Tyranny for the Commons Man
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HOW DOES one escape a dilemma in which multiple individuals acting in their own rational self-interest can ultimately destroy a shared limited resource—even when it is clear this serves no one in the long run?

In 1968, Science published Garrett Hardin’s landmark article “The Tragedy of the Commons.” Hardin relied on the metaphor of a small English village in the eighteenth century. Each family has a house with a small plot of land for growing vegetables. In addition, there is a large, common area used by all the villagers to graze their livestock. Each villager has a cow or two that provide the family with its milk. The common area is large enough to support the entire village. Then the village begins to grow. Families get larger, and procure an extra cow. New families move in. Suddenly, the common is threatened; it is being overgrazed. Grass is consumed so fast that there is not enough time for it to replenish itself before rains erode the topsoil. Each cow no longer has quite enough to eat, and thus yields less milk than it did before. If the overuse of the common continues, there will be a slow but sure decrease in the number of animals it can support until, finally, it becomes useless for grazing.

We are now dealing with a tragedy of the global commons. There is one earth, one atmosphere and one water supply, and 6 billion people are sharing it. Badly. The wealthy are overgrazing, and the poor can’t wait to join them. Examples are plentiful: the overharvesting of trees by lumber companies; the overplanting of land by farmers; the overdevelopment of suburban communities; the extraction of petroleum from a common pool by oil companies; and the overcrowding of highways and other public facilities. These behaviors make whatever benefits users derive from those resources vanishingly small. The issues are as far ranging as contamination of water by toxic wastes, pollution of the atmosphere by carbon dioxide and various particulates, and profligate use of water and energy. Now we must tackle the global-commons problem before the line on Al Gore’s global-warming graph reaches the moon.

From the point of view of an individual villager, since he needs the milk from his two or three cows even if they produce less than before, less is better than nothing. Besides, how much difference will it make if he alone shows restraint in his use of the common? Indeed, his temptation might be to add still another cow to make up for this setback. The slow decrease in overall dairy-product yield in the village has little impact on him, especially in comparison to how he would be affected if he stopped using the common altogether. What would be best for this villager is if everyone else in the village showed restraint. Then he could continue to use the common as before, with plenty of grass to take care of his cows. He could, in this way, be a free rider on the moderation shown by others. But of course, everyone would like to be a free rider. The result is that none of the villagers modify their behavior, and the common is destroyed.

Rational individuals (and states) will always benefit by being free riders in the short term. If you do the right thing, you lose; you’re a sucker. Doing the wrong thing at least keeps you even. In the long term, when you decide to keep yourself even with others, you (and everyone else) still end up
worse-off than before. As the common erodes, it becomes less able to sustain those who depend on it.

There is an important and quite general feature to the commons problem—what economist Thomas Schelling called “the tyranny of small decisions.” When deciding whether to add another cow to your herd, you are not choosing to destroy a common resource in order to get a little more milk. Faced with that choice, you might refrain. The choice you see is a little more milk in exchange for a little less grass. Good deal. So, commons problems are marked by conflicts between individual and collective interests and between short-term and long-term interests. It is from this tragic dilemma that we must escape.

ONE APPROACH to the commons problem appeals to the moral side of people and states. It suggests that we should educate the populace about the dangers and social costs of pollution, wanton use of energy and public lands, and the like, and exhort them to exercise moderation as citizens of the world. In theory, if we tell people the right thing to do—and show that if they all adhere to a set of behaviors, the world will be better-off—we can count on them to act morally. But such appeals are unlikely to have a broad-enough influence to do the job. Some people will do the right thing simply because it’s the right thing, but many others will not curb their habits, desires, and need for more and better. This is true even within a society that shares at least some values. Globally, a strictly moral appeal is close to a nonstarter (though, as I will suggest at the end of this article, finding a way to moralize the global commons effectively could be quite powerful).

A second approach appeals to our self-interested side, offering incentives for good behavior and punishments for bad. It amounts to using various economic tools to privatize the commons. So nonpolluters and energy conservers get tax breaks. And polluters pay fees for the privilege. President Obama’s cap-and-trade plan for reducing greenhouse-gas emissions is a ready example. And we already see this logic in effect domestically on a small scale. Purchasers of inefficient automobiles pay a luxury tax. Tobacco and alcohol are taxed to help defray the social (medical) costs of their use. Permits are sold to regulate the use of parks and beaches. Fees (tolls) are charged for highway use, and they can be scaled so it is almost prohibitively expensive to drive during rush hour. A tax is added to downtown parking to defray costs and improve the quality of mass transit.

