

## Alternative Essay Prompts

Please select and respond to one of the essay questions below. Your essay should be in Times New Roman font, 12 point, and double-spaced. The length of the essay should be from 2 to 3 pages.

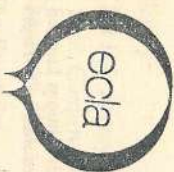
Please upload the completed essay directly to your application.

1. Smoke and flames play an important symbolic role in the film *Citizen Kane* (dir. Orson Welles, 1941). Select three memorable scenes of your choice from the film. What might fire or smoke signify at these points in the film? How are flames or smoke visualized (or not visualized)? What moral connotations might fire and smoke convey in these scenes and in the film as a whole?
2. In his work "The Social Contract," Jean-Jacques Rousseau identifies and categorizes three primary modes of governance: Democracy, Aristocracy, and Monarchy. Yet he writes: "If there were a nation of gods, it would be governed democratically. So perfect a government is unsuited to men" (68). Do you agree with this statement? Is it possible to have democracy in any given nation, no matter its size? Develop an argument in response to this question, drawing directly from the text.
3. Please read Chapter 1 of "Freakonomics" by Steven D. Levitt and based on the text, consider the following question: Is it possible to be an altruist or are all human actions, including the charitable ones, a result of social, moral or economic incentives? Your response should engage with the text, but you are welcome to include examples from current events, personal experience and other sources to support your argumentation.

Jean-Jacques Rousseau  
*The Social Contract*  
or Principles of Political Right



Translation by H. J. Tozer  
Introduction by Derek Matravers



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*The Social Pact*

I assume that men have reached a point at which the obstacles that endanger their preservation in the state of nature overcome, by their resistance, the forces which each individual can exert with a view to maintaining himself in that state. Then this primitive condition can no longer subsist, and the human race would perish unless it changed its mode of existence.

Now, as men cannot create any new forces, but only combine and direct those that exist, they have no other means of self-preservation than to form by aggregation a sum of forces which may overcome the resistance, to put them in action by a single motive power, and to make them work in concert.

This sum of forces can be produced only by the combination of many; but the strength and freedom of each man being the chief instruments of his preservation, how can he pledge them without injuring himself, and without neglecting the cares which he owes to himself? This difficulty, applied to my subject, may be expressed in these terms:

'To find a form of association which may defend and protect with the whole force of the community the person and property of every associate, and by means of which each, coalescing with all, may nevertheless obey only himself, and remain as free as before.' Such is the fundamental problem of which the social contract furnishes the solution.

The clauses of this contract are so determined by the nature of the act that the slightest modification would render them vain and ineffectual, so that, although they have never perhaps been formally enunciated, they are everywhere the same, everywhere tacitly admitted and recognised, until, the social pact being violated, each man regains his original rights and recovers his natural liberty,

whilst losing the conventional liberty for which he renounced it.

These clauses, rightly understood, are reducible to one only, *viz.* the total alienation to the whole community of each associate with all his rights; for, in the first place, since each gives himself up entirely, the conditions are equal for all; and, the conditions being equal for all, no one has any interest in making them burdensome to others.

Further, the alienation being made without reserve, the union is as perfect as it can be, and an individual associate can no longer claim anything: for, if any rights were left to individuals, since there would be no common superior who could judge between them and the public, each, being on some point his own judge, would soon claim to be so on all; the state of nature would still subsist, and the association would necessarily become tyrannical or useless.

In short, each giving himself to all, gives himself to nobody; and as there is not one associate over whom we do not acquire the same rights which we concede to him over ourselves, we gain the equivalent of all that we lose, and more power to preserve what we have.

If, then, we set aside what is not of the essence of the social contract, we shall find that it is reducible to the following terms:

'Each of us puts in common his person and his whole power under the supreme direction of the general will; and in return we receive every member as an indivisible part of the whole.'

Forthwith, instead of the individual personalities of all the contracting parties, this act of association produces a moral and collective body, which is composed of as many members as the assembly has voices, and which receives from this same act its unity, its common self (*moi*), its life, and its will. This public person, which is thus formed by the union of all the individual members, formerly took the name of *city*,\* and now takes that of

\* The real meaning of this word has been almost completely effaced among the moderns; the majority take a town for a city, and a burgh for a citizen. They do not know that houses make the town, and that citizens make the city. This very mistake cost the Carthaginians dear. I have never read of the tide citizens (*ciues*) being given to the subjects of a prince, not even in ancient times to the Macedonians, nor, in our days, to the English, although nearer liberty than all the rest. The French alone employ familiarly this name *citizen*,

impossible to injure one of the members without attacking the body, still less to injure the body without the members feeling the effects. Thus duty and interest alike oblige the two contracting parties to give mutual assistance; and the men themselves should seek to combine in this twofold relationship all the advantages which are attendant on it.

Now, the sovereign, being formed only of the individuals that compose it, neither has nor can have any interest contrary to theirs; consequently the sovereign power needs no guarantee towards its subjects, because it is impossible that the body should wish to injure all its members; and we shall see hereafter that it can injure no one as an individual. The sovereign, for the simple reason that it is so, is always everything that it ought to be.

But this is not the case as regards the relation of subjects to the sovereign, which, notwithstanding the common interest, would have no security for the performance of their engagements, unless it found means to ensure their fidelity.

Indeed, every individual may, as a man, have a particular will contrary to, or divergent from, the general will which he has as a citizen; his private interest may prompt him quite differently from the common interest; his absolute and naturally independent existence may make him regard what he owes to the common cause as a gratuitous contribution, the loss of which will be less harmful to others than the payment of it will be burdensome to him; and, regarding the moral person that constitutes the state as an imaginary being because it is not a man, he would be willing to enjoy the rights of a citizen without being willing to fulfil the duties of a subject. The progress of such injustice would bring about the ruin of the body politic.

In order, then, that the social pact may not be a vain formula, it tacitly includes this engagement, which can alone give force to the others, — that whoever refuses to obey the general will shall be constrained to do so by the whole body; which means nothing else than that he shall be forced to be free; for such is the condition which, uniting every citizen to his native land, guarantees him from all personal dependence, a condition that ensures the control and working of the political machine, and alone renders legitimate civil engagements, which, without it, would be absurd and tyrannical, and subject to the most enormous abuses.

## CHAPTER 8

*The Civil State*

The passage from the state of nature to the civil state produces in man a very remarkable change, by substituting in his conduct justice for instinct, and by giving his actions the moral quality that they previously lacked. It is only when the voice of duty succeeds physical impulse, and law succeeds appetite, that man, who till then had regarded only himself, sees that he is obliged to act on other principles, and to consult his reason before listening to his inclinations. Although, in this state, he is deprived of many advantages that he derives from nature, he acquires equally great ones in return; his faculties are exercised and developed; his ideas are expanded; his feelings are ennobled; his whole soul is exalted to such a degree that, if the abuses of this new condition did not often degrade him below that from which he has emerged, he ought to bless without ceasing the happy moment that released him from it for ever, and transformed him from a stupid and ignorant animal into an intelligent being and a man.

Let us reduce this whole balance to terms easy to compare. What man loses by the social contract is his natural liberty and an unlimited right to anything which tempts him and which he is able to attain; what he gains is civil liberty and property in all that he possesses. In order that we may not be mistaken about these compensations, we must clearly distinguish natural liberty, which is limited only by the powers of the individual, from civil liberty, which is limited by the general will; and possession, which is nothing but the result of force or the right of first occupancy, from property, which can be based only on a positive title.

Besides the preceding, we might add to the acquisitions of the civil state moral freedom, which alone renders man truly master of himself; for the impulse of mere appetite is slavery; while obedience

to a self-prescribed law is liberty. But I have already said too much on this head, and the philosophical meaning of the term *liberty* does not belong to my present subject.

## CHAPTER 9

*Real Property*

Every member of the community at the moment of its formation gives himself up to it, just as he actually is, himself and all his powers, of which the property that he possesses forms part. By this act, possession does not change its nature when it changes hands, and become property in those of the sovereign; but, as the powers of the state (*cité*) are incomparably greater than those of an individual, public possession is also, in fact, more secure and more irrevocable, without being more legitimate, at least in respect of foreigners; for the state, with regard to its members, is owner of all their property by the social contract, which, in the state, serves as the basis of all rights; but with regard to other powers, it is owner only by the right of first occupancy which it derives from individuals.

The right of first occupancy, although more real than that of the strongest, becomes a true right only after the establishment of that of property. Every man has by nature a right to all that is necessary to him; but the positive act which makes him proprietor of certain property excludes him from all the residue. His portion having been allotted, he ought to confine himself to it, and he has no further right to the undivided property. That is why the right of first occupancy, so weak in the state of nature, is respected by every member of a state. In this right men regard not so much what belongs to others as what does not belong to themselves.

In order to legalise the right of first occupancy over any domain whatsoever, the following conditions are, in general, necessary: first, the land must not yet be inhabited by anyone; secondly, a man must occupy only the area required for his subsistence; thirdly, he must take possession of it, not by an empty ceremony, but by labour and cultivation, the only mark of ownership which, in default of legal title, ought to be respected by others.

Indeed, if we accord the right of first occupancy to necessity and labour, do we not extend it as far as it can go? Is it impossible to assign limits to this right? Will the mere setting foot on common ground be sufficient to give an immediate claim to the ownership of it? Will the power of driving away other men from it for a moment suffice to deprive them for ever of the right of returning to it? How can a man or a people take possession of an immense territory and rob the whole human race of it except by a punishable usurpation, since other men are deprived of the place of residence and the sustenance which nature gives to them in common? When Nuñez Balbao on the sea-shore took possession of the Pacific Ocean and of the whole of South America in the name of the crown of Castille, was this sufficient to dispossess all the inhabitants, and exclude from it all the princes in the world? On this supposition, such ceremonies might have been multiplied vainly enough; and the Catholic king in his cabinet might, by a single stroke, have taken possession of the whole world, only cutting off afterwards from his empire what was previously occupied by other princes.

We perceive how the lands of individuals, united and contiguous, become public territory, and how the right of sovereignty, extending itself from the subjects to the land which they occupy, becomes at once real and personal, which places the possessors in greater dependence, and makes their own powers a guarantee for their fidelity — an advantage which ancient monarchs do not appear to have clearly perceived, for, calling themselves only kings of the Persians or Scythians or Macedonians, they seem to have regarded themselves as chiefs of men rather than as owners of countries. Monarchs of today call themselves more cleverly kings of France, Spain, England, etc.; in thus holding the land they are quite sure of holding its inhabitants.

The peculiarity of this alienation is that the community, in receiving the property of individuals, so far from robbing them of it, only assures them lawful possession, and changes usurpation into true right, enjoyment into ownership. Also, the possessors being considered as depositaries of the public property, and their rights being respected by all the members of the state, as well as maintained by all its power against foreigners, they have, as it were, by a transfer advantageous to the public and still more to themselves,

acquired all that they have given up — a paradox which is easily explained by distinguishing between the rights which the sovereign and the proprietor have over the same property, as we shall see hereafter.

