

a strategic situation between nations that leads to inequality within them

Nations cooperate and compete just as individual people do, and like individuals they can get trapped in situations where solutions that are of mutual benefit are unavailable. The benefits I am concerned with are those affecting large numbers of their citizens: economic well-being and how its benefits are distributed, and opportunities for social mobility. I shall assume that there is an optimal level of inequality in the incomes and wealth of a nation which provides incentives for people to develop their skills, take risks, and make efforts, benefiting society as a whole, the least well-off together with everyone else. I shall also assume that this level involves less inequality than in contemporary societies, where the few wealthiest own the vast majority of the resources. (I shall ignore the complication that this level may well vary from one nation to another. I take it not to vary enough to affect the argument.)

So why is there greater inequality than we would rationally choose? No doubt there are structural reasons in terms of ownership and inheritance. (One [recent analysis](#) traces the origin of inequality to the ancient domestication of animals, which can be accumulated and handed down¹. I [have argued](#)² that risk-taking inevitably leads to inequality, in the absence of equalizing factors.) But my purpose now is to point to a way that competition between nations can work to the detriment of their citizens. In effect, we have a classic prisoner's dilemma. Imagine two nations in close commercial contact, where taxes and benefits are lower in one than the other. A consequence will be that the nation with the lower taxes will be a preferred site of investment for capital from both nations. (I suspect that corporation taxes are more important than individual taxation in this connection, but

1 <https://www.nature.com/articles/nature24646>

2 <http://www.fernieroad.ca/a/variability%20and%20expectation.pdf>

there is a fine line between them given modern systems of tax evasion, and individual people and their wealth can move just as corporate investment can. Inheritance taxes play a large role here. Their value is described in [this article](#) in *The Economist*³.) That is what leads to a prisoner's dilemma⁴: both are better off with taxes and benefits above some threshold but each is worst off if it has higher taxes and benefits than the other, so each adopts taxes and benefits below this threshold for fear of competition with the other. The result is far from optimal for both. The situation can be summed up with a familiar table

nation A.....	
		higher taxes	lower taxes
nation B	higher taxes	unsatisfactory/unsatisfactory	advantageous/victimized
	lower taxes	victimized/advantageous	good/good

The good outcome here for either party has a medium level of investment determined purely by economic opportunity and maintains inequality at a low level. In the advantageous outcome, which is always one-sided, there is the greatest level of investment, some of it more than is economically justified and tending to create inflation. In this advantageous outcome there is also a medium level of inequality, maintained like the greatest level of investment only as long as the nation is paired with another which has a higher level of taxation and benefits. The victimized outcome, always the pair of the advantageous outcome, has investment At a low level and as a result not enough economic activity to maintain benefits which even out the wealth distribution. As a result even the least advantaged are worse off than they would be in the other outcomes. In the unsatisfactory outcome there is a medium level of investment and a high level of inequality. This is the outcome for both nations if they both respond to the threat of the

3 "Inheritance","Taxing Inheritance", "Redistribution". *The Economist* 25 Nov 2017: 13, 2-22, 23-24.

4 https://en.wikipedia.org/wiki/Prisoner%27s_dilemma

other by lowering their own taxes, and thus the outcome for both after one has responded to the other's decrease with its own.

The ordering of the outcomes "optimum > good > unsatisfactory > victimized" results from [Pareto dominance](#)⁵: one outcome is better than another if it has higher investment and the same inequality, less inequality and the same investment, or is better in both respects⁶.

The result is a race to the bottom. Out of fear of landing in the victimized situation, each will institute lower taxes, and the result will be satisfactory for neither. Neither will achieve the advantage over the other that having lower taxes might provide, but both will suffer high levels of inequality.

What is the optimum level of inequality? A broad comparison of different past and present societies would be relevant. But when I try to imagine a society isolated from competition with others, I find myself thinking that top incomes three times as much as bottom incomes, after taxes, would provide strong incentives. If greater differentials were not available and imaginable from precedents elsewhere the prospect of tripling one's income would be extremely appealing. But in contemporary societies the differences are vastly greater. (In the US at the moment the top 1% has an average income of [81 times](#) the average of the bottom half⁷.) As I imagine an equal society, the degree of inequality, as measured by the [Gini coefficient](#), would be very low not because

5 https://en.wikipedia.org/wiki/Pareto_efficiency

6 Pareto efficiency implicitly uses the ordering I have described. It is named after Vilfredo Pareto, who was fascinated by issues of inequality, and how to measure it. He discovered that in very many societies the distribution of income is nothing like a bell curve but concentrates its greater numbers at the lower end: many poor, few rich.

7 <http://money.cnn.com/2016/12/22/news/economy/us-inequality-worse/index.html>

everyone brought home exactly the same amount but because the differences in income would be proportional to the numbers of people earning them⁸. For example in a drastically simplified situation in which two thirds of the population earns a uniform basic wage and one third of the population earns three times as much, the Gini coefficient would be zero, the same as absolute equality.

8 https://en.wikipedia.org/wiki/Gini_coefficient

Of course nations interact in more complex ways than 2-nation competition. The economies of many nations affect one another. There are a number of N-person generalizations of the 2-person prisoner's dilemma. One of the most revealing of them is due to Philip Pettit in his "Free Riding and Foul Dealing"⁹. Pettit distinguishes between simple free riding cases in which one agent's defection from the mutually beneficial cooperation does not doom the results of such cooperation but does take away the incentive for joining in it, and, on the other hand, foul dealing cases in which even one agent's defection ruins the benefits to everyone. The basic important fact is that to the essential features of 2-person prisoner's dilemmas generalize to arbitrarily many agents: we still find a race to the bottom prompted by the fear that one agent may go for the possibly slight advantages of abstaining from a mutually beneficial cooperation. I believe that some situations between nations also fit Pettit's foul dealing pattern. Sometimes one nation's decision to attract investment away from others at the price of its own citizens' well-being can adversely affect many other economies. At first the defecting nation's economy will do well, as it attracts investment and talent from others, but as the effects of defection begin to bite investment will become uniform again, leaving a residue of inequality. Whatever its deeper causes, this is easily observed in the modern world.

Suppose that strategic situations along the lines of these are among the causes of inequality and barriers to general prosperity. What can be done to defuse them? An obvious immediate suggestion is to adopt this strategic frame in normal political rhetoric, with the sense that a mutually destructive bid for dominance gives a temporary advantage that will eventually fade leaving a damaged economy and society. An analogy is nations that aim at short-term advantage by defecting from climate change measures.

9 *The Journal of Philosophy*, 83, 7, 1986, pp. 361-379

The hope is that framing the issues in this way will encourage mutual restraint, with the realization that any advantages gained are likely to be temporary and to result in a worse situation than one started from.

More systematic suggestions involve the creation of institutions. Supra-national institutions regulating the interactions between nations are obvious means. The natural institutions to employ are those that already exist for economic and social reasons, such as the European union. Harmonization of tax rates within such cooperating nations has obvious attractions. A more drastic suggestion is along the lines of overlapping jurisdictions, as explained [here](#)¹⁰. For example, nations with close economic ties could have representatives on each other's tax-setting bodies. Measures like this would need drastic institutional changes, though. They are very unlikely to be adopted for any single motive, however powerful.

Adam Morton, November 2017

10 <http://www.fernieroad.ca/a/unbundling.html>