Policies like these are designed to reframe the incentives in the relevant situations, making individual interest line up with collective interest. We can choose not to exercise restraint, but only at a price. And the price will be high enough either to induce compliance or to compensate society for profligacy.

This approach is promising. Yet there are better and worse ways to use incentives and restraints to save the global commons. Psychologists have developed insights in recent years about how people make decisions; efforts to change behavior can be made more effective. Some of psychology’s lessons can be applied to interactions between states, thereby helping governments better approach negotiations. Others target individuals. Inherent to the global-commons problem is the need not only for behavioral change by states but also by their citizens. Also inherent to the global-commons problem is a need for perhaps-unprecedented international cooperation. Free riders will make addressing global warming extremely difficult. And the developed world already has myriad incentives to continue its excesses. Maintaining GDP growth, securing better resources for their populations, increasing market competitiveness and even controlling national-security-dominating sea-lanes can be extremely important to states—just as important in the short run, perhaps, as conserving resources is in the long run. The developing world will be fast on the developed world’s heels, hoping to employ the same abuses to impel its societies onward. The key to success lies in overcoming the tyranny of small decisions.

THE COMMONS problem starts at its base as a more sophisticated version of the prisoner’s
dilemma, an exercise that has been used to model everything from littering to nuclear proliferation. As we know from these exercises in which convicts stay mum or rat out their partners to cut a deal on their sentence, both inmates do better collectively over the long term by cooperating with each other and staying silent. But in any one-shot game, there will be no trust between the two of them and so they will both rat out one another. People often think negotiations about the global commons aren’t dominated by the nasty and brutish forces one normally associates with international power politics (or our nation’s prisons). After all, goes the argument, the commons involves “softer” security issues and sits so low on the foreign-policy-priority food chain that different tools and techniques are required. But this is not the case. Every one of the psychological strategies for approaching international talks is built on the idea of “cooperating” or “defecting.” And whether one is dealing with hard or soft stakes, iterative and cooperative negotiations with clear costs and incentives are the most successful. At all levels of the international-negotiating spectrum, there are situations in which cooperation is possible even though people are vulnerable in the short run to exploitation.

Research has taught us that for cooperation to emerge, games must have multiple moves and the future has to matter. The logic is straightforward: if you are out to win a one-move game, defection is the dominant strategy (like the tyranny of small decisions in the commons problem). But defection will lose its dominance if what you do on your turn will affect what the other player does on his next. Thus, in attempting to produce cooperation among states to conserve the global commons, we should seek to create multiple-move negotiations in which the future matters. Make a trade agreement conditional on a greenhouse-gas treaty. Make opening one’s borders to imports conditional on refraining from overfishing. This is an argument, in short, for ongoing international entanglements. It is a way to avoid the anarchy of a global environment where no one governing body enforces all laws.

Research also shows that even if there is no way to enforce agreements, people (and governments) who talk about the dilemma are more likely to work together than those who do not. So one major aim of the Obama administration’s Major Economies Forum on Energy and Climate is to avoid the failures of the Kyoto Protocol discussions. As Andrew Revkin writes in the New York Times, “While a grand if loosely outlined accord was forged in Japan in December of [1997], subsequent negotiations over details left the pact emasculated, by many accounts, and also without United States support.” The Kyoto treaty, sweeping and lacking in specifics, didn’t necessitate much follow-through or give-and-take among its signatories. As such, it was rejected by the Senate and later wholly jettisoned by the Bush administration. The Kyoto fiasco goes to show that if parties aren’t in it for the long haul and don’t succeed in setting common terms, defection is likely. So conversation in addition to the threat of retaliation seems to foster cooperation.