It may also happen that men begin to unite before they possess anything, and that afterwards occupying territory sufficient for all, they enjoy it in common, or share it among themselves, either equally or in proportions fixed by the sovereign. In whatever way this acquisition is made, the right which every individual has over his own property is always subordinate to the right which the community has over all; otherwise there would be no stability in the social union, and no real force in the exercise of sovereignty.

I shall close this chapter and this book with a remark which ought to serve as a basis for the whole social system; it is that instead of destroying natural equality, the fundamental pact, on the contrary, substitutes a moral and lawful equality for the physical inequality which nature imposed upon men, so that, although unequal in strength or intellect, they all become equal by convention and legal right.\*

\* Under bad governments this equality is only apparent and illusory; it serves only to keep the poor in their misery and the rich in their usurpations. In fact, laws are always useful to those who possess and injurious to those that have nothing; whence it follows that the social state is advantageous to men only so far as they all have something; and none of them has too much.

*The Different Systems of Legislation*

If we ask precisely wherein consists the greatest good of all, which ought to be the aim of every system of legislation, we shall find that it is summed up in two principal objects, *liberty* and *equality* — liberty, because any individual dependence is so much force withdrawn from the body of the state; equality, because liberty cannot subsist without it.

I have already said what civil liberty is. With regard to equality, we must not understand by this word that the degrees of power and wealth should be absolutely the same; but that, as to power, it should fall short of all violence, and never be exercised except by virtue of station and of the laws; while, as to wealth, no citizen should be rich enough to be able to buy another, and none poor enough to be forced to sell himself,\* which supposes, on the part of the great, moderation in property and influence, and, on the part of ordinary citizens, repression of avarice and covetousness.

It is said that this equality is a chimera of speculation which cannot exist in practical affairs. But if the abuse is inevitable, does it follow that it is unnecessary even to regulate it? It is precisely because the force of circumstances is ever tending to destroy equality that the force of legislation should always tend to maintain it.

But these general objects of every good institution ought to be modified in each country by the relations which arise both from the local situation and from the character of the inhabitants; and it is with reference to these relations that we must assign to each nation a

\* If then, you wish to give stability to the state, bring the two extremes as near together as possible; tolerate neither rich people nor beggars. These two conditions, naturally inseparable, are equally fatal to the general welfare; from the one class spring tyrants, from the other, the supporters of tyranny; it is always between these that the traffic in public liberty is carried on; the one buys and the other sells.

particular system of institutions, which shall be the best, not perhaps in itself, but for the state for which it is designed. For instance, if the soil is unfruitful and barren, or the country too confined for its inhabitants, turn your attention to arts and manufactures, and exchange their products for the provisions that you require. On the other hand, if you occupy rich plains and fertile slopes, if in a productive region, you are in need of inhabitants, bestow all your cares on agriculture, which multiplies men, and drive out the arts, which would only end in depopulating the country by gathering together in a few spots the few inhabitants that the land possesses. \* If you occupy extensive and convenient coasts, cover the sea with vessels and foster commerce and navigation; you will have a short and brilliant existence. If the sea on your coasts bathes only rocks that are almost inaccessible, remain fish-eating barbarians; you will lead more peaceful, perhaps better, and certainly happier lives. In a word, besides the maxims common to all, each nation contains within itself some cause which influences it in a particular way, and renders its legislation suitable for it alone. Thus the Hebrews in ancient times, and the Arabs more recently, had religion as their chief object, the Athenians literature, Carthage and Tyre commerce, Rhodes navigation, Sparta war, Rome valour. The author of the *Spirit of the Laws* has shown in a multitude of instances by what arts the legislator directs his institutions towards each of these objects.

What renders the constitution of a state really solid and durable is the observance of expediency in such a way that natural relations and the laws always coincide, the latter only serving, as it were, to secure, support, and rectify the former. But if the legislator, mistaken in his object, takes a principle different from that which springs from the nature of things; if the one tends to servitude, the other to liberty, the one to riches, the other to population, the one to peace, the other to conquests, we shall see the laws imperceptibly weakened and the constitution impaired; and the state will be ceaselessly agitated until it is destroyed or changed, and invincible nature has resumed her sway.

\* Any branch of foreign commerce, says the Marquis d'Argenson, diffuses merely a deceptive utility through the kingdom generally; it may enrich a few individuals, even a few towns, but the nation as a whole gains nothing, and the people are none the better for it.

sovereign will always dominant, and the sole rule of all the rest.

On the other hand, according to the natural order, these different wills become more active in proportion as they are concentrated. Thus the general will is always the weakest, the corporate will has the second rank, and the particular will the first of all; so that in the government each member is, firstly, himself, next a magistrate, and then a citizen — a gradation directly opposed to that which the social order requires.

But suppose that the whole government is in the hands of a single man, then the particular will and the corporate will are perfectly united, and consequently the latter is in the highest possible degree of intensity. Now, as it is on the degree of will that the exertion of force depends, and as the absolute power of the government does not vary, it follows that the most active government is that of a single person.

On the other hand, let us unite the government with the legislative authority; let us make the sovereign the Prince, and all the citizens magistrates; then the corporate will, confounded with the general will, will have no more activity than the latter, and will leave the particular will in all its force. Thus the government, always with the same absolute force, will be at its minimum of relative force or activity.

These relations are incontestable, and other considerations serve still further to confirm them. We see, for example, that each magistrate is more active in his body than each citizen is in his, and that consequently the particular will has much more influence in the acts of government than in those of the sovereign; for every magistrate is almost always charged with some function of government, whereas each citizen, taken by himself, has no function of sovereignty. Besides, the more a state extends, the more is its real force increased, although it does not increase in proportion to its extent; but, while the state remains the same, it is useless to multiply magistrates, for the government acquires no greater real force, inasmuch as this force is that of the state, the quantity of which is always uniform. Thus the relative force or activity of the government diminishes without its absolute or real force being able to increase.

It is certain, moreover, that the despatch of business is retarded in proportion as more people are charged with it; that, in laying too

### *The Principle which Constitutes the Different Forms of Government*

To explain the general cause of these differences, I must here distinguish the Prince from the government, as I before distinguished the state from the sovereign.

The body of the magistracy may be composed of a greater or less number of members. We said that the ratio of the sovereign to the subjects was so much greater as the people were more numerous; and, by an evident analogy, we can say the same of the government with regard to the magistrates.

Now, the total force of the government, being always that of the state, does not vary: whence it follows that the more it employs this force on its own members, the less remains for operating upon the whole people.

Consequently, the more numerous the magistrates are, the weaker is the government. As this maxim is fundamental, let us endeavour to explain it more clearly.

We can distinguish in the person of the magistrate three wills essentially different: first, the will peculiar to the individual, which tends only to his personal advantage; secondly, the common will of the magistrates, which has reference solely to the advantage of the Prince, and which may be called the corporate will, being general in relation to the government, and particular in relation to the state of which the government forms part; in the third place, the will of the people, or the sovereign will, which is general both in relation to the state considered as the whole, and in relation to the government considered as part of the whole.

In a perfect system of legislation the particular or individual will should be inoperative; the corporate will proper to the government quite subordinate; and consequently the general or

much stress on prudence, we leave too little to fortune; that opportunities are allowed to pass by, and that owing to excessive deliberation the fruits of deliberation are often lost.

I have just shown that the government is weakened in proportion to the multiplication of magistrates, and I have before demonstrated that the more numerous the people is, the more ought the repressive force to be increased. Whence it follows that the ratio between the magistrates and the government ought to be inversely as the ratio between the subjects and the sovereign; that is, the more the state is enlarged, the more should the government contract; so that the number of chiefs should diminish in proportion as the number of the people is increased.

But I speak here only of the relative force of the government, and not of its rectitude; for, on the other hand, the more numerous the magistracy is, the more does the corporate will approach the general will; whereas, under a single magistrate, this same corporate will is, as I have said, only a particular will. Thus, what is lost on one side can be gained on the other, and the art of the legislator consists in knowing how to fix the point where the force and will of the government, always in reciprocal proportion, are combined in the ratio most advantageous to the state.

### CHAPTER 3

#### *Classification of Governments*

We have seen in the previous chapter why the different kinds or forms of government are distinguished by the number of members that compose them; it remains to be seen in the present chapter how this division is made.

The sovereign may, in the first place, commit the charge of the government to the whole people, or to the greater part of the people, in such a way that there may be more citizens who are magistrates than simple individual citizens. We call this form of government a *democracy*.

Or it may confine the government to a small number, so that there may be more ordinary citizens than magistrates; and this form bears the name of *aristocracy*.

Lastly, it may concentrate the whole government in the hands of a single magistrate from whom all the rest derive their power. This third form is the most common, and is called *monarchy*, or royal government.

We should remark that all these forms, or at least the first two, admit of degrees, and may indeed have a considerable range; for democracy may embrace the whole people, or be limited to a half. Aristocracy, in its turn, may restrict itself from a half of the people to the smallest number indeterminately. Royalty even is susceptible of some division. Sparta by its constitution always had two kings; and in the Roman Empire there were as many as eight Emperors at once without its being possible to say that the Empire was divided. Thus there is a point at which each form of government blends with the next; and we see that, under three denominations only, the government is really susceptible of as many different forms as the state has citizens.

What is more, this same government being in certain respects

capable of subdivision into other parts, one administered in one way, another in another, there may result from combinations of these three forms a multitude of mixed forms, each of which can be multiplied by all the simple forms.

In all ages there has been much discussion about the best form of government, without consideration of the fact that each of them is the best in certain cases, and the worst in others.

If, in the different states, the number of the supreme magistrates should be in inverse ratio to that of the citizens, it follows that, in general, democratic government is suitable to small states, aristocracy to those of moderate size, and monarchy to large ones. This rule follows immediately from the principle. But how is it possible to estimate the multitude of circumstances which may furnish exceptions?

#### CHAPTER 4

### *Democracy*

He that makes the law knows better than anyone how it should be executed and interpreted. It would seem, then, that there could be no better constitution than one in which the executive power is united with the legislative; but it is that very circumstance which makes a democratic government inadequate in certain respects, because things which ought to be distinguished are not, and because the Prince and the sovereign, being the same person, only form as it were a government without government.

It is not expedient that he who makes the laws should execute them, nor that the body of the people should divert its attention from general considerations in order to bestow it on particular objects. Nothing is more dangerous than the influence of his private interests on public affairs; and the abuse of the laws by the government is a less evil than the corruption of the legislator, which is the infallible result of the pursuit of private interests. For when the state is changed in its substance all reform becomes impossible. A people which would never abuse the government would likewise never abuse its independence; a people which always governed well would not need to be governed.

Taking the term in its strict sense, there never has existed, and never will exist, any true democracy. It is contrary to the natural order that the majority should govern and that the minority should be governed. It is impossible to imagine that the people should remain in perpetual assembly to attend to public affairs, and it is easily apparent that commissions could not be established for that purpose without the form of administration being changed.

In fact, I think I can lay down as a principle that when the functions of government are shared among several magistracies, the least numerous acquire, sooner or later, the greatest authority,

if only on account of the facility in transacting business which naturally leads them on to that.

