

TAWP LECTURES: THE MANY FACETS OF ALTRUISM

Day 3, January 21st, 2011
Joel Velasco

AGENDA

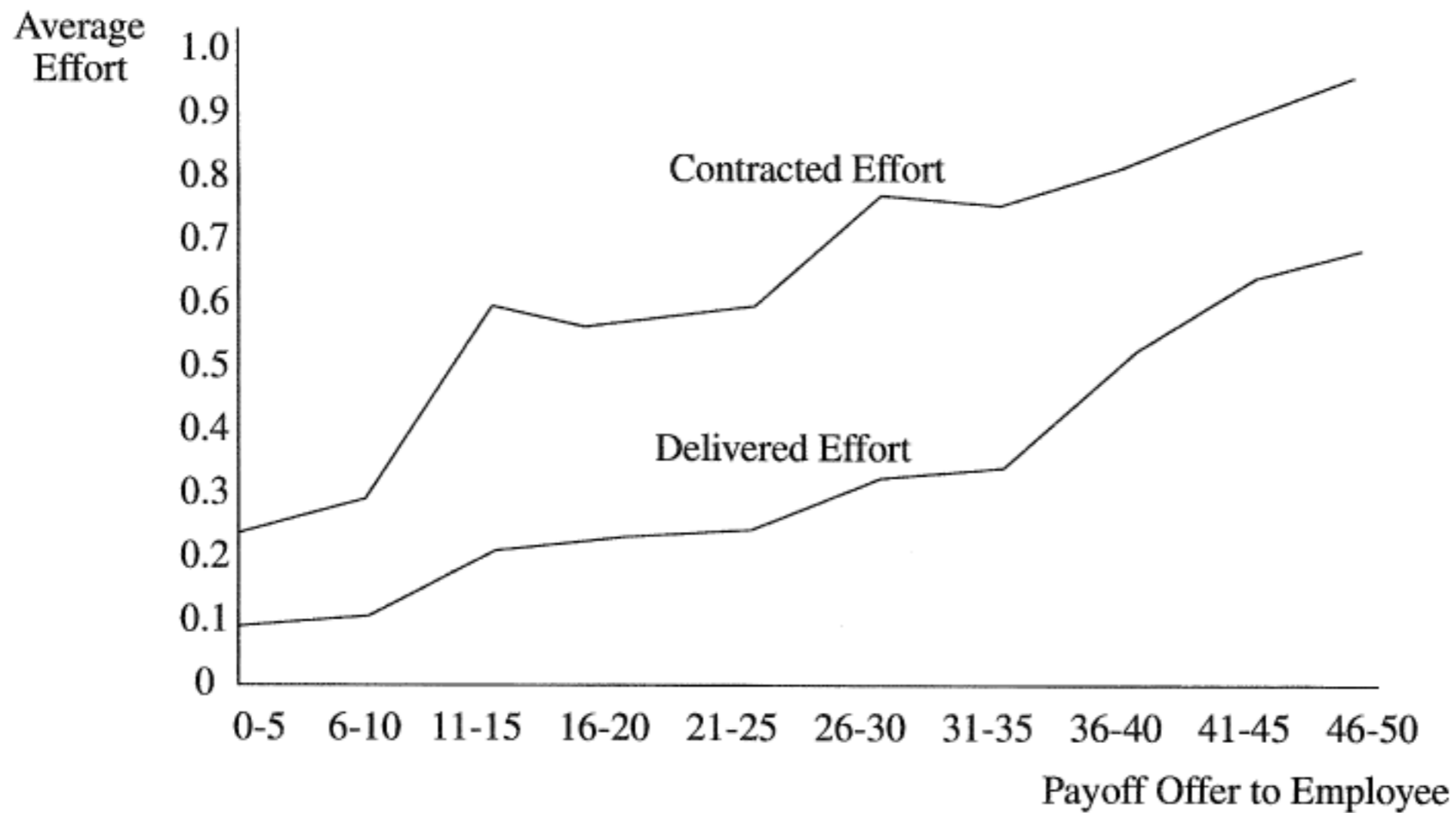
- Descriptions and experimental results of some games
- Why does this happen?
- Could this be natural selection?

