Nordic Journal of Political Economy

Volume 24 1997 Pages 177-179

Children and Distributional Justice: Comment

Oded Stark

Oded Stark*

Children and Distributional Justice: Comment

Questions pertaining to the allocation and distribution of resources within the family have attracted considerable attention. (For recent comprehensive reviews see Laitner (1997) and Behrman (1997).) In a recent issue of this Journal, Bojer (1996) presents a simple problem: "Assume there are two children, Ola and Kari, with unequal talents. A given amount of resources, over and above what is required to provide for their immediate needs, is to be invested in their education. The distribution of this investment should optimize size and distribution of their future production. Now, if redistribution between adults carries no cost, the rule for optimal distribution is straightforward: it should maximize future production, and then, if necessary, redistribute income to achieve whatever degree of equality is deemed desirable. But if there is a deadweight loss associated with redistribution, this must be taken into account." Bojer continues by assuming and claiming as follows: "Assume the deadweight loss at the margin to be half an ECU for each ECU redistributed. Let the marginal future product of the last ECU invested be A and B for investment in Ola and Kari respectively, where A is smaller than B. Ola's future income will then be A for each ECU invested in himself, and at most B/2 if it is invested in Kari. The best result for Ola is for the ECU to be invested in Kari if A<B/2, but for the ECU to be invested in himself when B/2<A<B."

It seems to me that the allocation rule advocated by Bojer is false and that the reasoning underlying the proposed rule is flawed.

Measure the resources available for investment in the children's education by E units of ECU, and denote the given amount of ECU available for investment by $\bar{E}$. Let MFP stand for the marginal future product of the investment. If all the $\bar{E}$ units are invested in Ola, Ola's future income will not be $\bar{E} \times A$, as claimed by Bojer, but $\int_0^{\bar{E}} MFP_{Ola}\, dE > \bar{E} \times A$; see Figure 1. Given Bojer's definition of A viz., "the *marginal* future product of the *last* ECU invested in Ola" (emphasis added),

* University of Oslo and University of Vienna.
I thank the National Institute on Aging (grant R01-AG13037) for partial financial support.

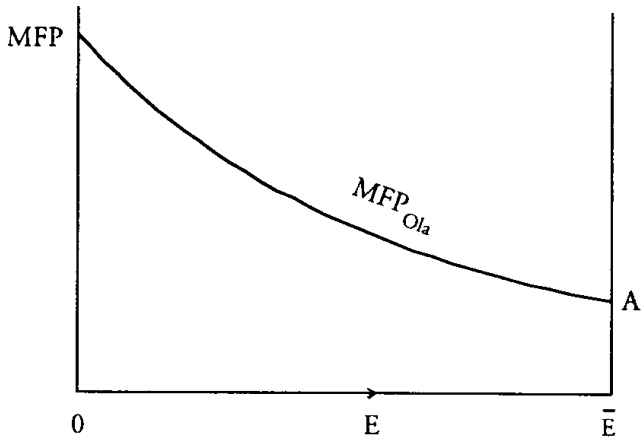

Figure 1

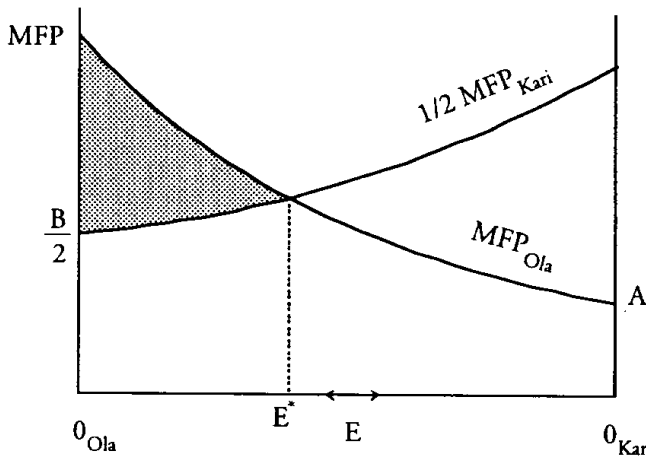

Figure 2

Bojer's calculation of Ola's future income is false.