Moreover, how many things difficult to combine does not this government presuppose! First, a very small state, in which the people may be readily assembled, and in which every citizen can easily know all the rest; secondly, great simplicity of manners, which prevents a multiplicity of affairs and thorny discussions; next, considerable equality in rank and fortune, without which equality in rights and authority could not long subsist; lastly, little or no luxury, for luxury is either the effect of wealth or renders it necessary; it corrupts both the rich and the poor, the former by possession, the latter by covetousness; it betrays the country to effeminacy and vanity; it deprives the state of all its citizens in order to subject them one to another, and all to opinion.

That is why a famous author has assigned virtue as the principle of a republic, for all these conditions could not subsist without virtue; but, through not making the necessary distinctions, this brilliant genius has often lacked precision and sometimes clearness, and has not seen that the sovereign authority being everywhere the same, the same principle ought to have a place in every well-constituted state, in a greater or less degree, it is true, according to the form of government.

Let us add that there is no government so subject to civil wars and internal agitations as the democratic or popular, because there is none which tends so strongly and so constantly to change its form, none which demands more vigilance and courage to be maintained in its own form. It is especially in this constitution that the citizen should arm himself with strength and steadiness, and say every day of his life from the bottom of his heart what a virtuous Palatine\* said in the Diet of Poland: *Malo periculosam libertatem quam quietum servitium*.<sup>1</sup>

If there were a nation of gods, it would be governed democratically. So perfect a government is unsuited to men.

\* The Palatine of Posnania, father of the King of Poland, Duke of Lorraine.

<sup>1</sup> [I prefer a perilous freedom to a peaceful slavery.]

## CHAPTER 5

*Aristocracy*

We have here two moral persons quite distinct, *viz.* the government and the sovereign; and consequently two general wills, the one having reference to all the citizens, the other only to the members of the administration. Thus, although the government can regulate its internal policy as it pleases, it can never speak to the people except in the name of the sovereign, that is, in the name of the people themselves. This must never be forgotten.

The earliest societies were aristocratically governed. The heads of families deliberated among themselves about public affairs. The young men yielded readily to the authority of experience. Hence the names *priests*, *elders*, *senate*, *gerontes*. The savages of North America are still governed in this way at the present time, and are very well governed.

But in proportion as the inequality due to institutions prevailed over natural inequality, wealth or power\* was preferred to age, and aristocracy became elective. Finally, the power transmitted with the father's property to the children, rendering the families patrician, made the government hereditary, and there were senators only twenty years old.

There are, then, three kinds of aristocracy—natural, elective and hereditary. The first is only suitable for simple nations; the third is the worst of all governments. The second is the best; it is aristocracy properly so-called.

Besides the advantage of the distinction between the two powers, aristocracy has that of the choice of its members: for in a popular government all the citizens are born magistrates; but this

\* It is clear that the word *optimates* among the ancients did not mean the best, but the most powerful.

one limits them to a small number, and they become magistrates by election only:\* a method by which probity, intelligence, experience, and all other grounds of preference and public esteem are so many fresh guarantees that men will be wisely governed.

Further, assemblies are more easily convoked; affairs are better discussed and are despatched with greater order and diligence; while the credit of the state is better maintained abroad by venerable senators, than by an unknown or despised multitude.

In a word, it is the best and most natural order of things that the wisest should govern the multitude, when we are sure that they will govern it for its advantage and not for their own. We should not uselessly multiply means, nor do with twenty thousand men what a hundred chosen men can do still better. But we must observe that the corporate interest begins here to direct the public force in a less degree according to the rule of the general will, and that another inevitable propensity deprives the laws of a part of the executive power.

With regard to special expediences, a state must not be so small, nor a people so simple and upright, that the execution of the laws should follow immediately upon the public will, as in a good democracy. Nor again must a nation be so large that the chief men, who are dispersed in order to govern it, can set up as sovereigns, each in his own province, and begin by making themselves independent so as at last to become masters.

But if aristocracy requires a few virtues less than popular government, it requires also others that are peculiarly its own, such as moderation among the rich and contentment among the poor; for a rigorous equality would seem to be out of place in it, and was not even observed in Sparta.

Besides, if this form of government comports with a certain inequality of fortune, it is expedient in general that the administration of public affairs should be entrusted to those that are best

\* It is very important to regulate by law the form of election of magistrates; for, in leaving it to the will of the Prince, it is impossible to avoid falling into hereditary aristocracy, as happened in the republics of Venice and Berne. In consequence, the first has long been a decaying state, but the second is maintained by the extreme wisdom of its Senate; it is a very honourable and a very dangerous exception.

able to devote their whole time to it, but not, as Aristotle maintains, that the rich should always be preferred. On the contrary, it is important that an opposite choice should sometimes teach the people that there are, in men's personal merits, reasons for preference more important than wealth.

people. This maxim is very fine, and also very true in certain respects; unfortunately it will always be ridiculed in courts. Power which springs from the affections of the people is doubtless the greatest, but it is precarious and conditional; princes will never be satisfied with it. The best kings wish to have the power of being wicked if they please, without ceasing to be masters. A political preacher will tell them in vain that, the strength of the people being their own, it is their greatest interest that the people should be flourishing, numerous, and formidable; they know very well that that is not true. Their personal interest is, in the first place, that the people should be weak and miserable, and should never be able to resist them. Supposing all the subjects always perfectly submissive, I admit that it would then be the prince's interest that the people should be powerful, in order that this power, being his own, might render him formidable to his neighbours; but as this interest is only secondary and subordinate, and as the two suppositions are incompatible, it is natural that princes should always give preference to the maxim which is most immediately useful to them. It is this that Samuel strongly represented to the Hebrews; it is this that Machiavelli clearly demonstrated. While pretending to give lessons to kings, he gave great ones to peoples. The *Prince* of Machiavelli is the book of republicans.\*

We have found, by general considerations, that monarchy is suited only to large states; and we shall find this again by examining monarchy itself. The more numerous the public administrative body is, the more does the ratio of the Prince to the subjects diminish and approach equality, so that this ratio is unity or equality, even in a democracy. This same ratio increases in proportion as the government contracts, and is at its maximum when the government is in the hands of a single person. Then the distance between the Prince and the people is too great, and the state lacks cohesion. In

\* Machiavelli was an honourable man and a good citizen; but, attached to the house of the Medici, he was forced, during the oppression of his country, to conceal his love for liberty. The mere choice of his execrable hero sufficiently manifests his secret intention; and the opposition between the maxims of his book the *Prince* and those of his *Discourses on Tiberius* and his *History of Florence* shows that this profound politician has had hitherto only superficial or corrupt readers. The court of Rome has strictly prohibited his book; I certainly believe it, for it is that court which he most clearly depicts.

## CHAPTER 6

*Monarchy*

We have hitherto considered the Prince as a moral and collective person united by the force of the laws, and as the depositary of the executive power in the state. We have now to consider this power concentrated in the hands of a natural person, of a real man, who alone has a right to dispose of it according to the laws. He is what is called a monarch or a king.

Quite the reverse of the other forms of administration, in which a collective being represents an individual, in this one an individual represents a collective being: so that the moral unity that constitutes it is at the same time a physical unity, in which all the powers that the law combines in the other with so much effort are combined naturally.

Thus the will of the people, the will of the Prince, the public force of the state, and the particular force of the government, all obey the same motive power; all the springs of the machine are in the same hand, everything works for the same end; there are no opposite movements that counteract one another, and no kind of constitution can be imagined in which a more considerable action is produced with less effort. Archimedes, quietly seated on the shore, and launching without difficulty a large vessel, represents to me a skilful monarch, governing from his cabinet his vast states, and, while he appears motionless, setting everything in motion.

But if there is no government which has more vigour, there is none in which the particular will has more sway and more easily governs others. Everything works for the same end, it is true; but this end is not the public welfare, and the very power of the administration turns continually to the prejudice of the state.

Kings wish to be absolute, and from afar men cry to them that the best way to become so is to make themselves beloved by their

order to unify it, then, intermediate orders, princes, grandees, and nobles, are required to fill them. Now, nothing at all of this kind is proper for a small state, which would be ruined by all these orders.

But if it is difficult for a great state to be well governed, it is much more so for it to be well governed by a single man; and everyone knows what happens when the king appoints deputies.

One essential and inevitable defect, which will always render a monarchical government inferior to a republican one, is that in the latter the public voice hardly ever raises to the highest posts any but enlightened and capable men, who fill them honourably; whereas those who succeed in monarchies are most frequently only petty mischief-makers, petty knaves, petty intriguers, whose petty talents, which enable them to attain high posts in courts, only serve to show the public their ineptitude as soon as they have attained them. The people are much less mistaken about their choice than the prince is; and a man of real merit is almost as rare in a royal ministry as a fool at the head of a republican government. Therefore, when by some fortunate chance one of these born rulers takes the helm of affairs in a monarchy almost wrecked by such a fine set of ministers, it is quite astonishing what resources he finds, and his accession to power forms an epoch in a country.

In order that a monarchical state might be well governed, it would be necessary that its greatness or extent should be proportioned to the abilities of him that governs. It is easier to conquer than to rule. With a sufficient lever, the world may be moved by a finger; but to support it the shoulders of Hercules are required. However small a state may be, the prince is almost always too small for it. When, on the contrary, it happens that the state is too small for its chief, which is very rare, it is still badly governed, because the chief, always pursuing his own great designs, forgets the interests of the people, and renders them no less unhappy by the abuse of his transcendent abilities, than an inferior chief by his lack of talent. It would be necessary, so to speak, that a kingdom should be enlarged or contracted in every reign, according to the capacity of the prince; whereas, the talents of a senate having more definite limits, the state may have permanent boundaries, and the administration prosper equally well.

The most obvious inconvenience of the government of a single person is the lack of uninterrupted succession which forms in

the two others a continuous connection. One king being dead, another is necessary; elections leave dangerous intervals; they are stormy; and unless the citizens are of a disinterestedness, an integrity, which this government hardly admits of, intrigue and corruption intermingle with it. It would be hard for a man to whom the state has been sold not to sell it in his turn, and indemnify himself out of the helpless for the money which the powerful have extorted from him. Sooner or later everything becomes venal under such an administration, and the peace which is then enjoyed under a king is worse than the disorder of an interregnum.

What has been done to prevent these evils? Crowns have been made hereditary in certain families; and an order of succession has been established which prevents any dispute on the demise of kings; that is to say, the inconvenience of regencies being substituted for that of elections, an appearance of tranquillity has been preferred to a wise administration, and men have preferred to risk having as their chiefs children, monsters, and imbeciles, rather than have a dispute about the choice of good kings. They have not considered that in thus exposing themselves to the risk of this alternative, they put almost all the chances against themselves. That was a very sensible answer of Dionysius the younger, to whom his father, in reproaching him with a dishonourable action, said: 'Have I set you the example in this?' 'Ah!' replied the son, 'your father was not a king.'

