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ON DONOR SOVEREIGNTY AND UNITED CHARITIES

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> "There are eight degrees in alms-giving, one lower than the other....[The second degree] is giving alms in such a way that the giver and recipient are unknown to each other.... [One way to accomplish this is by] the donation of money to the charity fund of the Community, to which no contribution should be made unless there is confidence that the administration is honest, prudent, and efficient.
>
> "Below this degree is the instance where the donor is aware to whom he is giving the alms, but the recipient is unaware from whom he received them. The great Sages, for example, used to go about secretly throwing money through the doors of the poor. This is quite a proper course to adopt and a great virtue where the administrators of a charity fund are not acting fairly."
>
> -- Maimonides

1. The Problem

It is common practice for individual charitable organizations to merge their fund-raising activities. United Funds or Community Chests, the United Jewish Appeal and Federation of Jewish Philanthropies are well-known examples. There are obvious reasons for such mergers. By having a common fund drive, the combined organizations save considerable expenditure of resources which would otherwise be largely duplicative; moreover, prospective donors are saved the annoyance of having more than one solicitor call. For both reasons, the net receipts of the combined charities may well go up.

On the other hand, such charitable combinations impose a hidden cost on their donors. Whereas before the merger a donor could control the separate amounts which he gave to each charity, after the merger he can generally only control the total amount of his gift. The allocation of that total will generally be decided by the merged organizations. If the donor cares about that allocation, he may be less well off than before.

This phenomenon is plainest where the managements of the combined charities set the allocation explicitly; it is likely to be present, however, even where there is some effort made to accommodate donor preferences. Some merged fund drives, for example, allow each donor to specify how his gift is to be allocated. Clearly, if every donor did so, there would be no utility lost from the inability to control such allocations. In practice, however, large numbers of donors do not avail themselves of this opportunity. The result of this is that a large sum of otherwise unallocated money is distributed by bargaining among the managements of the component charities. One very important element of that bargaining inevitably becomes the financial needs of each organization after taking into account the earmarked funds. Hence, if one charity gets a high proportion of the earmarked funds, it is likely to do relatively less well in the later bargaining for the undifferentiated funds than a charity receiving smaller earmarked donations.[1] If donors perceive this to be the case, then they will also perceive that their earmarking does not affect the ultimate disposition of their gifts. (Indeed, this may be one reason for the failure to earmark, although certainly not the only one.)

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[1]This does not have to be the case, of course. The management of the combined charity, for example, could take earmarking as an expression of donor preferences and divide the undifferentiated funds in the same proportion as the earmarked funds. Such a solution is unlikely to be very stable in practice, however, unless every individual charity gets as much as it would expect to get on its own. In general, bargaining over fair shares is likely to be a complicated business.

Moreover, if the combined fund drive accounts for a large share of the funds raised by the component charities, the same phenomenon can arise even if those charities have supplemental individual fund-raising activities. A donor giving to a particular charity may be directly contributing to it but may be weakening that charity's bargaining position in the distribution of the combined charity's receipts. In this case, as in the case of earmarking, if a dollar of direct contribution results in a dollar less of allocation from the combined fund, then donor activities have no effect on ultimate allocation. If the relation is other than one-for-one, then donors can affect the ultimate allocation, but not as efficiently as if the charities were wholly separate. In either case, a utility loss is imposed on the donor.[1]

Do donors care about the allocation of their own funds or only about the existence of the charities involved? It seems plain to me that donors do care about such allocations. Certainly it would be a very strong assumption to suppose that they do not. Unless donors care, it is hard to understand why individuals give more -- sometimes considerably more -- to some charities than to others. While it is true that charities partake of some aspects of public goods (in the technical sense), it seems clear that donors derive satisfaction not merely from the knowledge that the charities exist but also from the sense of themselves participating in a worthy cause. Unless they think all causes equally worthy, they are likely to care where their money goes.

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[1] If donors believe erroneously that they can completely control the allocation of their gifts is there a real utility loss? For my purposes it seems unnecessary to explore this question.

Note that this means that utility losses can be present even if the management of the combined charities sets the post-merger allocation of funds so that each individual charity's share is the same as it was before the merger. (This may, of course, be a sensible thing to do.) Even though such an allocation is the average, in some appropriately weighted sense, of the allocations which donors would choose, there may be no donor for whom it is the preferred allocation of his own money. A donor who cares about the allocation of his own contribution and not just about the total funds going to each component charity will then be made worse off by being forced to contribute in the average proportion.

Hence, while combined fund drives provide obvious resource savings and may also involve utility gains to donors in the form of decreased annoyance,[1] they are also likely to impose utility losses on donors because of lessened or lost control over fund allocations. Two questions then arise.