Moreover, if A<B/2, the best result for Ola is *not* for $\bar{E}$ to be invested in Kari but, as shown in Figure 2, for E^* to be invested in himself, with the remainder $\bar{E}-E^*$ to be invested in Kari. (In figure 2, $1/2\ MFP_{Kari}$ represents what Ola can have if Ola reaps the fruits of the allocation to Kari.) Note that this allocation procedure, as compared to the one advocated by Bojer, increases Ola's future income by the shaded area in Figure 2. Hence, Bojer's claim that "the best result for Ola is for $\bar{E}$ to be invested in Kari if A<B/2" is plainly wrong. By a similar reasoning, it is not true that if A>B/2 the best result for Ola is for the $\bar{E}$ to be invested in himself.

It might be argued that Bojer's argument pertains to the special case of a constant throughout marginal future product of E, as portrayed in Figures 1′ and 2′. While theoretically feasible, this special case is not empirically tenable. Investment in human capital has never been found to yield constant marginal returns throughout. Moreover, if this degenerate case *is* the one alluded to by Bojer, why stress that A and B are "the *marginal* future product[s] of the *last* ECU invested"? If the MFP curves were flat, the rule would be absolutely trivial. Ola's best

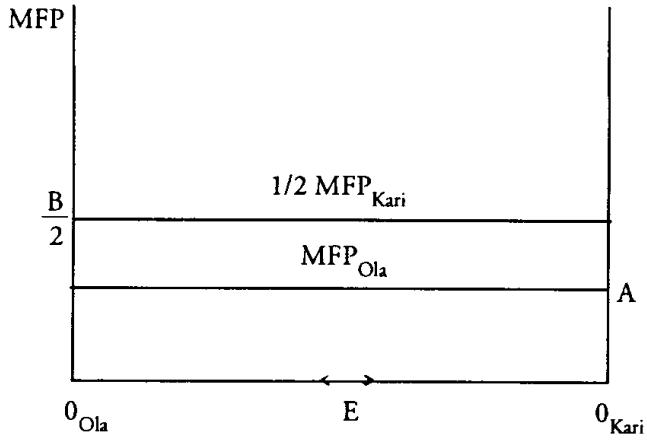

Figure 1′

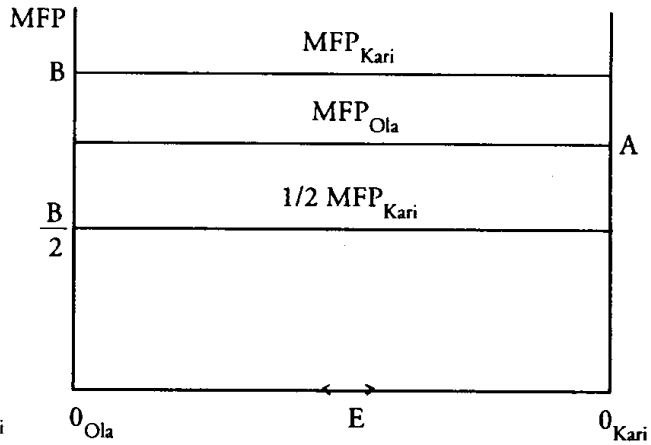

Figure 2′

outcome is: net of the cost of redistribution invest in the child who is more productive. To this end, reference to Ola, Kari, A, B, B/2, and ECU is of no value added. Finally, and as an aside, if the MFP curves are constant throughout, A>B/2 is a necessary and sufficient condition for allocating the *E* to Ola; whether or not A<B is immaterial.

References

Behrman, Jere R. 1997. "Intrahousehold Distribution and the Family." In Rosenzweig, Mark R. and Stark, Oded (eds.), *Handbook of Population and Family Economics*, Amsterdam: North-Holland.

Bojer, Hilde. 1996. "Children and Distributional Justice." *Nordic Journal of Political Economy*, 23: 121-132.

Laitner, John. 1997. "Intergenerational and Interhousehold Economic Links." In Rosenzweig, Mark R. and Stark, Oded (eds.), *Handbook of Population and Family Economics*, Amsterdam: North-Holland.