And chances of success are further increased if you “start out nice.” That is, cooperating. True, cooperators are vulnerable to exploitation, but they open the possibility of a virtuous cycle of mutual cooperation. Defectors are doomed to a vicious cycle of defection. Political scientist Robert Axelrod showed some years ago that the simple strategy of “tit-for-tat”—start out cooperating and from then on, do whatever your partner did on the previous turn—bested all comers in a prisoner’s dilemma “tournament.” (Actually, it bested all comers but “tit-for-two-tats,” an even nicer, more forgiving strategy.) And this was in a situation in which the aim was to win, not to cooperate. The point is that cooperation does work and can be incentivized so it becomes the preferable strategy.

This is not a blindly optimistic set of recommendations, simply relying on all states’ better natures. As key in negotiations is the need to punish defection. What Axelrod found is that overly cooperative strategies were vulnerable to exploitation by defectors. And once a defection in tit-for-tat reciprocation begins, it is hard to avoid a vicious cycle.

It is difficult enough to get cooperation from largely law-abiding citizens within a state. In the international sphere with no supranational governing body, the task is almost insurmountable. All the climate-change treaties will continue to be useless without real costs for defections and real incentives for cooperation.
AS STATES enter these negotiating processes, leaders must also beware of “naive realism” and “reactive devaluation.” Parties to a conflict tend to think that while they see the issue “objectively,” the other side is biased. Stanford psychology professor Lee Ross dubs this psychological characteristic naive realism, and it’s not hard to see how it can lead to a negotiating impasse (“We're being so reasonable; why are they so intransigent?”). It is hard to get into a virtuous cycle of cooperation if the parties cannot see the negotiations from the other side’s perspective. Because not only do states suffer from naive realism but they tend also to devalue what the other party offers. Suppose, for example, limits on fishing rights in international waters and standards for smokestack emissions are on the table. “We’ll pollute less if we can fish more,” you offer. “No deal,” says your negotiating partner, “you’re getting more than you’re giving.” “OK, then,” you say, “we’ll fish less if we can pollute more.” “No deal,” says your negotiating partner, “you’re getting more than you’re giving.” And you, of course, would say the same thing if your partner made either of those offers. We seem to assume that if someone is willing to give something up, it must be worth less than we think it is.

Both naive realism and reactive devaluation are real obstacles to reaching negotiated agreements, and I don’t see how we can effectively save the global commons without brokering international accords. Nor do I see a way to eliminate naive realism and reactive devaluation. My hope is that if negotiating partners know about these processes, they will stifle their first impulse to reject offers, understanding that these offers are probably more reasonable than they appear. It would likely help to assume the best rather than the worst at the start of a negotiation, again affirming the need to “start out nice.” That way, the other party’s offers won’t automatically arouse suspicion. And it would help to have colleagues role-play the other side’s arguments in advance. If you live with those arguments for a while, you may come to see that the other side of the story is just as reasonable as is yours. Just as perspective-taking is essential in a good friend, a good parent, a good lover, a good teacher or a good doctor, so it is in a good negotiator.

AND AGAIN, as we’re creating these iterative processes not only multi-play but also multi-option games are necessary. It is a truism of negotiation that the more things on the table, the better the parties can do. With more of what you want at stake and what you don’t want on offer, the effects of reactive devaluation can be minimized. The way to make a negotiation into a non-zero-sum game is to include items that the parties don’t care about equally. If I give in on A–D, he’ll give in on E–H. Since I don’t care so much about A–D, I’ll end up in a better position than that in which I started. Since he doesn’t care so much about E–H, so will he. The way to reach a mutually beneficial agreement is for each party to give in on the things that matter more to the other party than they do to him. The more things on the table, the more likely it is that some of them will be valued differently by the various parties. And what is true logically is also true empirically. In MBA-program negotiating exercises, students get higher scores when there are, say, eight items in play than when there are only four. The negotiators—both sides—do better.

But, alas, this recommendation comes with a caveat: what is true logically and empirically is not true psychologically. The participants may do better, but they feel worse, because they leave the negotiation thinking about all the things they gave up. As psychologists Daniel Kahneman and Amos Tversky have captured with “prospect theory” (for which Kahneman was awarded a Nobel Prize in economics), losses hurt more than wins help. “Sure, I gained on items A–D, but I lost on items E–H. Four losses. Disaster!” If each thing you give up hurts more than each thing you acquire, the feeling of loss multiplies more than the feeling of gain does. So you conduct a successful, complex deal and you feel like a failure. All you can think about is what you left on the table.

