

Genetics of relationships and marriage

Think for a moment about the people you know in relationships. It could be long-term relationships as well as shorter-term flings. Is there any set of generalizations about their personalities or behaviors you'd draw? Is there anything in common among those you know who have been married the longest? How about those who seem to be in constant conflict? Hasty generalizations and anecdotes tend to be the downfall of good science, however, inductive reasoning is what makes the dating website industry flourish.

Sites like match.com, eharmony.com, and others pride themselves in having 'the most' of certain things (people on their site, dates, marriages, etc.) or 'the best' of other things (connections, compatibility, etc.). The site Chemistry.com used to advertise they used the "the latest science of attraction" to match up singles, that is until the [Better Business Bureau](#) asked them to stop. Yet, the real science behind these claims [is not as certain](#) as their ad campaigns are.

So what makes for good relationships? If I could answer that question, it would be an incredibly lucrative business model. But suffice to say, the answer lies in large part within the genetics of the individuals.

Symmetry



Actor Brad Pitt has [scored high on facial symmetry scales](#)

A lot of research points to the importance of symmetry in visual appeal; those who are rated as having greater facial symmetry are often scored higher on indices of attractiveness. This could be due to symmetry's [association](#) with health. However, popular as this belief is, it is [not](#) consensus science. Also, the visual recognition system is making rapid evaluations: We tend to decide if we like someone in a [period](#) of a couple hundred milliseconds to a few seconds. Deep and interesting conversation can sometimes offset this, but the original effect of what I call the '*visual inertia*' is often very difficult to overcome.

While some individuals claim to prefer certain body types and physical features, there are generally some benchmarks that we tend to look for. Women are judged on such [parameters](#) as waist-to-hip ratio, and men are [judged](#) on shoulder-to-waist ratio among other factors. Additionally, there is [some evidence](#) that the height of the man is associated with perceived happiness in the relationship. To be more precise, what was measured was the *difference in height* between the two partners — so if the man's partner is

substantially shorter, his absolute height is less important.

Invisible world of MHC

Let me break down the invisible world of the major histocompatibility complex (MHC). This facet of relationships relies on the [theory](#) that people can subconsciously determine each other's relative differences in their immune systems by [scent](#). What they are detecting, or how they are detecting it are still open questions; the presumption is that there is some [scent-based information](#) conveyed by pheromones that are detected. The theory arose by looking at pair-bonded couples to look for correlations, and one that was found was that (for the groups sampled), the individuals in a couple tended to have more substantial differences than similarities in their immune system complex. The hypothesis posited for this is that couples which being together more diverse immune systems would tend to be more genetically fit in the long-run with adverse environmental conditions, and produce heartier offspring. Again, these are correlative findings and haven't been repeatedly substantiated in a way that was designed to isolate the MHC from other factors.

Psychological biases

We also tend to make decisions about a partner, and those decisions become more impervious to falsification and logic as time goes on. What this means is that once we've made up our mind about a (potential) partner, whether it's favorable or unfavorable, it's very difficult to undo this perception, even with contrary evidence. It turns out this also plays into how we [listen to](#) and perceive presidential candidates.

So what's the takeaway? Physical attractiveness matters, there are likely other uncontrolled — and uncontrollable — factors, such as MHC at play, and our own personal biases and outlook synthesize and shape our opinion to a degree that makes finding that special someone very... personal (read: not logical).

What makes all of this very interesting is that relationships can't on the whole be quantified. So for as much of our world as we've measured and put metrics to, including: travel distances, time, the walking steps of our 'quantified self,' blood pressure, temperature, etc., one of the most important factors of being human — our relationships — has largely resisted becoming measured in any meaningful way other than a hindsight measurement of 'successful/not successful'.

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