All things conspire to deprive of justice and reason a man brought up to govern others. Much trouble is taken, so it is said, to teach young princes the art of reigning; this education does not appear to profit them. It would be better to begin by teaching them the art of obeying. The greatest kings that history has celebrated were not trained to rule; that is a science which men are never less masters of than after excessive study of it, and it is better acquired by obeying than by ruling. *Nam utilissimus idem ac brevissimus honorum mandarumque rerum delectus, cogitare quid aut nolueris sub alio principe, aut nolueris.*<sup>1</sup>

A result of this want of cohesion is the instability of royal government, which, being regulated sometimes on one plan, sometimes on another, according to the character of the reigning

<sup>1</sup> ['For the quickest and most useful way of choosing between things that are good and evil is to consider what, under another emperor, you would have approved or disapproved.' Tacitus, *Histories* I, 16]

prince or that of the persons who reign for him, cannot long pursue a fixed aim or a consistent course of conduct, a variability which always makes the state fluctuate between maxim and maxim, project and project, and which does not exist in other governments, where the Prince is always the same. So we see that, in general, if there is more cunning in a court, there is more wisdom in a senate, and that republics pursue their ends by more steadfast and regular methods; whereas every revolution in a royal ministry produces one in the state, the maxim common to all ministers, and to almost all kings, being to reverse in every respect the acts of their predecessors.

From this same want of cohesion is obtained the solution of a sophism very familiar to royal politicians; this is not only to compare civil government with domestic government, and the prince with the father of a family, an error already refuted, but, further, to ascribe freely to this magistrate all the virtues which he might have occasion for, and always to suppose that the prince is what he ought to be — on which supposition royal government is manifestly preferable to every other, because it is incontestably the strongest, and because it only lacks a corporate will more conformable to the general will to be also the best.

But if, according to Plato, a king by nature is so rare a personage, how many times will nature and fortune conspire to crown him? And if the royal education necessarily corrupts those who receive it, what should be expected from a succession of men trained to rule? It is, then, voluntary self-deception to confuse royal government with that of a good king. To see what this government is in itself, we must consider it under incapable or wicked princes; for such will come to the throne, or the throne will make them such.

These difficulties have not escaped our authors, but they have not been embarrassed by them. The remedy, they say, is to obey without murmuring: God gives bad kings in his wrath, and we must endure them as chastisements of heaven. Such talk is doubtless edifying, but I am inclined to think it would be more appropriate in a pulpit than in a book on politics. What should we say of a physician who promises miracles, and whose whole art consists in exhorting the sick man to be patient? We know well that when we have a bad government it must be endured; the question is to find a good one.

## CHAPTER 7

*Mixed Governments*

Properly speaking, there is no simple government. A single chief must have subordinate magistrates; a popular government must have a head. Thus, in the partition of the executive power there is always a gradation from the greater number to the less, with this difference, that sometimes the majority depends on the minority, and sometimes the minority on the majority.

Sometimes there is an equal division, either when the constituent parts are in mutual dependence, as in the government of England; or when the authority of each part is independent, but imperfect, as in Poland. This latter form is bad, because there is no unity in the government, and the state lacks cohesion.

Is a simple or a mixed government the better? A question much debated among publicists, and one to which the same answer must be made that I have before made about every form of government.

The simple government is the better in itself, for the reason that it is simple. But when the executive power is not sufficiently dependent on the legislative, that is, when there is a greater proportion between the Prince and the sovereign than between the people and the Prince, this want of proportion must be remedied by dividing the government; for then all its parts have no less authority over the subjects, and their division renders them all together less strong against the sovereign.

The same inconvenience is also provided against by the establishment of intermediate magistrates, who, leaving the government in its entirety, only serve to balance the two powers and maintain their respective rights. Then the government is not mixed, but temperate.

The opposite inconvenience can be remedied by similar means, and, when the government is too lax, tribunals may be erected to

sical economics, was first and foremost a philosopher. He strove to be a moralist and, in doing so, became an economist. When he published *The Theory of Moral Sentiments* in 1759, modern capitalism was just getting under way. Smith was entranced by the sweeping changes wrought by this new force, but it wasn't just the numbers that interested him. It was the human effect, the fact that economic forces were vastly changing the way a person thought and behaved in a given situation. What might lead one person to cheat or steal while another didn't? How would one person's seemingly innocuous choice, good or bad, affect a great number of people down the line? In Smith's era, cause and effect had begun to wildly accelerate; incentives were magnified tenfold. The gravity and shock of these changes were as overwhelming to the citizens of his time as the gravity and shock of modern life may seem to us today.

Smith's true subject was the friction between individual desire and societal norms. The economic historian Robert Heilbroner, writing in *The Worldly Philosophers*, wondered how Smith was able to separate the doings of man, a creature of self-interest, from the greater moral plane in which man operated. "Smith held that the answer lay in our ability to put ourselves in the position of a third person, an impartial observer," Heilbroner wrote, "and in this way to form a notion of the objective . . . merits of a case."

Consider yourself, then, in the company of a third person—or, if you will, a pair of third people—eager to explore the objective merits of interesting cases. These explorations generally begin with the asking of a simple unasked question. Such as: what do schoolteachers and sumo wrestlers have in common?

## Chapter 1

### WHAT DO SCHOOLTEACHERS AND SUMO WRESTLERS HAVE IN COMMON?

Imagine for a moment that you are the manager of a day-care center. You have a clearly stated policy that children are supposed to be picked up by 4 p.m. But very often parents are late. The result: at day's end, you have some anxious children and at least one teacher who must wait around for the parents to arrive. What to do?

A pair of economists who heard of this dilemma—it turned out to be a rather common one—offered a solution: fine the tardy parents. Why, after all, should the day-care center take care of these kids for free?

The economists decided to test their solution by conducting a study of ten day-care centers in Haifa, Israel. The study lasted twenty weeks, but the fine was not introduced immediately. For the first four weeks, the economists simply kept track of the number of parents who came late; there were, on average, eight late

pickups per week per day-care center. In the fifth week, the fine was enacted. It was announced that any parent arriving more than ten minutes late would pay \$3 per child for each incident. The fee would be added to the parents' monthly bill, which was roughly \$380.

After the fine was enacted, the number of late pickups promptly went . . . up. Before long there were twenty late pickups per week, more than double the original average. The incentive had plainly backfired.

Economics is, at root, the study of incentives: how people get what they want, or need, especially when other people want or need the same thing. Economists love incentives. They love to dream them up and enact them, study them and tinker with them. The typical economist believes the world has not yet invented a problem that he cannot fix if given a free hand to design the proper incentive scheme. His solution may not always be pretty—it may involve coercion or exorbitant penalties or the violation of civil liberties—but the original problem, rest assured, will be fixed. An incentive is a bullet, a lever, a key: an often tiny object with astonishing power to change a situation.

We all learn to respond to incentives, negative and positive, from the outset of life. If you toddle over to the hot stove and touch it, you burn a finger. But if you bring home straight A's from school, you get a new bike. If you are spotted picking your nose in class, you get ridiculed. But if you make the basketball team, you move up the social ladder. If you break curfew, you get grounded. But if you ace your SATs, you get to go to a good college. If you flunk out of law school, you have to go to work at your father's insurance company. But if you perform so well that a rival company comes calling, you become a vice president and

no longer have to work for your father. If you become so excited about your new vice president job that you drive home at eighty mph, you get pulled over by the police and fined \$100. But if you hit your sales projections and collect a year-end bonus, you not only aren't worried about the \$100 ticket but can also afford to buy that Viking range you've always wanted—and on which your toddler can now burn her own finger.

An incentive is simply a means of urging people to do more of a good thing and less of a bad thing. But most incentives don't come about organically. Someone—an economist or a politician or a parent—has to invent them. Your three-year-old eats all her vegetables for a week? She wins a trip to the toy store. A big steelmaker belches too much smoke into the air? The company is fined for each metric ton of pollutants over the legal limit. Too many Americans aren't paying their share of income tax? It was the economist Milton Friedman who helped come up with a solution to this one: automatic tax withholding from employees' paychecks.

There are three basic flavors of incentive: economic, social, and moral. Very often a single incentive scheme will include all three varieties. Think about the anti-smoking campaign of recent years. The addition of a \$3-per-pack "sin tax" is a strong economic incentive against buying cigarettes. The banning of cigarettes in restaurants and bars is a powerful social incentive. And when the U.S. government asserts that terrorists raise money by selling black-market cigarettes, that acts as a rather jarring moral incentive.

Some of the most compelling incentives yet invented have been put in place to deter crime. Considering this fact, it might be worthwhile to take a familiar question—why is there so much

crime in modern society?—and stand it on its head: why isn't there a lot *more* crime?

After all, every one of us regularly passes up opportunities to maim, steal, and defraud. The chance of going to jail—thereby losing your job, your house, and your freedom, all of which are essentially economic penalties—is certainly a strong incentive. But when it comes to crime, people also respond to moral incentives (they don't want to do something they consider wrong) and social incentives (they don't want to be seen by others as doing something wrong). For certain types of misbehavior, social incentives are terribly powerful. In an echo of Hester Prynne's scarlet letter, many American cities now fight prostitution with a "shaming" offensive, posting pictures of convicted johns (and prostitutes) on websites or on local-access television. Which is a more horrifying deterrent: a \$500 fine for soliciting a prostitute or the thought of your friends and family ogling you on [www.HookersAndJohns.com](http://www.HookersAndJohns.com)?

So through a complicated, haphazard, and constantly readjusted web of economic, social, and moral incentives, modern society does its best to militate against crime. Some people would argue that we don't do a very good job. But taking the long view, that is clearly not true. Consider the historical trend in homicide (not including wars), which is both the most reliably measured crime and the best barometer of a society's overall crime rate. These statistics, compiled by the criminologist Manuel Eisner, track the historical homicide levels in five European regions.

## HOMICIDES

(PER 100,000 PEOPLE)

	ENGLAND	NETHERLANDS & BELGIUM	SCANDINAVIA	GERMANY & SWITZERLAND	ITALY
13TH-14TH C.	23.0	47.0	N.A.	37.0	56.0
15TH C.	N.A.	45.0	46.0	16.0	73.0
16TH C.	7.0	25.0	21.0	11.0	47.0
17TH C.	5.0	7.5	18.0	7.0	32.0
18TH C.	1.5	5.5	1.9	7.5	10.5
19TH C.	1.7	1.6	1.1	2.8	12.6
1900-1949	0.8	1.5	0.7	1.7	3.2
1950-1994	0.9	0.9	0.9	1.0	1.5

The steep decline of these numbers over the centuries suggests that, for one of the gravest human concerns—getting murdered—the incentives that we collectively cook up are working better and better.

So what was wrong with the incentive at the Israeli day-care centers?

You have probably already guessed that the \$3 fine was simply too small. For that price, a parent with one child could afford to be late every day and only pay an extra \$60 each month—just one-sixth of the base fee. As babysitting goes, that's pretty cheap. What if the fine had been set at \$100 instead of \$3? That would have likely put an end to the late pickups, though it would have also engendered plenty of ill will. (Any incentive is inherently a trade-off; the trick is to balance the extremes.)