First, if donors are unhappy about the way in which their money is to be allocated, are they not likely to express that unhappiness by changing the amounts they give? Since the management of the charities is likely to be sensitive to the total receipts, doesn't this mean that donors by voting with their dollars, so to speak, will influence the allocation in the way they would like it to go? At the least, one would

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[1]As exemplified by the time and trouble of the "great Sages" described in the opening quotation. Perhaps it is worth remarking, however, that, in modern times, the merging of charities does not provide the donor with the satisfaction of rising one step up the Ladder of Charity of Maimonides. The feature which distinguishes the second from the third degree is the question of the anonymity of the individual ultimate recipients, and this is generally equally preserved whether or not the charities are merged.

expect this to be true if there is no problem of aggregating over donors with widely different preferences.

Second, if, after the merger, receipts net of administrative and fund-raising expenses go up, can that not be taken as an indication that the utility costs imposed on donors are more than offset by the resource savings? Certainly, if gross receipts go up, one would expect this to be an indication that donors are happier with the merger than they would be without it. Hence one might expect to judge whether the merger was worth having by looking at gross or net receipts.[1]

The present paper shows that both of these suppositions are erroneous as general propositions. I provide a counterexample with a single donor in which the total amount given to the merged charities goes up as the post-merger allocation moves away from that which the donor would choose in the absence of the merger. Indeed, for a particular special case, total charitable donations are actually minimized at the preferred allocation (at least locally).[2] Hence management paying attention to total receipts will generally be led away from the allocation preferred by the donor. It follows immediately that one cannot conclude the merger was worth having

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[1] I am well aware that all of this is from the point of view of the donors only. Clearly the merger will be worth having from the point of view of the ultimate recipients if net receipts go up and each component charity gets at least as much with the merger as it would without it. It is not at all clear how one should weigh the interests of the recipients against the interests of the donors. Presumably the donors consider the interests of the recipients in making their donations (formally, the utilities or consumptions of the recipients enter the utility functions of the donors). Is one justified in taking further account of recipient utilities than this and imposing on donors some outside sense of what their charitable obligations should be? This is not a simple question and I do not consider it further in this paper.

[2] That receipts may not be greatest at the pre-merger allocation may seem unsurprising if we think of the merged charities as a monopolist engaging in a tie-in sale. The analogy is not complete, however, because (Continued on next page)

because gross or net receipts go up. Generalization to many donors is immediate.

While the example used is, of course, special, it is in no sense pathological.[1] Hence, while there may be occasions on which gross (or net) receipts provide an appropriate guide to donor preferences and to the desirability of mergers from the donors' point of view, they do not do so in general.

(Footnote 2 continued from previous page) neither before nor after the merger can the "monopolist" completely control price (although the ability to set the post-merger allocation does have some aspects of control over relative price). Moreover, it is hard to explain the special case in which total receipts are at a relative minimum at the pre-merger allocation along these lines. For treatment of a somewhat analogous problem, see E.S. Phelps and R. A. Pollak, "On Second-Best National Saving and Game-Equilibrium Growth" Review of Economic Studies XXXV (April 1968), pp. 185-200.

[1] As would be, for instance, a case in which the donor insisted that the net amount received from his personal donation by a particular individual charity be a constant. In such an example, the donor would obviously regard the imposition of an outside allocation following the merger just as he would an additional administrative expense and feel compelled to give more to achieve the same net result. While instructive, such an example seems too extreme to be persuasive.

2. The Counterexample

Assume a single donor who allocates his income, y, among donations to two charities, denoted x_1 and x_2, and expenditure on a single ordinary commodity, denoted x_3. We choose the units of x_3 so as to make its price unity. The donor then (with no merger) faces the budget constraint

$$(1) \qquad x_1 + x_2 + x_3 = y \ .$$

The donor maximizes a strictly quasi-concave utility function

$$(2) \qquad U(x) = V(x_1) + W(x_2) + Q(x_3) \quad ,$$

where

$$(3) \qquad V(x_1) = \beta_1 \log (x_1 - \gamma_1) \quad ; \quad W(x_2) = \beta_2 \log (x_2 - \gamma_2)$$

with the $\beta_i > 0$.[1] There is no need to restrict $Q(x_3)$ further than required for strict quasi-concavity. We assume until further notice that

$$(4) \qquad \beta_1\gamma_2 \neq \gamma_2 \beta_1 \quad .$$

Counterexamples are permitted to be special, of course; it may be felt, however, that this one is objectionable in a particular way. I have

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[1] It is necessary to assume that $x_1 > \gamma_1$, $x_2 > \gamma_2$ is feasible, which will certainly be true if the $\gamma_2 < 0$, but can hold even if the $\gamma_i > 0$ provided income is large enough.

made the donor's utility function depend solely on his own consumption and his own contributions, that is, on his own feeling of contributing to worthy causes. Donors can obviously also be interested in the existence and level of charities independent of their own contributions (the public good aspect of charities referred to above), and the donor whose behavior is being modeled apparently is not interested in such considerations.

