Take home examination in Family Economics

Receive Monday July 7 2003, 12.00
Return Monday July 14 2003, 12.00

Yoram Weiss

Sources:

1. Shapley, L. and M. Shubik (1972), "The Assignment Game I: The Core, " *International Journal of Game Theory* , 1, 11-130.

2. Roth A. and M. Sotomayor (1990), *Two-Sided Matching*, Cambridge University Press, Chapter 8.

3. Shimer R. and L. Smith (2000), "Assortative Matching and Search," *Econometrica,* 68, 343-370.

4. Y. Weiss, Lecture 4.

Assume that men are ranked by some marital attribute x and women are ranked by marital attribute y. The distribution of these attributes in each gender is uniform on the interval $[0, 1]$. If man x and woman y marry, they can produce together xy. This marital output can be divided between the partner and the utility of each partner equals his share. A person of either sex who remains single has a fixed payoff a where $0 < a < 1$. The proportion of women to men in the population is r.

Consider a frictionless marriage market with complete information, where agents marry at will and can swap partners at will.

Problem 1. Define a stable assignment and characterize the stable assignment profile that emerges under the assumptions above.

Problem 2. Define the sharing rule that must accompany a stable assignment, and characterize it under the assumptions above. How is the share affected by the sex ratio r?. Explain.

Problem 3. Assume now that shares are rigidly determined by custom and each person receives *half* of the marital output xy. How will this affect the stable assignment? Explain.

Consider now a marriage market with frictions, as described by Shimmer and Smith, where unmatched partners meet randomly with partners of the other sex, but can marry only if matched with a single person.

Problem 4. Describe the equilibrium matching sets and explain the differences from the frictionless case.