But there was another problem with the day-care center fine. It substituted an economic incentive (the \$3 penalty) for a moral

incentive (the guilt that parents were supposed to feel when they came late). For just a few dollars each day, parents could buy off their guilt. Furthermore, the small size of the fine sent a signal to the parents that late pickups weren't such a big problem. If the day-care center suffers only \$3 worth of pain for each late pickup, why bother to cut short your tennis game? Indeed, when the economists eliminated the \$3 fine in the seventeenth week of their study, the number of late-arriving parents didn't change. Now they could arrive late, pay no fine, *and* feel no guilt.

Such is the strange and powerful nature of incentives. A slight tweak can produce drastic and often unforeseen results. Thomas Jefferson noted this while reflecting on the tiny incentive that led to the Boston Tea Party and, in turn, the American Revolution: "So inscrutable is the arrangement of causes and consequences in this world that a two-penny duty on tea, unjustly imposed in a sequestered part of it, changes the condition of all its inhabitants."

In the 1970s, researchers conducted a study that, like the Israeli day-care study, pitted a moral incentive against an economic incentive. In this case, they wanted to learn about the motivation behind blood donations. Their discovery: when people are given a small stipend for donating blood rather than simply being praised for their altruism, they tend to donate *less* blood. The stipend turned a noble act of charity into a painful way to make a few dollars, and it wasn't worth it.

What if the blood donors had been offered an incentive of \$50, or \$500, or \$5,000? Surely the number of donors would have changed dramatically.

But something else would have changed dramatically as well, for every incentive has its dark side. If a pint of blood were sud-

denly worth \$5,000, you can be sure that plenty of people would take note. They might literally steal blood at knifepoint. They might pass off pig blood as their own. They might circumvent donation limits by using fake IDs. Whatever the incentive, whatever the situation, dishonest people will try to gain an advantage by whatever means necessary.

Or, as W. C. Fields once said: a thing worth having is a thing worth cheating for.

Who cheats?

Well, just about anyone, if the stakes are right. You might say to yourself, *I don't cheat*, regardless of the stakes. And then you might remember the time you cheated on, say, a board game. Last week. Or the golf ball you nudged out of its bad lie. Or the time you really wanted a bagel in the office break room but couldn't come up with the dollar you were supposed to drop in the coffee can. And then took the bagel anyway. And told yourself you'd pay double the next time. And didn't.

For every clever person who goes to the trouble of creating an incentive scheme, there is an army of people, clever and otherwise, who will inevitably spend even more time trying to beat it. Cheating may or may not be human nature, but it is certainly a prominent feature in just about every human endeavor. Cheating is a primordial economic act: getting more for less. So it isn't just the boldface names—inside-trading CEOs and pill-popping ballplayers and perk-abusing politicians—who cheat. It is the waitress who pockets her tips instead of pooling them. It is the Wal-Mart payroll manager who goes into the computer and shaves his employees' hours to make his own performance look better. It is the third grader who, worried about not making it

to the fourth grade, copies test answers from the kid sitting next to him.

Some cheating leaves barely a shadow of evidence. In other cases, the evidence is massive. Consider what happened one spring evening at midnight in 1987: seven million American children suddenly disappeared. The worst kidnapping wave in history? Hardly. It was the night of April 15, and the Internal Revenue Service had just changed a rule. Instead of merely listing the name of each dependent child, tax filers were now required to provide a Social Security number. Suddenly, seven million children—children who had existed only as phantom exemptions on the previous year's 1040 forms—vanished, representing about one in ten of all dependent children in the United States.

The incentive for those cheating taxpayers was quite clear. The same for the waitress, the payroll manager, and the third grader. But what about that third grader's *teacher*? Might she have an incentive to cheat? And if so, how would she do it?

Imagine now that instead of running a day-care center in Haifa, you are running the Chicago Public Schools, a system that educates 400,000 students each year.

The most volatile current debate among American school administrators, teachers, parents, and students concerns "high-stakes" testing. The stakes are considered high because instead of simply testing students to measure their progress, schools are increasingly held accountable for the results.

The federal government mandated high-stakes testing as part of the No Child Left Behind law, signed by President Bush in 2002. But even before that law, most states gave annual standardized tests to students in elementary and secondary school. Twenty

states rewarded individual schools for good test scores or dramatic improvement; thirty-two states sanctioned the schools that didn't do well.

The Chicago Public School system embraced high-stakes testing in 1996. Under the new policy, a school with low reading scores would be placed on probation and face the threat of being shut down, its staff to be dismissed or reassigned. The CPS also did away with what is known as social promotion. In the past, only a dramatically inept or difficult student was held back a grade. Now, in order to be promoted, every student in third, sixth, and eighth grade had to manage a minimum score on the standardized, multiple-choice exam known as the Iowa Test of Basic Skills.

Advocates of high-stakes testing argue that it raises the standards of learning and gives students more incentive to study. Also, if the test prevents poor students from advancing without merit, they won't clog up the higher grades and slow down good students. Opponents, meanwhile, worry that certain students will be unfairly penalized if they don't happen to test well, and that teachers may concentrate on the test topics at the exclusion of more important lessons.

Schoolchildren, of course, have had incentive to cheat for as long as there have been tests. But high-stakes testing has so radically changed the incentives for teachers that they too now have added reason to cheat. With high-stakes testing, a teacher whose students test poorly can be censured or passed over for a raise or promotion. If the entire school does poorly, federal funding can be withheld; if the school is put on probation, the teacher stands to be fired. High-stakes testing also presents teachers with some positive incentives. If her students do well enough, she might find

herself praised, promoted, and even richer: the state of California at one point introduced bonuses of \$25,000 for teachers who produced big test-score gains.

And if a teacher were to survey this newly incentivized landscape and consider somehow inflating her students' scores, she just might be persuaded by one final incentive: teacher cheating is rarely looked for, hardly ever detected, and just about never punished.

How might a teacher go about cheating? There are any number of possibilities, from brazen to subtle. A fifth-grade student in Oakland recently came home from school and gaily told her mother that her super-nice teacher had written the answers to the state exam right there on the chalkboard. Such instances are certainly rare, for placing your fate in the hands of thirty prepubescent witnesses doesn't seem like a risk that even the worst teacher would take. (The Oakland teacher was duly fired.) There are more nuanced ways to inflate students' scores. A teacher can simply give students extra time to complete the test. If she obtains a copy of the exam early—that is, illegitimately—she can prepare them for specific questions. More broadly, she can “teach to the test,” basing her lesson plans on questions from past years' exams, which isn't considered cheating but may well violate the spirit of the test. Since these tests all have multiple-choice answers, with no penalty for wrong guesses, a teacher might instruct her students to randomly fill in every blank as the clock is winding down, perhaps inserting a long string of Bs or an alternating pattern of Bs and Cs. She might even fill in the blanks for them after they've left the room.

But if a teacher *really* wanted to cheat—and make it worth her while—she might collect her students' answer sheets and, in the

hour or so before turning them in to be read by an electronic scanner, erase the wrong answers and fill in correct ones. (And you always thought that no. 2 pencil was for the *children* to change their answers.) If this kind of teacher cheating is truly going on, how might it be detected?

To catch a cheater, it helps to think like one. If you were willing to erase your students' wrong answers and fill in correct ones, you probably wouldn't want to change too many wrong answers. That would clearly be a tip-off. You probably wouldn't even want to change answers on every student's test—another tip-off. Nor, in all likelihood, would you have enough time, because the answer sheets have to be turned in soon after the test is over. So what you might do is select a string of eight or ten consecutive questions and fill in the correct answers for, say, one-half or two-thirds of your students. You could easily memorize a short pattern of correct answers, and it would be a lot faster to erase and change that pattern than to go through each student's answer sheet individually. You might even think to focus your activity toward the end of the test, where the questions tend to be harder than the earlier questions. In that way, you'd be most likely to substitute correct answers for wrong ones.

If economics is a science primarily concerned with incentives, it is also—fortunately—a science with statistical tools to measure how people respond to those incentives. All you need are some data.

In this case, the Chicago Public School system obliged. It made available a database of the test answers for every CPS student from third grade through seventh grade from 1993 to 2000. This amounts to roughly 30,000 students per grade per year, more than 700,000 sets of test answers, and nearly 100 million indi-

vidual answers. The data, organized by classroom, included each student's question-by-question answer strings for reading and math tests. (The actual paper answer sheets were not included; they were habitually shredded soon after a test.) The data also included some information about each teacher and demographic information for every student, as well as his or her past and future test scores—which would prove a key element in detecting the teacher cheating.

Now it was time to construct an algorithm that could tease some conclusions from this mass of data. What might a cheating teacher's classroom look like?

The first thing to search for would be unusual answer patterns in a given classroom: blocks of identical answers, for instance, especially among the harder questions. If ten very bright students (as indicated by past and future test scores) gave correct answers to the exam's first five questions (typically the easiest ones), such an identical block shouldn't be considered suspicious. But if ten poor students gave correct answers to the *last* five questions on the exam (the hardest ones), that's worth looking into. Another red flag would be a strange pattern within any one student's exam—such as getting the hard questions right while missing the easy ones—especially when measured against the thousands of students in other classrooms who scored similarly on the same test. Furthermore, the algorithm would seek out a classroom full of students who performed far better than their past scores would have predicted and who then went on to score significantly lower the following year. A dramatic one-year spike in test scores might initially be attributed to a *good* teacher; but with a dramatic fall to follow, there's a strong likelihood that the spike was brought about by artificial means.

Consider now the answer strings from the students in two sixth-grade Chicago classrooms who took the identical math test. Each horizontal row represents one student's answers. The letter a, b, c, or d indicates a correct answer; a number indicates a wrong answer, with 1 corresponding to a, 2 corresponding to b, and so on. A zero represents an answer that was left blank. One of these classrooms almost certainly had a cheating teacher and the other did not. Try to tell the difference—although be forewarned that it's not easy with the naked eye.

