A Theory of Marriage Part II

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Summarized by Ken Kikkawa

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Abstract

Fun applications of marriage analysis.

1 Summary

Findings include:

- An explanation of why persons who care for each other are more likely to marry each other than are otherwise similar persons who do not. This in turn provides a justification for assuming that each family acts as if it maximized a single utility function.
- An explanation of why polygyny (one man and more than one women), when permitted, has been more common among successful men and, more generally, why inequality among men differences in the number of men and women have been important in determining the incidence of polygyny
- An analysis of the relation between natural selection over time and assortive mating[1], which is relevant, among other things, for understanding the persistence over several generations of differences in incomes between different families.
- An analysis of which marriages are more likely to terminate in separation and divorce, and of how the assortive mating of those remarrying differs from the assortive mating in their first marriages.

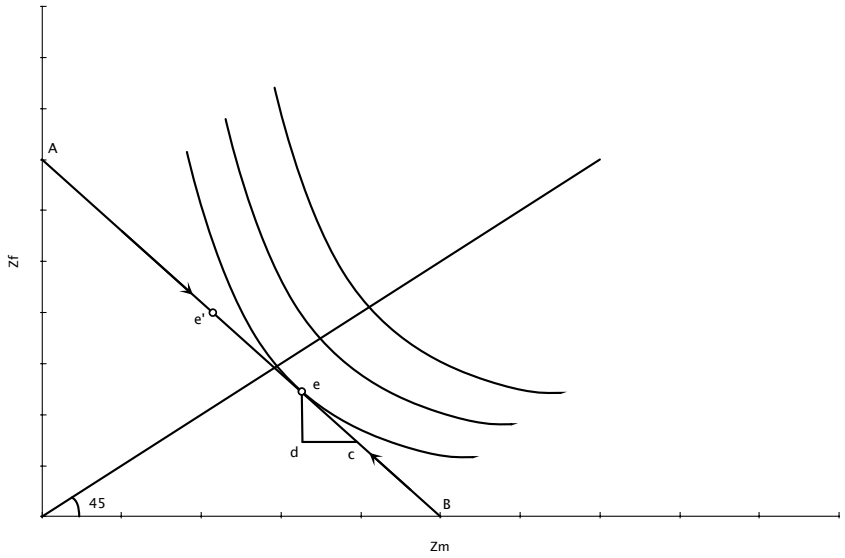
2 Love, Caring and Marriage

Here we look at effects of love on marriage. In particular, since loving someone usually involves caring about what happens to him or her, we concentrate on working out several implications for marriage, of "caring".

If M cares about F, M's utility would depend on commodity consumption of F as well as his own. The indifference curve will be as in figure 1. If M cared as much about F as about himself ("full" caring), then the slopes of all the indifference curves would equal unity (in absolute value) along the 45 degree line. If he cared more about himself, then the slopes would exceed unity. Point C in figure 1 represents the (market) allocation of commodities to M and F that is determined by equilibrium in the marriage market. Only is M were married to F could he transfer commodities to F. If the terms of transfer are measured by the line AB, he moves along AB to point e. he transfers cd and F receives de. Presumably there should be no loss, so AB should have a slope of unity. Then the equilibrium point after transfer would be on the 45 degree line with full caring, and to the right of this line if M preferred his own consumption to F's.

[1] Wikipedia says, "Assortative mating is a nonrandom mating pattern where individuals with similar genotypes and/or phenotypes mate with one another more frequently than what would be expected under a random mating pattern. For example, it is common for individuals of similar body size to mate with one another. Less commonly, in negative assortative mating, individuals with diverse traits mate more frequently than what would be expected in random mating."

Figure 1:



If F also cares about M, she would modify the market allocation point c to another point in AB, say e' in general. The market completely determines the division of output only in the interval e'e: positions in Be are modified to e, positions in Ae' are modified to e'. If each fully cares about another, points e and e' are both identical at the 45 degree line. This is consistent with the popular belief that persons in love "share".

M's income at e exceeds his own consumption because of the utility he gets from F's consumption. Indeed, his income is the sum of his and F's consumption, and equals OA (or OB), the output produced by M and F. Similarly, F's income exceeds her own consumption if she benefits from M's consumption. Caring makes family income greater than family output because some output is jointly consumed. At point e, all of F's and part of M's consumption would be jointly consumed. Since both e and e' are on the 45 degree line with mutual and full caring, the combined incomes of M and F would then be double their combined output: all of M's and all of F's consumption would be jointly consumed. Thus caring and love encourage (and are encouraged by) marriage.

3 Polygamy

In part I it was said that monogamous unions will dominate if the ratio of men and women are the same, if all men and all women are identical, and if there were diminishing returns from adding an additional spouse to a household. Now we drop the assumption of identical men and women, and let them have different traits. Polygyny happens when men/women ratio decreases, but it also happens even without an excess of women. Then inequality among men is crucial to explain this.

If the productivity of me differs, a polygynous sorting could be optimal, even with CRS and an equal number of men and women. Total output over all marriages could be greater if a second wife to an able man added more to output than she would add as a first wife to a less able one. Consider two identical women who would produce 5 units of output if single, and two different men who would each produce 8 and 15 units, if single. Let the marries outputs be 14 and 27 when each man has one wife, and 18 and 35 when each has two. Clearly, total output is greater if the abler man takes to wives and the other remains single.

Thus the analysis says that polygyny would be more frequent among more productive men, such as those with large farms, high positions, and great strength, and evidence supports that. For example, only about 10-20 percent of the Mormons had more than one wife, and they were the more successful and prominent ones.

4 Assortive Mating, Inequality, and Natural Selection

A very qualitative explanation which I did not quite understand. It's only 1 page and a half, read it if you are interested.

5 Life-Cycle Martial Patterns

When to enter the marriage market? The age of entry would be earlier the larger the number of children desired, the higher the expected lifetime income, and the lower the level of education.

In the marriage market, one searches for a mate, until the value to him of any expected improvement in the mate he can find is no greater than the cost of his time and other inputs to the additional search. Search will be longer the greater the benefits expected from additional search. Since benefits will be greater the longer the expected duration of marriage, people will search more carefully and marry later when they expect to be married longer (when divorce is difficult etc). Thus when divorce becomes easier, the fraction of persons legally marries may actually increase because of the effect on the age at marriage.

Search will be longer the more variable potential mates were. Hence, other determinants the same, marriage should be later in dynamic, mobile, and diversified societies than in static homogeneous ones.

People will marry early if they are lucky enough to find a good mate. Also they marry early when they are unduly pessimistic about their prospects of attracting someone better in the future. So early marriages contain both lucky and pessimistic ones, while later marriages contain unlucky and optimistic ones.

The cost of search differs greatly for different traits. The optimal allocation of search expenditures implies that marital decisions would be based on fuller information about more-easily searched traits than about more-difficult-to-search traits.

Married persons make decisions too. The incentive to separate is smaller the more important are investments that are "specific" to a particular marriage. The most obvious example of specific investment is children. Since specific investments would grow, the incentive to separate tends to decline over time. But the incentive to separate is greater, the more convinced a person becomes that the marriage was a mistake. This conviction could result from an additional information about the mate's trait, or other potential mate. If the mistake was considered large enough to outweigh the loss in marriage-specific capital, separation and perhaps divorce will follow.