Assortative Mating

Assortative mating is the tendency for like to marry like — rich people to marry rich people, college graduates to marry college graduates, Catholics to marry Catholics, Jews to marry Jews. Under what circumstances would we expect it to increase or decrease, for what reasons and with what consequences?

Start by considering a greatly simplified model of the marriage market in a very small world, one with the traditional division of labor between household and market production but without the traditional sexual division of labor. The world contains two men and two women. One of the men and one of the women are high income earners. The other two command lower incomes on the market but are equally good at running a household. The two high-income earners can each make $100,000/year, the two low-income earners can each make $40,000/year. Any of them can produce household services, cooking, laundry, rearing children, whose cost if purchased on the market would be $60,000/year.

With assortative mating, the high-income pair marry each other. Both work, they purchase household services and are left with $140,000/year. The other pair also marry, one works and one stays home, and they have an income of $40,000/year. The combined income for the two couples, net of the cost of buying or producing household services, is $180,000/year.

Suppose instead that each high-income earner marries a low-income earner. The high-income member of the pair works, the other stays home and runs the household. Combined income of the two couples, again net of cost, is $200,000/year.

The pattern is a familiar one in the context of trade. One partner has a comparative advantage in earning income, the other in household production. Dividing who does what accordingly can make both better off.

The implication of that simple model is that men with college degrees should marry women without them and women with college degrees should marry men without them. That is not what actually happens. Why?

There are a number of possible explanations. Many couples meet in college. Educated men and women may get along better with educated partners. Educated men and women may prefer that their children be reared by an educated housewife or househusband, may want intelligent children and believe they are more likely to produce them with an intelligent spouse.

I want to offer another explanation, one that applies not only to marriage but to a variety of other things as well. To do so, I add one more assumption to my model: The income of each couple must be split evenly between them. With assortative mating, the high-income couple get $70,000 each, the low-income couple get $20,000 each. With mixed mating, each individual gets $50,000. Since the high-income individuals are better off marrying each other, they do. Switching to the mixed mating pattern and dividing each couple's income 75/25 would make everyone better off, but that is not an option.

Why might we expect a roughly equal division in marriage? Husband and wife live in the same house, share the same meals and vacations. That limits, although it does not entirely prevent, an unequal division of consumption. We now have another explanation of assortative mating.

Generalizing from the simple model, we would expect to see assortative mating in contexts where differences among potential partners are large and pairs are constrained to a roughly equal division,

because the loss to the high value partner of having to share equally with the low value partner outweighs the benefit of a more efficient division of labor. We would expect the opposite pattern where potential partners are free to vary the division between them.

Consider next the same logic applied not to a marriage but a law firm. Law firms are organized as partnerships, which limits the degree to which it is practical to maintain an unequal division among the voting partners. It follows that voting partners will be reluctant to recruit others who are substantially less productive than they are and unable to recruit others who are substantially more productive. In order to take advantage of comparative advantage they will have to hire non-voting members of the firm, whether non-partner attorneys or secretaries, who will receive a different, usually lower, share of the firm's income. That appears to fit the actual behavior of law firms.

Finally, consider the issue of immigration. It should be in the interest of the population of a high income, high skill country such as the U.S. to admit low skill, low income immigrants due to the usual principle of gains from trade. One of the chief arguments against doing so is that poor people will come not to work but to collect welfare. One solution proposed by supporters of free immigration, the solution I offered more than forty years ago in my first book (Chapter 14), is that welfare should not be available to new immigrants.[1] The problem with that solution is that immigrants will eventually become citizens, at which point, if still poor, they can vote for income redistribution in their own favor. Hence, it is argued, we should admit skilled immigrants from India and China to work in Silicon Valley but not unskilled Mexicans to pick our crops, even though the net gains, to both us and them, would be larger if we did the latter.

How serious a problem this is in the real world of 21st century America is not clear; arguably the benefit of employment for someone coming from a poor country is enough above that of welfare so that most immigrants will choose to work. It is, however, a significant part of the argument offered against immigration. Its logic is the same that I have offered for when assortative mating will or will not happen.

Assortative Mating and Increasing Inequality

Alparslan Tuncay, in a recent paper, measured the change in assortative mating over time by calculating the correlation between income of husband and of wife. He found that it had increased from .3 for families formed in the late 1960's to .52 for families formed in the late 1980's. He estimated that if assortative mating had not increased, the increase in the Gini coefficient, the conventional measure of income inequality, over that period would have been about 40% less.

Why did assortative mating increase? One explanation that Tuncay offered was that the age of marriage increased. The younger people marry, the harder it is to predict their future income, hence the less able they are to select a mate on that basis. The authors of *The Bell Curve*, writing more than twenty years before Tuncay, offered a different reason. They observed that American society had become increasingly meritocratic over time, with where someone ended up in the distribution of status and income depending more on his ability than in the past, less on his parents' status. One consequence was that people were more likely to associate with, hence more likely to marry, others of similar ability.

[1] I also proposed that their taxes should be reduced to compensate them for not being eligible for some of the benefits those taxes pay for.

The same effect would be expected from changes that increased the range over which individuals sought mates. The girl in your village who makes the best fit with you is likely to fit less well than the girl in your city who makes the best fit. As population becomes more concentrated, transport and communication better, status more closely correlated with ability, the result should be a greater pairing of like with like. The rise of online dating should have a similar effect.

A third reason that occurred to me was the increasing involvement of women in the labor market. If husband and wife are both going to be employed outside the home, the advantage of pairing high-income with low-income, described above, vanishes. There are still gains from comparative advantage, a wife who likes to cook paired with a husband who likes to wash dishes, but they are no longer linked to differences in income.