#### CLASSROOM A

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1b2a34d4ac42d23b141acd24a3a12dadbc4a2134141
dbaab3dcacb1dadbc42ac2cc31012dadbc4adb40000
d12443d43232d32323c213c22d2c23234c332db4b300
db2abad1acbdda212b1acd24a3a12dadbc400000000
d4aab2124cbddadbcb1a42cca3412dadbc423134bc1
1b33b4d4a2b1dadbc3ca22c00000000000000000000
d43a3a24acb1d32b412acd24a3a12dadbc422143bc0
313a3ad1ac3d2a23431223c000012dadbc400000000
db2a33dcacbd32d313c21142323cc3000000000000000
d43ab4d1ac3dd43421240d24a3a12dadbc400000000
db223a24acb11a3b24cacd12a241cdadbcb4adb4b300
db4abadcacbdad3141ac212a3a1c3a144ba2db41b43
1142340c2cbddadb4b1acd24a3a12dadbc43d133bc4
214ab4dc4cbdd31b1b2213c4ad412dadbc4adb00000
1423b4d4a23d24131413234123a243a2413a21441343
3b3ab4d14c3d2ad4cbcac1c003a12dadbc4adb40000

```

dba2ba21ac3d2ad3c4c4cd40a3a12dadbc400000000  
 d122ba2cacbd1a13211a2d02a2412d0dbcb4adb4b3c0  
 144a3adc4cbddadbcbcb2c2cc43a12dadbc4211ab343  
 d43aba3cacbddadbcbca42c2a3212dadbc42344b3cb

**CLASSROOM B**

db3a431422bd131b4413cd422a1acda332342d3ab4c4  
 d1a1a11acbd2d3dbc1ca22c23242c3a142b3adb243c1  
 d42a12d2a4b1d32b21ca2312a3411d00000000000000  
 3b2a34344c32d21b1123cdc00000000000000000000  
 34aabad12cbdd3d4c1ca112cad2ccd00000000000000  
 d33a3431a2b2d2d44b2acd2cad2c2223b40000000000  
 23aa32d2a1bd2431141342c13d212d233c34a3b3b000  
 d32234d4a1bdd23b242a22c2a1a1cda2b1baa33a0000  
 d3aab23c4cbddadb23c322c2a22223232b443b24bc3  
 d13a14313c31d42b14c421c42332cd2242b3433a3343  
 d13a3ad122b1da2b11242dc1a3a12100000000000000  
 d12a3ad1a13d23d3cb2a21ccada24d2131b440000000  
 314a133c4cbd142141ca424cad34c122413223ba4b40  
 d42a3adcacbddadbcb42ac2c2ada2cda341baa3b24321  
 db1134dc2cb2dadb24c412c1ada2c3a341ba20000000  
 d1341431acbddad3c4c213412da22d3d1132a1344b1b  
 1ba41a21a1b2dadb24ca22c1ada2cd32413200000000  
 dbaa33d2a2bddadbcbca11c2a2accda1b2ba20000000

If you guessed that classroom A was the cheating classroom, congratulations. Here again are the answer strings from classroom A, now reordered by a computer that has been asked to apply the cheating algorithm and seek out suspicious patterns.

**CLASSROOM A**

(WITH CHEATING ALGORITHM APPLIED)

- 1 112a4a342cb214d0001**acd24a3a12dadbc4a**00000000
- 2 1b2a34d4ac42d23b141**acd24a3a12dadbc4a**2134141
- 3 db2abad1acbdda212b1**acd24a3a12dadbc4**000000000
- 4 d43a3a24acb1d32b412**acd24a3a12dadbc4**22143bc0
- 5 1142340c2cbddadb4b1**acd24a3a12dadbc4**3d133bc4
- 6 d43ab4d1ac3dd43421240d24a3a12dadbc400000000
- 7 dba2ba21ac3d2ad3c4c4cd40a3a12dadbc400000000
- 8 144a3adc4cbddadbcbcb2c2cc43a12dadbc4211ab343
- 9 3b3ab4d14c3d2ad4cbca1c003a12dadbc4adb40000
- 10 d43aba3cacbddadbcbca42c2a3212dadbc42344b3cb
- 11 214ab4dc4cbdd31b1b2213c4ad412dadbc4adb00000
- 12 313a3ad1ac3d2a23431223c000012dadbc400000000
- 13 d4aab2124cbddadbcb1a42cca3412dadbc423134bc1
- 14 dbaab3dcacb1dadbc42ac2cc31012dadbc4adb40000
- 15 db223a24acb11a3b24caed12a241cdadbcb4adb4b300
- 16 d122ba2cacbd1a13211a2d02a2412d0dbcb4adb4b3c0
- 17 1423b4d4a23d24131413234123a243a2413a21441343
- 18 db4abadcacb1dad3141ac212a3alc3a144ba2db41b43
- 19 db2a33dcacb2d3d313c21142323cc300000000000000
- 20 1b33b4d4a2b1dadbc3ca22c00000000000000000000
- 21 d12443d43232d32323c213c22d2c23234c332db4b300
- 22 d4a2341cacbddad3142a2344a2ac23421c00adb4b3cb

Take a look at the answers in bold. Did fifteen out of twenty-two students somehow manage to reel off the same six consecutive correct answers (the d-a-d-b-c-b string) all by themselves?

There are at least four reasons this is unlikely. One: those ques-

tions, coming near the end of the test, were harder than the earlier questions. Two: these were mainly subpar students to begin with, few of whom got six consecutive right answers elsewhere on the test, making it all the more unlikely they would get right the same six hard questions. Three: up to this point in the test, the fifteen students' answers were virtually uncorrelated. Four: three of the students (numbers 1, 9, and 12) left more than one answer blank *before* the suspicious string and then ended the test with another string of blanks. This suggests that a long, unbroken string of blank answers was broken not by the student but by the teacher.

There is another oddity about the suspicious answer string. On nine of the fifteen tests, the six correct answers are preceded by another identical string, 3-a-1-2, which includes three of four *incorrect* answers. And on all fifteen tests, the six correct answers are followed by the same incorrect answer, a 4. Why on earth would a cheating teacher go to the trouble of erasing a student's test sheet and then fill in the *wrong* answer?

Perhaps she is merely being strategic. In case she is caught and hauled into the principal's office, she could point to the wrong answers as proof that she didn't cheat. Or perhaps—and this is a less charitable but just as likely answer—she doesn't know the right answers herself. (With standardized tests, the teacher is typically not given an answer key.) If this is the case, then we have a pretty good clue as to why her students are in need of inflated grades in the first place: they have a bad teacher.

Another indication of teacher cheating in classroom A is the class's overall performance. As sixth graders who were taking the test in the eighth month of the academic year, these students needed to achieve an average score of 6.8 to be considered up to

national standards. (Fifth graders taking the test in the eighth month of the year needed to score 5.8, seventh graders 7.8, and so on.) The students in classroom A averaged 5.8 on their sixth-grade tests, which is a full grade level below where they should be. So plainly these are poor students. A year earlier, however, these students did even worse, averaging just 4.1 on their fifth-grade tests. Instead of improving by one full point between fifth and sixth grade, as would be expected, they improved by 1.7 points, nearly two grades' worth. But this miraculous improvement was short-lived. When these sixth-grade students reached seventh grade, they averaged 5.5—more than two grade levels below standard and even *worse* than they did in sixth grade. Consider the erratic year-to-year scores of three particular students from classroom A:

	5TH GRADE SCORE	6TH GRADE SCORE	7TH GRADE SCORE
STUDENT 3	3.0	6.5	5.1
STUDENT 5	3.6	6.3	4.9
STUDENT 14	3.8	7.1	5.6

The three-year scores from classroom B, meanwhile, are also poor but at least indicate an honest effort: 4.2, 5.1, and 6.0. So an entire roomful of children in classroom A suddenly got very smart one year and very dim the next, or more likely, their sixth-grade teacher worked some magic with her pencil.

There are two noteworthy points to be made about the children in classroom A, tangential to the cheating itself. The first is that they are obviously in poor academic shape, which makes them the very children whom high-stakes testing is promoted as help-

ing the most. The second point is that these students (and their parents) would be in for a terrible shock once they reached the seventh grade. All they knew was that they had been successfully promoted due to their test scores. (No child left behind, indeed.) *They* weren't the ones who artificially jacked up their scores; they probably expected to do great in the seventh grade—and then they failed miserably. This may be the cruelest twist yet in high-stakes testing. A cheating teacher may tell herself that she is helping her students, but the fact is that she would appear far more concerned with helping herself.

An analysis of the entire Chicago data reveals evidence of teacher cheating in more than two hundred classrooms per year, roughly 5 percent of the total. This is a conservative estimate, since the algorithm was able to identify only the most egregious form of cheating—in which teachers systematically changed students' answers—and not the many subtler ways a teacher might cheat. In a recent study among North Carolina schoolteachers, some 35 percent of the respondents said they had witnessed their colleagues cheating in some fashion, whether by giving students extra time, suggesting answers, or manually changing students' answers.

What are the characteristics of a cheating teacher? The Chicago data shows that male and female teachers are equally prone to cheating. A cheating teacher tends to be younger and less qualified than average. She is also more likely to cheat after her incentives change. Because the Chicago data ran from 1993 to 2000, it bracketed the introduction of high-stakes testing in 1996. Sure enough, there was a pronounced spike in cheating in 1996. Nor was the cheating random. It was the teachers in the lowest-scoring classrooms who were most likely to cheat. It should also be noted that the \$25,000 bonus for California teachers was eventually re-

voked, in part because of suspicions that too much of the money was going to cheaters.

Not every result of the Chicago cheating analysis was so dour. In addition to detecting cheaters, the algorithm could also identify the best teachers in the school system. A good teacher's impact was nearly as distinctive as a cheater's. Instead of getting random answers correct, her students would show real improvement on the easier types of questions they had previously missed, an indication of actual learning. And a good teacher's students carried over all their gains into the next grade.

Most academic analyses of this sort tend to languish, unread, on a dusty library shelf. But in early 2002, the new CEO of the Chicago Public Schools, Arne Duncan, contacted the study's authors. He didn't want to protest or hush up their findings. Rather, he wanted to make sure that the teachers identified by the algorithm as cheaters were truly cheating—and then do something about it.

Duncan was an unlikely candidate to hold such a powerful job. He was only thirty-six when appointed, a onetime academic all-American at Harvard who later played pro basketball in Australia. He had spent just three years with the CPS—and never in a job important enough to have his own secretary—before becoming its CEO. It didn't hurt that Duncan had grown up in Chicago. His father taught psychology at the University of Chicago; his mother ran an afterschool program for forty years, without pay, in a poor neighborhood. When Duncan was a boy, his afterschool playmates were the underprivileged kids his mother cared for. So when he took over the public schools, his allegiance lay more with schoolchildren and their families than with teachers and their union.

The best way to get rid of cheating teachers, Duncan had decided, was to readminister the standardized exam. He only had the resources to retest 120 classrooms, however, so he asked the creators of the cheating algorithm to help choose which classrooms to test.

How could those 120 retests be used most effectively? It might have seemed sensible to retest only the classrooms that likely had a cheating teacher. But even if their retest scores were lower, the teachers could argue that the students did worse merely because they were told that the scores wouldn't count in their official record—which, in fact, all retested students would be told. To make the retest results convincing, some non-cheaters were needed as a control group. The best control group? The classrooms shown by the algorithm to have the best teachers, in which big gains were thought to have been legitimately attained. If those classrooms held their gains while the classrooms with a suspected cheater lost ground, the cheating teachers could hardly argue that their students did worse only because the scores wouldn't count.

So a blend was settled upon. More than half of the 120 retested classrooms were those suspected of having a cheating teacher. The remainder were divided between the supposedly excellent teachers (high scores but no suspicious answer patterns) and, as a further control, classrooms with mediocre scores and no suspicious answers.

The retest was given a few weeks after the original exam. The children were not told the reason for the retest. Neither were the teachers. But they may have gotten the idea when it was announced that CPS officials, not the teachers, would administer the test. The teachers were asked to stay in the classroom with

their students, but they would not be allowed to even touch the answer sheets.

The results were as compelling as the cheating algorithm had predicted. In the classrooms chosen as controls, where no cheating was suspected, scores stayed about the same or even rose. In contrast, the students with the teachers identified as cheaters scored far worse, by an average of more than a full grade level.

As a result, the Chicago Public School system began to fire its cheating teachers. The evidence was only strong enough to get rid of a dozen of them, but the many other cheaters had been duly warned. The final outcome of the Chicago study is further testament to the power of incentives: the following year, cheating by teachers fell more than 30 percent.

