

# Chapter 4

## Getting Organized and Taking Action: Rules for Reformers

---

### 1. What You Will Learn in This Chapter

In this chapter you will learn –

1. Why collective action in pursuit of a common goal can be problematic.
2. Why free-riding increases as groups get larger.
3. How the mighty are exploited by the meek during collective action.
4. Why leadership is vital for effective collective action.
5. Six basic techniques leaders can use to boost collective action within a group or alliance.

### Concepts

Collective Action

“The” Collective Action Problem

Aggregative games

Excludable good

Rivalrous good

Private good

Public good

Club good

Commons good

Tragedy of the commons

Best response function

Nash Equilibrium

Strategic substitutes

Free-riding

Easy-riding

Size principle

Exploitation of the mighty by the meek

Threat enhancement

Cost reduction

Selective benefits

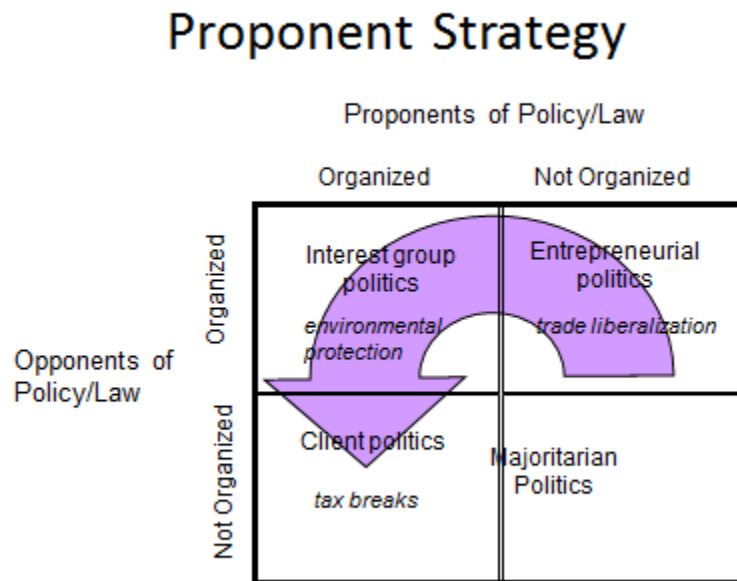
Selective sanctions

Altruistic punishers

Altruistic contributors

## 2. Collective Action and its Problems

In the last lecture, I introduced the idea of “judo politics.” Remember the boxes with the swoopy arrows? (See Figure 1). A group’s key moves in judo politics are: *get organized*, then *take collective action!* When organized the group can participate effectively in politics, or least much more effectively than when unorganized. How obvious ...



**Figure 1. Review of Judo Politics.** The key to judo politics is getting organized and taking collective action. But most groups fail to do either. Why?

But if the need for organization is so obvious, why do so many potential groups fail to become organized? If participation in politics is so important, why do so many organized groups take so little action? In contrast, why are other groups well-organized and buzzing with action? What is the secret of their success? In particular, what tactics can group leaders use to create sustained, high levels of political action?

These questions deal with what social scientists call the *collective action problem*. First let’s define what we mean by collective action.

**Collective Action: Action taken by a group of people, firms, organizations, countries or other entities in pursuit of a common goal.**

As I've emphasized, collective action in pursuit of a political goal can be extremely valuable. It can change the policies of governments, the behavior of firms, and the lives of people.

So what's the collective action "problem"? If a group of people, or firms, or organizations agree on a common goal, shouldn't they just naturally take action together? Surprisingly perhaps, the answer is often "no."

Here's a definition of the classic collective action problem:

**Classic Collective Action Problem: A situation in which several actors have a common goal that would justify acting together collectively, but the individual actors face incentives that undermine their effort, particularly in tandem with others.**

In such a situation, collective action often fails. The essence of this outcome is captured in the phrase, "rational individuals, irrational society."<sup>1</sup>

Let's look at an example, because the first time you encounter the idea of a collective action problem, it can be rather mind-boggling. For most people, it just seems natural to believe that if a group has a common interest, the members of the group will act on it. Grasping the collective action problem is easier, I think, if you work through a concrete example. Let's look at real one: the Mothers of East Los Angeles.

---

### Example

#### No Prison in East LA! Take 1<sup>2</sup>

---

<sup>1</sup> Brian Barry and Russell Hardin, *Rational Man, Irrational Society? An Introduction and Sourcebook*, Sage Publishing (1982).

<sup>2</sup> This example is based on a real case, documented in KSG case "No Prison in East LA."

Maria Cisneros is a poor Mexican-American mother living in a depressed area of Los Angeles, the neighborhood called East Los Angeles. Due to over-crowding in California's prisons, the state legislature has directed the California Corrections Department (CDC) to build a new prison in Los Angeles county, and the CDC has picked East Los Angeles as the location.

Maria thinks this as a terrible idea. To the outsiders who zoom past on LA's freeways, East Los Angeles looks like a bleak and blighted wasteland. But Maria knows differently. To her, East LA is no wasteland, it's a vibrant neighborhood. This is where her friends live, where her kids go to school with their friends, where she knows the shopkeepers and they know her, and where she goes to church. She's afraid the prison will really hurt the neighborhood. The prison will bring in lots of sleazy characters, like bail bondsmen; it will generate almost no jobs for the people who live nearby; and she's afraid escaped criminals from the prison might endanger her children. East LA already has more than its share of half-way houses, drug treatment centers, community mental health centers and the like, which never seem to go into rich neighborhoods. "Enough is enough," she thinks.

Maria knows most of her neighbors feel exactly the way she does, because everyone at the Church of the Resurrection (the local Catholic church) is talking about the prison. They're worried too, and some are pretty angry.

Maria's heard from her friend Lucy that some local businessmen are trying to organize a protest to be held at the proposed site for the prison. But Maria can't make up her mind whether she should go. She calls her close friend Lucy on the phone. "Are you going? I

can't decide." Lucy is unsure too. They talk for a few minutes, then Maria has an idea. "Let's make a list of the reasons to go, and a list of the reasons to stay home. Then we can see what to do." Lucy agrees, and they start coming up with the two lists.

What's on the two lists?

-----

If you were Maria or Lucy, what would you put on the lists? Think about it for a minute, then let's walk through it together.

Let's try the "Reasons to Go" list first. Number 1 on the list is surely: "The prison is bad so let's try to stop it!" What else is on the "go" list? Maybe: Some of our friends will be there and it would be nice to see them.

How about the "Stay at Home" list? There will be some reasons like, "I need to be at home for my kids" or "I can't take time off from work." In other words, there are substantial opportunity costs to going. Another might be, "It's pretty hard to get there, the bus doesn't run very often." Maria also has this concern: "I've never been to a demonstration. I don't know what to do." Then she thinks: "Who knows who will show up? There might be trouble-makers and it could get dangerous." In other words, there are real costs and uncertainties to participating. Taken together these reasons boil down to, it's pretty costly for Maria and Lucy to participate.

But how about this one: "Whether we show up or not, *it won't make any difference*. The government's probably already made up its mind anyway." Suppose Lucy makes this argument. Maria might respond with this counter-argument, "If enough people show up, the protest will make it onto TV. Then it might make some difference. So we should go." Lucy – who is pretty hard-headed – might answer back, "If enough people show up to make it on to TV, what are two more people? No one will even notice us. Our showing up just won't make any difference." Maria might then respond with a different kind of argument, "Well, whether it makes a difference or not, it's the right thing to do."

With lists like that, what do think Maria and Lucy do? Maybe their anger at the prison is enough to get them out the door, despite all the other reasons – a situation we'll discuss shortly. But, taken all-in-all, it might not be surprising to see the two of them stay home despite their desire to stop the prison. Now multiply that conversation across the whole neighborhood. How many people show up to the protest?

This kind of situation is very general. It arises when group members consider a political "good," like a good public policy. The group members may be individuals like Maria and Lucy, but also firms or non-profit agencies in a coalition, or even nations (think, global warming). Each would benefit, or potentially benefit, if they all engage in some activity supporting the policy change, perhaps protesting but also lobbying, contributing, canvassing, voting, writing, telephoning, learning information, advertising, staging media events, boycotting, and so on. But the incentives facing them as individuals – especially when they take into account the actions of others – lead the group members to under-supply the activities. As a result, there is too little "good" public policy, from the group members' perspective.

Similarly, consider actions opposing what many citizens would see as clear political "bads" – rent-seeking polices that hurt the public, useless pork barrel projects, special interest tax loopholes, political pandering, deficit spending when the economy is doing well. Actions opposing these bad polices are also undertaken too little (think back to "client politics" in the Interest Group Matrix). Here the undersupplied actions include becoming informed, monitoring politicians, studying proposed bills, and

then protesting, lobbying, contributing, voting, and so on. As a result of inaction by citizens, there is too much bad public policy.

## The New Logics of Collective Action

The collective action problem has been the subject of enormous scholarly attention across the social sciences, particularly since the 1965 publication of Mancur Olsen's breakthrough book *The Logic of Collective Action*. In fact, we've learned a huge amount about collective action since Olsen. We now know there are many kinds of collective action problems, not just one.<sup>3</sup> We've discovered concepts unknown 50 years ago. For example, we've learned to see collective action as so-called *aggregative games* in which what happens to an individual participant depends not only on her own action but on the aggregated actions of all the participants. We've worked out how the ideas of *strategic substitutes* and *strategic complements* allow us to analyze the logics – not logic -- of collective action and aggregative games.

Collective action has also been the subject of study by practical reformers. They've understood very well that getting organized and taking action are vital in politics. So, for example the left-wing community organizer Saul Alinsky wrote a how-to book, his famous *Rules for Radicals: A Practical Primer for Realistic Radicals* (1971), summing up what he had learned from many years of personal observation and experience. Alinsky's little handbook continues to guide group organizers, including some in movements that would have dismayed him such as the conservative Tea Party movement.<sup>4</sup>

In my opinion, our new understanding of the logics of collective action is good enough so that we can return to how-to books like *Rules for Radicals* and ask, how much stands up? Or rather, what practical advice can activists and leaders glean from the new scholarship on collective action? So, starting in this chapter and continuing in the next, I'll offer some "Rules for Reformers" (rather than rules for "radicals"). Theory and case studies suggest that leaders can use these rules to achieve a high degree of effective collective action. In later chapters we'll link this analysis with broader strategic questions, particularly, what message to send via collective action and who to target with collective action.

