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Rotten Kid Transfers And Pareto Efficiency In Nonsymmetric Teams

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Abstract

We show that there is an exhaustive sharing scheme involving "rotten kid transfers" that allow Pareto efficiency in nonsymmetric teams where at least one member is team-spirited. The optimal "rotten kid transfers" from team-spirited members required to keep self-interested members from shirking are determined. If the affordability condition is satisfied, the optimal "rotten kid transfers" induce Pareto efficiency in teams.

The apparent success of some cooperative labor arrangements in the form of profit-sharing in Japan and Germany (e.g., Ouchi, 1981; Gordon, 1982) has rekindled renewed interest in the theory of cooperative teams. The dominant microeconomic view pioneered by Alchian and Demsetz (1972) hold that teams (in the cooperative as opposed to the capitalist mold) tend to be inefficient because of "free riding." This was amply reinforced a decade later by Holmstrom's (1982) result showing that with exhaustive sharing and nonobservable effort levels, no team sharing scheme exists that sustains first-best production efficiency. This view largely overshadowed an older but equally interesting result by Sen (1966) on the possibility of first-best efficiency being sustained by correct sharing of symmetric team surplus where effort levels are observable. The correct formula equates the proportion of output allocated according to work effort to the ratio of the labor elasticity of output and the share of wages in output in teams with identical members. Interestingly, Sen's seminal paper already included altruism as a possible factor affecting the outcome of the game. Teams with perfectly altruistic members whether identical or otherwise attain Pareto efficiency unconditionally; teams with imperfectly altruistic and nonidentical members, however, fail to attain Pareto efficiency. Fabella (1988) drawing both from Sen and Holmstrom showed that with observable effort levels, proportional team sharing (one based on contribution to effort levels) sustains first-best production efficiency if and only if team output is directly proportional to the sum of all effort levels. The search for sharing schemes that sustain first-best efficiency in teams parallels the search for self-enforcing contracts in oligopoly theory (Friedman, 1977; and Lambson, 1984). In fact, Macleod (1984) has employed the "trigger strategy equilibrium" concept in oligopoly theory to generate a result that differs from Holmstrom's in the supergame version of the team game with infinitely-lived members. Although departures from strict rationality are now being proposed to ensure the cooperative solution in oligopoly theory (Kurz, 1985; Sen, 1987), broadsides from strict reductionists are not in short supply (e.g., Binmore). It is, however, of great interest to note that more and more, it is becoming clear that cooperative solutions such as in the prisoner's dilemma game require some form of irrationality. As Aumann and Sorin (1989) startlingly observed on the attainment of cooperation: "In one way or another, all refinements (of Selten's "trembling hand") work by assuming that irrationallity cannot be ruled out, that players ascribe irrationality to each other with a small probability." Altruism or team spiritedness can be construed as just forms of irrational behavior.

In short, Pareto efficiency has thus far been possible only for very special teams: Under the observable effort category (a) teams with purely altruistic members, identical or otherwise (Sen, op.cit.), (b) teams with identical or nonidentical members operating under natural sharing and a team output directly proportional to the sum of effort levels, i.e., constant returns to scale (Fabella, op.cit.), (c) teams with identical membership and some egalitarian bias and decreasing returns to scale in production (Sen, op.cit.). In this category there is a dearth of results on sustaining Pareto efficiency under nonidentical membership and nonconstant returns to scale. Under the unobserved effort category (d) teams with infinitely-lived members playing the supergame version of the team game (Macleod, op.cit.) employing the trigger strategy. This, on the whole, is a thin theoretical infrastructure for the recent spate of evidence on the positive effect of some cooperative arrangements on efficiency (Fitzroy and Kraft, 1987; Jensen and Meckling, 1976).