Such a defect in the example is apparent rather than real, however. Let Z_1 and Z_2, respectively, denote the level of donations by all other individuals to the two charities. We could replace (2) by taking the donor's utility function to be

$$U^*(x, Z) = F(U(x), Z_1, Z_2) \quad . \tag{5}$$

where U(x) is given by (2). Since the Z_i are outside the control of the particular donor, however, we may as well take them as parameters and, given the weak separability of (5), treat the donor as though his utility function were simply (2). While such separability is also special, continuity will show that our results continue to hold when such separability is absent but departures from it sufficiently small. Since the purpose of a counterexample is to place the burden of proof on those believing the propositions being negated, this is sufficient generality for our purposes.

Denoting differentiation by subscripts, the first-order conditions for the pre-merger optimum are:

$$V_1 = W_2 = Q_3 = -\lambda \quad ; \quad x_1 + x_2 + x_3 = y \quad , \tag{6}$$

where λ is a Lagrange multiplier.

Now suppose that the two charities merge and allocate their funds so that the ratio of the first charity's funds to those of the second are given by k, a fixed positive constant announced to all donors. Hence $x_1 = kx_2$, and the donor now faces the problem of choosing x_2 and x_3 to maximize

$$U(kx_2, x_2, x_3) = V(kx_2) + W(x_2) + Q(x_3) \tag{7}$$

subject to

$$(k+1)\, x_2 + x_3 = y \quad . \tag{8}$$

(Note that the merger changes the relative prices of x_1 and x_2, although that is not the only thing it does.)

Define $c = x_1 + x_2$, the donor's total contributions to charity. If the conjectures we are examining are correct, then such total contributions will be greatest if the merged charity sets k at the ratio which the donor would prefer, the ratio he would himself choose in the absence of the merger. I shall show that this is not the case in the present example by showing that $\partial c/\partial k \neq 0$ at the pre-merger optimum. It follows that the donor's contributions will <u>rise</u> rather than fall as the merged charity's managers move away from his preferred allocation in a particular direction.

The first-order conditions for the post-merger optimum are:

$$(9) \qquad kV_1 + W_2 + (k+1)\lambda = 0 \quad ; \quad Q_3 + \lambda = 0 \quad ; \quad (k+1)x_2 + x_3 = y \quad ,$$

which involve the intuitive condition that the marginal utility of a dollar consumed equals a weighted average of the marginal utilities of dollars donated to each charity. Differentiating totally with respect to k:

$$(10) \qquad \begin{bmatrix} k^2V_{11} + W_{22} & 0 & k+1 \\ 0 & Q_{33} & 1 \\ k+1 & 1 & 0 \end{bmatrix} \begin{bmatrix} \partial x_2/\partial k \\ \partial x_3/\partial k \\ \partial \lambda/\partial k \end{bmatrix} = - \begin{bmatrix} V_1 + kx_2V_{11} + \lambda \\ 0 \\ x_2 \end{bmatrix} .$$

Observe that, since income is fixed, $\partial c/\partial k = - \partial x_3/\partial k$. Let D be the determinant of the matrix on the left of (10) and observe that $D > 0$ by the second-order conditions. Inverting that matrix by the adjoint method, we obtain:

$$(11) \qquad \partial c/\partial k = - \partial x_3/\partial k = (1/D) \{(k+1)(V_1 + kx_2V_{11} + \lambda) - x_2(k^2V_{11} + W_{22})\}$$

$$= (1/D) \{(k+1)(V_1 - Q_3) + x_1V_{11} - x_2W_{22}\} ,$$

using (9) and the fact that $x_1 = kx_2$.

Now consider setting k at the allocation the donor would himself choose, so that the first-order conditions for the pre-merger optimum (6) are satisfied. At such a point, $V_1 = Q_3$. Further, because of the particular character of V and W given in (3), the condition that $V_1 = W_2$ becomes:

(12) $$\frac{\beta_1}{x_1 - \gamma_1} = \frac{\beta_2}{x_2 - \gamma_2} \quad .$$

Hence, at such a point (evaluating V_{11} and W_{22}), (11) becomes

(13) $$\partial c/\partial k = (1/D) \{\frac{\beta_2 x_2}{(x_2 - \gamma_2)^2} - \frac{\beta_1 x_1}{(x_1 - \gamma_1)^2}\}$$

$$= (1/D) (\frac{\beta_1}{x_1 - \gamma_1})(\frac{x_2}{x_2 - \gamma_2} - \frac{x_1}{x_1 - \gamma_1}) \quad .$$

However, from (12)

(14) $$\frac{x_2}{x_2 - \gamma_2} = \frac{\beta_2 x_1 + (\beta_1\gamma_2 - \beta_2\gamma_1)}{\beta_2(x_1 - \gamma_1)} \quad .$$

Hence the sign of $\partial c/\partial k$ at the pre-merger optimum is the same as that of $(\beta_1\gamma_2 - \beta_2\gamma_1)$ and (4) states that the latter magnitude is not zero, yielding the desired result.

