


Economists often assume a household can be treated as a single utility maximizing unit. The "new home economics," which deals specifically with household decisions about fertility and labor supply, assumes a "harmonious household" (i.e., household utility maximization is always consistent with utility maximization of individual household members). [Terleckyj 1976] Ironically, some of the same investigators have analyzed marital instability, the existence of which suggests that not all households maintain or perhaps ever achieve such harmony. [Becker, Lindis and Michael 1977] Models of households with individual utility maximizing members in (potential) conflict are a recent innovation. Masser and Brown (1980) and McElroy and Horney (1981) posit households in which conflict can arise between individual utility maximizers, but in these models, household members do not "care" about each other. The purpose of this paper is to present a simple general model of a household in which members can "care" about each other in the Becker (1974) sense; yet conflict is possible. We show in passing that Becker's conclusions about harmonious households, including the "rotten kid" theorem, do not hold in our general case.

Becker defines the head of household as an individual who "cares" sufficiently about other household members to transfer income or other resources to them.2 Caring is manifested in the head's utility function:

\[ U_j = U(X_j, U_j) \]  

where \( U_i \), \( X_i \) = utility and consumption of head \( i \), and \( U_j \) = utility of the other household members, \( j = 1, \ldots, n \).

The utility of the other members appears in the head's utility function, and in a purely consumption setting, we replace \( U_j \) with \( X_j \), the consumption of other household members:

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A key implicit assumption of this formulation is that "caring," as defined by eqs. (1) and (2), is the only possible motive that the head may have for transferring income to other household members. Suppose, however, that we modify the utility function of the head so that he gets some satisfaction from the act of transferring income rather than just from the

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1. Masser and Brown introduce "caring" indirectly with an efficiency parameter on own consumption, while McElroy and Horney ignore it completely.

2. Becker (1974) p. 1074, in order to be the head, a household member must also have sufficient income to make the transfers. Caring is a necessary but not sufficient condition to be the head. An interesting implication of this definition is that if another family member's income rises fast enough the head could be "beheaded."
pleasure the income produces for the recipient.\(^1\) Consider a specific example of this kind of "action" utility: the husband (b) derives some satisfaction from his role as the family "breadwinner." The addition of this form of action utility implies the following changes in eq. (2) for a two member household:

\[
U_b = U(N_b, X_b, A) \tag{3}
\]

\[
A \geq T/Y_b \quad 0 \leq A \leq 1 \tag{4}
\]

where \(T\) = transfer of income from husband (b) to wife (w) and

\[Y_b = \text{family income} \]

Assume that all of the arguments of this function have a positive but diminishing effect on utility. For the purpose of illustration only, we also assume the wife is selfish in the sense that her utility depends only on her own consumption or

\[
U_w = U(N_w) \tag{5}
\]

The family budget constraint is

\[
Y_b = Y_b + Y_w = (X_w + X_b) \tag{6}
\]

where \(p\) is the price of consumption, which is set equal to one.

We begin the analysis by considering the effect of the inclusion of \(A\) in the husband’s utility function on the distribution of consumption in the household. We can compare the marginal utility functions for the husband with respect to both the husband’s and wife’s consumption for equations (3) and (3). To simplify the analysis suppose that the husband is the sole "breadwinner" so that \(Y_b = Y_a\) and \(X_w = T\).

In equation (7) we compare the marginal utility of the husband’s consumption (\(MU_b\)) from eq. (2) with the marginal utility of

\[
MU_b = \frac{\partial U_b}{\partial X_b} + \frac{\partial U_b}{\partial A} \tag{7}
\]

No effect on household welfare. However, if utility function (3) is substituted for (2), then a redistribution of income leads to a reduction of \(U_b\). This result can be proved by considering the husband’s alternatives when income is redistributed. If be chooses to maintain \(T\) and thus \(X_b\) and \(X_w\) must decline since at the original levels of \(X_b\) and \(X_w\), \(MU_b\) is less than \(MU_w\), the effect of reducing \(X_b\) and increasing \(X_w\) must be to reduce \(U_b\). The husband’s alternative is to reduce \(X_w\) but in this case both \(T\) and \(A\) decline and so \(U_b\) also does. Thus the existence of action utility implies that changes in the household distribution of income do affect individual welfare.