In this paper, we explore the static team efficiency implication of Becker's (1974, 1976, 1981) "rotten kid theorem". Becker's approach skirts the selfish-nonselfish agent debate (viz., between Sen and Binmore) by assuming the existence of some of each. Although originally conceived to justify the idea of shared family utility function, the notion of arrangements that induce members to act as if they were maximizing the collective good has general applicability. Phelps (1988) has empirically explored the implication of the theorem in the workplace and concluded that indeed it has a role to play. Men with stronger affiliation towards their spouses often tended to be also income maximizers. The theorem postulates at least one altruistic member in a family with selfish members ("rotten kids"). This is more plausible than assuming everyone to be purely altruistic as in Sen's pure altruism case. While the altruist maximizes family welfare, the "rotten kids" maximize individual welfare resulting in an undersupply of effort levels (reminiscent of Alchian and Demsetz, op.cit.). The altruist can offer to transfer some of his/her own income to the "rotten kids" on condition that these behave in a cooperative way. Thus, a side-payment contract is envisioned. The theorem requires additionally two conditions, namely, (a) the "inequality condition," or that the rotten kid's maximum noncooperative income is small and enough can indeed be significantly augmented by transfers afforded by the altruist's income, and (b) the "restricted options condition," or that the rotten kid finds his/her selfish tendencies best served by the transfers within the household and not outside. Criticisms of the "rotten kid theorem" are not in short supply (Hirshleifer, 1977; Weintrobe, 1981; Bergstrom, 1987). By far the most interesting is Lindbeck and Weibull's (1988) who show that the selfish member ("smart kid") knowing the altruists' tendencies, can "free ride" in the repeated version of the game which leads to time inconsistency and Pareto inefficiency. This was brought out already by Buchanan (1975) in the case of fiscal transfers. The donee has the incentive to squander his own resources which makes his future position more precarious. This compels the altruist to make larger donation which in turn makes the altruist happier. The program is time inconsistent. A way out is to postulate "cooperative egoism" (Hammond, 1975; Kurz, 1978; Axelrod, 1984) where the donor expects reciprocity rather than strict altruism. In this paper, we employ "team spirit" which makes the agent consider team output rather individual share as important in lieu of strict altruism where the act of transfer itself is welfare improving. The paper thus connects three strands of literature: Becker's rotten kid theorem, Sen's altruism and Pareto efficiency in the workplace, and the possibility of Pareto efficiency when the labor elasticity of output is unequal to one. In addition, we explicitly allow for nonconstant returns to scale and nonidentical membership.

In Section II, we present a team of nonidentical numbers and we review the "cooperative program" and define team "Pareto efficiency." In III, we formulate the individual program of an team-spirited member and that of a self-interested member, define the "rotten kid sharing scheme" and show exhaustiveness. Of interest is the feature (Ω) that keeps the transfers being positive for different output elasticity values. This feature has to do with oversupply or undersupply of effort by selfish members under different elasticities. We define the affordability condition which allows the team-spirited the wherewithal to bribe the rotten kids to cooperate. We determine the optimal (Pareto-inducing)transfer levels and show that given affordability, the sharing scheme with optimal transfers will attain Pareto efficiency.

II. The Cooperative Program

We consider a team of $n \geq 2$ members. Let $i = 1, 2, \ldots, n$ represent any member. Every member i possesses a private utility function U_i defined as follows:

$$U_i = X_i - V_i(l_i) \qquad i = 1, 2, \ldots, n \qquad (1)$$

where the utility function over member i's output share, X_i, is assumed to be an identity (as in Holmstrom (1982) and Rabella (1988)). $V_i(l_i)$, the disutility function defined over effort level l_i, is assumed differentiable, strictly convex and nondecreasing in its argument. We assume that for all team members, all offers outside the team is inferior to the worst possible arrangement within the team. The exhaustiveness condition in cooperative team theory says that if total output is F, then $\sum_{i=1}^{n} X_i = F$. We assume the production function F(.) be quasi-concave, differentiable and nondecreasing in $L = \sum_{i=1}^{n} l_i$, the sum of all work efforts supplied. Wenow let $X_i = s_i F$, where $0 \leq s_i \leq 1$ is the ith proportional share in total output and $\sum_{i=1}^{n} s_i$.

Following Sen (op.cit.), we assume the team to have a nondiscriminatory social welfare function W defined as the sum of the private utility functions:

$$W = \sum_{i=1}^{n} U_i . \tag{2}$$

Using $s_i F = X_i$, the "cooperative program" is then

$$\max_{\{l_i\}} \{F - \sum_{i=1}^{n} V_i(l_i)\}. \tag{3}$$

This is a strictly concave program.
The 1° condition with respect to l_i, gives:

$$F' = V_i' \qquad i = 1, 2, \ldots, n. \tag{4}$$

where $V_i' = dV_i/dl_i$ and $F' = dF/dL$. Equation (4) generates the Pareto efficient cooperative effort level profile $\{l_i{}^c\}$ which generates the Pareto efficient cooperative production level, $F(\sum_{i=1}^{n} l_i{}^c)$. More importantly, (4) is also the Pareto efficiency condition for a market system equalizing the marginal product of labor with the marginal rate of substitution between labor and leissure. Thus, (14) remains an interesting reference point regardless of one's viewpoint regarding the social welfare function. Bigman (1991) analyses the implications of five different team objectives one of which is the maximization of total welfare. The latter, however, links readily with mainstream market economies which is its virtue. When this is the case, we simply say "Pareto efficiency" is attained.

