girl would go out with someone if and only if they were at least one standard deviation above her idea of average. In that case, referring to our previous calculation, only 15.8655% of females would consider someone with my physical characteristics and personality acceptable as a potential romantic partner.

Figure 3. A third representative sample of individuals who will never be the author's girlfriend. Photo: Library of Congress.
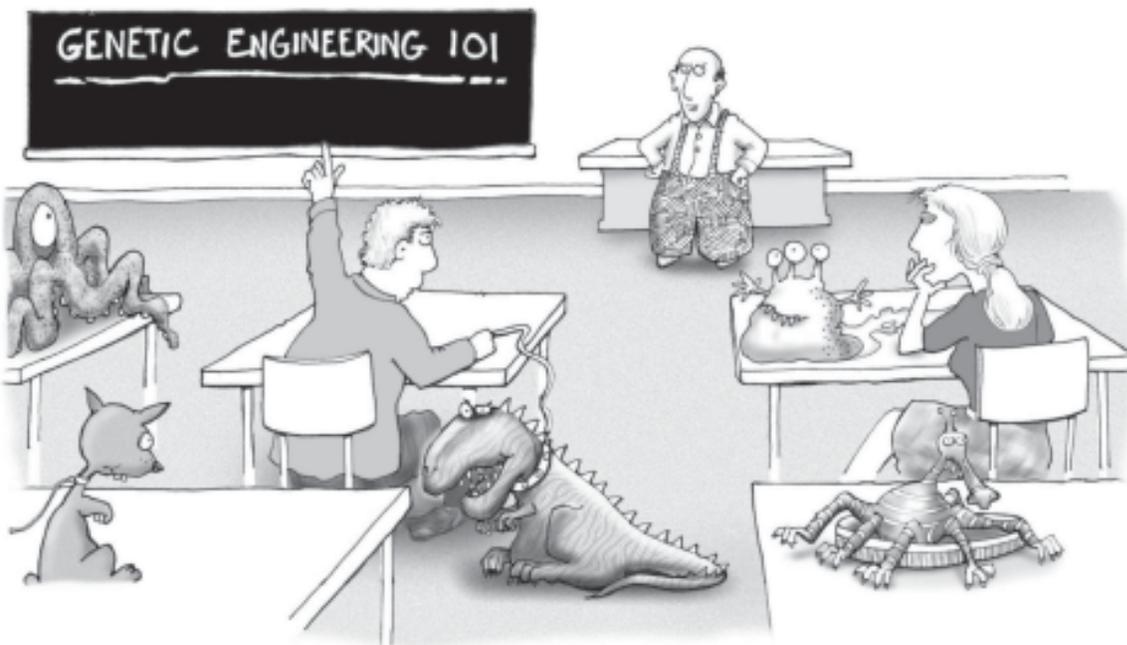
Conclusion

It is here, at a pool of 18,726 acceptable females, that we end our statistical analysis. At first glance, a datable population of 18,726 may not seem like such a low number, but consider this: assuming I were to go on a blind date with a new girl about my age every week, I would have to date for 3,493 weeks before I found one of the 18,726. That's very nearly 67 *years*. As a North American male born in the late 1970s, my life expectancy is probably little more than 70 years, so we can safely say that I will be quite dead before I find the proverbial girl of my dreams. Come to think of it, she'll probably be dead too.

Reference

[CB99] U.S. Bureau of the Census. *Report WP/98, World Population Profile: 1998*. U.S. Government Printing Office, Washington, DC, 1999.

Notes

1. After a short period of brooding, of course, these males will eventually come to the realization that the real reason they were never able to get a girlfriend is that they were too discriminating with their attentions. They will consequently return to the dating scene, entering a sequence of blasé relationships with mediocre girls for whom they don't really care, until they finally marry one out of fear of spending the rest of their lives alone. I am convinced that this behaviour is the real reason for today's alarmingly high divorce rate.

2. Due to rounding, figures cited may not add up exactly.

3. [CB99] gives the annual death rate for developed countries as 10 per 1000, but does not list death rates per age group. Presumably, the death rate graphs as a bathtub curve, but in the absence of any numbers supporting this hypothesis, and for the sake of simplicity, I will conservatively estimate the death rate among this age group to be 1% biennially.

4. Despite my efforts to research the matter, I could find no data on the distribution of beauty, either outer or inner, amongst the population. Perhaps attractiveness, being a largely subjective trait, does not lend itself to quantification. It is not unreasonable, however, to assume that like most other traits, it has a normal distribution. Indeed, this assumption seems to be backed up by informal observation and judgment — in any reasonably large group of people, most of them will be average-looking, and a tiny minority either exceedingly beautiful or exceedingly ugly. v

"Okay—is there anybody ELSE whose homework ate their dog..?"