FAMOUS GAMES FOR TESTING ALTRUISM AND COOPERATION

- Prisoner's Dilemma and the Stag Hunt
- Ultimatum game
 - Compare this to dictator
- Public Goods game
 - With or without the possibility of punishment
- Trust game

Payoff to employer is $100e-w$

Payoff to employee is $w-c(e)$



FAILURES OF RATIONALITY?

- How to explain the results of these games?
 - Perhaps people are just being really stupid. -- But we can still explain irrational behavior.
 - Gintis et al. explanation: humans are strong reciprocators -- we are inclined to cooperate and do so when others cooperate, but we also altruistically punish (punish defectors at a cost to ourselves).

ETHICS AND BIOLOGY

"Let us try to teach generosity and altruism, because we are born selfish. Let us understand what our own selfish genes are up to, because we may then at least have the chance to upset their designs, something that no other species has ever aspired to do."

Richard Dawkins, *The Selfish Gene* (p. 3)

This is just false.
If anything, we are born cooperators

NATURAL SELECTION

- It seems that natural selection of some kind is probably involved.
 - You can say that there are norms involved (you want to be fair). Assume you have internalized the norms. Okay, what are norms and how did they evolve? Why feel shame or guilt?
 - You could try to say individual selection (say reciprocal altruism) or kin selection. Seems doubtful to me.