III. The Individual Programs

We are dealing with a team where effort supply is voluntary and where individual tendencies may not warrant first-best efficiency. Let members 1, 2, ..., k < n be team-spirited and members k+1, k+2, ..., n be purely self-interested ("rotten"). We use h to represent a team spirited member and j to represent a self-interested one. Before proceeding we first define the "rotten kid sharing scheme."

Definition 1: A sharing scheme $\{s_i\}$ is called a "rotten kid sharing scheme" (rkss) if

$$\text{(i)}\quad s_h = (l_h/L) - (\Omega/k)\left(\sum_{j=k+1}^{n} t_j l_j/L\right) \quad h = 1, 2, \ldots, k$$

$$\text{(ii)}\quad s_j = (l_j/L)(1+\Omega t_j) \quad j = k+1, k+2, \ldots, n \tag{5}$$

$$\text{(iii)}\quad \Omega = \text{sgn}(\epsilon-1),\ \epsilon = F'L/F.$$

Remark 1: ϵ is the labor elasticity of output. Thus $\Omega = -1$ if $\epsilon < 1$, $\Omega = 0$ if $\epsilon = 1$ and $\Omega = 1$ if $\epsilon > 1$. This formula will be required to keep the required transfers positive. We assume that $\epsilon \neq 1$ stays strictly on one side of 1 for all values of L.

Definition 2: A sharing scheme $\{s_i\}$ is a cooperative team sharing if $\sum_{i=1}^{n} s_i = 1$, i.e., if it is exhaustive.

t_j is the rotten kid transfer parameter of j and $(t_j l_j/L)F$ is the "rotten kid transfer" to member j. The aggregate amount transferred is $(\sum_{j=k+1}^{n} t_j l_j/L)F$. The k team-spirited members each contribute (1/k) ofthis. The higher is (l_j/L), the higher is j's transfer allocation given t_j. But the arrangement is not automatic. Note that the base allocation is the "natural team sharing", i.e., $s_i = l_i/L, \forall_i$, if t = 0. The first step in the allocation subgame is this: every i claims (l_i/L) of F regardless of classification. The second step involves the side-payment or transfer: (a) every h sets aside $(1/k)(\sum l_j/L)F$ and (b) if every supplied l_{jc}, this amount is transferred to the self-interested group in the amount $t_j(l_j{}^c/L)F$ for every j. Thus, there is an implied side-payment contract where self-interested members obligate payments to themselves by not shirking. We avoid all problems involving credible commitments by assuming that every j knows for certain that every h is team-spirited and has no incentive to renege. The fact that team-spirited members share equally the transfer burden is immaterial here precisely because of team spirit definition. If any h happens to have a share less than his/her transfer obligation, some other team-spirited will cover for him/her with no prejudice to the former. What is more important is whether the team-spirited as a group can afford the total transfer. We first show that rkss is a cooperative team sharing scheme.

<u>Lemma</u> : rkss is exhaustive.

<u>Proof</u>: We show that for (5), $\sum_{i=1}^{n} s_i = 1$.

By definition we have from (5i)

$$\sum_{h=1}^{k} s_h = \sum_{h=1}^{k}(l_h/L) - \sum_{h=1}^{k}(\Omega/k)(\sum_{j=k+1}^{n} t_j l_j/L) = \sum_{h=1}^{k}(l_h/L) - (k\Omega/k)(\sum_{j=k+1}^{n} t_j l_j/L).$$

On the other hand, we have from (5ii)

$$\sum_{j=k+1}^{n} s_j = \sum_{j=k+1}^{n}(l_j/L) + \Omega\sum_{j=k+1}^{n} t_j(l_j/L)$$

Summing now across i = 1, 2, .., n, gives

$$\sum_{h=1}^{k}(l_h/L) + \sum_{j=k+1}^{n}(l_j/L) = 1.$$

Q.E.D.