## Organization of the Chapter

Let me lay out the organization of this chapter and look ahead to the next. In this chapter, we are going to really dig into the classic analysis of collective action. By the end of the chapter, you should understand the standard analysis very well. But the classic analysis has its limitations. For one thing, it deals exclusively with one-sided politics, either entrepreneurial politics or client politics. In the next

---

<sup>3</sup> The organization of Chapters 4 and 5 reflects this point. Chapter 4 focuses on 1) aggregative games with strategic substitutes. Chapter 5 examines 2) aggregative games with strategic complements, 3) aggregative games with strategic substitutes within an alliance and strategic complements across competing alliances, and 4) aggregative games with neither strategic substitutes nor compliments. The strategic characters of these four classes of games are quite different.

<sup>4</sup> Brad Knickerbocker, "Who Is Saul Alinsky and Why Is Newt Gingrich So Obsessed About Him?" *Christian Science Monitor*, January 28 2012 <http://www.csmonitor.com/USA/Politics/The-Vote/2012/0128/Who-is-Saul-Alinsky-and-why-is-Newt-Gingrich-so-obsessed-with-him>

chapter, we'll extend the classic analysis and look at competitive situations – various forms of interest group politics. But, we have a way to go before we get there.

First, we'll start with a standard taxonomy that distinguishes four different kinds of goods. Particularly important for us are “pure public goods.”

Then, using asteroid defense and the East LA prison as running examples, we'll scrutinize three phenomena that constitute the core of the traditional understanding of collective action: 1) Free-riding and Easy-Riding, 2) the Size Principle, and 3) the Exploitation of the Mighty by the Meek. I introduce a key concept, “strategic substitutes,” and show you how to use it.

We'll then look at several ways to overcome the classic free-riding problem. I'll extract six lessons for leadership from the classic approach. These are practical take-aways for people who want to be leaders.

An on-line Appendix provides the technical details behind the presentation in the chapter. This supplementary material is only for theory aficionados who want to explore the ideas in excruciating detail. Practically-minded people lose nothing by skipping it, you'll get the important ideas right here.

### 3. Public Goods versus Private Goods

The traditional place to start is the distinction between *private goods* and *public goods*. Private goods are the things we buy in the grocery store or on line – bananas and the like (see Figure 1). Public goods are things like asteroid defense. Even Elon Musk can't buy that one in a store.

From an analytical perspective, the key features of private goods are: they are “excludable” and “rivalrous” in consumption.<sup>5</sup> “Excludable” means, if you own the good, you can stop other people from consuming it. “Rivalrous” means, if you consume the good you use it up so it isn't there for others to consume. The key to public goods is that they are neither excludable nor rivalrous.

---

<sup>5</sup> The excludability-rivalrous is pretty venerable in the social sciences, dating back to Samuelson, though one can find acute analyses of public good problems even earlier, including famous passages in Hume and Hobbes.

## Private vs. Public Goods



**Figure 1. Private vs. Public Goods.** A banana is a private good: If you own it, you can stop other people from eating it (excludability). And if you eat it, it's gone -- no one else can then eat it (rivalrous consumption). Asteroid defense is a public good: if the US supplied a meteor shield to stop in-coming planet killers, everyone on earth would benefit, not just Americans (non-excludability). And (presumably) use of the asteroid defense would not "use it up." The infrastructure would continue to exist (non-rivalrous consumption). Some public policies look like private goods; many look like public ones; some are a mixture.

Here are the definitions:

**Excludable good:** A good is excludable if it is possible to block access to it for individuals who have not paid for it. By contrast, a good is non-excludable if individuals who have not paid for it nonetheless get access to it.

**Rivalrous good:** A good is rivalrous if it can be consumed by only one consumer. If non-durable (like bananas), such a good is "used up" by its consumption. If durable (like a car or refrigerator), such a good can be used only by one consumer at a time. By contrast, consumption of a non-rivalrous good is not restricted to one consumer.

The two characteristics gives rise to – yes, you guessed it – a two-by-two matrix classifying goods. The matrix is shown in Table 1. The four kinds of goods have names: private goods, club good, commons goods, and pure public goods.

		<b>Excludability</b>	
		Excludable	Non-excludable



<b>Rivalry in Consumption</b>	Rivalrous	<u>Private Goods</u> Bananas Shoes E-rental textbook Firm-specific tax loophole	<u>Commons</u> Blue-fin tuna Earth's atmosphere L.A. ground water Lower Manhattan roads
	Non-rivalrous	<u>Club Goods</u> Swimming club Wi-fi network Paper textbook MOOC Toll road Voting franchise	<u>Pure Public Goods (or Bads)</u> Asteroid Defense East L.A. Prison Election winner Industry-wide tax loophole

**Table 1. Four types of Goods: Public, Private, Club, and Commons.** The collective action problems in each type are somewhat distinctive. Legislation or court may shift the same good from one box to another, e.g., lower Manhattan's roads are a commons but could become a private good through electronic congestion pricing, or a club good through entrance tolls.

We all understand private goods, which are excludable and rivalrous in consumption. We buy and use private goods all the time. It's worth noting, however, that sometimes public policies are actually private goods. Or perhaps the right way to say it is, some public policies dispense private goods. For example, a tax loophole that benefits only one company is pretty much a private good for the company -- and is typically bought and paid for through political contributions and lobbying. (This view would cast Congress as the Walmart of special interest favors: high volume, low prices.) In the next chapter, we look at situations where actors compete with one another to win a private good from government -- a procurement contract, an exclusive license, a franchise, a service contract, and the like. This competition is also a kind of collective action. Because of the explosion of contracting by American governments -- federal, state, and local -- the politics associated with government dispensation of private goods has become quite important.

Let's move to the next box in Table 1. *Club goods* are excludable but not rival -- think of a private golf course, a suburban swimming club, or a toll road.<sup>6</sup> If you are in the club, you get to use the facility, if not, you can't. And as long as there is no congestion, using the course or pool or toll road is non-rivalrous. As I'll explain in a minute, some government policies look like club goods.

Club goods present distinctive political issues. These often turn on how big to make the club, what entrance requirements to impose, and what kinds of goods to provide the members. From a public policy perspective the electorate is a club, let's call it the "voting club." Some people are in the voting

<sup>6</sup> The study of club goods began with James M. Buchanan, "An Economic Theory of Clubs." *Economica* 32.125 1-14 (1965). Unfortunately we don't have much time to spend on these interesting ideas.

club; others are out. Voting laws determine who is who. Admission to the voting club – via the franchise (the legal right to vote) -- allows “members” a voice in choosing the “club’s” leaders and thus its policies. Historically, excluded groups have persuaded current members to admit them to the voting club in exchange for current or future actions. For example, when mass citizen armies arose in 19<sup>th</sup> century Europe, excluded groups often gained the franchise in exchange for supplying the cannon fodder needed to fight mass wars.<sup>7</sup> In the United States, women’s suffrage in the states often involved a tacit bargain between women and various groups who already held the franchise -- progressives, prohibitionists, populists -- who expected women to support their cause once they were admitted to the voting club.<sup>8</sup> In fact if you think about it, citizenship in a country is belonging to a club, perhaps the most important “country club” you can join. (Sorry about that dreadful pun, I couldn’t resist). Debates over immigration policy are typically arguments over the advantages of expanding the size of the club versus the disadvantages of changing its cultural and political makeup.

Let’s move to the next box in Table 1. *Commons goods* are rivalrous but excludable. An example is the lower Manhattan roadway – tolls could make it excludable, and intensive use certainly makes it rivalrous.

Commons goods display a very different set of issues, the most important of which is the “tragedy of the commons.”

**Tragedy of the Commons: A situation that occurs when individuals reap the full benefit from an action exploiting the commons while facing only a portion of the cost caused by their action, which instead falls at least partly on others. The typical result is over-utilization of the commons.**

For example, prized eating fish like the blue fin tuna, Chilean sea bass, and (famously) Atlantic cod have been hunted to near extinction. The reason is, each fishing boat reaps the lucrative rewards from catching these valuable fish; but each boat faces only a portion of the loss caused by its catch, namely shrinking the breeding stock for the future. Instead, that cost is mostly pushed off onto all the other fishermen (and of course future fish-lovers). The result is frantic over-fishing, to the point of exterminating the fish. The data on Atlantic cod show this process in a particularly dramatic way.

In contrast, Maine lobstermen have worked out a system that yields high yet sustainable levels of lobster harvests. Essentially, the lobstermen divide up Maine’s coastal waters with a clear assignment of who gets to lobster where (and where not). There are firm rules about the allowable size of harvested lobsters, which wholesale buyers must follow as well. The hard-bitten lobstermen back up the allocation

---

<sup>7</sup> Davide Ticchi and Andrea Vindigni. "War and Endogenous Democracy." *Available at SSRN 1136202* (2008).

<sup>8</sup> This is actually a rather complicated story but see Eileen L. McDonagh and H. Douglas Price, "Woman Suffrage in the Progressive Era: Patterns of Opposition and Support in Referenda Voting, 1910-1918." *American Political Science Review* 79(02): 415-435 (1985), and Rebecca Mead, *How the Vote Was Won: Woman Suffrage in the Western United States, 1868-1914*, NYU Press, 2004.

of territory with swift vigilante justice for poachers and cheaters.<sup>9</sup> The result works amazingly well. In fact, political scientist Elinor Ostrom shared the 2009 Nobel Prize in Economics for her detailed studies of commons around the world. She discovered many examples of primitive peoples solving a commons problem using ingenious decentralized enforcement, somewhat like the Maine lobstermen. And, she identified concrete principles for building successful decentralized governance mechanisms for commons.<sup>10</sup>

These decentralized mechanisms can work extraordinarily well with small stable populations, like primitive societies or lobstermen in Maine (no offense to the stalwart characters “Down East”). But decentralized enforcement of the commons typically fails in mass industrial societies. This is particularly true for arguably the most common commons problem, air and water pollution. Destroying some lobster pots or roughing up a bad neighbor can work in Maine. But it doesn’t work at all with, say, a gigantic oil company’s off-shore drilling platform, as witnessed by British Petroleum’s “gross negligence and willful misconduct” in the horrific Deep Water Horizon oil spill.<sup>11</sup> These problems in modern societies typically lead to government regulation. We consider the politics of regulation in more detail in a later chapter.