You might think that the sophistication of teachers who cheat would increase along with the level of schooling. But an exam given at the University of Georgia in the fall of 2001 disputes that idea. The course was called *Coaching Principles and Strategies of Basketball*, and the final grade was based on a single exam that had twenty questions. Among the questions:

How many halves are in a college basketball game?

- a. 1                      b. 2                      c. 3                      d. 4

How many points does a 3-pt. field goal account for in a basketball game?

- a. 1                      b. 2                      c. 3                      d. 4

What is the name of the exam which all high school seniors in the state of Georgia must pass?

- Eye Exam
- How Do the Grits Taste Exam
- Bug Control Exam
- Georgia Exit Exam

In your opinion, who is the best Division I assistant coach in the country?

- Ron Jirsa
- John Pelphrey
- Jim Harrick Jr.
- Steve Wojciechowski

If you are stumped by the final question, it might help to know that *Coaching Principles* was taught by Jim Harrick Jr., an assistant coach with the university's basketball team. It might also help to know that his father, Jim Harrick Sr., was the head basketball coach. Not surprisingly, *Coaching Principles* was a favorite course among players on the Harricks' team. Every student in the class received an A. Not long afterward, both Harricks were relieved of their coaching duties.

If it strikes you as disgraceful that Chicago schoolteachers and University of Georgia professors will cheat—a teacher, after all, is meant to instill values along with the facts—then the thought of cheating among sumo wrestlers may also be deeply disturbing. In Japan, sumo is not only the national sport but also a repository of the country's religious, military, and historical emotion. With its

purification rituals and its imperial roots, sumo is sacrosanct in a way that American sports will never be. Indeed, sumo is said to be less about competition than about honor itself.

It is true that sports and cheating go hand in hand. That's because cheating is more common in the face of a bright-line incentive (the line between winning and losing, for instance) than with a murky incentive. Olympic sprinters and weightlifters, cyclists in the Tour de France, football linemen and baseball sluggers: they have all been shown to swallow whatever pill or powder may give them an edge. It is not only the participants who cheat. Cagney baseball managers try to steal an opponent's signs. In the 2002 Winter Olympic figure-skating competition, a French judge and a Russian judge were caught trying to swap votes to make sure their skaters medaled. (The man accused of orchestrating the vote swap, a reputed Russian mob boss named Alimzhan Tokhtakhounov, was also suspected of rigging beauty pageants in Moscow.)

An athlete who gets caught cheating is generally condemned, but most fans at least appreciate his motive: he wanted so badly to win that he bent the rules. (As the baseball player Mark Grace once said, "If you're not cheating, you're not trying.") An athlete who cheats to *lose*, meanwhile, is consigned to a deep circle of sporting hell. The 1919 Chicago White Sox, who conspired with gamblers to throw the World Series (and are therefore known forever as the Black Sox), retain a stench of iniquity among even casual baseball fans. The City College of New York's championship basketball team, once beloved for its smart and scrappy play, was instantly reviled when it was discovered in 1951 that several players had taken mob money to shave points—intentionally missing baskets to help gamblers beat the point spread. Remember Terry

Malloy, the tormented former boxer played by Marlon Brando in *On the Waterfront*? As Malloy saw it, all his troubles stemmed from the one fight in which he took a dive. Otherwise, he could have had class; he could have been a contender.

If cheating to lose is sport's premier sin, and if sumo wrestling is the premier sport of a great nation, cheating to lose couldn't possibly exist in sumo. Could it?

Once again, the data can tell the story. As with the Chicago school tests, the data set under consideration here is surpassingly large: the results from nearly every official match among the top rank of Japanese sumo wrestlers between January 1989 and January 2000, a total of 32,000 bouts fought by 281 different wrestlers.

The incentive scheme that rules sumo is intricate and extraordinarily powerful. Each wrestler maintains a ranking that affects every slice of his life: how much money he makes, how large an entourage he carries, how much he gets to eat, sleep, and otherwise take advantage of his success. The sixty-six highest-ranked wrestlers in Japan, comprising the *makuuchi* and *juryo* divisions, make up the sumo elite. A wrestler near the top of this elite pyramid may earn millions and is treated like royalty. Any wrestler in the top forty earns at least \$170,000 a year. The seventieth-ranked wrestler in Japan, meanwhile, earns only \$15,000 a year. Life isn't very sweet outside the elite. Low-ranked wrestlers must tend to their superiors, preparing their meals, cleaning their quarters, and even soaping up their hardest-to-reach body parts. So ranking is everything.

A wrestler's ranking is based on his performance in the elite tournaments that are held six times a year. Each wrestler has fifteen bouts per tournament, one per day over fifteen consecutive

days. If he finishes the tournament with a winning record (eight victories or better), his ranking will rise. If he has a losing record, his ranking falls. If it falls far enough, he is booted from the elite rank entirely. The eighth victory in any tournament is therefore critical, the difference between promotion and demotion; it is roughly four times as valuable in the rankings as the typical victory.

So a wrestler entering the final day of a tournament on the bubble, with a 7-7 record, has far more to gain from a victory than an opponent with a record of 8-6 has to lose.

Is it possible, then, that an 8-6 wrestler might allow a 7-7 wrestler to beat him? A sumo bout is a concentrated flurry of force and speed and leverage, often lasting only a few seconds. It wouldn't be very hard to let yourself be tossed. Let's imagine for a moment that sumo wrestling *is* rigged. How might we measure the data to prove it?

The first step would be to isolate the bouts in question: those fought on a tournament's final day between a wrestler on the bubble and a wrestler who has already secured his eighth win. (Because more than half of all wrestlers end a tournament with either seven, eight, or nine victories, hundreds of bouts fit these criteria.) A final-day match between two 7-7 wrestlers isn't likely to be fixed, since both fighters badly need the victory. A wrestler with ten or more victories probably wouldn't throw a match either, since he has his own strong incentive to win: the \$100,000 prize for overall tournament champion and a series of \$20,000 prizes for the "outstanding technique" award, "fighting spirit" award, and others.

Let's now consider the following statistic, which represents the hundreds of matches in which a 7-7 wrestler faced an 8-6 wrestler

on a tournament's final day. The left column tallies the probability, based on all past meetings between the two wrestlers fighting that day, that the 7-7 wrestler will win. The right column shows how often the 7-7 wrestler actually did win.

7-7 WRESTLER'S PREDICTED WIN PERCENTAGE AGAINST 8-6 OPPONENT	7-7 WRESTLER'S ACTUAL WIN PERCENTAGE AGAINST 8-6 OPPONENT
48.7	79.6

So the 7-7 wrestler, based on past outcomes, was expected to win just less than half the time. This makes sense; their records in this tournament indicate that the 8-6 wrestler is slightly better. But in actuality, the wrestler on the bubble won *almost eight out of ten* matches against his 8-6 opponent. Wrestlers on the bubble also do astonishingly well against 9-5 opponents:

7-7 WRESTLER'S PREDICTED WIN PERCENTAGE AGAINST 9-5 OPPONENT	7-7 WRESTLER'S ACTUAL WIN PERCENTAGE AGAINST 9-5 OPPONENT
47.2	73.4

As suspicious as this looks, a high winning percentage alone isn't enough to prove that a match is rigged. Since so much depends on a wrestler's eighth win, he should be expected to fight harder in a crucial bout. But perhaps there are further clues in the data that prove collusion.

It's worth thinking about the incentive a wrestler might have to throw a match. Maybe he accepts a bribe (which would obviously not be recorded in the data). Or perhaps some other arrangement is made between the two wrestlers. Keep in mind that the pool

of elite sumo wrestlers is extraordinarily tight-knit. Each of the sixty-six elite wrestlers fights fifteen of the others in a tournament every two months. Furthermore, each wrestler belongs to a stable that is typically managed by a former sumo champion, so even the rival stables have close ties. (Wrestlers from the same stable do not wrestle one another.)

Now let's look at the win-loss percentage between the 7-7 wrestlers and the 8-6 wrestlers the *next* time they meet, when neither one is on the bubble. In this case, there is no great pressure on the individual match. So you might expect the wrestlers who won their 7-7 matches in the previous tournament to do about as well as they had in earlier matches against these same opponents—that is, winning roughly 50 percent of the time. You certainly wouldn't expect them to uphold their 80 percent clip.

As it turns out, the data show that the 7-7 wrestlers win only 40 percent of the rematches. Eighty percent in one match and 40 percent in the next? How do you make sense of that?

The most logical explanation is that the wrestlers made a quid pro quo agreement: you let me win today, when I really need the victory, and I'll let you win the next time. (Such an arrangement wouldn't preclude a cash bribe.) It's especially interesting to note that by the two wrestlers' *second* subsequent meeting, the win percentages revert to the expected level of about 50 percent, suggesting that the collusion spans only two matches.

And it isn't only the individual wrestlers whose records are suspect. The collective records of the various sumo stables are similarly aberrational. When one stable's wrestlers fare well on the bubble against wrestlers from a second stable, they tend to do especially *poorly* when the second stable's wrestlers are on the

bubble. This indicates that some match rigging may be choreographed at the highest level of the sport—much like the Olympic skating judges' vote swapping.

No formal disciplinary action has ever been taken against a Japanese sumo wrestler for match rigging. Officials from the Japanese Sumo Association typically dismiss any such charges as fabrications by disgruntled former wrestlers. In fact, the mere utterance of the words "sumo" and "rigged" in the same sentence can cause a national furor. People tend to get defensive when the integrity of their national sport is impugned.

Still, allegations of match rigging do occasionally find their way into the Japanese media. These occasional media storms offer one more chance to measure possible corruption in sumo. Media scrutiny, after all, creates a powerful incentive: if two sumo wrestlers or their stables *have* been rigging matches, they might be leery to continue when a swarm of journalists and TV cameras descend upon them.

So what happens in such cases? The data show that in the sumo tournaments held immediately after allegations of match rigging, 7–7 wrestlers win only 50 percent of their final-day matches against 8–6 opponents instead of the typical 80 percent. No matter how the data are sliced, they inevitably suggest one thing: it is hard to argue that sumo wrestling isn't rigged.

Several years ago, two former sumo wrestlers came forward with extensive allegations of match rigging—and more. Aside from the crooked matches, they said, sumo was rife with drug use and sexcapades, bribes and tax evasion, and close ties to the *yaiza*, the Japanese mafia. The two men began to receive threatening phone calls; one of them told friends he was afraid he would be killed by the *yakuza*. Still, they went forward with plans to

hold a press conference at the Foreign Correspondents' Club in Tokyo. But shortly beforehand, the two men died—hours apart, in the same hospital, of a similar respiratory ailment. The police declared there had been no foul play but did not conduct an investigation. "It seems very strange for these two people to die on the same day at the same hospital," said Mitsuru Miyake, the editor of a sumo magazine. "But no one has seen them poisoned, so you can't prove the skepticism."

Whether or not their deaths were intentional, these two men had done what no other sumo insider had previously done: named names. Of the 281 wrestlers covered in the data cited above, they identified 29 crooked wrestlers and 11 who were said to be incorruptible.