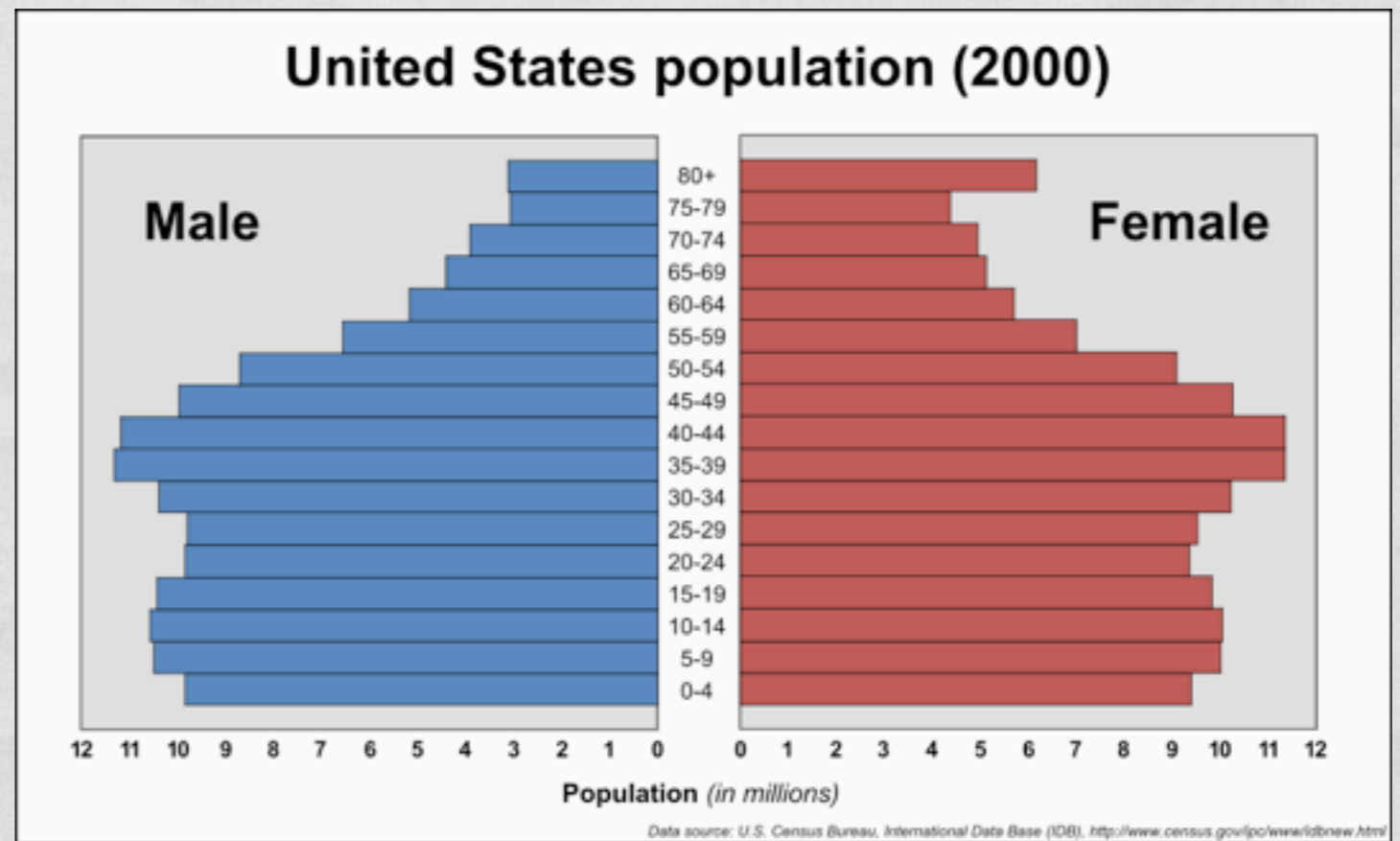
NATURAL SELECTION

- Gintis et al. believe that an gene-culture coevolution is involved.
 - A plausible story is cultural group selection (competition between different human cultures)
 - Cultural practices influenced the environment making certain behaviors (so genes) beneficial (say to avoid punishment).
 - Genetics influences cultural capacities and outcomes and influences the environment for cultural evolution.