At the opposite extreme from private goods are pure public goods, our focus for most of this chapter. Such goods are not excludable (very important!) and are non-rivalrous in consumption. An example is a Star Wars-style asteroid defense – a bunch of equipment lifted into space that would deflect a big incoming rock like the one that wiped out the dinosaurs.<sup>12</sup> Whichever country put the defense up would benefit from it, at least if a planet-killer showed up. But so would everyone else on planet earth. And the benefits of the defense accruing to its creators would not “use up” the benefits that would go to others.

For East LA residents the proposed prison would be a pure public bad. And, reducing the size of the prison or halting its construction altogether would be a pure public good for them. Critically, because this good is non-excludable, all the families in the community -- not just those who showed up at marches or went to Sacramento to walk the halls of the legislature -- would benefit if collective action succeeded in blocking or shrinking the prison. So, how hard should Maria and Lucy work against the prison since they will get the benefit of others’ activism whether they participate or not? What can community leaders do to boost their participation? In the next section, we’ll provide the classic analysis of this issue.

---

<sup>9</sup> Trevor Corson, “Learning from Maine’s Lobster Wars,” *The Atlantic* September 16 2009

<http://www.theatlantic.com/health/archive/2009/09/learning-from-maines-lobster-wars/26613/>

<sup>10</sup> This work is described accessibly in Elinor Ostrom, *Governing the Commons*. Cambridge university press, 2015.

<sup>11</sup> In the words of the U.S. District Court judge who heard the resulting case. See

[https://en.wikipedia.org/wiki/Deepwater\\_Horizon](https://en.wikipedia.org/wiki/Deepwater_Horizon)

<sup>12</sup> On the dinosaur killer, see Eric Hand, “Scientists Hit Pay Dirt in Drilling of Dinosaur Killing Impact Crater,” *Science* May 3 2016 <http://www.sciencemag.org/news/2016/05/scientists-hit-pay-dirt-drilling-dinosaur-killing-impact-crater>. Along with the dinosaurs, some 75% of life on earth perished.

## 4. Collective Action and Pure Public Goods: The Classic Approach

### The Basic Calculation: Private Goods versus Public Goods

Let's think about the calculations a rationalist individual makes when buying a private good like bananas, a firm makes when lobbying for a private tax break, or an NGO makes when purchasing a good or service that benefits it alone (say, a mailing list of potential donors). Then let's consider the same calculation when these entities consider contributing to a public good – participating in a protest, lobbying for an industry-wide tax break, or working with other NGOs on a policy campaign. I am going to show you some simple diagrams that (I hope!) give you some intuition on the core problem, free-riding. Some of this material is a little challenging the first time you encounter it, so you may need to go over it several times.

#### Buying Private Goods

When buying bananas, a rational economic person – the fabled homo economicus -- thinks about the benefits the purchase will bring her. Let's call those benefits  $b(x_i)$ , where  $x_i$  connotes the quantity purchased by individual  $i$ . And, she compares those benefits with the costs they require. Let's call those costs  $c(x_i)$ . She would like to purchase bananas so as to maximize her net benefits, that is, the total benefit minus the total costs. In crude form, her calculation is

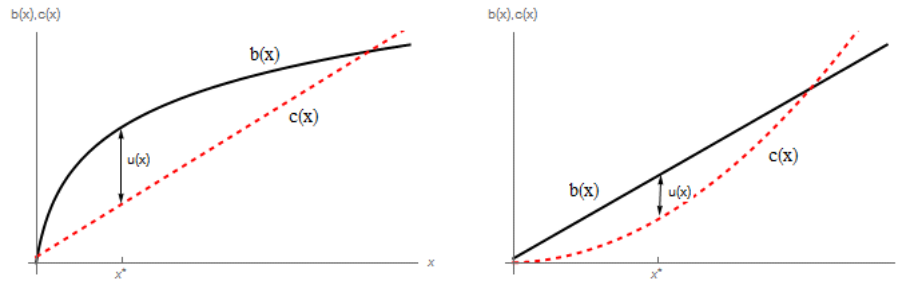
$$\max_{x_i} u(x_i) = b(x_i) - c(x_i) \quad (1)$$

Meaning, choose the personal banana-buy that maximizes net benefits.<sup>13</sup>

Figure 2 shows the logic of this calculation in action. The left-hand panel looks at people buying bananas. In the left-hand panel, the benefit increases as the person buys more bananas. But, the benefit curve flattens as purchases increase, meaning that the pleasure of one more banana drops off as the customer consumes them. The price of bananas is fixed at any given time, so the cost curve is just the price per banana times the quantity purchased. The arrow in the figure shows the net benefits (benefit minus costs) at the best level of banana purchase. The arrow is located at the best purchase level and its length indicates the size of net benefits.

---

<sup>13</sup> If you have a budget and are buying a bunch of other private goods besides bananas, the calculation is somewhat more complicated. In that case, you would like the budget allocation across the goods to yield you the best sum of net benefits across all the goods. If you like thinking about this sort of thing, you might want to take a course on microeconomics.



**Figure 2. Purchasing Private Goods.** The purchaser buys the good so as to maximize net benefits (net benefits are shown by the arrows). The figure on the left might represent an individual buying bananas or an NGO buying a list of potential donors. The figure on the right might represent a firm “buying” a private tax loophole through campaign contributions and lobbying.

The right-hand panel shows the benefit and cost curves for, say, a firm acquiring a tax loophole through lobbying and campaign contributions. I drew the curves to suggest that benefit of more tax loophole to doesn’t drop off for the firm, like it does for bananas for people. But, as the firm presses for a bigger and bigger tax loophole, the incremental price may increase, as it becomes more and more work for congressmen to hide or obscure a gigantic giveaway to the firm. Again, the location of the arrow shows the optimal purchase level, and the length net benefit

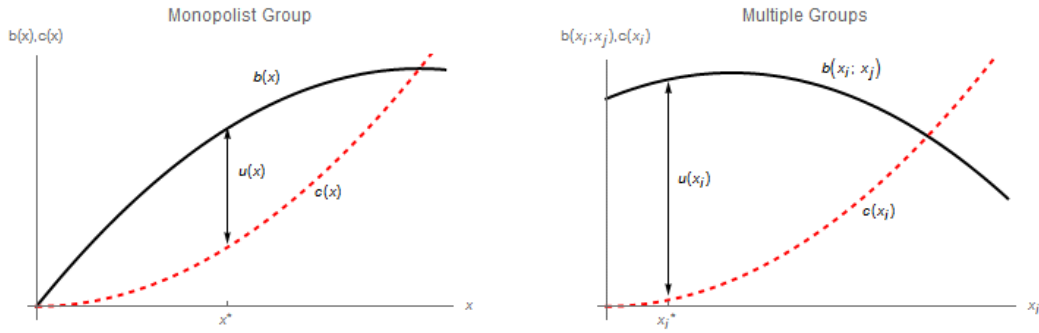
### Contributing to Public Goods: Individual Perspective

“Buying” public goods, like asteroid defense or an industry-wide subsidy, is also costly. For asteroid defense, “buying the good” means undertaking a very expensive space program. For an industry-wide subsidy, “buying the good” means expending funds lobbying Congress, advocating, contributing to key congressmen, and so on. But, the individual calculation of actors buying public goods is different from that of individuals or groups buying private goods – at least when they act together. The reason is, each actor benefits from the purchases of others but doesn’t have to pay for those benefits. As a result, the benefit-cost calculation of Equation 1 becomes

$$\max_{x_i} u(x_i) = b(x_i + x_{-i}) - c(x_i) \quad (2)$$

Where  $x_{-i}$  means, the sum of all the contributions made by actors other than action  $i$ .

Figure 3 shows this logic using the same kind of diagrams as in Figure 2. The left-hand panel shows the calculation of a sole group – there are no others capable of contributing -- considering how much of a public good to “purchase,” perhaps through costly political action (so here,  $x_{-i} = 0$ ). This situation is not that different from purchasing a private good: the group chooses a level of action that maximizes its own net benefits (shown by the arrow in the figure). Of course, this purchase is good news for non-purchasers because they will get the public good for free.



**Figure 3. Purchasing Public Goods – The Individual Perspective.** The left-hand panel shows the calculation of a sole group – there are no others -- considering how much of a public good to “purchase,” perhaps through costly political action. In the right-hand panel the group is one of many groups. If other groups also take action, the group receives benefits even if it doesn’t take any action itself, because the good is a public good. Thus the benefit curve shifts upward. The level of purchase that maximizes the length of the arrow in the panel is now much smaller. The group “free-rides” on the efforts of others.

Political philosopher Russell Hardin provides an amusing example of a one-person purchase of a public good.<sup>14</sup> At one time the eccentric billionaire Howard Hughes lived in Las Vegas. In those days there were no videos and no internet – the only way to watch late night movies was on TV. Hughes was very partial to western movies, which he liked to view late at night. But the Las Vegas TV station did not show westerns late at night. So Hughes simply bought the station and ordered his new employees to play westerns hour-after-hour post-midnight, so he could enjoy them whenever he wanted. A TV broadcast is non-excludable and non-rivalrous – it is a pure public good. So Hughes – a group of one -- single-handedly purchased and provided a public good (late night westerns) which thousands of people in Las Vegas could watch for free if they wished. But he did it to please himself.

Now consider what happens when many groups contribute to the public good. The calculation of just one of them is shown in the right-hand panel of Figure 3. If other groups purchase some of the good (so  $x_{-i} > 0$ ), the group receives benefits even if it doesn’t take any action itself, because the good is a public good. Thus its benefit curve is no longer equal to zero at its zero purchase, and in fact is higher at any given level of its own purchase. Nonetheless, the amount of the public good the group receives will increase if it contributes. As shown in the figure, the group again selects an amount of own-action that maximizes its own net benefits (again, shown by the arrow). But because the group now benefits from the purchases of the other groups, its own purchase is much smaller. It “free-rides” – or rather, “easy-rides” since it may still purchase some of the good -- on the efforts of others.