I now consider the special case in which the inequality in (4) does not hold and show that there exist subcases in which total donations are actually at a local minimum at the pre-merger optimum.[1] In order to do this most easily, observe the following properties which hold at the pre-merger optimum if (4) is violated and the γ_i are not zero.

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[1] I suspect that in some (or all) of these the minimum is global, but this is harder to show.

First, since $\partial c/\partial k = 0$ in such a case, it follows that:

(15) $$\partial x_1/\partial k = - \partial x_2/\partial k = x_2/(k+1) \quad ; \quad \partial x_3/\partial k = 0 \quad .$$

Next, from (14) in this case, it must be true that

(16) $$k = x_1/x_2 = \gamma_1/\gamma_2 \quad .$$

Denote by N the term in brackets on the far right-hand side of (11) and note that N = 0 at the pre-merger optimum in this case as does $(V_1 - Q_3)$.

At the pre-merger optimum in this case, therefore,

(17) $$\partial^2 c/\partial k^2 = (1/D)\partial N/\partial k = (1/D)\{(k+1)V_{11} + V_{11} + x_1 V_{111} + W_{22} + x_2 W_{222}\}(\frac{x_2}{k+1})$$

where use has been made of (15). From the definition of V, however,

(18) $$V_{11} + x_1 V_{111} = \frac{\beta_1}{(x_1 - \gamma_1)^2} (\frac{2x_1}{x_1 - \gamma_1} - 1)$$

$$= \frac{\beta_1}{(x_1 - \gamma_1)^2} (\frac{x_1 + \gamma_1}{x_1 - \gamma_1})$$

and similarly for W. Using (12), (16), and (18), we obtain from (17):

(19) $$\partial^2 c/\partial k^2 = (\frac{1}{D})(\frac{x_2}{k+1})(\frac{\beta_1}{(x_1 - \gamma_1)^2})(k+1)(\frac{x_1 + \gamma_1}{x_1 - \gamma_1} - 1)$$

$$= \gamma_1 (\frac{2x_2\beta_1}{D(x_1 - \gamma_1)^3})$$

which has the sign of γ_1.

Thus, while in the very special case we are examining, total donations are maximized (at least locally) at the preferred allocation if the γ_i are negative, they are actually at a relative minimum in the equally plausible case in which the γ_i are positive.[1] As for the case in which both γ_i are zero (thus still violating (4)), as one might expect, this turns out to be very much a watershed. Indeed, in this case, total donations turn out to be wholly independent of the allocation set by the merged charity. To see this, observe that in this case the post-merger first-order conditions (9) imply:

$$(20) \qquad c = (k+1)x_2 = \frac{\beta_1 + \beta_2}{Q_3}$$

so that x_3 must satisfy

$$(21) \qquad x_3 + \frac{\beta_1 + \beta_2}{Q_3} = y ,$$

an equation which is independent of k. In view of the budget constraint (1), this means that c is also independent of k.

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[1] Curiously, this turns out to be the case even though, in view of (12) and (16), the pre-merger allocation is independent of income so that the donor seems especially attached to it in some sense.

3. Conclusions

Even before aggregation problems, therefore, it turns out that donor sovereignty over charitable allocations is unlikely to occur. Even if the managers of the merged charity pay strict attention to donors and seek to maximize gross receipts, they will not generally be led to the allocation which donors prefer. Indeed, there exist cases in which any move *away* from the donor preferred allocation increases gross receipts.

A fortiori, it is not the case that one can conclude that such a merger is desirable from the point of view of donors by seeing whether it increases net or gross receipts. Such receipts can go up rather than down just because donors are forced to give in proportions which they do not freely choose.

Indeed, this may be the case even if the managers of the charity set the post-merger allocation equal to that which obtained before the merger (a natural thing to do, but one which will be harder to justify the farther in the past is the original merger). Receipts may then go up not because donors are pleased at being saved one or more solicitations but because they are forced to give in the average proportions even though every one of them feels worse off as a result.[1]

The interesting questions of when such mergers are desirable and how the allocations should be set must therefore be examined according to other criteria.

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[1] To see that such an example is possible, suppose that donors fall into two classes. Let every donor in the first class have a utility function of the partial Cobb-Douglas type discussed at the end of the preceding section, that is, with both $\gamma_i=0$. Let the other class all have utility functions of the type described in the more general counterexample. It is easy to see that if the first group has a higher than average preferred value of k and the second group a lower, then total receipts can increase when everyone is forced to the average allocation. This will occur because the donations of the first group will remain unchanged while those of the second group will increase (for appropriate choices of the parameters).