We now assume that team-spirited member h attaches the same value to the share of others as he does to his own, i.e., his public total utility function as opposed to his private utility U_h is

$$W_h = U_h + \sum_{\substack{j=1 \\ j\neq h}}^{n} X_j \qquad h = 1, 2, \ldots, k. \qquad (6)$$

The structure of U_h avoids time-inconsistency as in Lindbeck and Weibull (op.cit.) because what enters the utility of h is not the utility of the rotten kids which can be defined to how infinite first derivatives at near-zero consumption.

Here, h's concern becomes team output, hence team spirit. Using Proposition 1 the team-spirited member's program is

$$\max_{l_h} \{F - V_h(l_h)\} \qquad h = 1, 2, \ldots, k. \qquad (7)$$

If F is concave, this is a strictly concave program and has a unique solution. If F is not concave, we assume V_h to be "very convex" to guarantee at least a local maximum. The 1° condition gives

$$F' = V_h', \qquad h = 1, 2, \ldots, k, \qquad (8)$$

which is identical to (4). Team spirited members always supply the Pareto efficient effort levels since the team output level rather than individual allocation is their sole interest. Team spirited members are not subject to free riding by a selfish member because the latter's welfare is not the obligor and h's welfare is not directly connected with the act of transfer itself.

The "rotten kid's" program is

$$\max_{l_j} \{(l_j/L)(1+\Omega t_j)F - V_j(l_j)\} \quad j = k+1, k+2, \ldots, n. \qquad (9)$$

A sufficient condition for this to be a strictly concave program is that $F/F'L \geq 1$. However, we do not assume this as it unnecessarily restricts our options. We again assume instead that and V_i'' is sizeable enough for the purpose.

The 1° condition gives:

$$\{(1+\Omega t_j)[(F/F'L)\sum_{j=k+1}^{n}(l_j/L) + (l_j/L)]\}F' = V_j' \qquad (10)$$

Comparing (10) with (4) we have immediately:

<u>Proposition 1</u>: Selfish member j supplies first-best effort level l_j^c if and only if the "rotten kid transfer" parameter has the value

$$t_j^* = \{[(1/\in)(\sum_{\substack{i=1\\ i\neq j}}^{n} l_i/L) + (l_j/L)]^{-1} - 1\}/\Omega > 0. \qquad (11)$$

<u>Proof</u>: (if) If (11) is true, (4) follows from (10). (only if) For (10) to reduce to (4), we need (11). Q.E.D.

<u>Remark 2</u>: The role of Ω is now clear from (11). Suppose $\in < 1$. Then $(1/\in)\Sigma l_i/L) + (l_j/L)]^{-1} < 1$ and the expression {.} < 1 in (11). But for $\in < 1$, $\Omega = -1$ so that $t_j^* > 0$. Suppose now $\in > 1$. Then the expression {.} > 1 in (11). But for $\in > 1$, $\Omega = 1$ so that again $t_j^* > 0$. Thus the positiveness of t_j^* is guaranteed by Ω. The economic motivation for this is contained in the following:

<u>Proposition 2</u>: If $t_j = 0$, $j = k+1, k+2, \ldots, n$, then optimum effort supply by selfish j, l_j^{cn}, falls below, equals or exceeds the cooperative effort supply, l_j^c, as $\in$ exceeds, equals or falls below 1.

<u>Proof</u>: Consider (10). Let $t_j = 0$. Then we have $\{(\Sigma l_j/L)(1/\epsilon) + (l_j/L)\}F' = V_j'$ which gives l_j^{cn}. If $\epsilon > 1$ and $\{.\} < 1$ in (10) and $F' > V_j'$. Since $V_j(.)$ is ("very") convex, equality between F' and V_j' (the condition for cooperative supply) requires l_j to rise above l_j^{cn}, i.e., $l_j^{cn} < l_j^{c}$. The other two cases follow by similar reasoning. Q.E.D.

The relationship between l_j^{cn} and l_j^{c} is dictated by the value of ϵ. When $\epsilon > 1$, or increasing returns to scale obtains, the rotten kid's effort supply falls short of the Pareto optimum level. He has to be bribed to work more. When $\epsilon < 1$, selfish effort supply exceeds the Pareto level and he has to be bribed tone down his enthusiasm.