**Free-riding. Free-riding occurs when an actor decides not to contribute to a public good but instead just to benefit from the contributions of others.**

<sup>14</sup> Russell Hardin, *Collective Action*. Resources for the Future, published by Johns Hopkins University Press. 1982.

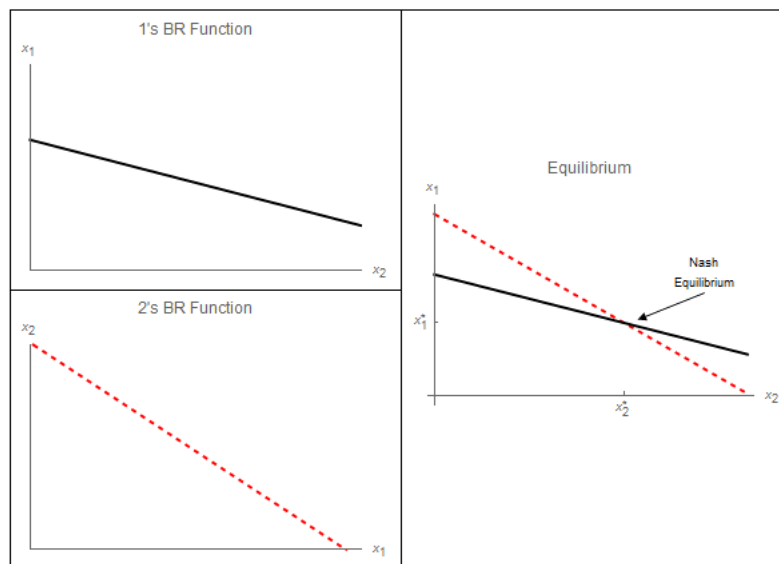
To distinguish the situation in which an actor makes no contribution at all, from one in which is makes some contribution but a reduced one, some analysts use the phrase “easy-riding.”

**Easy-riding. Easy-riding occurs when an actor contributes to a public good but less than it would if it were acting unilaterally.**

So far so good. But perhaps this question occurred to you: What happens will all the groups free-ride or easy-ride on each other’s efforts? How much of the public good actually gets purchased? A lot? Not much? Maybe none?

This is not a simple question, because a group’s decision to contribute to a public good when others may also do so is not a single-actor problem (a “decision theoretic” problem) like buying bananas, or even Howard Hughes’ decision to buy the TV station. Rather, it is a “game theoretic” one – one where each actor’s calculation depends on what it expects the others to do. It might seem impossible to work out such problems but one of the triumphs of 20<sup>th</sup> century social science was the creation of powerful tools for analyzing such situations. Let’s apply those tools to this situation.

### Contributing to Public Goods: Equilibrium



**Figure 4. Best-Response Functions and Equilibrium in a Public Goods Contribution Game with Two Groups.** The top left-hand panel shows the best response (BR) of Group 1 to any level of contribution by Group 2. The bottom left-hand panel shows a similar best response of Group 2 to any level of contribution of Group 2. The right-hand panel puts the two together (note that the dashed curve of Group 2 is inverted so the axes are defined like those of the upper left panel). At the pair of contribution levels  $(x_1^*, x_2^*)$  the two groups take best responses to each other’s action. This situations constitutes a Nash equilibrium in the contributions game.

Let's start with the idea of a "best-response." In the right-hand panel of Figure 3, I indicated the best choice for a particular actor, given the contributions of other actors to the public good. In the figure, this best-choice or best-response was shown by the location of the vertical arrow placed where the difference between total benefits and total costs is largest. But this specific best-response was contingent on the amount contributed by others (that amount was shown by the height of the benefit curve when the actor contributed zero). Suppose we allowed the level of contributions by others to vary, and we mapped out the best-response of the actor for each different level of others' contributions. Then we would have a figure like that shown in the upper left-hand panel of Figure 4. This is a *best-response function* (sometimes called a reaction function).

**Best-response function. A best-response function indicates the best choice for an actor, given any choice by another actor.**

In the upper left-hand panel of Figure 4, the actor making the choice is Player 1; the actor whose choice she is responding to it Player 2. The x-axis shows every possible contribution level of Player 2 to the public good. The y-axis shows every possible contribution level of Player 1, and the down-ward sloping line indicates Player 1's best response to any contribution level of Player 2. (I am going to skip over the details of how to derive a best-response function since we are focusing on the basic concepts).<sup>15</sup>

Of course one can do the same thing for Player 2. Player 2's best-response function to any choice of Player 1 is shown in the lower left-hand panel in Figure 4.

Now, what happens when we put Player 1's best responses together with Player 2's? This is shown in the right-hand panel of Figure 4. (Note that we must invert one of the functions so the axes are the same for the two players – in the figure, I inverted Player 2's best response function.) At the point where the two best responses cross, *both* players are taking best responses to the other player's action. Since each is taking the best possible response to the other's action, neither could do better by unilaterally changing to some other action. Thus, these mutual best responses constitute a *Nash Equilibrium*.

**Nash Equilibrium. A situation in which all players take best responses to each others' actions. Because no one has an incentive to change, the situation hangs together as an equilibrium.**

The idea of a Nash equilibrium, discovered by the Princeton mathematician and Nobel laureate John Nash, is one of the most important ideas in the social sciences.

---

<sup>15</sup> Well, here are some details. If Player 1's objective function (like Equation 2) is differentiable, differentiate it with respect to Player 1's own choice variable ( $x_i$ ) and set the resulting equation equal to zero. This uses calculus to describe the objective function's maximum. Solve for Player's 1's choice variable. If the objective function has the right shape (is concave, so the second derivative of the objective function with respect to the choice variable is negative) this procedure indicates the objective-function maximizing choice. If you understand these details, then you probably already knew how to do this. If you didn't, you needn't worry.



## Asteroid Defense

Now let's use the ideas we just learned to look harder at the asteroid defense problem.

### The Problem Facing the Countries

Suppose there are  $n$  number of countries who could contribute to the asteroid shield. Each country's government has a budget,  $B_i$ , which it may allocate either toward contributing to the world asteroid defense or to goods that benefit only its own citizens (the subscript indicates the country). These may be public goods for the citizen of a country but for everyone else they are effectively private goods, so let's just call them private goods. Just like before we'll call country  $i$ 's quantity of asteroid defense purchased  $x_i$  which costs it (let's say)  $c$  per unit. So its expenditure on asteroid defense is  $cx_i$ . We'll use a little trick to think about a country's private good consumption. We'll summarize that through a single good  $y_i$  whose price is normalized to 1. Here is country  $i$ 's budget constraint:

$$B_i = cx_i + y_i$$

This just says, the budget is composed of the expenditure on asteroid defense plus the expenditure on private goods. The total quantity of asteroid defense is simply the sum of the contributions of all the countries, call this  $x = \sum_{i=1}^n x_i$  (meaning, the sum of all the contributions).

If you think about it, an asteroid defense is a lot like an insurance policy. If a bad event occurs – in this case, a big rock arrives rather than (say) your house burns down -- the insurance policy (here, the asteroid defense shield) is very valuable. But if it doesn't, you are just out the money. Here, no asteroid means the shield is just a load of very expensive junk in orbit. Let's call the probability of an arrival  $p$ . A reasonable assumption is, in the event of an arrival the bigger the shield, the more effective and more valuable it is. So, to keep things simple let's say the shield's value is just its size  $x$ . In the event of an arrival, the payoff to each country comes from both goods, the public good (the shield) and its private good  $y_i$ . Call this benefit  $\pi(x, y_i)$ . However, if the asteroid does not arrive, which happens with probability  $1 - p$ , the shield is valueless and the only benefits accruing to a county come from its consumption of private goods. Call this  $\pi(y_i)$ . So we can write a country's expected payoff (its probability weighted payoff) as this:

$$E\pi_i = p\pi_i(x, y_i) + (1 - p)\pi_i(y_i)$$

Note that a country benefits from the *total* shield  $x$ , not just its purchase  $x_i$ , because the shield is a public good. Also, the country is constrained by its budget: it can't spend more money than it has. Using the budget constraint, we can write  $y_i = B_i - cx_i$ . So we can re-write the country's payoff as:

$$E\pi_i = p\pi_i(x_i + x_{-i}, B_i - cx_i) + (1 - p)\pi_i(B_i - cx_i) \quad (3)$$

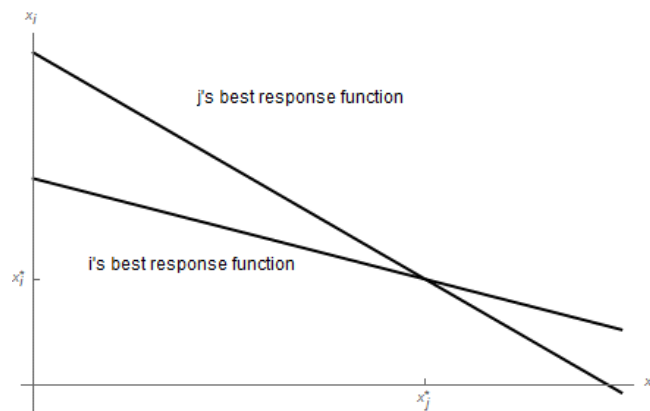
Where  $x_{-i}$  means the sum of the contributions from every country except country  $i$ . Written this way, the object for a country is to choose its level of contribution to the shield that maximizes Equation (3).

I've written a country's payoff in a quite general way, but in order to construct the figures I use a much more specific function. There I assume that a country's payoff is the sum of the value of the asteroid defense and the value of the private consumption, and the shape of each part of the sum looks like the payoffs in Figure 3. So, more consumption is better but at a decreasing rate. I give the details in the technical Appendix.<sup>16</sup>

### Equilibrium and Strategic Substitutes

Figure 5 shows the actual best response functions in the asteroid defense game, as if the game were played by just two countries. (The reaction function I labelled "j's reaction function" can be seen as the aggregated responses of all the other players.) The functions look exactly like the ones in Figure 4. However, I want to point out the importance of the *slope* of the two reaction function; they have a negative slope, they slope downward. When reaction functions both slope downward, the actions in question are called *strategic substitutes*.