A second type of disturbance to the family’s initial equilibrium occurs when the wife’s opportunity wage rises sufficiently to induce her to want to enter the labor force.\(^2\) We first consider the possible impact of such a change on the husband’s utility by totally differentiating (3):

\[
\frac{\partial U_b}{\partial T} \frac{dT}{dY_w} + \frac{\partial U_b}{\partial Y_w} \frac{dY_w}{dY_b} \tag{9}
\]

and then evaluating the effect of a change in \(Y_w\):

\[
\frac{\partial U_b}{\partial Y_w} \frac{dY_w}{dY_b} \tag{10}
\]

We know \(\frac{\partial A}{\partial X_b}\) is positive, and thus \(MU_b > MU_w\). In order to reach equilibrium, the husband will increase \(X_b\) and reduce \(Y_w\). This is shown diagrammatically in Figure 1. The vertical axes measure the marginal utility of consumption. The length of the horizontal axis is family income, \(Y_t = X_e + X_b\). The husband’s consumption and marginal utility is read from left to right and the wife’s read from right to left. With no action utility, \(MU_b\) and \(MU_w\) are the relevant schedules, which intersect at point E, with husband consuming AC, and wife CD. We know from equations (7) and (8) that action utility reduces \(MU_b\) below \(MU_w\) and raises \(MU_w\) above \(MU_b\). In this case, the new equilibrium is at E’, with the husband consuming AB and the wife BD.

We now consider two further changes in the standard approach: first, a redistribution of family earnings, and second, an increase in the wife’s earnings. According to Becker, a simple redistribution of family earnings should have

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In order to explain intra-industry trade in a homogeneous commodity, the existence of transportation, storage, or selling costs is normally assumed. (See Grubel and Lloyd, 1975, ch. 5) Indeed, Lancaster (1980) suggests that "entrepot trade and locational effects between large adjacent countries [are] the only cases in which exports and imports can consist of absolutely identical commodities in all countries. However, in this note a theory of intra-industry trade in a homogeneous commodity is set forth in which none of the above assumptions are made. We find that a country can simultaneously export and import a homogenous commodity when its production is controlled by a domestic monopolist and the country imposes a quota on imports of it.

Consider an economy in which a domestic monopolist controls the production of a homogeneous commodity, good X. In Figure 1, D, represents the domestic demand for good X; M, represents the monopolist's marginal cost function; and P, is the world price of good X. In the absence of trade impediments, i.e., transportation costs or trade barriers, the domestic monopolist is unable to exert any monopoly power. He produces Q units and sells these units domestically at price P. The economy consumes Q units, with Q units imported being imported.

Assume that a quota of Q units is now imposed on imports of good X. Licenses to import those Q units are assumed to be allocated among citizens so that no licenseholder possesses monopoly power in the importation of good X. Since the quota sets an upper limit on the imports of good X, the domestic demand confronting the monopolist is represented by D, where D lies left of D, at any given price by Q, units. Following Corden (1972), we term D as the "quota-distorted demand curve" corresponding to the quota of Q, units. The Q, quota-distorted marginal revenue curve is represented by M.

In this situation the monopolist will maximize profits by engaging in price discrimination and will determine output and prices by setting M, = P, = M. Although the monopolist continues to produce Q units, he now sells to domestic consumers Q units at price P and exports Q units at price P. On the other hand, domestic consumption is equal to Q units, which consists of the Q units purchased from the monopolist plus the Q, Q, units imported. At the same time that the monopolist is exporting good X, license-holders are importing good X to be sold to domestic consumers. The country simultaneously exports and imports this homogeneous commodity.

References