If assortative mating, on both income and ability, is increasing, that explains increasing income inequality twice over. In the short run, pairing high income with high income and low income with low income increases the inequality of family income. In the long run, if some of the abilities that lead to high income, such as intelligence, are heritable, it widens the distribution of abilities, hence of income. Data show a gradual increase in mean IQ — the Flynn effect. I do not know if anyone has looked at whether variance is also increasing, as this argument suggested it should be. If, as some studies have found, the increase has been concentrated in the lower part of the IQ distribution, variance should be decreasing, the opposite of the predicted effect.

It seems natural to assume that one of the forces encouraging assortative mating is that smart men want to marry smart women; certainly I did (and did). In the novels of Robert Heinlein, one of my favorite authors, the usual assumption is the opposite. Smart women are worried that their intelligence will scare men away, so conceal it. In one of them,[2] the protagonist teaches the woman he is interested in to play three dimensional chess. It is only near the end of the book, when they are together in a somewhat desperate situation, that she demonstrates that she is a much better player than he is and admits to being her planet's champion. If the pattern is as common as Heinlein seems to assume, the degree of assortative mating by intelligence might depend on how good intelligent women are at pretending not to be intelligent.

Heinlein is fiction, but there have been attempts to actually study both what successful men are looking for in a wife and whether success, measured by graduate degrees or high income, makes women more or less likely to get married. Christine Whelan, writing in 2012, offered evidence that, while successful women on average marry later, they are about as likely to marry as less successful women. She argued that while the idea of successful men being scared off by successful women had some truth in the past, it no longer did.[3] Whelan, however, clearly knows what conclusion she wants to reach. As she herself puts it, her mission is to "shatter [] the bad news myths that smart, successful women can't have personal and professional happiness." She provides no evidence on whether, when successful women marry, they marry successful men. In contrast to her results, a paper based on psychological experiments concluded that men were more attracted to women more intelligent than themselves in contexts where the hypothetical woman was psychologically distant, less attracted when the actual woman was physically close and a potential date.[4] The experiments, using male undergraduates, were of the sort where a sufficiently intelligent

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[2] *Starman Jones.*

[3] Dr. Christine B. Whelan,Why Smart Men Marry Smart Women. The author's views are conveniently summarized in a webbed excerpt.

[4] Lora E. Park, Ariana F. Young, Paul W. Eastwick, "(Psychological) Distance Makes the Heart Grow Fonder: Effects of Psychological Distance and Relative Intelligence on Men's Attraction to Women."

subject can figure out that the experimenters are lying to him, testing something other than what they claim, and be dropped from the sample. So perhaps the conclusion only holds for unintelligent men.[5]

As best I can tell, the question of whether smart men on average prefer smart women is still open. But, even if Heinlein is right and Whelan is wrong, there is another reason why smart men might, on average, marry smart women …

The Correlation Between Intellect and Pulchritude

I have spent much of my life teaching at reasonably good schools. The students who succeed in getting admitted to such schools tend to be well above average, intellectually speaking. In my possibly biased observation, the women at such schools are not only smarter than average, they are better looking as well. That raises an interesting question: Assuming my observation is correct, why would there be a positive correlation between intellect and pulchritude?

One possible answer is that the former is an input to the latter. The abilities that make a woman academically successful might also make her successful in improving her appearance, whether by diet and exercise, choice of clothing, or in other ways.

Another possibility is that intellect and looks are both affected by some common cause. Poor nutrition, for instance, might affect both. So might genetic factors or environmental ones, pre or post-natal. Something that goes right or wrong with the process that builds a human being might go right or wrong with both intellect and whatever determines physical appearance.

Another and perhaps more intriguing possibility is that the correlation is due to selective pressure in past societies. Consider a society where male status is in part dependent on intellectual ability. Imperial China would be one example, since high status positions in the Imperial civil service were obtained by success in competitive exams, but the same pattern could be expected in any context where individuals compete for status and their success depends in part in intellect. Men prefer attractive women, so men with unusually high intellect will be mating with women with unusually good looks, producing children with both.[6]

Another possibility is that more attractive women are more likely to end up in selective colleges for reasons unrelated to intelligence. Perhaps attractive women get more support from those around them, including parents, teachers, high school advisors, and college admissions officers.

There is at least one other possible explanation for my observation. I am attracted to smart women. Women I am attracted to appear better looking—to me—than women I am not attracted to, whether or not they actually are. My observation may reflect characteristics of the observer, not the observed. The phenomenon I am trying to explain may not exist.

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[5] The authors do not say what colleges the subjects were from, but since the payment for participation was course credit in a psychology class they were presumably from the authors' schools: The University at Buffalo, California Lutheran University, and University of Texas at Austin. The form of

[6] The conjecture is not original to me. See D.M. Buss, "Human mate selection," American Scientist, 73 (1985), pp. 47-51

Some evidence that what I observed is real, hence evidence against my final two explanations, is an article that claims to have measured the relation between intelligence and physical attractiveness, finding it positive, measurable, larger in the U.K. than in the U.S — and larger for men than for women.

Great Comment on Someone Else's Blog

> Will being a brilliant software engineer get you a smokin'-hot babe for a wife? No, it won't. (There are exceptions to this.) But unless you're a complete jerk, there's probably an accountant with a cute smile who shares your love of HP Lovecraft, or a genetics lab tech with a great laugh who plays Dungeons and Dragons, or an IT consultant who loves to cuddle and is willing to put up with your cat's YouTube fame.
>
> It is less the case that shy, successful people are purchasing access to a mate and more the case that the shy, successful people have finally found a common breeding ground to spawn. (comment by Anatid to a post on The Volokh Conspiracy[7])

[7] When I went back to the post to check the context of the comment, I found that the comments had vanished. I do not know why. Neither does the author of the post.