**Strategic substitutes. In a game with strategic substitutes, when one player raises its effort or contribution, the other player or players reduce theirs. This gives rise to down-ward sloping reaction functions. Free-riding or easy-riding in collective action games arise because the game involves strategic substitutes.**



<sup>16</sup> Here is the utility function I use for calculations:

$$E\pi_i = p(\alpha \log(x) + \beta \log(B_i - cx_i)) + (1-p)\gamma \log(B_i - cx_i)$$

Modeling aficionados will recognize this as a state contingent Cobb-Douglas utility function. In the event of an arrival the payoff is  $x^\alpha y_i^\beta$ , while absent an arrival it is  $y_i^\gamma$ . In the event of an arrival and zero level of asteroid defense, the payoff is zero, indicating extinction of human life. The log transformation doesn't really change the problem facing a country but makes the calculations a bit easier.

**Figure 5. Best Response Functions and Equilibrium in the Asteroid Defense Game.** A critical feature is the down-ward slopes of the reaction functions: contributions by country  $i$  and the other countries are *strategic substitutes*. It is this feature of the game that gives rise to free-riding.

Strategic substitutes arise when increased action from the other parties reduces the incentives to taking action. It is exactly this incentive, which manifests itself as negatively sloping best-response functions, that gives rise to free-riding or easy-riding.

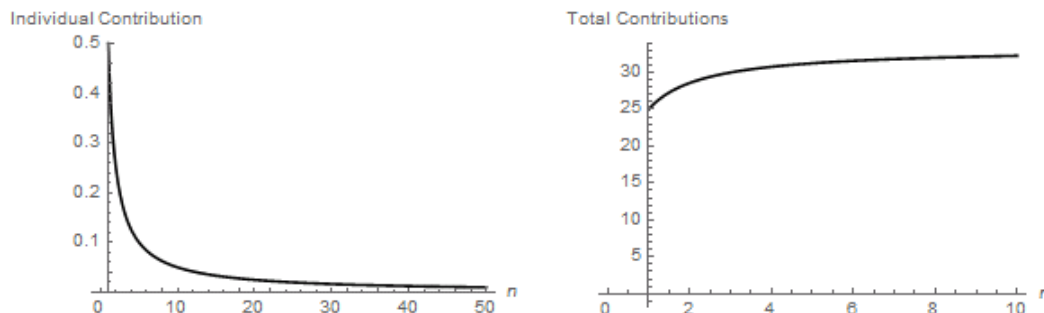
### The Size Principle

One of the famous ideas in Olson's classic book is the *size principle*. The size principle addresses what happens to contributions when the number of players increases. There are two somewhat different versions. We'll start with the easier one.

**Size Principle (1).** In a game of collective action with strategic substitutes, the addition of a new player reduces the contributions of all the other players.

In other words, as the number of players increases, the amount of free-riding by each one *increases*. So they reduce their contribution. This is a very strong result and occurs whenever a collective action game displays strategic substitutes.

The left-hand panel in Figure 6 shows the per-country contribution in the asteroid protection game as the number of countries increases.<sup>17</sup> As you can see, contributions plummet as the number of potentially participating countries rises. Beyond a handful of countries, individual contributions become very small. They approach zero as the number of countries becomes large.



**Figure 6. The Size Principle.** The left-hand panel shows individual contributions in the asteroid defense game as the number of countries able to participate becomes larger. Per-country contributions fall. This is a strong feature of collective action games with strategic substitutes. The right-hand panel shows the total contributions across all the countries, as the number of countries increases. As shown, total contributions increases

<sup>17</sup> For simplicity, the calculation assumes all countries are the same. Obviously, some have larger budgets than others. I return to this point shortly.

as the number of countries increases, though not by much. This result is rather typical but is not universally true. Total contributions may actually fall as the number of countries increases, but this is somewhat special.

The second version of the size principle asks not what happens to individual contributions but what happens to total contributions as the number of potential participants become large.

**Size Principle (2). In a game of collective action with strategic substitutes, the addition of a new player usually increases the total contributions from all the players, though it need not do so.**

This part of the Size Principle is a bit subtle. Adding more players reduces the effort of the pre-existing players but it does add the effort of the new players. So, there are two different effects that work in opposite directions. It is not immediately obvious how this tug-of-war will turn out. But, careful analysis shows that if the public good – here, the asteroid shield – is what economists call a “normal” good (and the payoff function satisfies a weak condition), then adding the new players boosts total collective action.<sup>18</sup> What is a so-called normal good? It just means that as your budget increases, you buy more of the good. Since most of the public goods that we would think about are certainly normal goods, we would think that this is the ordinary case. But as you can see in the right-hand panel of Figure 6, the boost from new members may not be very big if the total number of actors is large.

So, the basic take-away is: free-riding becomes much worse as group size increases. A simple intuition is, being too small may be bad because small groups can't generate much collective action. But being very large may not be so great either, because free-riding become severe and organizational costs (which we haven't discussed at all) will be very large. Often times, being neither too small nor too large is best. And certainly, reducing free-riding is essential.

### **The Exploitation of the Mighty by the Meek**

Another famous idea, associated with Olson and Harvard economist Richard Zeckhauser, is what I am calling “the exploitation of the mighty by the meek.”<sup>19</sup> The basic insight is that the less interested or less able tend to free ride on the more interested and more able.

Again there are two somewhat different versions. Here is the first.

**Exploitation of the Mighty by the Meek (1). In a collective action game with strategic substitutes, if one actor increases its valuation of the public good, receives a higher budget, or faces lower costs, it**

---

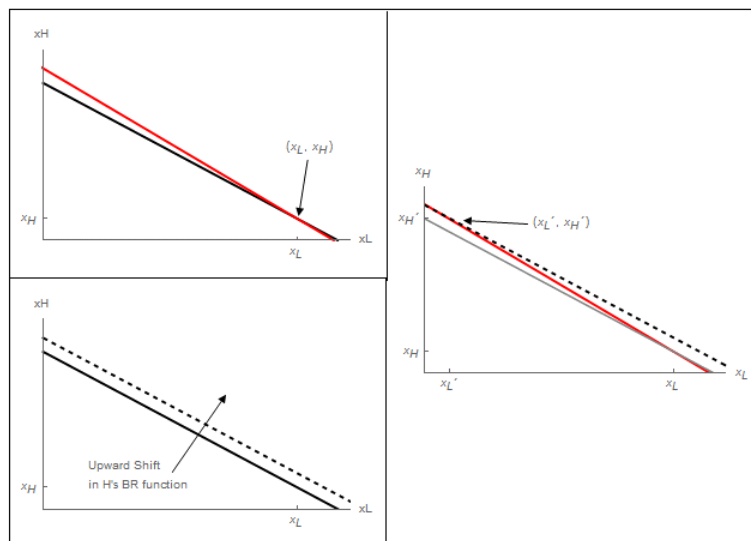
<sup>18</sup> A rigorous proof actually requires some pretty fancy analysis, see Acemoglu and Jensen 2013. But the result probably sounds relatively intuitive to you.

<sup>19</sup> In Olson and Zeckhauser's original work on alliances like NATO, they clearly had in mind the tendency of relatively low-demanding countries (say, Belgium or Holland in NATO) to easy-ride on the efforts of relatively high-demanding ones (like the U.S.). Later analysts focused more on easy-riding by low-budget countries on big-budget ones. A third kind of exploitation involves easy-riding by the less efficient on the more efficient. Analysis of all three turns out to be essentially the same, see Acemoglu and Jensen 2013.

**increases its contributions to the public good, but other actors decrease their contributions. The actors with constant valuations, budgets or costs easy-ride harder on the privileged actor.**

To understand the logic of the Exploitation of the Mighty by the Meek, let's examine the interaction of high-valuers and low-valuers in the asteroid game.

Even though a public good like asteroid defense is valued by all, it may be valued more by some countries than others. Perhaps this is because news networks or TV shows have run many segments or programs about death-by-asteroid, thereby sensitizing the country's population to the threat. Or perhaps the country is an island nation and appreciates that it will be swept away by tsunamis if a sizeable asteroid strikes the ocean. Or perhaps the country has a continent-sized land mass so it is more likely than others to find its homeland reduced to hot glowing slag by medium-sized strikes.



**Figure 7. The Exploitation of the Mighty by the Meek.** Shown in the panels are best-response functions, just as in Figures 4 and 5. In the upper left-hand panel, Country H and Country L are identical in all respects. Their contributions are indicated by the intersection of the two best-response functions at the point labeled  $(x_L, x_H)$ . But then Country H begins to see asteroid defense as more important than formerly, while Country L does not. As shown in the lower left-hand panel, Country H's best-response function shifts upward so that it wishes to contribute more to asteroid defense, at every level of contribution of Country L. The result, as shown in the right-hand panel, is a new equilibrium, indicated as  $(x'_L, x'_H)$ , in which H contributes much more and L contributes much less.

To see what happens in the interaction between high-valuers and low-valuers, let's return to the situation of two perfectly identical countries. This situation is shown in the left-hand panel of Figure 7, using the by-now-familiar picture of intersecting best-response functions. Let's call one of the countries "L" and the other "H" though they start out as identical in their valuation for asteroid defense. (I've

drawn the axes in Figure 7 to emphasize the intersection points, but at the point labeled  $(x_L, x_H)$  (the two identical countries make exactly the same contribution).

Now suppose Country H suddenly perceives asteroid defense as more important or valuable than formerly. As a result, for any level of contribution by Country L, Country H will wish to make a bigger contribution than formerly. As shown in the lower left-hand panel of Figure 7, its best-response function shifts upward, as shown by the dashed black line in the figure.

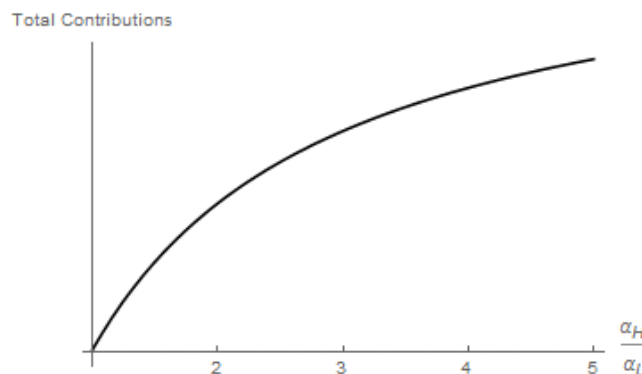
The result is a new pair of equilibrium contributions, as shown in Figure 7. In the new equilibrium, shown by the intersection point labeled  $(x'_L, x'_H)$ , H's contribution is much larger – and L's is much smaller. In other words, L takes advantage H's new enthusiasm to easy-ride like mad on H's contribution. In essence, the low-valuing L exploits the willingness of the high-valuing H to make larger contributions.