What happens when the whistle-blowers' corroborating evidence is factored into the analysis of the match data? In matches between two supposedly corrupt wrestlers, the wrestler who was on the bubble won about 80 percent of the time. In bubble matches against a supposedly clean opponent, meanwhile, the bubble wrestler was no more likely to win than his record would predict. Furthermore, when a supposedly corrupt wrestler faced an opponent whom the whistle-blowers did not name as either corrupt or clean, the results were nearly as skewed as when two corrupt wrestlers met—suggesting that most wrestlers who *weren't* specifically named were also corrupt.

So if sumo wrestlers, schoolteachers, and day-care parents all cheat, are we to assume that mankind is innately and universally corrupt? And if so, how corrupt?

The answer may lie in . . . bagels. Consider this story about a man named Paul Feldman.

Once upon a time, Feldman dreamed big dreams. With early training in agricultural economics, he wanted to tackle world hunger. Instead, he took a job in Washington, analyzing weapons expenditures for the U.S. Navy. This was in 1962. For the next twenty-odd years, he did further analytic work in Washington. He held senior-level jobs and earned good money, but he wasn't always recognized for his best work. At the office Christmas party, colleagues would introduce him to their wives not as "the head of the public research group" (which he was) but as "the guy who brings in the bagels."

The bagels had begun as a casual gesture: a boss treating his employees whenever they won a research contract. Then he made it a habit. Every Friday, he would bring in some bagels, a serrated knife, and cream cheese. When employees from neighboring floors heard about the bagels, they wanted some too. Eventually he was bringing in fifteen dozen bagels a week. In order to recoup his costs, he set out a cash basket and a sign with the suggested price. His collection rate was about 95 percent; he attributed the underpayment to oversight, not fraud.

In 1984, when his research institute fell under new management, Feldman took a look at his future and grimaced. He decided to quit his job and sell bagels. His economist friends thought he had lost his mind, but his wife supported him. The last of their three children was finishing college, and they had retired their mortgage.

Driving around the office parks that encircle Washington, he solicited customers with a simple pitch: early in the morning, he would deliver some bagels and a cash basket to a company's snack room; he would return before lunch to pick up the money and the leftovers. It was an honor-system commerce scheme, and it

worked. Within a few years, Feldman was delivering 8,400 bagels a week to 140 companies and earning as much as he had ever made as a research analyst. He had thrown off the shackles of cubicle life and made himself happy.

He had also—quite without meaning to—designed a beautiful economic experiment. From the beginning, Feldman kept rigorous data on his bagel business. So by measuring the money collected against the bagels taken, he found it possible to tell, down to the penny, just how honest his customers were. Did they steal from him? If so, what were the characteristics of a company that stole versus a company that did not? Under what circumstances did people tend to steal more, or less?

As it happens, Feldman's accidental study provides a window onto a form of cheating that has long stymied academics: white-collar crime. (Yes, shorting the bagel man is white-collar crime, writ however small.) It might seem ludicrous to address as large and intractable a problem as white-collar crime through the life of a bagel man. But often a small and simple question can help chisel away at the biggest problems.

Despite all the attention paid to rogue companies like Enron, academics know very little about the practicalities of white-collar crime. The reason? There are no good data. A key fact of white-collar crime is that we hear about only the very slim fraction of people who are *caught* cheating. Most embezzlers lead quiet and theoretically happy lives; employees who steal company property are rarely detected.

With street crime, meanwhile, that is not the case. A mugging or a burglary or a murder is usually tallied whether or not the criminal is caught. A street crime has a victim, who typically reports the crime to the police, who generate data, which in turn

generate thousands of academic papers by criminologists, sociologists, and economists. But white-collar crime presents no obvious victim. From whom, exactly, did the masters of Enron steal? And how can you measure something if you don't know to whom it happened, or with what frequency, or in what magnitude?

Paul Feldman's bagel business was different. It did present a victim. The victim was Paul Feldman.

When he started his business, he expected a 95 percent payment rate, based on the experience at his own office. But just as crime tends to be low on a street where a police car is parked, the 95 percent rate was artificially high: Feldman's presence had deterred theft. Not only that, but those bagel eaters knew the provider and had feelings (presumably good ones) about him. A broad swath of psychological and economic research has shown that people will pay different amounts for the same item depending on who is providing it. The economist Richard Thaler, in his 1985 "Beer on the Beach" study, showed that a thirsty sunbather would pay \$2.65 for a beer delivered from a resort hotel but only \$1.50 for the same beer if it came from a shabby grocery store.

In the real world, Feldman learned to settle for less than 95 percent. He came to consider a company "honest" if its payment rate was above 90 percent. He considered a rate between 80 and 90 percent "annoying but tolerable." If a company habitually paid below 80 percent, Feldman might post a hectoring note, like this one:

*The cost of bagels has gone up dramatically since the beginning of the year. Unfortunately, the number of bagels that disappear without being paid for has also gone up. Don't let that continue. I don't imagine that you would teach your children to cheat, so why do it yourselves?*

In the beginning, Feldman left behind an open basket for the cash, but too often the money vanished. Then he tried a coffee can with a money slot in its plastic lid, which also proved too tempting. In the end, he resorted to making small plywood boxes with a slot cut into the top. The wooden box has worked well. Each year he drops off about seven thousand boxes and loses, on average, just one to theft. This is an intriguing statistic: the same people who routinely steal more than 10 percent of his bagels almost never stoop to stealing his money box—a tribute to the nuanced social calculus of theft. From Feldman's perspective, an office worker who eats a bagel without paying is committing a crime; the office worker probably doesn't think so. This distinction probably has less to do with the admittedly small amount of money involved (Feldman's bagels cost one dollar each, cream cheese included) than with the context of the "crime." The same office worker who fails to pay for his bagel might also help himself to a long slurp of soda while filling a glass in a self-serve restaurant, but he is very unlikely to leave the restaurant without paying.

So what do the bagel data have to say? In recent years, there have been two noteworthy trends in the overall payment rate. The first was a long, slow decline that began in 1992. By the summer of 2001, the overall rate had slipped to about 87 percent. But immediately after September 11 of that year, the rate spiked a full 2 percent and hasn't slipped much since. (If a 2 percent gain in payment doesn't sound like much, think of it this way: the nonpayment rate fell from 13 to 11 percent, which amounts to a 15 percent decline in theft.) Because many of Feldman's customers are affiliated with national security, there may have been a patriotic element to this 9/11 Effect. Or it may have represented a more general surge in empathy.

The data also show that smaller offices are more honest than big ones. An office with a few dozen employees generally outpays by 3 to 5 percent an office with a few hundred employees. This may seem counterintuitive. In a bigger office, a bigger crowd is bound to convene around the bagel table, providing more witnesses to make sure you drop your money in the box. But in the big-office/small-office comparison, bagel crime seems to mirror street crime. There is far less street crime per capita in rural areas than in cities, in large part because a rural criminal is more likely to be known (and therefore caught). Also, a smaller community tends to exert greater social incentives against crime, the main one being shame.

The bagel data also reflect how much personal mood seems to affect honesty. Weather, for instance, is a major factor. Unseasonably pleasant weather inspires people to pay at a higher rate. Unseasonably cold weather, meanwhile, makes people cheat prolifically; so do heavy rain and wind. Worst are the holidays. The week of Christmas produces a 2 percent drop in payment rates—again, a 15 percent increase in theft, an effect on the same magnitude, in reverse, as that of 9/11. Thanksgiving is nearly as bad; the week of Valentine's Day is also lousy, as is the week straddling April 15. There are, however, several good holidays: the weeks that include the Fourth of July, Labor Day, and Columbus Day. The difference in the two sets of holidays? The low-cheating holidays represent little more than an extra day off from work. The high-cheating holidays are fraught with miscellaneous anxieties and the high expectations of loved ones.

Feldman has also reached some of his own conclusions about honesty, based more on his experience than the data. He has come to believe that morale is a big factor—that an office is more hon-

est when the employees like their boss and their work. He also believes that employees further up the corporate ladder cheat more than those down below. He got this idea after delivering for years to one company spread out over three floors—an executive floor on top and two lower floors with sales, service, and administrative employees. (Feldman wondered if perhaps the executives cheated out of an overdeveloped sense of entitlement. What he didn't consider is that perhaps cheating was how they got to *be* executives.)

If morality represents the way we would like the world to work and economics represents how it actually does work, then the story of Feldman's bagel business lies at the very intersection of morality and economics. Yes, a lot of people steal from him, but the vast majority, even though no one is watching over them, do not. This outcome may surprise some people—including Feldman's economist friends, who counseled him twenty years ago that his honor-system scheme would never work. But it would not have surprised Adam Smith. In fact, the theme of Smith's first book, *The Theory of Moral Sentiments*, was the innate honesty of mankind. "How selfish soever man may be supposed," Smith wrote, "there are evidently some principles in his nature, which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it, except the pleasure of seeing it."

There is a tale, "The Ring of Gyges," that Feldman sometimes tells his economist friends. It comes from Plato's *Republic*. A student named Glaucon offered the story in response to a lesson by Socrates—who, like Adam Smith, argued that people are generally good even without enforcement. Glaucon, like Feldman's economist friends, disagreed. He told of a shepherd named Gyges

who stumbled upon a secret cavern with a corpse inside that wore a ring. When Gyges put on the ring, he found that it made him invisible. With no one able to monitor his behavior, Gyges proceeded to do woeful things—seduce the queen, murder the king, and so on. Glaucon's story posed a moral question: could any man resist the temptation of evil if he knew his acts could not be witnessed? Glaucon seemed to think the answer was no. But Paul Feldman sides with Socrates and Adam Smith—for he knows that the answer, at least 87 percent of the time, is yes.

## Chapter 2

### HOW IS THE KU KLUX KLAN LIKE A GROUP OF REAL-ESTATE AGENTS?

As institutions go, the Ku Klux Klan has had a markedly up-and-down history. It was founded in the immediate aftermath of the Civil War by six former Confederate soldiers in Pulaski, Tennessee. The six young men, four of whom were budding lawyers, saw themselves as merely a circle of like-minded friends. Thus the name they chose, "kuklux," a slight mangling of *kuklos*, the Greek word for "circle." In the beginning, their activities were said to be harmless midnight pranks—for instance, riding horses through the countryside while draped in white sheets and pillowcase hoods. But soon the Klan evolved into a multistate terrorist organization designed to frighten and kill emancipated slaves. Among its regional leaders were five former Confederate generals; its staunchest supporters were the plantation owners for whom Reconstruction posed an economic and political nightmare. In 1872, President Ulysses S. Grant spelled out for the House of