HETEROGENEITY IN ASSORTATIVE VOLUNTARY CONTRIBUTION GAMES

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> Do good outcomes exist for players with heterogeneous endowments?

N players with initial endowment w_i play the following public-goods game (**Social Dilemma**):

1. **Actions.** Each player i decides how much to contribute α_i.
2. **Matching.** Rank players by their effective contributions. Then, assign them to groups according to their ranking:
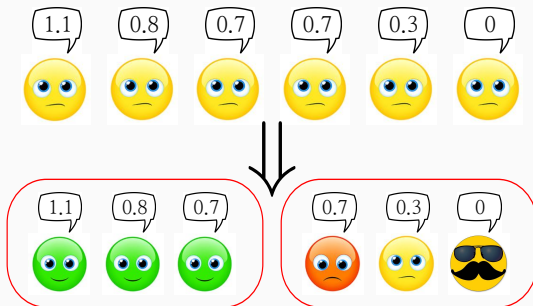
3. **Outcome.** Payoffs ϕ_i based on the contribution total in each group:

$$\phi_i\left(\alpha_i \mid \alpha_{-i}\right) = w_i\left(1 - \alpha_i\right) + Q \sum_{j \in G_i} \alpha_j^{\gamma} w_j$$

· The exponent γ: a measure of "how good" the public-good provision efficacy is.

· Heterogeneity in initial endowments w_i: indicates how much the players differ from each other.

Efficiency loss in case of heterogeneous players for Q = 0.6