Now consider the interaction of big-budget actors with small-budget ones. Again suppose the two actors start out completely identical. But then suppose H gets a larger budget. Again it will contribute more at any level of L's contribution, so its best-response functions shifts upward, just like in Figure 7. And, this creates a new equilibrium just like the one in the right-hand side of the figure. So, the lower-budget actor will easy-ride more on the higher-budget one.

The analysis of a drop in costs for H is identical and leads to similar conclusions.

An obvious question is, though one actor's contributions go up and other actor's contributions go down, what happens to overall contributions? The answer is similar to that in the Size Principle.

**Exploitation of the Mighty by the Meek (2).** In a game of collective action with strategic substitutes, a positive shock to one player (a higher valuation of the public good, a bigger budget, or lower costs) usually increases the total contributions of all the players despite the increased free-riding of the non-shocked players, though it need not do so.



**Figure 8. Total Contributions in the Asteroid Game as Country L Increases Its Valuation of Asteroid Defense.** The parameter  $\alpha_i$  measures Country  $i$ 's valuation of asteroid

defense, so the x-axis shows the valuation of Country H relative to Country L. As H's valuation increases, its contribution increases -- but L's falls as it easy-rides ever harder. Nonetheless, total contributions increase. This is typical but it is not necessary.

Figure 8 illustrates the second part of the Mighty and the Meek, showing total contributions in the asteroid game as Country H increases its valuation of defense. As shown in the figure, total contribution increase even though Country L easy-rides harder and harder on H. Again, this result is not always true but it will hold when the public good is a normal good.

We have now completed the classic analysis of collective action, or at least most of it. With the basic concepts under our belt, let's turn to rules for reformers. What advice does the theory give us?

## 5. Creating Collective Action: Rules for Reformers

You should now understand why many potential groups never form and why many that do undertake relatively little action. To be clear: in terms of group formation, organizing a group is a public good itself! Free-riding and easy-riding imply that often, no one is willing to put in the time and effort to organize the group (and, organizing a group can take a horrendous amount of time and effort). Then, even if a group forms and has members, free-riding and easy-riding imply that most of the group members won't do very much.

So, why do we see as many groups as we do, and why do we see action? In a nutshell the answer is *leadership*. Beating the free rider problem is Job Number 1 for group leaders (though there are plenty of other jobs too, including strategy, management, and organizational maintenance – which we discuss later). If the leader succeeds in Job Number 1, the group forms and participates in policy making. If the leader fails in Job Number 1, the group fails. Think of where the civil rights movement would have been without Martin Luther King Jr., Ralph Abernathy, Medgar Evers, James Forman Fannie Lou Hamer, John Lewis, Bayard Rustin, and many others. Would it even have existed? The same can be said of the women's movement, the gay rights movement, the environmental movement, and countless community organizations. Maybe you participate in one.

Often group leadership relies heavily on charismatic leadership. This is a subject that a social scientist like me has a hard time getting his hands around. But, there are truly inspirational, magnetic characters that people feel an urge to follow. Frequently cited examples include Winston Churchill, Franklyn Roosevelt, Ronald Reagan, Mohandas Gandhi, Adolph Hitler, Billy Graham, and Martin Luther King, Jr. It is perhaps not surprising that many of the "usual suspects" were elected politicians. But one often finds charismatic leaders in groups as well, especially among the founders of successful groups.

//case study of charismatic group leader<sup>20</sup> //

---

<sup>20</sup> See F. Weed, "The MADD Queen: Charisma and the Founder of Mothers Against Drunk Driving," *Leadership Quarterly* 4:329-345 (1993). For subsequent history of MADD see James Fell and Robert Voas, "Mothers Against

Having a charismatic leader is a huge boost for a group but it is not *necessary* and it is never *sufficient*. It is not necessary because solid competent non-charismatic leadership will often be good enough. It is never sufficient because, to put it bluntly, the actuarial tables always win in the end. Charismatic leaders grow old and inevitably pass away. Some depart or are ushered out, as the organization becomes larger. If the organization has not institutionalized its leadership and relies exclusively on the extraordinary charisma of a single person, that one departure will also mark the end of the organization.

//case study of failed succession//

Furthermore, it is not at all clear that charisma can be either taught or learned (despite a sizeable academic and consulting industry that would have you believe otherwise). But what can be learned are devices for over-coming free-riding that come directly from the theory of collective action. Let's examine six of them. (We'll add some more in the next lecture.)

## The Rules

### **Rule 1. Boost perceived attractiveness, enhance perceived threat.**

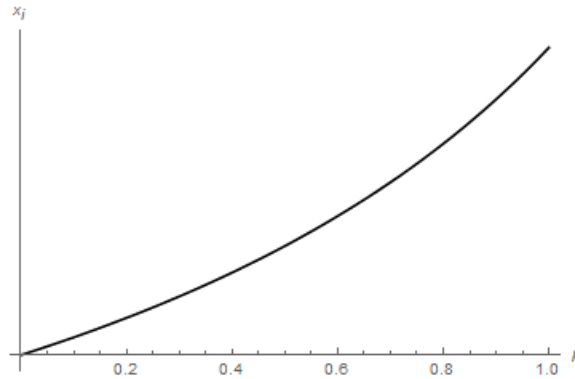
In 1947, with much of Europe in ruins following the catastrophe of World War II, President Harry Truman and his Secretary of State George Marshall conceived a wildly ambitious plan to get Western Europe back on its feet. The plan was expensive, but in the long run it would vastly benefit the U.S., both economically and strategically. The big problem: how to sell the high-priced plan to a pinch-penny, parochial Congress? The Republican Chair of the Senate Foreign Relations Committee, Arthur Vandenberg, was blunt. The only way forward, Vandenberg told the President, was "to scare the hell out of the country." Truman took up the challenge with gusto, using speeches to paint an imminent threat of communism in Europe in the most dire and graphic terms. To be clear, to the best of my knowledge nothing Truman said in his speeches was untrue. But he made it clear just how very, very bad things might be if Congress failed to enact the Marshall Plan. (Which it did, in arguably the single most successful act of American foreign policy in the post-war era.)

Our analysis of the collective action problem backs up Vandenberg's insight. In the asteroid defense game, the larger the perception of threat – that is, the probability of an asteroid strike -- the larger the contributions of the countries. This relationship, while not surprising, is shown in Figure 9.

---

Drunk Driving (MADD): The First Twenty Five Years," *Traffic Injury Prevention* 7: 195-212 (2006)  
<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.522.4468&rep=rep1&type=pdf>





**Figure 9. Individual Contributions Increase Dramatically as Perceived Threat -- the Probability of an Asteroid Strike -- Increases.** Shown on the x-axis is the probability of a strike. The y-axis shows the size of individual contributions. The number of contributing countries ( $n$ ) is assumed fixed.

The point is not to misrepresent the probability of a bad event. As I discuss in the chapter on persuasion, misrepresentation is almost always a terrible strategy, because the truth is likely to come out; and when it does, a liar's credibility is tarnished forever. But within the bounds of truth, proponents should emphasize that a strike is not an impossible event. Our galactic neighborhood (they should point out) has thousands of potential planet killers lurking about. It is just a matter of time before one arrives – and the clock is ticking. In addition, asteroid activists should make clear how enormous the stakes are: the extinction of humanity in the event of an arrival without a shield. In terms of the model, emphasizing the size of the stakes boosts the salience or value of the shield, an effect we discussed earlier (recall Figure 8). In other words, activists should try to turn the ignorant and complacent into the informed and aware.

In the case of the East LA prison, group leaders should make sure the community understands that the prison will indeed be built if community members do nothing. Leaders should underscore that it will be a large prison and will have very bad effects on the community. Again, the point is not to be deceptive but to be clear and emphatic about the threat and the desirability of the goal from collective action.

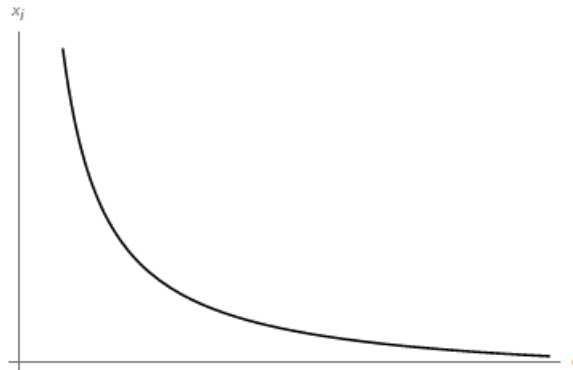
Let's compare Rule 1 with Alinsky's Rule 13: "Pick the target, freeze it, personalize it, and polarize it." In other words, create a clear enemy and make it look bad in a way that group members can understand in their gut. This is rather similar to our Rule 1 and the underlying dynamic falls straight out of the theory of collective action. (In Chapter 5, we'll consider situations where there is an active enemy.)

### **Rule 2. Reduce participation costs for supporters.**

Even in ancient Athens, the birthplace of democracy, there was a free-riding problem. As historian Mary Beard notes, "By the end of the fifth century, low turn-outs had led to the introduction of payment just

for showing up at the voting assemblies.”<sup>21</sup> In other words, Athens used participation subsidies to boost turnout.

Remember the dialogue between Maria and Lucy and the importance to them of participation costs? In our model, this is the unit cost of participation,  $c$ . We have said relatively little about this so far, but it is very important. You will hardly be surprised to discover that contributions and participate fall, and fall dramatically, as costs increase. This is shown in Figure 10.



**Figure 10. Individual Contributions Plummet as the Unit Cost of Participation Increases.** This is hardly surprising but the impact of participation costs can be large. Leaders need to find ways to reduce participation costs.