<u>Remark 3</u>: As a check to the preceeding, we observe that when $\epsilon = 1$, $t_j^* = 0$ $\forall j = k+1, k+2, \ldots, n$. This should be expected from Fabella (op.cit.). That is, when the production function is characterized by a unitary labor elasticity of output, the optimal "rotten kid transfer" is zero. Proportional team sharing alone suffices to elicit first-best effort level from i, altruist or no, when $\epsilon = 1$.

We now proceed to more interesting cases with $\epsilon \neq 1$. We have mentioned the "inequality condition" in the "rotten kid theorem." There is here an analogous condition. The inequality condition has to do with the affordability of the aggregate transfer. If the team-spirited group's aggregate share in output $(\Sigma l_h{}^c/L)F$ is very small, it may not suffice to cover all the required transfers which is $(\sum_{j=k+1}^{n} t_j l_j{}^c/L)F$. Assuming zero minimum absolute retention on the part of the team-spirited member the inequality condition, which we call here the "affordability condition", is:

Affordability Condition with zero retention:

$$(\sum_{h=1}^{k} l_h{}^c / \sum_{j=k+1}^{n} t_j l_{jc}) \geq 1. \qquad (12)$$

If (12) is satisfied, then every j has no incentive to shirk within the possibilities offered by the team. The reason is that every selfish j is maximizing selfish individual utility with the "rotten kid transfer". Every other l_j level is inferior to $l_j{}^c$ in view of (10) and (11).

There is, however, a possibility of a team member being offered a better deal outside the team, say, by yet another team. If this offer improves on the member's share after the transfer, the member will, if selfishly optimizing, leave the team. Although "exit" is an important aspect of organization, our concern here is as assumed earlier only with members whose best bet is in staying with the team or in other words, whose options outside the team are inferior to the worst arrangement within the team. Thus, we skirt the need for the "restricted option" condition in the rotten kid theorem.

The following summary of our previous discussion is now obvious.

Proposition 3: Let the affordability conditions be satisfied. Let "rotten kid transfers" to the tune of (11) be offered. Then rkss sustains Pareto efficiency.

Proof: It is clear that (4) will hold for all $i = 1, 2, \ldots, n$. For every $h = 1, 2, \ldots, k$ (8) holds. If the conditions hold, (10) becomes $F' = V_j'$, $j = k+1, k+2, \ldots, n$ and the every j attains the best he could in the tema.
Q.E.D.

Why will some members be team-spirited and others selfish? One view is to say that individual tendencies are just given and nothing more need be said. Another way is to postulate the existence of an environment outside the team of which the the team-spirited member cares for but the selfish members do not. One plausible scenario is that the team-spirited is a member of an external exclusive club whose members belong to different teams and who make a substantial bet on the basis of team revenue or market share. This forces such members to consider the team output as very important. Team spirit is in this case not a given but is a result of yet another side bet. It is my belief that considerations of the "outside environment" especially a competitive one will be more and more important in team theory and in motivating nonselfish behaviors.

Example:

Let $n = 2$. Let member 1 be team spirited and member 2 be self-interested. Let the disutility of effort functions be:

$$\begin{aligned} &\text{(i)} \quad V_1(l_1) = c_1 l_1^2 - l_1 \\ &\text{(ii)} \quad V_2(l_2) = c_2 l_2^2 \end{aligned} \tag{13}$$

Thus, the two members are nonidentical. Let the production function be

$$F(L) = (l_1 + l_2)^2 \tag{14}$$

Clearly, we have $F'L/F = \epsilon = 2$ and remains so for all values of L. The "rotten kid sharing scheme" (rkss) is now

$$\begin{aligned} &\text{(i)} \quad s_1 = (l_1/L) - \Omega t(l_2/L) \\ &\text{(ii)} \quad s_2 = (l_2/L)(1+\Omega t) \qquad (15) \\ &\text{(iii)} \quad \Omega = \text{sgn}(\epsilon-1) = 1 \text{ for } \epsilon = 2. \end{aligned}$$

where $t_2 = t$. Obviously, $s_1 + s_2 = 1$ (Proposition 1).