Why should this matter if, objectively, you actually did better in the complex negotiation than you would have in a simpler one? It matters because whether you participate in further talks depends on how good you feel about the one you just completed. As we know, iterative processes make for better
outcomes. If you feel that you failed or were out-negotiated or were exploited, you won’t come back for more. So, paradoxically perhaps, the research suggests that you will be more likely to have sustained negotiations if you keep the agendas simple than if you make them complex and multidimensional, so that everyone can “win” something.

Thus we’re left at something of an impasse. Complexity means everyone can win, which is good. But it also means that everyone can lose, which, for psychological reasons, is bad. Perhaps the thing to do is not worry so much about the future attitude of negotiators who are stung by what they gave up in the last round. You can always bring in fresh negotiators, who are not carrying that psychological baggage, to the next one.

A final point to bear in mind is that states care not only about their overall sacrifice in a negotiation but also about what other states sacrifice. They care about their gains and losses relative to those of their competitors. This concern is both about real comparative or strategic advantage and about fairness. In the end, we need highly iterative negotiations, where all sides relinquish something, parties talk to one another and start out cooperating, and manageable tasks are settled over a long period of time.

The same findings from psychology that speak to relations among states also address the obstacles faced when dealing with individual behavioral change. Without change on the domestic level, international agreements will mean little. And for change to occur at home, people within states must be willing to make sacrifices.

BUT ON the international level we see time and again that change can be difficult to effect. The same is true for individuals. As economist Robert Frank has observed, people, like states, care more about their relative position in a social or economic hierarchy than they do about their absolute position. Better to keep your thermostat at seventy-eight degrees in summer when others are doing the same than to keep it at seventy-four when others have theirs at seventy-two. Knowing that “we’re all in the same boat” matters to people just as it does to states.

And sacrifice must be shared in a way that is publicly verifiable because people, like states, care about fairness. They care enough to punish those who exploit power, even at a cost to themselves, as the much-studied “ultimatum game” has shown. In the ultimatum game, one player is given a resource—say $10—to share with another player. The second player can either accept the offer, with each player getting the designated share, or reject it, with each player getting nothing. Of course, a “rational” player in control of the $10 will make a small offer, knowing that the other “rational” player will accept it, since something is better than nothing. But, as we’ve come to learn, recipients routinely reject small offers even though it makes them worse-off. And the proposers, who know that recipients will reject small offers, in fact make large ones. The most common offer is a fifty-fifty split. So evidence of shared sacrifice is important to satisfy people’s sense of justice.

This sacrifice is not impossible to imagine. People are adaptable. They get used to things. If you make them pay more for gas, or make them keep their houses colder in winter and warmer in summer, they’ll be angry, but they’ll get over it. So the time to demand sacrifice is early in an official’s term in office. By the time the official is up for reelection, people will have taken seventy-eight-degree thermostat settings in the summer as the new normal.

TO EASE such behavioral change, much as in international negotiations, tasks should be scaled down to manageable pieces. Nobody is going to save the global commons alone. But each of us can forgo meat a few times a week, fly one less time a year, carry cloth tote bags and so on. These bite-size chunks will make it easier for people to feel like they are doing their part. Though these sorts of small efforts probably cannot be legislated, they make wonderful topics for bully pulpits and examples for opinion leaders to set. The Obama vegetable garden by itself isn’t going to change how
Americans eat. But many social phenomena are susceptible to what Duke economics and political science professor Timur Kuran describes as “informational cascades.” Someone out there who won’t take the lead in using cloth bags is almost ready to do so. Just one example will tip that person’s behavior. And once there are two adherents, other people, whose “tipping threshold” is a bit higher, will come on board. This will make it easier for others, and so on. Before you know it, plastic grocery bags will have gone the way of the rotary phone.

And in yet another bit of psychological tweaking, we can focus on what will be lost, not what will be gained. Remember prospect theory. Losing $100 makes people feel more than twice as bad as winning $100 makes people feel good. Kahneman and Tversky also showed that it is relatively easy to induce people to think of the same decision as involving gains or losses by manipulating the way in which the decision is framed: we aren’t gaining clean drinking water by conserving, we’re losing it by polluting; we aren’t saving lives by ridding the air we breathe of contaminants, we’re killing people by not doing so.