Reducing “ $c$ ” for asteroid defense would not be easy, but doing so for protests in East LA is another matter. In fact, one can distinguish two broad strategies or modes for reducing the participation cost of people like Lucy and Maria. The first is *knowledge-based*, the second is *transaction-based*.

### **Knowledge-Based Cost Reduction**

Knowledge-based tactics focus on education: telling people when to go, where to go, how to go, and what to do once there. Devices that quickly and easily disseminate information, like phone trees, email, and social media are very useful. Similarly, newsletters provide cost-reducing information. Piggy-backing on pre-existing social networks, like those found in churches, clubs, and workplaces, helps enormously.

-----

#### Example

#### The American Hospital Association's Communication Alerts

Write up the example, just using the AHA's own web page. It would be nice to get one of their alerts.

-----

---

<sup>21</sup> Mary Beard, “Power to the People?” *Times Literary Supplement* June 29 2016 <http://www.the-tls.co.uk/articles/public/power-to-the-people-2/>

As a side-note, when I was growing up in the South during the civil rights movement, the famous Student Non-violent Coordinating Committee (SNCC) – the shock troops of the sit-ins and marches -- targeted my sleepy little town (Chapel Hill, North Carolina) for sit-ins. Everyone knew what was coming, and I can well remember the tense conversations around my parents' dinner table. A few days before the protests, trainers from SNCC arrived, rented a space (which probably wasn't easy), and ran a school for protestors. Now, an essential tactic of the civil rights movement was non-violence. This was absolutely vital in the media-based struggle over the hearts and minds of the country. Non-violence in the face of extreme provocation, beatings, and police brutality is not natural. It takes discipline. The school taught this discipline to the protestors. But, an added benefit must have been the kind of knowledge-based cost reduction we are discussing. If you attended the school, you learned where to go, when to get there, how to get there, what to expect, and what to do and what not to do. Courage and determination are scarce commodities, and knowledge-based cost reduction economizes on them.

One of Alinsky's rules seems to address the knowledge-based tactic (his rule 2): "Never go outside the expertise of your people." In other words, forcing people to operate in realms they don't understand raises their participation costs and thus hurts their participation. However, as formulated in Alinsky's rule, the adage seems too static. It suggests people can't learn. They can, but it is up to leaders to teach them.

### *Transactions-Based Cost Reduction*

The second kind of cost reduction is more quotidian: subsidize participation by providing rides, offering child care, providing free meals, and facilitating cheap lodging. The SNCC coordinators that I mentioned received the princely salary of \$10 per week. This may not seem like much, but it could make the difference even for highly committed young activists, like the SNCC kids. As an example of subsidizing participation, many groups provide pre-packaged protest packages, particularly for writing to Congress. As we discuss in the chapter on persuasion, these packages have a downside but they do boost participation.

Another kind of transaction cost is not so humdrum: the possibility of violence, social stigma, and reprisals from participation. Reducing this kind of participation cost may not be easy but it falls on leaders to try. One way to do so is to exclude from participation, in so far as possible, those inclined to violence or those who desire it for their own purposes. But another interesting example involves social stigma. In a traditionally oriented community like the Mexican-American community of East Los Angeles in the 1980s, street protests were not a historically acceptable activity for women. For their participation to become acceptable within the community, the sanction of respected authority was important. Here, the role of the Catholic Church and community priests was key – respected priests helped organize the protests and legitimated the participation of women, both in their own eyes and those of their families. In the next chapter, we'll look at protest size as another tactic for reducing stigma, reprisals, and the probability of arrest.

A final tactic deserves mention: matching contributions. You may have noticed this tactic employed by your local public radio station, your alumnae association, or whatnot. The idea is to get a wealthy donor to “match” the donations of small contributors. The point isn't really the big contribution from the mega-donor; he or she would probably give anyway. Rather, the point is to boost the incentive of small donors. The match creates something like food-stamps for donations, a subsidy that can be used only for one type of good. The result is typically an increase in small donations (I provide some analytics in the Appendix). Hence, just re-packaging the large donation leads to a multiplier effect in contributions (also it might be easier to get the big donation).

### **Rule 3. Create excludable benefits from participation.**

What are “excludable benefits” from participation?

#### **Excludable benefits from participation. A valued private good that can be acquired only by contributing to the public good.**

The idea of a private good tied to participation in producing a public good seems almost contradictory. But it is very sensible. Two of Alinsky's rules address it directly. His Rule 6 was, “A good tactic is one your people enjoy.” His Rule 7 was: “A tactic that drags on too long becomes a drag.” In other words, if you can make the act of participating fun, entertaining, enjoyable, or even profitable, people will do it more.

Here is a simple example. A major activity of the famous group Amnesty International is writing letters to dictators and authoritarian governments, asking them for the release of specific prisoners of conscience. The spotlight from receiving thousands of letters about a specific individual seems to make a difference. However, traditionally Amnesty did not ask its members to sit at home and write letters in isolation from one another, a tedious prospect at best. Instead, members got together in monthly groups and wrote letters together. This maneuver turned letter writing from a tedious drag into a fun social activity where friendships were formed and people socialized together. This technique is less attractive to young people today, and Amnesty is experimenting with social media as an alternative.

Another example of excludable benefits is the merchandise given with membership or sold members and the public. The merchandise can be attractive and useful, but more than that, it affords people an opportunity to affirm their identity to themselves and in public. The World Wildlife Federation (WWF), for instance, has been ingenious at devising attractive merchandise, often designed pro bono by talented artists. Hats, t-shirts, tote bags, umbrellas are just the tip of an ice-berg that includes jewelry, games, Christmas tree decorations, and (my favorite) paste-on art for fingernails. As I understand it, prime purchasers of NGO merchandise are women in their 40s and 50s. Bear this in mind for appropriate gift-giving!<sup>22</sup>

Examples of excludable benefits from group membership abound. A famous example is the magazine subscriptions that typically come with membership in professional organizations. For instance, physicians who join the American Medical Association (AMA) receive *JAMA*, the *Journal of the American*

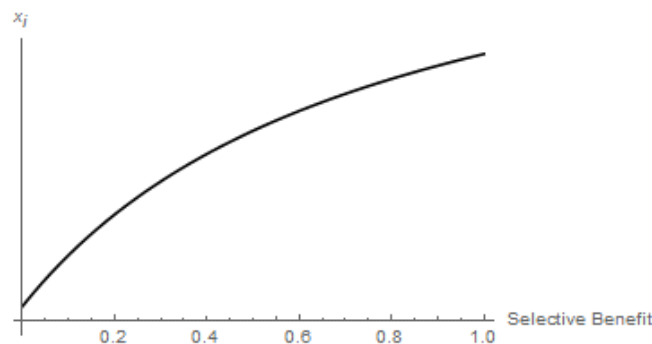
---

<sup>22</sup> Another benefit for the organization is that the non-members who buy the merchandise are good targets for recruitment. Buy on-line and you will receive endless solicitations to join.

*Medical Association.* This is useful to doctors because they learn about new drugs from the magazine's abundant advertisements. AMA members like the magazine (a private good); but their dues support AMA lobbyists in Washington (a public good). As a member of the American Political Science Association, I receive edge-the-seat reading like the *American Political Science Review*. Also, I get cheaper car rentals. I am not so sure my dues give me much more of value.

Do members really join groups to receive tote bags and magazines, and make new friends? Not necessarily, but excludable benefits surely boost membership and contributions. Here is a final example, due to Princeton sociologist Paul Starr and found in his outstanding book, *The Social Transformation of American Medicine*.<sup>23</sup> In the U.S. local medical societies traditionally had great difficulty getting doctors to join. As a result, many local societies collapsed. But the situation turned around when local medical societies found a really nifty excludable benefit. Medical malpractice in the U.S. is based on local standards of practice, not universal standards of best practice. So, litigation often requires a local doctor to testify that another local doctor performed badly. Local medical societies developed the norm that members of the society would not testify against each other. What a great benefit: join the local medical society and receive immunity from medical malpractice suits!

Figure 11 examines the consequences for participation of the creation of a selective benefit in the our simple asteroid defense model.



**Figure 11. Selective Benefits from Participation Boost Contributions Dramatically.** Shown is the effect from adding a selective benefit in the asteroid defense game. Finding a selective benefit can require imagination.

#### **Rule 4. Create sanctions for non-participation.**

The flip side of excludable benefits from participation is, targeted sanctions for non-participation.

Here is a simple example: in Australia, failure to vote brings a penalty, sort of like a speeding ticket. You will hardly be surprised to discover that voting participation in Australia is far, far higher than in the U.S.

<sup>23</sup> Paul Starr, *The Social Transformation of American Medicine*, citation.

or even comparable OECD countries. And, the best study on the subject finds real policy consequences from near universal voting.<sup>24</sup>

Few groups have access to the power of the state to sanction non-participants. Nonetheless the same principle applies but implemented through local social networks rather than state enforcement. A famous field experiment in Michigan conducted by Yale researchers illustrates the basic idea.<sup>25</sup> The study examined voting turnout. Randomly chosen residents were told by the researchers that the researchers would inform their neighbors whether they turned out to vote in the upcoming election. The prospect of public shaming boosted voting participation.

Creating sanctions for non-participation may not be easy. (Creating and maintaining sanctions is itself a public good!) It involves two components: First, the extent of non-participation of every member must be monitored. Second, someone must enforce the sanction, like shaming, and this could well be costly for the enforcer.

In practice, monitoring takes place within social networks so that the actions for each individual are highly visible to at least several other members. For example, in our East L.A. example, if Lucy does not show up at protests, Maria is likely to notice.

Within these social networks, sanctions typically consist of ostracism, gossip, snubbing, ridicule, verbal assaults and other forms of shaming. Because potential participants may be locked into long-term relationships with participants, these punishments while seemingly somewhat minor can be quite stinging, hard to avoid, and actually rather effective.