The individual program for 1 is

$$\max_{l_1} \; [l_1 + l_2]^2 + l_1 - c_1 l_1^2 \tag{16}$$

The 1° condition for maximum is $2]l_1 + l_2] + 1 - 2c_1 l_1 = 0$ which gives

$$l_1 = (2l_2 + 1)/2(c_1 - 1) \tag{17}$$

The second order condition is satisfied if $c_1 > 1$. The individual program for 2 is

$$\max_{l_2} \{(l_2/L)(1+t)F - c_2 l_2^2\}. \tag{18}$$

The first order necessary condition for maximum is

$$(1+t)[F/F'L][l_1/L] + [l_2/L]F' - 2c_2 l_2 = 0. \tag{19}$$

The second order condition is satisfied if $c_2 > 1$. Since $(F/F'L) = \epsilon = ½$, player 2 will act cooperatively, i.e., $F' = 2c_2 l_2$, if and only if

$$t^* = [(½)(l_1^c/L) + l_2^c/L]^{-1} - 1 \tag{20}$$

where l_1^c and l_2^c are cooperative effort levels of 1 and 2. We first solve for l_1^c and l_2^c. Setting $F' = V_2' = 2c_2 l_2$ gives

$$l_2^c = l_1^c/(c_{2-1}) \tag{21}$$

Substituting this into (17) gives:

$$\text{(i)} \quad l_1^c = -(½)(c_2-1)[1-(c_1-1)(c_2-1)]^{-1}$$
$$\text{(ii)} \quad l_2^c = -(½)[1-(c_1-1)(c_2-1)]^{-1} \tag{22}$$

For l_1^c and l_2^c to be positive, we need $[1-(c_1-1)(_2-1)] < 0$. In the cooperative framework, total effort is

$$L = l_1^c + l_2^c = -(1/2)(c_2)[1-(c_1-1)(c_2-1)]^{-1} \tag{23}$$

Thus, we have

$$\text{(i)} \quad (l_1^c/L) = (c_2-1)/c_2 \qquad (24)$$
$$\text{(ii)} \quad (l_2^c/L) = (1/c_2)$$

This means $(l_1{}^c/L) + (l_2{}^c/L) = 1$ as expected. Substituting these into (20) gives

$$t^* = (c_2-1)/(c_2 + 1) \qquad (25)$$

Using (24) and (25) in (15) gives:

$$\text{(i)} s_1 = [(c_2-1)/c_2] - [(c_2-1)/(c_2 + 1)c_2]$$

$$\text{(ii)} \ s_2 = [1/c_2] + [(c_2-1)/(c_2+1)c_2] \qquad (26)$$

and again $s_1 + s_2 = 1$ after the transfer of t^*. In the transfer affordable? t^* is affordable if $t^* \leq (l_1{}^c/l_2{}^c)$ with zero retention. But $l_1{}^c/l_2{}^c = (c_2-1) > [(c_2-1)/(c_2+1)] = t^*$ if $c_2 > 1$. Thus, t^* is affordable.

Conclusion

In the foregoing, we considered a team consisting of two kinds of members: at least one team-spirited member and at least one self-interested member. The team-spirited member effectively cares only for the level of total output and is indifferent with respect to allocation. The self-interested member cares only for his share in total output. We then defined the "rotten kid sharing scheme" (rkss) which consists of two steps. Output is first allocated according to individual contribution to work effort. Then, the team-spirited effect transfers (the "rotten kid transfers") from their share to self-interested members on condition that no shirking occurred on the part of the self-interested members. We showed that rkss is an exhaustive sharing scheme (Proposition 1). We determined the optimal "rotten kid transfer" as that which allows the self-interested member to maximize his utility at Pareto optimal effort supply (Proposition 2). Thus, shirking will not occur within the possibilities offered by the team. We give the condition for the affordability of the transfers. When the affordability condition is satisfied, rkss with the optimal transfers will result in Pareto efficiency (Proposition 4).

Whence is team spiritedness? Team spirit is a ubiquitous concern in actual organizations and elicits considerable budgets to foster but mainstream economics seem unable or unwilling to deal with it. It is important to keep in mind Aumann and Sorin's apocalyptic observation that irrationality seems inherent in the attainment of the cooperative solutions in repeated games. The view we employ here is that in the short-run, team-spiritedness may be one form of irrationality but in the longer run may be a manifestation of a competitive outside environment that impacts an even selfish individual calculus. At least, that's what seems to bind such amorphous but anxiety-provoking notions as Japan, Inc. or Korea, Inc.

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