THE IDEA of people dying is a “vivid particular”—a concrete example of what behavioral stasis will cause. Paul Slovic, a professor of psychology at the University of Oregon, has pointed out how powerless people feel when confronted with millions of sick and malnourished children living in the third world. “What can I do to make a difference?” people ask. Slovic calls it “psychic numbing.” But these same people will contribute $20 a month to World Vision to take care of a particular child, with a name, a photo and a life story. We can capitalize on the power of the vivid example by encouraging people to think about the fact that their children (or grandchildren) won’t be able to use the beach that they so loved when they were young, because it won’t be there any more. Without such vivid-particular images, problems may seem intractable and individuals may become immobilized.

A focus on vivid particulars has another advantage as well. Though there is less disagreement among experts about our ecological future than some would claim, the problem is that the dire forecasts are still probabilistic rather than certain. People do not think well about uncertainty, especially in the midrange between “can’t happen” and “must happen.” However, if the events in question are vivid, probabilities recede in importance. As long as it “can happen,” and it involves a vivid particular, people respond to potential calamities as if they are certain. We can then leave the fight about probabilities to experts while citizens do what they can to save the beaches for their children.

It helps, too, to make the dialogue about welfare, not wealth. Kathleen Vohs, a professor at the University of Minnesota, and her colleagues have shown in a series of experiments that when money is introduced into the picture, even in subtle ways (e.g., a computer screen saver with currency floating around), it makes people more individualistic, less social and less amenable. If cooperation is what saving the global commons needs, focus the arguments on welfare rather than wealth. Get money out of the picture. This might mean downplaying the economic consequences of threats to the global commons, and highlighting the human consequences. Doing this will not only suppress the tendency of people to go it alone but it will also moralize conserving the commons.

WE CAN see that in all of these cases, it is in some part about reframing these dilemmas to play to people’s sense of right and wrong. There is good evidence that moral motives have a stronger hold on people than purely instrumental, economic ones. University of Pennsylvania psychologist Paul Rozin has shown that people who are vegetarians for moral reasons (treatment of animals, profligate use of natural resources) are disgusted, not tempted, by the thought of eating meat. In contrast, those we might call “health vegetarians” remain tempted by those juicy burgers, whether or not they succumb. Similarly, the public attitude toward cigarettes turned on a dime once the effects of secondhand smoke on innocent victims cast smoking in moral terms. No longer were we hesitant to ask someone in a restaurant if he minded blowing his smoke in another direction. We piped right up, full of righteous indignation. Now, we don’t even have to venture forth; more and more, smoking in indoor public places is against the law.
I know that moralizing the preservation of the global commons is easier said than done. There is plenty of preaching about the environment already, and it doesn’t seem to be doing a good-enough job. Whether it will eventually create a new, widely shared moral norm remains to be seen. My experience with college students leaves me hopeful; for many of them, “steward the earth” has become the eleventh commandment, or replaced one of the original ten. The guiding idea of many students I talk to is roughly that the earth is a treasure, to be protected and nurtured and sustained, and not a “resource” to be used and discarded. If you have an attitude like that, conservation entails no sacrifice; it becomes part of the pleasure of being alive.

ABOVE ALL, if we’re going to save the global commons, as individuals and as a nation, we have to give up the doctrine of American exceptionalism. Ninety percent of people think they are above-average drivers. Ninety-nine percent of newlyweds think they will not be in the fifty percent of married couples who divorce. Eighty-five percent of college professors think they’re better than the average teacher. And in international negotiations, the United States always thinks it is better than everyone else—more reasonable, more generous, more concerned with justice. We have to acknowledge that there really is no justification for having an ecological footprint that is three or four times the per capita footprint of other developed countries, and more than ten times the footprint of developing countries. We have to get over ourselves, at least a little bit.

I know, I know. America really is exceptional. We are entitled to drive Hummers. We need those tanks because the safety of our kids is more important than the safety of anyone else’s. This feels right and true, so I understand how it might govern the attitudes and behaviors of most people (in America). But then I remind myself of the phenomenon of naive realism. Everybody, everywhere, has exactly the same feelings as we do. Like us, they can’t understand how people in other places don’t see things the way they do—don’t see things as they “really are.” This reminder of the above-average effect, sometimes called the “Lake Wobegon effect,” is enough to get me into the market for a Prius.


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