Why do the punishers actually engage in punishment (another public good!)? In order to account for the administration of punishments we need to step outside our barebones model. Probably the best explanation involves what is sometimes called "altruistic punishment."<sup>26</sup>

**Altruistic punishment. The desire felt by many people to punish non-participants in collective action even though the punishment does not directly benefit the punishers and in fact may be costly for them to administer.**

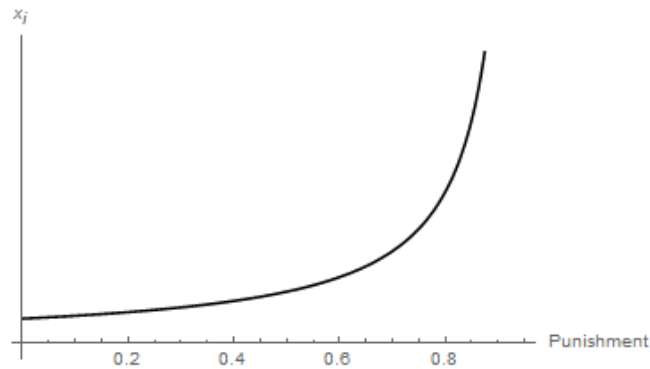
---

<sup>24</sup> Fowler, Anthony. "Electoral and Policy Consequences of Voter Turnout: Evidence from Compulsory Voting in Australia." *Quarterly Journal of Political Science* 8.2 (2013): 159-182.

<sup>25</sup> Alan S. Gerber, Donald P. Green, and Christopher W. Larimer. "Social Pressure and Voter Turnout: Evidence from a Large-scale Field Experiment." *American Political Science Review* 102.01 (2008): 33-48.

<sup>26</sup> An alternative explanation relies on the theory of repeated games. In a repeated setting, individuals can find themselves in an interlocking situation in which people who are supposed to punish violators but fail to do so will themselves be punished. These sorts of interlocking social arrangements may be at play in some of the arrangements in primitive societies for governing a commons observed by Ostrom. Some legal regimes institutionalize such arrangements, for example, if you have knowledge that a crime is about to be committed but fail to report it to the police, you become subject to punishment yourself. But within groups like the Mothers of East L.A., altruistic punishment seems more likely to be the correct explanation for why non-participants may be sanctioned.

Experiments and extensive field data show that many – perhaps most – people take pleasure from punishing people who are seen as deserving of punishment.<sup>27</sup> A moment of self-reflection may confirm the existence of this impulse in yourself.



**Figure 12. Selective Sanctions for Non-Participation Boost Contributions.** Shown is the effect on individual contributions in the asteroid defense game from incorporating a selective punishment for non-participation. Sanctions require monitoring and enforcement, and this is often best done within social networks.

Figure 12 looks at the effect from incorporating selective punishment into our simple model of asteroid defense. Not surprisingly, sanctions for non-participation increase individual contributions. Small punishments increase individual contributions only modestly. But multiplied across many potential participants the effect on total contributions can be substantial.

Leaders have two choices to find the social networks necessary for selective sanctions to work. The first is by far the easiest: piggy-back on existing networks. For example, use church congregations, clubs, workplaces, professional associations, and the like. The second option is a bit harder: create the social network anew. For example, consider again the letter-writing groups traditionally used by Amnesty International. The groups make letter writing fun; but at least potentially they also create a social network in which sanctions could be applied.<sup>28</sup> As another example, revolutionaries frequently organize themselves into small cells. This structure insulates the larger group from the capture and interrogation of a few of its members. But it also creates a social network in which cell members monitor each other's behavior and can apply sanctions to shirkers.<sup>29</sup>

<sup>27</sup> Ernest Fehr and Simon Gächter, "Altruistic Punishment in Humans." *Nature* 415 no. 6868 (2002): 137-140. Large-scale field experiments across many societies find that altruistic punishment appears to be nearly universal in humanity, see Joseph Henrich et al., "Costly Punishment Across Human Societies," *Science* 312.5781 (2006): 1767-1770. Explaining why people are like this isn't so simple but see Robert Boyd, Herbert Gintis, Samuel Bowles, and Peter Richerson, "The Evolution of Altruistic Punishment," *Proceedings of the National Academy of Sciences* 100.6 (2003): 3531-3535.

<sup>28</sup> In fact, participants tell me that the groups are not used this way. One might speculate that the reason is, sanctions could lead some people to quit the organization. Network-based sanctions work best when exit from the network is a costly, painful, or difficult.

<sup>29</sup> For a discussion see Michael Taylor, *Rationality and Revolution*, New York: Cambridge University Press (1988).

Alinsky's rules do not address selective sanctions for non-participation. A curious omission! But its hard to believe his community organizations didn't use such tactics.

### **Rule 5. Recruit high demanders, participants with abundant resources, and efficient producers.**

In our discussion of how the Mighty are Exploited by the Meek, we already covered this ground: high demanders, participants with abundant resources, and efficient producers are big contributors. Others will free-ride or easy-ride on their efforts but if the public good is a normal good, the overall effect will be positive. Therefore, groups should recruit and cultivate these mega-contributors.

### **Rule 6. Cherish and carefully use highly motivated altruists.**

In Rule 4 I discussed the use of altruistic punishers. But there is another type of altruist who is also extremely valuable for collective action: altruistic contributors. In the Maria-Lucy dialogue, the last argument that Maria makes is, "It's the right thing to do." Laboratory experiments and common observation document the existence of people who sincerely believe such arguments and find them compelling.<sup>30</sup> They take pride in contributing; they experience a "warm glow" from doing so; they feel a personal obligation to contribute. They are also moved by moral exhortation, and the combination of moral suasion and altruistic punishment seems to be particularly effective.<sup>31</sup>

It is important to understand that even altruistic contributors are not infinitely willing to contribute. Instead, one might see them as people who view their contribution as particularly important, somewhat like the sole purchaser of a public good in the left-hand panel of Figure 3. Such a purchaser is certainly sensitive to costs; but she doesn't treat the contributions of others as an opportunity to free-ride. In some sense, her best-response function is not downward sloping (or not as much) as the ordinary person's. Because of this reluctance to free- or easy-ride, altruistic contributors are a terrific resource for collective action.

But, altruistic contributors should be used economically. In particular, groups may want to hoard their altruistic contributors and "spend" them in the toughest places, that is, where participation costs can't be subsidized, where selective benefits are scarce, and where selective punishment is ineffective.

*Perhaps the most important place meeting this description is leadership roles themselves.* The sad truth is, leadership in organizations is far from glamorous. It is hard work, often poorly remunerated, frequently frustrating, often discouraging, and sometimes even punishing. But unless someone takes on the responsibility of leadership, collective action will fail. It makes great sense to slot altruistic contributors into leadership roles because they will work hard and keep going when others would quit or shirk. They "take a licking and keep on ticking." In this sense, collective action organizations need to cherish their altruistic contributors – and one might say, exploit them thoughtfully. If collective action

---

<sup>30</sup> John Ledyard, "Public Goods: A Survey of Experimental Research," pp. 111-194 in John Kagel and Alvin Roth (eds) *Handbook of Experimental Economics*, Princeton University Press (1995).

<sup>31</sup> Ernesto Dal Bó and Pedro Dal Bó. "Do the Right Thing: The Effects of Moral Suasion on Cooperation." *Journal of Public Economics* 117 (2014): 28-38.



organizations like MELA follow Rule 6, one would expect the top leadership to be disproportionately filled by altruists.

## Beyond the Six Basic Rules

This ends our discussion for today of Rules for Reformers. But there is much more. In the next chapter we look at situations with tipping, and at situations involving interest group competition. These situations lead to additional rules for reformers. Then, in other chapters we address group strategy: what is the best message to send through collective action? And, who should we target? These are vital matters. But the foundation is clear thinking about the free-riding problem and how to deal with it. I hope you now grasp the basics of collective action.

## 6. Nutshell Summary

In this chapter we reviewed the classic approach to the problem of collective action. It is important to understand the ideas in the classic approach, because they explain why so many groups fail to participate effectively in policy making – while a few do very well.

The classic approach analyzes an *aggregative game* of contributions to a *public good*, displaying *strategic substitutes*. It is a game, because the members of a group or an alliance are in a strategic situation with respect to one another – the outcome depends not just on each individual's personal choice but on everyone's choices. The game is aggregative, because the outcome depends on the sum of the contributions of all the players. The game involves a public good like asteroid defense or stopping the prison, because all the group members benefit from the good even if they made no or only small contributions. (The good is non-excludable). And it involves strategic substitutes, because higher contributions by one player undercut the incentives for other players to contribute, hence, downward sloping best-response functions. Consequently, a big problem is free-riding within the group or, in somewhat less severe form, easy-riding. The unfortunate result is provision of the public good – asteroid defense, protests against the prison -- at very low levels. In sum, easy-riding or free-riding leads to low participation in politics for many groups.

Beyond the basic idea of free-riding, the Size Principle shows that in the kind of game considered in the classic analysis, individual incentives to contribute plummet as the group becomes larger. Still, in most circumstances the total amount of collection action will increase as the group increases in size, though perhaps not by much because of free-riding.

In addition, in the kind of game considered in the classic analysis, the Meek Exploit the Mighty. This occurs in three ways: low-valuers free-ride on the heavy exertions of high-valuers; the less affluent free-ride on the abundant contributions of the more affluent; and the less-efficient (or high cost contributors) free-ride on the more efficient (or low-cost contributors). But, it's still good to have high-valuers, the affluent, and low-cost contributors in the group because total contributions will typically increase.

## The Political Analyst's Toolkit

Without effective leadership, most groups in the classic situation may not become organized at all. The reason is, organizing the group is itself a public good! As a result, it will not be undertaken very much. And, even if organized, the group will end up participating in policy-making at low or even inconsequential levels. *It is the job of group leaders to turn this situation around.* If they fail to do so, the group's prospects may be bleak.

The classic analysis suggests six ways for leaders to overcome free-riding: 1) magnify the importance of the public good or heighten the sense of threat from failure; 2) find a way to reduce the cost of participating; 3) create a selective benefit from participation; 4) create or encourage punishment for non-participation; 5) recruit high demanders, wealthy individuals, and efficient/low cost contributors; and 6) utilize altruists in leadership roles, since leadership is oft-times a punishing or unrewarding public good.

The case "No Prison in East LA!" shows all of these techniques at work, as the Mothers of East Los Angeles (MELA) fought the construction of a prison in their neighborhood.

## Technical Appendix

Charles Cameron  
Tokyo, Japan  
Wednesday, August 3, 2016