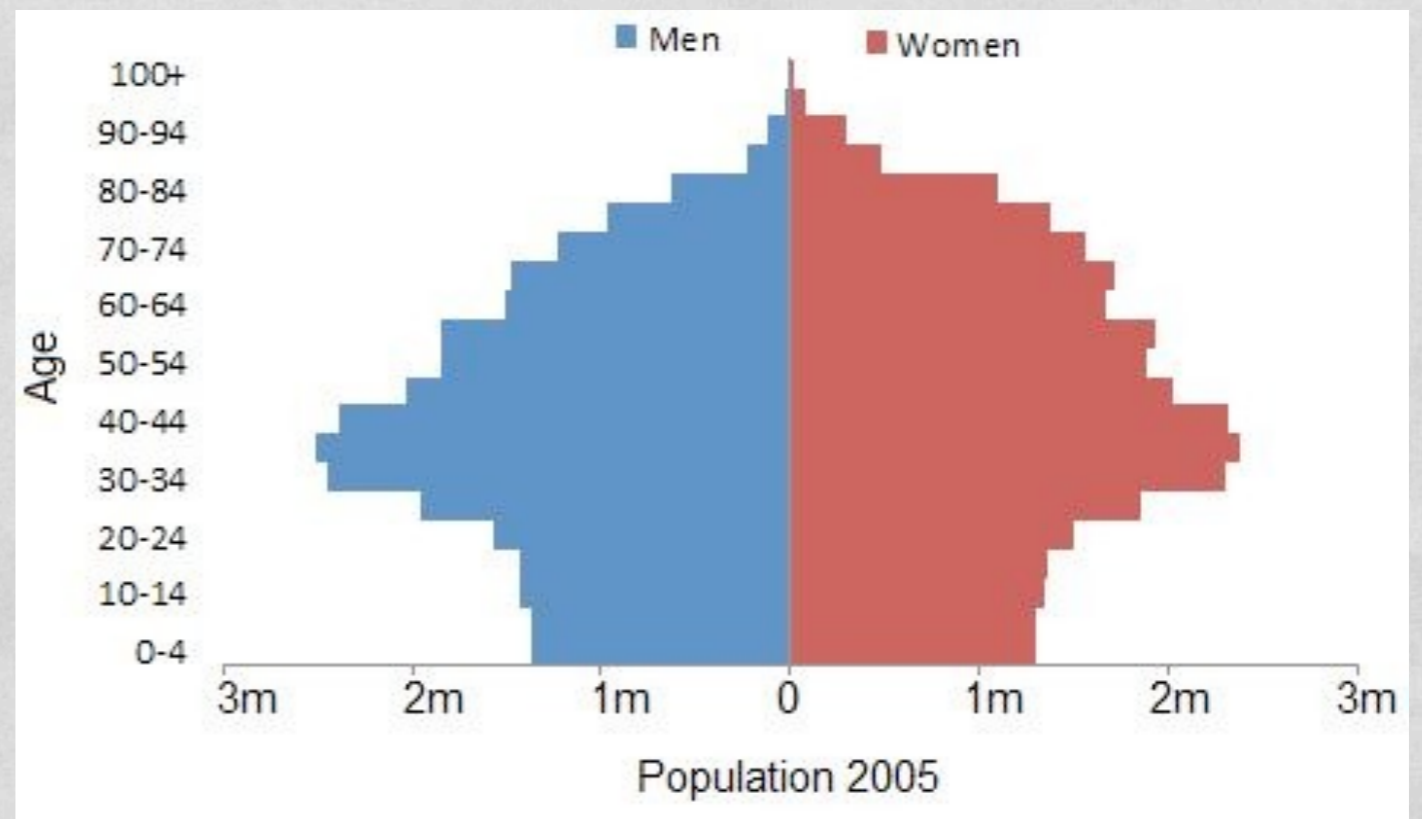
CULTURAL SELECTION

- Cavali-Sforza and Feldman (1981) Cultural Transmission and Evolution: A Quantitative Approach
- They look at a number of examples including declining birth rates in Western Europe in the 19th century
- For example, Italy went from 5 kids per woman to 2.
- They assume that natural selection on genes favors more kids - but they give models that show that cultural selection can overcome this.

US currently at 2.06
births per woman



Italy at 1.32



CULTURAL SELECTION

- On the individual 'cultural trait' model phenotypes have fitness and are more or less likely to spread, but they don't spread by genetics.
- They can be learned from others (parents, teachers, etc.)
- They can just be copied without 'teaching' (like wanting fewer kids)
- To spread counter to gene selection you need biased transmission

CULTURAL SELECTION

- In the birth rate cases, Cavali-Sforza and Feldman show that this was not gradual (5 then 4.5 then 3.5, etc.) and this was not simultaneous across classes.
- Modeling the results as two traits - 5 kids vs. 2 kids and having it spread through higher class first then spread through lower class is pretty accurate.
- This could not spread if you just did what your parents do.
- Also can't spread if you do what your peers do.

CULTURAL GROUP SELECTION

- Gintis et al. argue that strong reciprocity evolved by cultural group selection -- groups with one set of cultural traits (like norms) outcompete other groups.
 - Punishment, inequality leveling
 - Cultural transmission of norms, etc. is (historically) 'nearly universal' inside cultures
 - This makes the groups relatively homogenous with relatively low levels of 'migration' which is a recipe for stronger group selection

CULTURAL GROUP SELECTION

- Mark Pagel and others argue that humans are really cooperative but that this is not altruistic nor the result of group selection.
- Our natural environment is one in which benefits to your group usually directly benefit you (if you are a bad at team warfare, your side will lose and you will die).
- Ordinary, individual selection to maximize inclusive fitness explains this and we aren't being altruistic, just selfish.

WRAP UP

- It has been argued that humans are unique in the extent to which they exhibit cooperation with non-close kin.
- Are we thus “naturally selfish”?
 - Does this shed any light on our question about psychological egoism and motivational altruism?

HUMANS AS A MAJOR TRANSITION

- One view of social behavior is that basically there is no “real” altruism in nature - even in humans. Reciprocity, kin, and evolutionary dynamics show this to be the case.
 - Some people agree generally, but think that humans (and perhaps a few other cases) are special.
- Another view of social behavior is that altruism is everywhere, group selection is a good explanation, and it has happened in humans too.
 - Humans can still be special too due to culture