Human Relations

Human Relations

- HR departments often organize company social activities for workers. Are they just trying to make workers happy?
- Social activities promote team spirit among workers of the company.
- Team spirit (altruism toward co-workers) may promote cooperation.

Team Production

- Team output is

$$y = a + b + 0.5ab$$

  where a and b are the effort levels of workers A and B.
  - there is complementarity in effort levels: marginal product of effort by one worker if the other worker puts in more effort

- The costs of effort are $0.5a^2$ and $0.5b^2$ for A and B respectively.

- The efficient level of effort is characterized by

$$1 + 0.5b - a = 0$$
$$1 + 0.5a - b = 0$$

- These two equations imply $a^* = b^* = 2$.

Non-cooperative Outcome

- Suppose each worker is paid $0.5y$.
- Worker A maximizes
$$0.5(a+b+0.5ab)-0.5a^2$$
- The first-order condition is
$$0.5(1+0.5b)-a=0$$
- Likewise the first-order condition for worker B is
$$0.5(1+0.5a)-b=0$$
- These two equations imply $a^{NC}=b^{NC}=2/3$.
- There is under-provision of effort.
- Worker A's utility is
$$u^{NC}=0.5\,(2/3+2/3+0.5(2/3)(2/3))-0.5(2/3)^2=5/9$$

Altruism

- Company picnics and outings improve human relations to make the two workers care about one another. Each worker now puts a weight $\beta = 0.5$ on the utility of the other worker.
- Worker A maximizes

$$U_A = u_A + \beta u_B = 0.5(a + b + 0.5ab) - 0.5a^2 + 0.5[0.5(a + b + 0.5ab) - 0.5b^2]$$

- The first-order condition is

$$0.75(1 + 0.5b) - a = 0$$

- Similarly the first-order condition for B is

$$0.75(1 + 0.5a) - b = 0$$

- These two equations imply $a^{HR} = b^{HR} = 6/5 > 2/3$.

Worker Utility

- Promoting human relations improve efficiency by reducing the free-riding problem.
- It is difficult to compare the worker's utility under the non-cooperative solution to the HR situation because his utility function has changed.
- Suppose we only focus on worker A's "selfish utility."
- $u_A^{NC} = 5/9$ as before.
- $u_A^{HR} = 0.5(6/5 + 6/5 + 0.5(6/5)(6/5)) - 0.5(6/5)^2 = 21/25 > 5/9$
- By caring about worker B, worker A helps himself!

Unreciprocated Love

- Worker A is more sentimental and puts a weight $\beta_A = 0.5$ on B's utility.
- Worker B only puts a weight of $\beta_B = 0.1$ on A's utility.
- Does caring about B help A himself?
- Can you explain why?