

Describe how Hardin formulates the population problem, and evaluate his assumptions and his solutions in light of other evidence from the course.

SUMMARY

Writing in 1968 to a highly educated scientific audience, Garrett Hardin presented a compelling formulation of the population problem. He posed the population problem in stark terms. First, he examined the relation of population to resources, and concluded population must be brought under control. He then analyzed the dynamics that have caused population to swell. From this analysis, he proposed solutions. Certain aspects of his problem formulation still deserve careful consideration, but today, richer ideas for solutions complement those he proposed.

Hardin rejected the wild hope that improved food production technology will allow an indefinite increase in population: "a finite world can support only a finite population." More specifically, we cannot hope to provide growth in *both* the material quality of life and population. Mathematically, both factors cannot be maximized at once; and biophysically, the calories available per person must decrease as population increases. Thus he invalidated Jeremy Bentham's goal of "the greatest good for the greatest number," and concluded "the optimum population is, then, less than the maximum." (Notably, also according to this logic, the strategy of decreasing population by increasing the "standard of living" (consumption), as predicted by the demographic transition model, might be reexamined.)

But we have difficulty choosing to limit population, *and* choosing between which goods to pursue in a world that cannot provide for every different good because we have left the choice of "the good" entirely to individuals in our capitalistic society. We act as if individual choices will somehow solve collective problems such as population. Adam Smith's *laissez-faire* doctrine of the invisible hand tempts us to think that a system of individuals pursuing their private interests will automatically serve the collective interest. But applying this would be disastrous. Hardin employed a key metaphor, the Tragedy of the Commons (ToC) to show why. When a resource is held "in common," with many people having "ownership" and access to it, Hardin reasoned, a self-interested "rational" actor will decide to increase his or her exploitation of the resource since he or she receives the full benefit of the increase, but the costs are spread among all users. The remorseless and tragic result of *each* person thinking this way, however, is ruin of the commons, and thus of everyone using it. The straightforward application of the "herdsman" analogy to world population is that each couple expects to experience a large benefit from having another child, but only a little of the full social and ecological cost.

Both Hardin's solutions, and their weaknesses, stem from things assumed in this model. His basic solution is that we must abandon the commons system in breeding (as we have already in food production and pollution - instances where we have used privatization and laws to achieve this). People must no longer be free to add unlimited numbers of offspring to the total load on the earth's ecosystems. This sounds simple enough, but the key question is *how* this restriction is to be achieved.

Hardin's rejection of some solutions stems from the individualistic assumptions of his metaphor. Particularly, he rejects appeals to conscience, because they would "select for" those without scruples over having more children. It is doubtful however that conscience is entirely genetic, nor perfectly transmitted by learning in families. Further, his assumption that were it not for "welfare," over-breeders would have to pay for their profligacy, runs in the face of evidence that parents whose infants die are paradoxically *both* more inclined to get pregnant again, *and* less likely to emotionally invest in their young. Welfare may indeed be part of solving the population problem. This is just one example where Hardin fails to differentiate reproductive behavior according to socio-economic conditions.

HARDIN'S KEY ASSUMPTIONS AND PROBLEM FORMULATION:

1. The world is biophysically finite.

- The more people there are, the less each person's share must be.
- Technology (ie, agricultural) cannot fundamentally alter this.
- We can't *both* maximize the number of people *and* satisfy every desire or "good" of everyone.
- Practically, biophysical limits dictate we must *both* stabilize population, *and* make hard choices about which "goods" are to be sought.
- Both steps will generate opposition, since many people will have to relinquish something.

2. Over-population is an example of the tragedy of the commons (ToC).

- Commons are un-owned or commonly-held "pool" resources that are "free," or not allocated by markets.
- Hardin's ToC model assumes that individuals are short-term, self-interested "rational" actors, seeking to maximize their own gains.
- Such actors will exploit commons (have more babies, add more cattle to pastures, pollute the air) as long as they believe the costs to them individually are less than the benefits.
- The system of welfare insulates individuals from bearing the full costs of over-reproducing.
- When every individual believes and behaves in this manner, commons are quickly filled, degraded, and ruined along with their erst-while exploiters.
- A laissez-faire system (letting individuals choose as they like) will not "as if by an invisible hand" solve over-population.

3. The "commons" system for breeding must be abandoned (as it has been for other resources).

- In other words, something must restrain individual reproduction. . .
- but it must not be individual conscience; appealing to conscience will only result in fewer people with conscience in the population (assuming here that it is genetic, or perfectly transmitted by learning).
- It should be accomplished by "mutual coercion mutually agreed upon."
- Sacrificing freedom to breed will obtain for us other more important freedoms which will otherwise be lost.
- "Coercive" restrictions on breeding could take a number of forms.
- The "right" to determine the size of one's family must be rescinded.
- This will protect the conscientious traits in the population.

4. The problem is then to gain peoples' consent to a system of coercion.

- People will consent if they understand the dire consequences of letting the population growth rate be set only by individuals' choices.
- Educating all people about the ToC, its consequences, and the alternatives to it, is necessary.
- Then various restraints and incentives for low reproduction can and must be instituted.

EVALUATION

While extremely clean & efficient technology might allow more people and material consumption than Hardin imagined, ultimately the trade-off between human numbers and quality of life would remain.

The model of the ToC, while compelling, generalizes from a faulty historical case study. In fact communities managed their commons; real humans are not so exclusively self-interested as to not care

what their fellows think of them, and not be able to manage common concerns. It is possible that communities do observe and regulate members' fertility, rather than leaving it up to individual choice. This might be coercion on a small scale, but it could accommodate much individual need also.

The assumption that were it not for "welfare," over-breeders would have to pay for their profligacy runs in the face of evidence that parents whose infants die are paradoxically both more inclined to get pregnant again, *and* less likely to emotionally invest in their young. Child survival and welfare enable parents to stop at fewer children, and provide security in old age, independent from offspring's or husband's income.

People's motivations to have babies are not the same everywhere and at every time. They vary depending on economic circumstances, culture, and gender. Understanding and altering these conditions is another route to changing fertility decisions. The cost/benefit conditions of childbearing decisions can be altered in many ways. But some such strategies may require an unrealistic degree of material economic development. Ones which do not include wealth redistribution, meeting unmet need, improving the economic and educational options for girls and women, and increasing accountability of fathers.

Blunt forms or coercion such as China's one-child policy are likely to have negative unintended consequences.